Refrigerant R410A
INVERTER

AIRSTAGE™ V SERIES

Variable Refrigerant Flow System

Multi Air Conditioning System for Buildings



SERVICE MANUAL

FUJITSU GENERAL LIMITED

CONTENTS

1. TEST RUN

1-1 CHECK ITEMS BEFORE TEST RUN 01-01
1-2 TEST RUN METHOD 01-03
1-2-1 Procedure 01-03
1-2-2 Test Run From Outdoor PC Board 01-04
1-2-3 Test Run From Remote Controller 01-04
1-3 TEST RUN CONTROL 01-06

2. FUNCTION OF PRINTED CIRCUIT BOARD

2-1 PCB LAYOUTS 02-01
2-1-1 Indoor Unit Control Circuit Board 02-01
2-1-2 Outdoor Unit Control Circuit Board 02-03
2-1-3 Wired, Simple Remote Controller Circuit Board 02-04
2-1-4 Central Remote Controller Circuit Board 02-05
2-1-5 Network Convertor Circuit Board 02-06
2-1-6 Signal Amplifier Circuit Board 02-08
2-1-7 Group Remote Controller Circuit Board 02-09
2-1-8 External Switch Controller Circuit Board 02-10
2-2 MICROPROCESSOR FUNCTION LIST 02-11
2-2-1 Indoor Unit 02-11
2-2-2 Outdoor Unit 02-14
2-3 FUNCTION AND SETTING OF EACH SWITCH 02-15
2-3-1 Indoor Unit 02-15
2-3-2 Indoor Unit (COMPACT WALL MOUNTED TYPE) 02-18
2-3-3 Outdoor Unit 02-22
2-3-4 Wired, Simple Remote Controller 02-27
2-3-5 Central Remote Controller 02-28
2-3-6 Network Convertor 02-30
2-3-7 Signal Amplifier 02-32
2-3-8 Group Remote Controller 02-32
2-3-9 External Switch Controller 02-33
2-4 EXTERNAL INPUT & OUTPUT 02-36
2-4-1 Indoor Unit 02-36
2-4-2 Indoor Unit (COMPACT WALL MOUNTED) 02-38
2-4-3 Outdoor Unit 02-40
2-4-4 Central Remote Controller / PC Controller 02-41
2-4-5 Network Convertor 02-43

CONTENTS

3. INVERTER CONTROL

3-1 INVERTER CONTROL 03-01
3-1-1 What is Inverter 03-01
3-1-2 Inverter Block of Outdoor Unit 03-01
3-1-3 Basic Circuit of 3 Phase Inverter 03-02
3-1-4 PWM Control (General Consideration) 03-02
3-2 CIRCUIT DESCRIPTION 03-03
3-2-1 Filter PCB 03-03
3-2-2 Current Transformer 03-03
3-2-3 Power Relay & Resistor 03-03
3-2-4 Coil (Reactor) 03-03
3-2-5 Smoothing Capacitor 03-03
3-2-6 IGBT (Insulated Gate Bipolar Transistor) 03-03

4. OUTDOOR UNIT OPERATION CONTROL

4-1 INPUT / OUTPUT LIST 04-01
4-2 COMPRESSOR OPERATION 04-02
4-2-1 Operation / Stop Condition 04-02
4-2-2 Capacity Control 04-02
4-2-3 Frequency Range of Start,Stop,and Operation 04-03
4-2-4 Oil Return Control 04-03
4-2-5 Compressor Sequence Operation 04-04
4-3 FAN CONTROL 04-05
4-3-1 Cooling Operation 04-05
4-3-2 Snow Falling Protection Fan Mode 04-06
4-4 EXPANSION VALVE CONTROL 04-06
4-5 SPECIAL OPERATION 04-06
4-5-1 Oil Recovery Operation 04-06
4-5-2 Oil Equalization Operation 04-07
4-5-3 Excess Refrigerant Adjustment Operation 04-08
4-5-4 Pre-Heat Operation 04-08
4-6 PROTECTIVE FUNCTION 04-09
4-6-1 Protective Function List 04-09

CONTENTS

5. INDOOR UNIT OPERATION

5-1 FAN CONTROL 05-01
5-1-1 Fan Speed Setting 05-01
5-1-2 "AUTO" Position 05-01
5-2 MASTER CONTROL 05-02
5-2-1 Operation Mode Control 05-02
5-2-2 Auto Changeover 05-02
5-2-3 "COOL" Position 05-03
5-2-4 "HEAT" Position 05-03
5-2-4 "FAN" Position 05-03
5-3 LOUVER CONTROL 05-04
5-4 ELECTRONIC EXPANSION VALVE CONTROL 05-07
5-5 DRAIN PUMP OPERATION 05-07
5-6 FUNCTION 05-08
5-6-1 Auto Restart 05-08
5-6-2 Icing Protection Control 05-08
5-6-3 Oil Recovery Operation 05-08
5-7 TIMER CONTROL 05-09
5-7-1 Wireless Remote Controller 05-09
5-7-2 Group Remote Controller 05-11
5-7-3 Wired Remote Controller 05-13

6. TROUBLE SHOOTING

6-1 NORMAL OPERATION 06-01
6-1-1 Indoor Unit Display 06-01
6-1-2 Outdoor Unit Display 06-02
6-1-3 Operation Not Trouble 06-03
6-2 ABNORMAL OPERATION 06-04
6-2-1 Indoor Unit Display 06-04
6-2-2 Remote Controller 06-05
6-2-3 Outdoor Unit Display 06-06
6-2-4 Trouble Level of System 06-07
6-3 TROUBLE SHOOTING 06-08
6-3-1 How to Trouble Shoot From the Symptom 06-08
6-3-2 Trouble Shooting With Error Code (INDOOR UNIT) 06-09
6-3-3 Trouble Shooting With Error Code (OUTDOOR UNIT) 06-20
6-3-4 Trouble Shooting With No Error Code 06-56
6-3-5 Trouble Shooting for Optional Parts 06-61
6-4 SERVICE PARTS INFORMATION 06-78

CONTENTS

7. APPENDING DATA

7-1 REFRIGERANT PIPE SYSTEM DIAGRAM..... 07-01
7-2 CHARACTERISTICS OF SENSORS..... 07-05
7-2-1 Pressure Sensor..... 07-05
7-3 WIRING DIAGRAM.....07-08
7-3-1 Indoor Unit..... 07-08
7-3-2 Outdoor Unit..... 07-21
7-4 OUTDOOR INTERNAL LAYOUT..... 07-25
7-5 MODEL DESIGNATION.....07-30

8. DISASSEMBLY ILLUSTRATION & PARTS LIST

8-1 OUTDOOR UNIT..... 08-01
8-2 INDOOR UNIT..... 08-23
8-3 STANDARD ACCESSORIES UNIT..... 08-23

Refrigerant R410A
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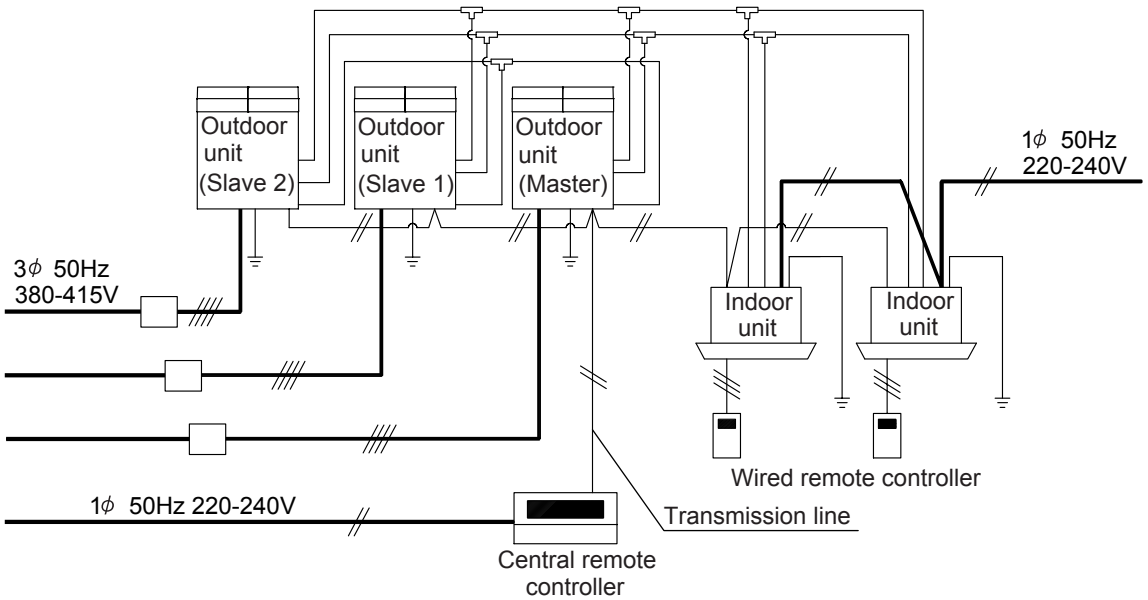
AIRSTAGE™
V SERIES

1 . TEST RUN

1. TEST RUN

1-1 CHECK ITEMS BEFORE TEST RUN

Before test run, check the following items.



Section	check item		Description	Standard	Check field
Installation location	Installation environment	Outdoor unit	Select a place where noise and vibration will be low.	DESIGN&TECHNICAL DATA 6-1-1 INSTALLATION OF OUTDOOR UNIT INSTALLATION MANUAL 2-1 SELECTING THE MOUNTING POSITION	
			Select a place to provide adequate strength.		
			Fasten the outdoor unit securely.		
			Install the outdoor unit in a location where it will avoid getting wet from rain.		
			Install the unit where it will not be tilted by more than 3deg.		
			The work space to repair is secured enough.		
			If possible,do not install the unit where it will be exposed to direct sunlight.		
		Indoor unit	Select a place where noise and vibration will be low.	INSTALLATION MANUAL SELECTION THE MOUNTING POSITION (Compact Duct Type) SELECTION THE MOUNTING POSITION (Duct Type) SELECTION THE MOUNTING POSITION (Wall Mounted Type)	
			Select a place to provide adequate strength.		
			Fasten the outdoor unit securely. (Should not drop.)		
			The work space to repair is secured enough.		
			The Service hole is secured specified position and appointed size.	DESIGN&TECHNICAL DATA 4-5 DIMENSIONS	
	Installation condition	Outdoor unit Indoor unit	Outdoor / Indoor unit are installed based on specifications. (Ex. In the same refrigerant system,difference in height between outdoor units and indoor units. In the same refrigerant system,difference in height between outdoor unit and outdoor unit. In the same refrigerant system,difference in height between indoor units and indoor units.)	DESIGN&TECHNICAL DATA 3-5 INSTALLATION SPACE 4-5 DIMENSIONS	

Section	check item	Description	Standard	Check field
Piping	Piping size,material and thickness	Use the piping size,material and thickness as per specifications.	DESIGN&TECHNICAL DATA 6-2 PIPING DESIGN	
	T-shaped tube kit and Separarion tube kit specification	The Separation tube as per specifications are used correctly. (Ex. Piping size, Installation angle)	DESIGN&TECHNICAL DATA 6-2-4 PIPE SIZE INSTALLATION MANUAL 3-2 OPTIONAL PART	
	Piping length	The piping length is within the limits of specifications. There are not impossible bending and crushing of piping.	DESIGN&TECHNICAL DATA 6-2-3 LIMITATIONS	
	Gas leakage check	There are no gas leaks.	Seal with nitrogen up to 4.15 Mpa. After 24 hours, check that the pressure has not fallen by leak.	
	Vacuuming	Draw a vacuum enough with a vacuum pump.	When -76 cmHg is reached, operate the vacuum pump for at least 1 hour.	
	Additional refrigerant charge	Charge a suitable amount. Using a special R410A gauge manifold and charging hose.	DESIGN&TECHNICAL DATA 6-2-6 ADDITIONAL CHARGE CALCULATION	
	3 way valve	Fully open respective stop valves on liquid, gas, oil.		

Section	check item		Description	Standard	Check field
Others	Pipe heat insulating material		Use the Pipe heat insulating material as per specifications.	DESIGN&TECHNICAL DATA 6-2-5 SELECTION OF PIPE HEAT INSULATIONG MATERIAL	
	Drain hose	Indoor unit	Drain water does not collects in the middle of drain hose.	INSTALLATION MANUAL 6. INSTALLING DRAIN HOSE (Compact Duct Type) 5. INSTALLING DRAIN HOSE (Duct Type) 1. INDOOR UNIT INSTALLATION (Wall Mounted Type)	
			Install the drain hose with downward gradient (1/50 to 2/50) and so there are no rises or traps in the hose.		

Section	check item	Description	Standard	Check field
Wiring	Power supply cable	Use the power supply cable as per specifications. There are not deficient phase, miss wiring, and breaking of wire for each indoor unit and outdoor unit.	DESIGN&TECHNICAL DATA 6-3-2 POWER SUPPLY CABLE WIRING 3-10 ELECTRIC CHARACTERISTICS 4-4 ELECTRIC CHARACTERISTICS INSTALLATION MANUAL 8 ELECTRICAL WIRING (Compact Duct Type) 7 ELECTRICAL WIRING (Duct Type) 6 ELECTRICAL WIRING (Wall Mounted Type) 5 OUTDOOR UNIT WIRING SETTING	
		Use the ground wire as per specifications. There are not miss wiring, and breaking of wire.		
	Breaker	Use the breaker as per specifications.	DESIGN&TECHNICAL DATA 6-3-2 POWER SUPPLY CABLE WIRING 3-10 ELECTRIC CHARACTERISTICS	
	Transmission cable	Use the transmission cable as per specifications. There are not miss wiring, and breaking of wire for each indoor unit and outdoor unit.	DESIGN&TECHNICAL DATA 6-3-3 TRANSMISSON LINE INSTALLATION MANUAL 8 ELECTRICAL WIRING (Compact Duct Type) 7 ELECTRICAL WIRING (Duct Type) 6 ELECTRICAL WIRING (Wall Mounted Type) 5 OUTDOOR UNIT WIRING SETTING	
		The wiring length is within the limits of specifications.		
		Use the ground wire as per specifications. There are not miss wiring, and breaking of wire.		
	Terminal resistor	Use the terminal resistor that came with the master unit.	INSTALLATION MANUAL 6-5 TERMINAL RESISTOR SETTING	
	Remote controller cable	Use the remote controller cable as per specifications. Connect the remote controller cable correctly.	DESIGN&TECHNICAL DATA 6-3-1 WIRING SPECIFICATION INSTALLATION MANUAL 8 ELECTRICAL WIRING (Compact Duct Type) 7 ELECTRICAL WIRING (Duct Type) 6 ELECTRICAL WIRING (Wall Mounted Type)	

Section	check item		Description	Standard	Check field
System	Address setting	Refrigeration circuit	Set all the address. And avoid overlapping.	DESIGN&TECHNICAL DATA 6-4-2 ADDRESS SETTING	
		Indoor unit			
		Outdoor unit			
		Remote controller			
	Others	Outdoor unit capacity	Check current setting. If the setting is wrong, set the DIP SW as per specifications. (For outdoor unit)	DESIGN&TECHNICAL DATA 6-6-2 SWITCH FUNCTION	
		Number of slave unit	Check current setting. If the setting is wrong, set the DIP SW as per specifications. (For outdoor unit) (Only for master unit)		
		Pipe length	Check current setting. If the setting is wrong, set the DIP SW as per specifications. (For outdoor unit) (Only for master unit)		
		Refrigerant type	Check current setting. If the setting is wrong, set the DIP SW as per specifications. (For indoor unit)	DESIGN&TECHNICAL DATA 6-6-2/6-6-6 SWITCH FUNCTION	
		Connected outdoor unit	Check current setting. If the setting is wrong, set the DIP SW as per specifications. (For indoor unit)		
		System distribution diagram	System distribution diagram (Piping distribution diagram, Wiring distribution diagram and Address distribution diagram) shall be always updated.		

1-2 TEST RUN METHOD

1-2-1 Procedure

Turn Power On

Procedure	Check item		check field
1. Turn on outdoor unit power		Supply power to the crankcase heater for 12 hours prior to the start of operation if the outdoor temperature is lower than 20℃	
		There are not instrument anomalies.	
		LED 1 lights. (For master unit & slave unit)	
2. Turn on indoor unit power		There are not instrument anomalies.	
		Blinking Operation indicator and Timer indicator alternately.	
		The middle of the screen displays "① "mark.(Simple Remote Controller)	
		The middle of the screen displays time.(Wired Remote Controller)	

Operation Check

Procedure	Check item		check field
・Operate all of the indoor units	The address reading check which uses the Service tool	Check the all of the indoor units and outdoor units on the Service tool	
	Abnormal noise and abnormal vibration	There are no abnormal noise or abnormal vibration.	
	Water drain	Check the indoor units for water leaks. Drain the water without accumulating.	
	Check intake and exhaust air temperatures	Intake - exhaust air temperature differential is 10℃ and over (Cooling), 15℃ and over. (Heating).	
・Operate one indoor unit	Fan rotation	Check the operation in each fan mode.	
	Abnormal noise and abnormal vibration	There are no abnormal noise or abnormal vibration.	
	Water drain	Check the indoor units for water leaks. Drain the water without accumulating.	
	Check intake and exhaust air temperatures	Intake - exhaust air temperature differential is 10℃ and over (Cooling), 15℃ and over. (Heating).	
・Operate the outdoor unit	Compressor operation	The compressor operates. (Check by noise of operation and blink of LED3.) Run the indoor units one at a time, and make sure that the corresponding outdoor units also run.	
	Fan rotation	Check the operation in each fan mode.	
	Abnormal noise and abnormal vibration	There are no abnormal noise or abnormal vibration.	
	Check high pressure and low pressure	Cooling : low pressure 0.8 Mpa (approx.) Heating : high pressure 3.0 Mpa (approx.)	
	Check discharge pipe temperature	Below 120℃	
	Check suction pipe temperature		
・Remote controller	Operate the remote controller	Operation by remote control can be performed by each remote controller. (Simple RC, Wired RC and Wireless RC)	

1-2-2 Test Run From Outdoor PC Board

All the indoor units connected to the outdoor unit can be test-operated by DIP switch setting. (Only for master unit)

SW1-1	SW1-2	Test Run	Remarks
OFF	OFF	Normal operation	SW1-1/SW1-2:OFF/ON or ON/OFF→OFF/OFF
ON	OFF	Cooling test run	SW1-1/SW1-2:OFF/OFF or ON/ON→ON/OFF
OFF	ON	Heating test run	SW1-1/SW1-2:OFF/OFF or ON/ON→OFF/ON
ON	ON	Normal operation	SW1-1/SW1-2:OFF/ON or ON/OFF→ON/ON

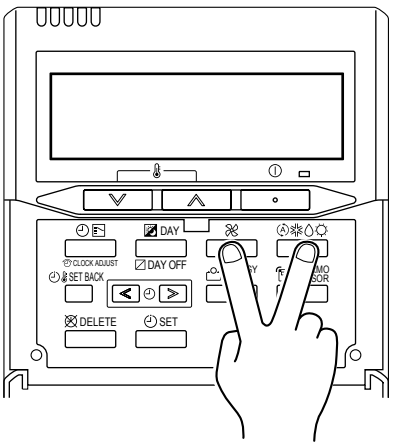
1-2-3 Test Run From Remote Controller

1. Standard wired remote controller

Stop the indoor unit. Push the ✻ button and
Ⓐ❄💧☼ button simultaneously for more than two seconds.
The air conditioner will start to conduct a test run and "**a i**" will display on the remote controller display.
However, the ⩒, ⩓ setting button does not have function, but all other buttons, displays, and protection functions will operate.

- Perform the test operation for 60 minutes.
- To stop test run, push the ⏻ button of the standard wired remote controller.
- For the operation method, refer to the operating manual and perform operation check.
- Check that there are no abnormal sounds or vibration sounds during test run operation.

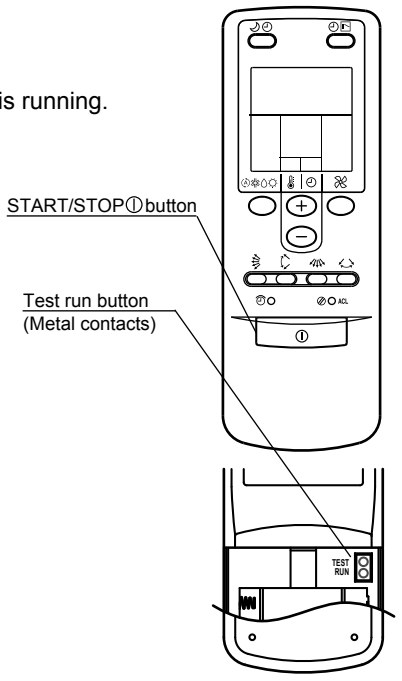
UTB-YUB / GUB / TUB



2. Standard wireless remote controller

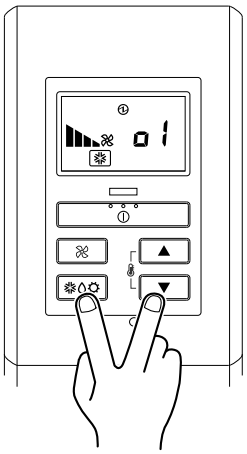
- Short two metal contacts under the battery compartment lid, while the air conditioner is running.
- To stop test run operation, push ⏻ button of the wireless remote controller.
  When the air conditioner is being test run, the OPERATION and TIMER lamps of indoor unit flash slowly at the same time.

UTB - YVB / GVB



3. Simple remote controller

UTB-YPB / GPB / TPB

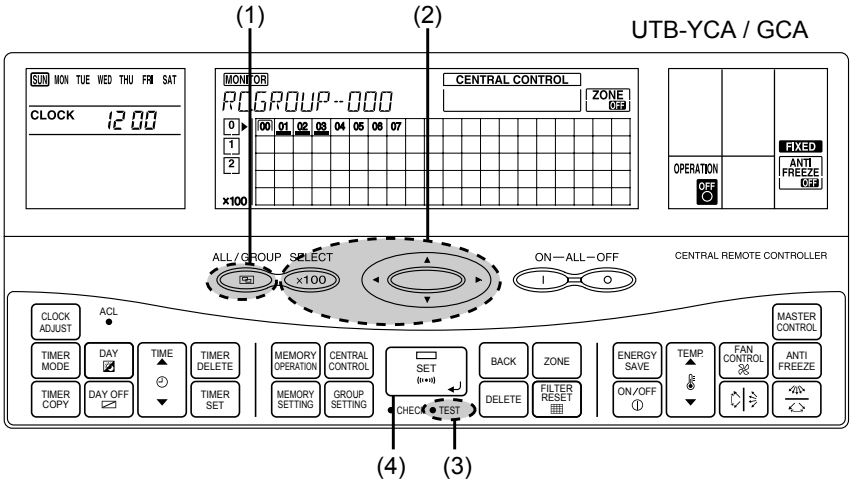


Stop the indoor and outdoor units. Push the remote controller ▼ button and ❄☼ button simultaneously for more than three seconds. The air conditioner will start to conduct a test run and **a 1** will display on the temperature display.
However the ▲ ▼ setting button does not have function but all other buttons, displays and protection functions will operate.

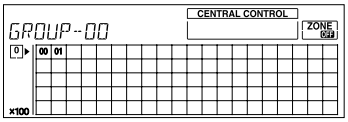
- To stop test running press the ON/OFF button of the simple remote controller.
- For the operation method refer to the operating manual and perform operation check.
- Check that there are no abnormal sounds or vibration sounds during test run operation.

4. Central remote controller

UTB-YCA / GCA



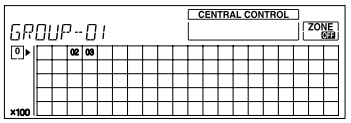
(1) Push ALL / GROUP to select control mode from among Individual control mode / Group control mode / All control.



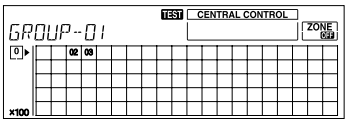
(2) When Individual control mode is selected, use SELECT ×100 and ▲▼ to select the desired central control number, then go to (3).

When Group control mode is selected use ◀▶ to select the desired group number, then go to (3).

When All control mode is selected, go directly to (3).

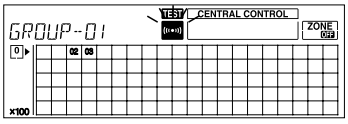


(3) Press ● TEST and **TEST** will light up. The operation setting is applied to the selected units.



(4) Press SET to send the signal and test run setting is sent to the indoor unit.

((●)) will flash as the signal is being transmitted.

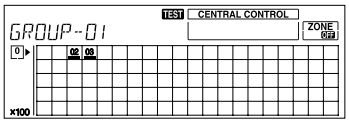


60 minutes' test run starts.

To stop the test run, do the operation shown in (3) above and press ON/OFF.

It is possible to change the settings for the operation mode (heating / cooling) and fan setting.

OPERATION OFF will come on, then do the operation shown in (4). Test run will stop.



1-3 TEST RUN CONTROL

1. When the test run signal is transmitted from standard wired, wireless remote controller, simple remote controller and central remote controller.

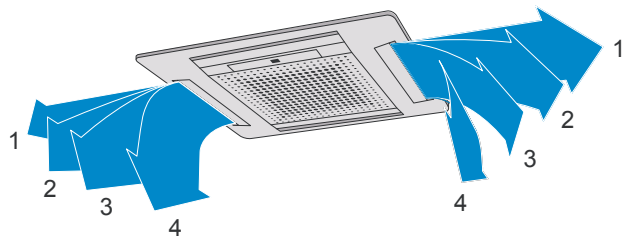
(1) The test run operation starts and the electric expansion valve is controlled to a maximum flow, regardless of the temperature condition.
(2) Frost prevention operation has priority over item(1).
(3) After 60 minutes passes, the test run stops.

2. When the test run signal is transmitted from the outdoor unit.

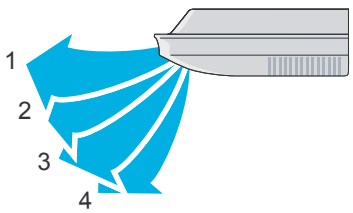
(1) Whether state of the indoor unit operates or stops, All units in the same refrigerant system will start to conduct a test run in accordance with the operation mode set by DIP SW 1-1 and SW 1-2 of outdoor unit (see 1 - 2 - 2).
(2) Test running initialization is shown below.

Operating Mode	EXCEPT FOR THE DUCT MODEL		DUCT TYPE	
	Cooling	Heating	Cooling	Heating
Fan speed	Hi	Hi	Hi	Hi
Room Temperature Indication	18	30	18	30
Vertical Air Direction Panel	Position ①	Position ④	————	————
Swing	OFF	OFF	————	————

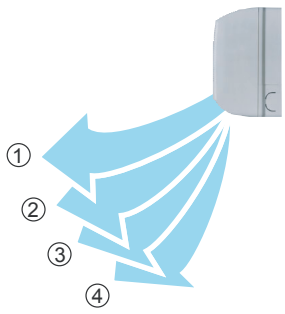
***ENSAMPLE**



■ **COMPACT CASSETTE TYPE**



■ **CEILING TYPE**



■ **COMPACT WALL MOUNTED TYPE**

Refrigerant R410A
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V SERIES

2 . FUNCTION OF PRINTED CIRCUIT BOARD

2. FUNCTION OF PRINTED CIRCUIT BOARD

2-1 PCB LAYOUTS

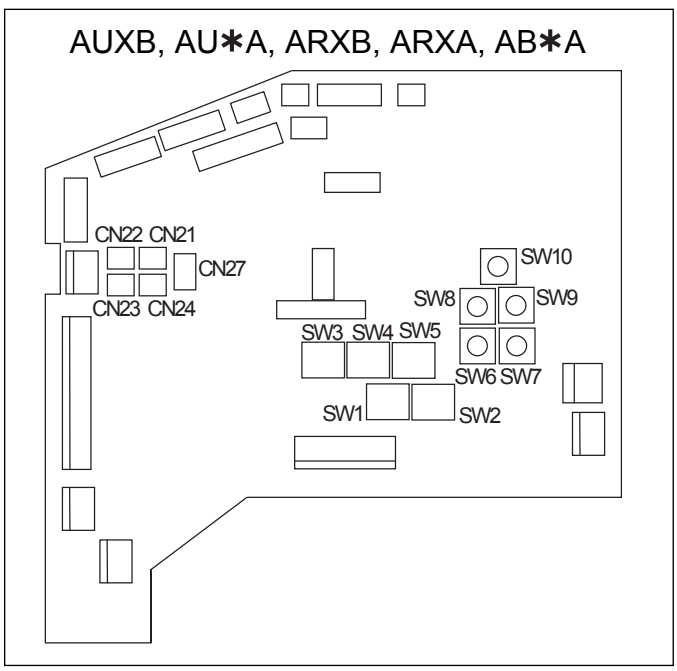
2-1-1 Indoor Unit Control Circuit Board

■MODELS : AUXB, AU∗A, AR∗B07-18, ARXB, ARXA, ARXC, AB∗A, AS∗A18-30, AW∗A

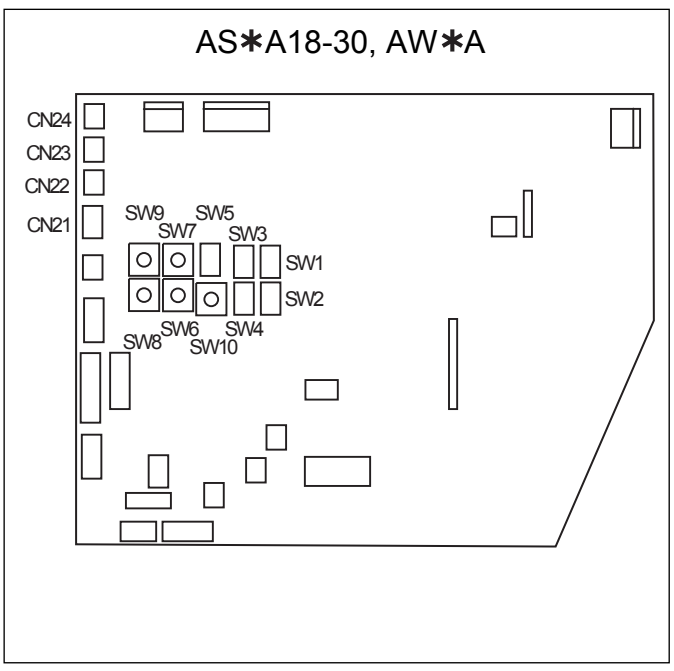
DIP-SW	SW 1	1	Forbidden
		2	Forbidden
		3	Room temp correct coefficient of heating 1
		4	Room temp correct coefficient of heating 2
	SW 2	1	Room temp correct coefficient of cooling
		2	Forbidden
		3	Refrigerant type
		4	Auto restart validity / invalidity
	SW 3	1	Forbidden (Indoor unit fan speed switch 1)
		2	Forbidden (Indoor unit fan speed switch 2)
		3	Forbidden (Indoor unit fan speed switch 3)
		4	External input select edge / pulse
	SW 4	1	Forbidden (Indoor unit model code)
		2	Forbidden (Indoor unit model code)
		3	Forbidden (Indoor unit model code)
		4	Forbidden (Indoor unit model code)
	SW 5	1	Wireless remote controller custom code switch 1
		2	Wireless remote controller custom code switch 2
		3	Outdoor unit series setting
		4	Draft prevention setting switch
Rotary SW	SW 6		Indoor unit address switch 1
	SW 7		Indoor unit address switch 2
	SW 8		Refrigerant circuit address switch 1
	SW 9		Refrigerant circuit address switch 2
	SW 10		Remote controller address switch

■SWITCH POSITION

AUXB, AU∗A, ARXB, ARXA, AB∗A



AS∗A18-30, AW∗A



2.COMPACT WALL MOUNTED TYPE

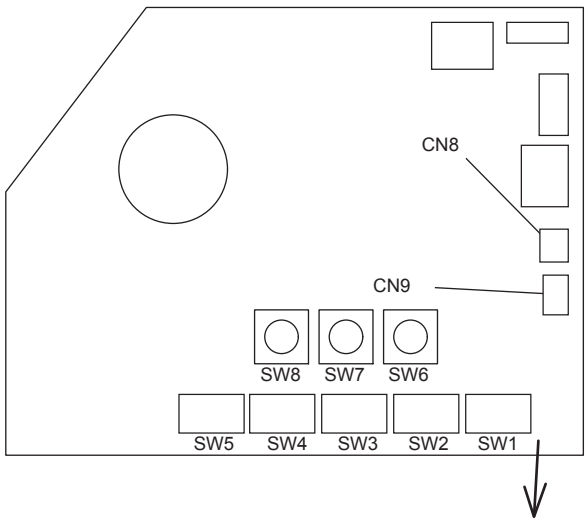
■ MODELS : AS∗E07-14

DIP SW	SW 1	1	Forbidden (Indoor unit fan speed switch 1)
		2	Forbidden (Indoor unit fan speed switch 2)
		3	Forbidden
		4	External input select edge / pulse
	SW 2	1	Forbidden (Indoor unit model code)
		2	Forbidden (Indoor unit model code)
		3	Forbidden
		4	Auto restart validity / invalidity
	SW 3	1	Wireless remote controller custom code switch 1
		2	Wireless remote controller custom code switch 2
		3	Outdoor unit series setting
		4	Refrigerant type
	SW 4	1	Indoor unit address switch 2
		2	Indoor unit address switch 3
		3	Forbidden
		4	Forbidden
	SW 5	1	Refrigerant circuit address switch 2
		2	Refrigerant circuit address switch 3
		3	Refrigerant circuit address switch 4
		4	Forbidden
Rotary SW	SW 6		Indoor unit address switch 1
	SW 7		Refrigerant circuit address switch 1
	SW 8		Remote controller address switch

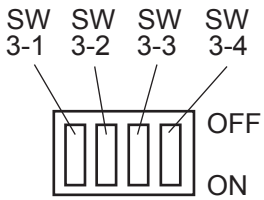
■ SWITCH POSITION

Compact wall mounted type indoor unit control circuit board

Controller PCB



DIP SWITCH (SW1~5)
Example : SW3

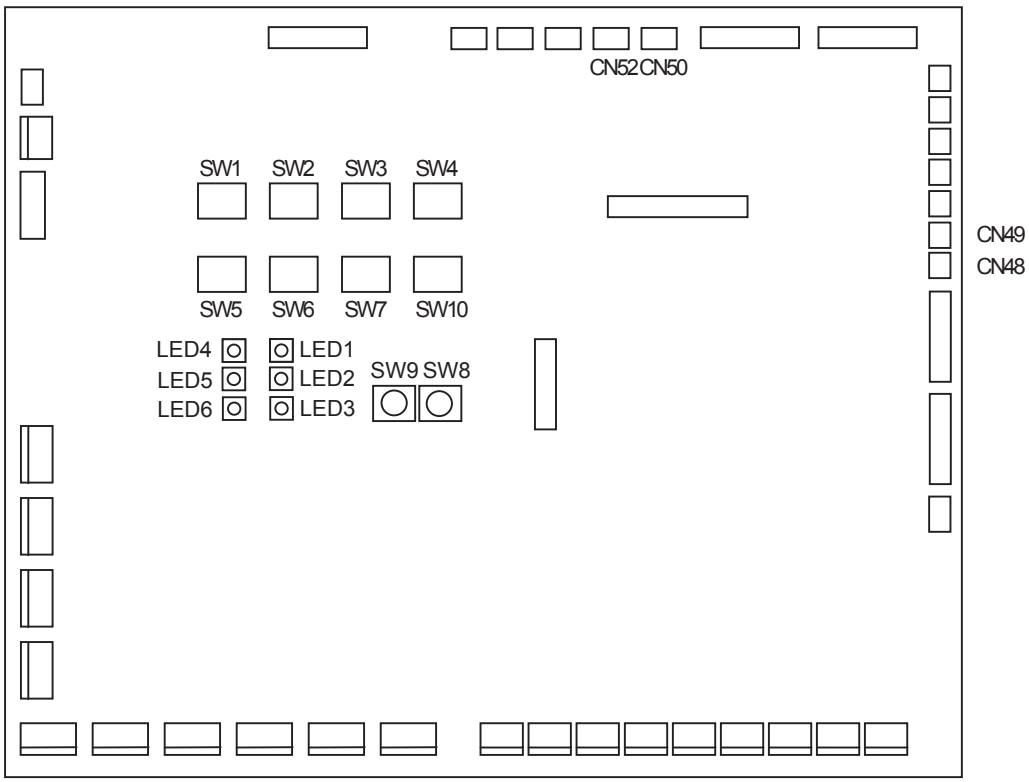


2-1-2 Outdoor Unit Control Circuit Board

DIP SW	SW 1	1	Test run (Cooling)
		2	Test run (Heatling)
		3	Pump down operation
		4	Forbidden
	SW 2	1	Silent operation mode
		2	Snow falling protection fan mode
		3	Sequential start shift switch 1
		4	Sequential start shift switch 2
	SW 3	1	Outdoor unit capacity switch 1
		2	Outdoor unit capacity switch 2
		3	Outdoor unit address setting switch 1
		4	Outdoor unit address setting switch 2
	SW 4	1	Number of slave unit connection 1
		2	Number of slave unit connection 2
		3	Forbidden
		4	Error reset
	SW 5	1	Cooling capacity shift switch 1
		2	Cooling capacity shift switch 2
		3	Heating capacity shift switch 1
		4	Heating capacity shift switch 2
	SW 6	1	Pipe length switch 1
		2	Pipe length switch 2
		3	Forbidden
		4	Forbidden
	SW 7	1	System type switch 1
		2	Forbidden
		3	Forbidden
		4	Forbidden
	SW 10	1	Forbidden
		2	Forbidden
		3	Forbidden
		4	Forbidden
Rotary SW	SW 8		Refrigerant circuit address switch 1
	SW 9		Refrigerant circuit address switch 2

■SWITCH POSITION

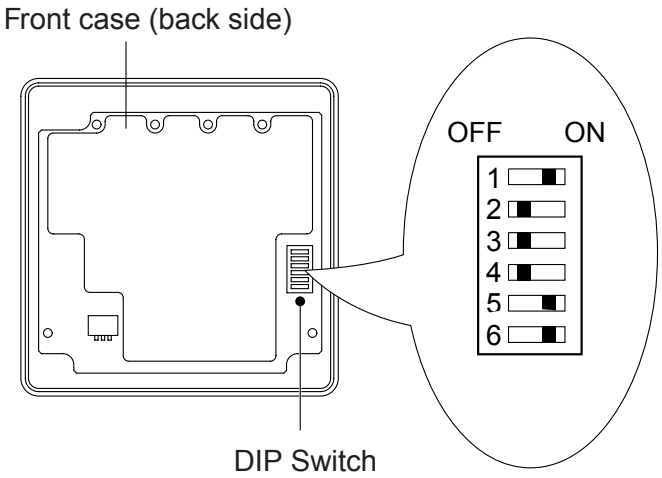
● Outdoor unit control circuit board



■SWITCH POSITION

• Wired remote controller

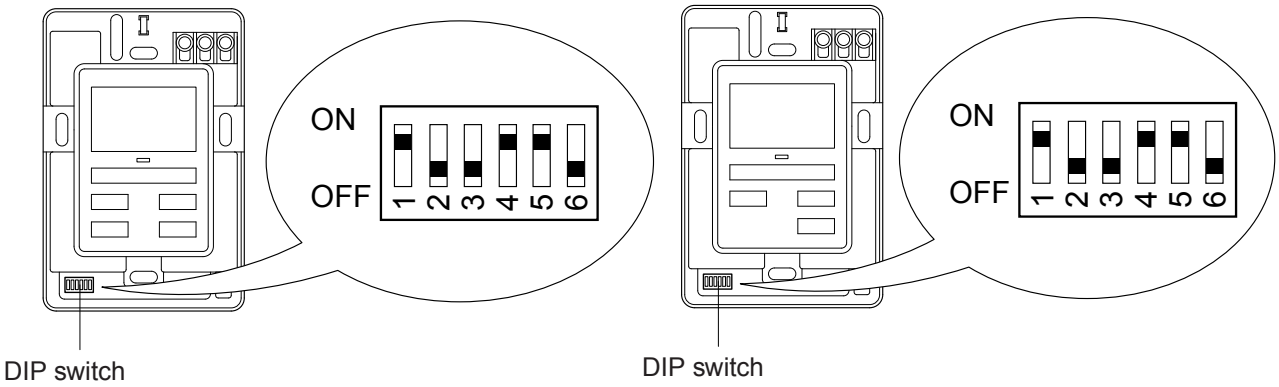
MODEL : UTB - ∗UB



• Simple remote controller

MODEL : UTB - ∗PB

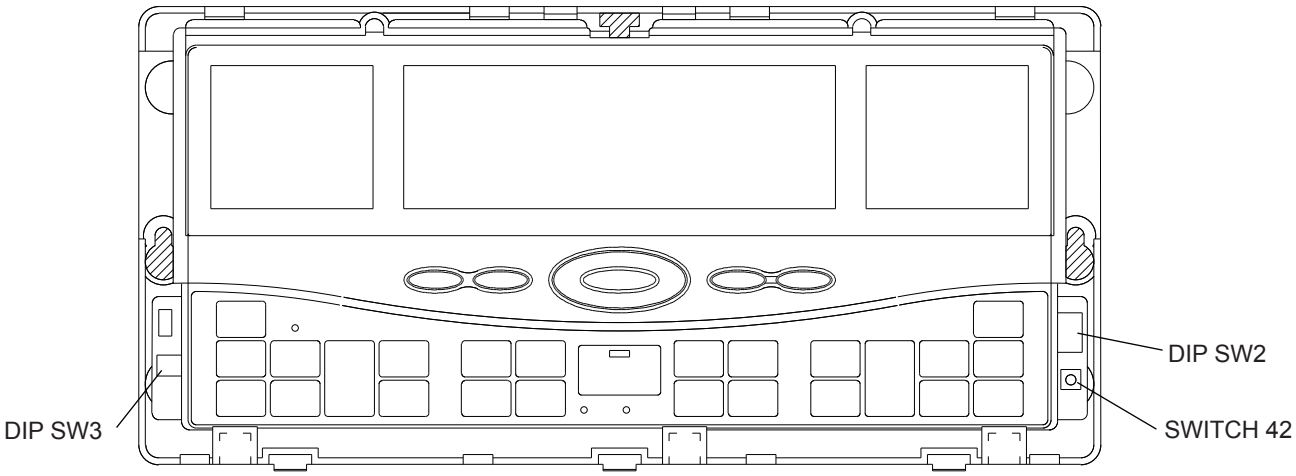
MODEL : UTB - ∗RA



Wired, simple remote controller		
DIP SW	1	Dual remote controller setting
	2	
	3	Group control setting
	4	Model setting
	5	Auto changeover setting
	6	Memory backup setting (Wired remote controller only)

2-1-4 Central Remote Controller Circuit Board

Central remote controller (UTB-YCA / UTB-GCA)



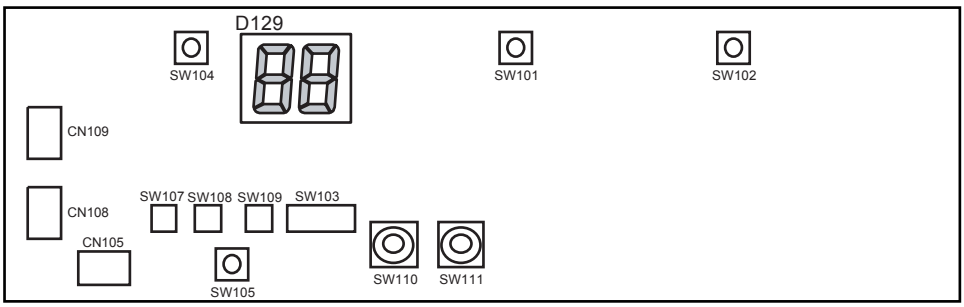
Central remote controller			
DIP SW	SW 2	1	External input validity / invalidity
		2	External input select edge / pulse
		3	Filter sign indication ON / OFF
		4	Temperature display °C / °F
		5	RC operation prohibit function validity/invalidity
		6	Forbidden
		7	Forbidden
		8	Memory backup setting ON / OFF
	SW 3	1	Forbidden
		2	Forbidden
		3	Forbidden
		4	Forbidden
	SW 42		Initial setting

2-1-5 Network Convertor Circuit Board

1. Network convertor (UTR-YRDA)

Network convertor (UTR-YRDA)			
DIP SW	SW 103	1	Indoor unit control method
		2	
		3	
		4	
		5	Number of connected indoor units
		6	
		7	
		8	
	SW 107	1	Forbidden
		2	Wired remote controller validity / invalidity
	SW 108	1	External input validity / invalidity
		2	External input select edge / pulse
	SW 109	1	Auto changeover validity / invalidity
		2	Auto restart validity / invalidity
Rotary SW	SW 110		Refrigeration circuit address 1
	SW 111		Refrigeration circuit address 2
Push SW	SW 104		Software reset

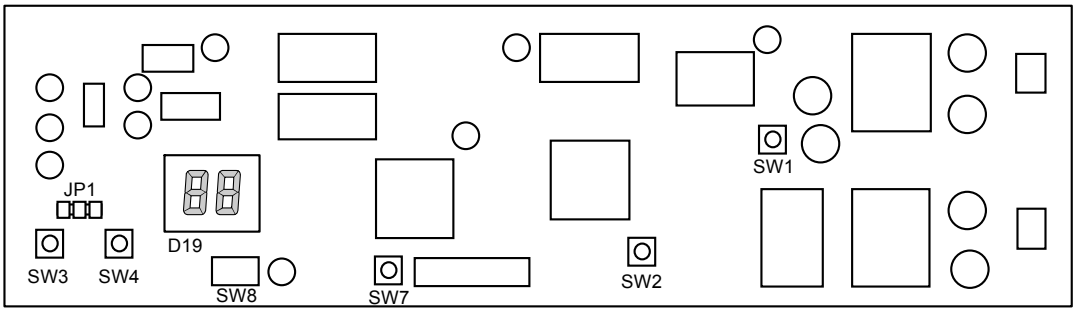
■ SWITCH POSITION



2. Network convertor (UTR-YLLA)

Item	Type	Details	
SW1	Push switch	Forbidden	
SW2	Push switch	Service pin	It is used for the commissioning.
SW3	Push switch	Forbidden	
SW4	Push switch	Set button	It is used for the initial setting.
SW7	Push switch	CPU reset	It is used for the initial setting. The CPU will be reset.
SW8	Push switch	Forbidden	
JP1	Jumper switch	Back up battery	It is used for the back up battery setting.
D19	LED	Forbidden	It is used to display the mode of the network convertor mode.

■ SWITCH POSITION

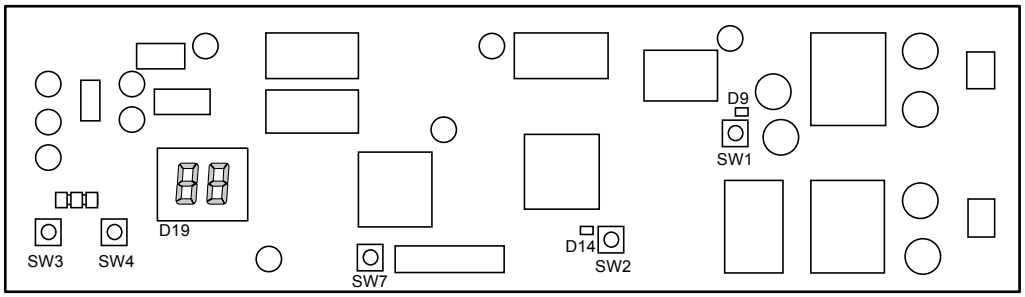


2-1-6 Signal Amplifier Circuit Board

Signal amplifier (UTR-YRPC)

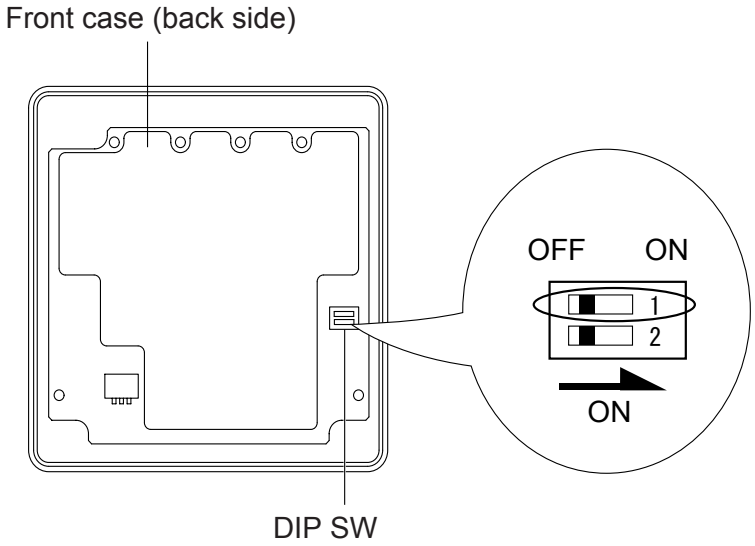
Item	Type	Details	
SW1	Push switch	Forbidden	
SW2	Push switch	Forbidden	
SW3	Push switch	Mode button	It is used for the initial setting.
SW4	Push switch	Set button	It is used for the initial setting.
SW7	Push switch	Reset button	It is used for the initial setting. The CPU will be reset.
D19	LED	Forbidden	It is used to display the mode of the signal amplifier.

■ SWITCH POSITION



2-1-7 Group Remote Controller Circuit Board

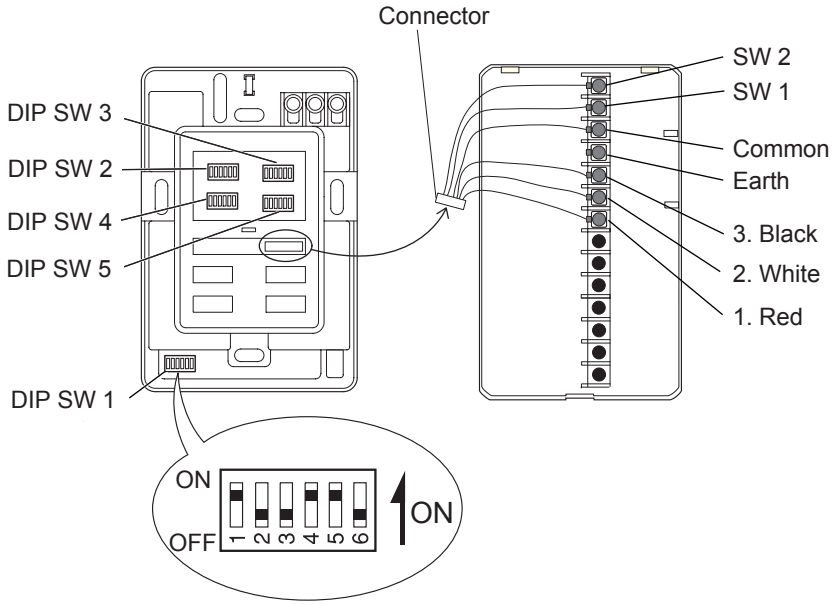
Group remote controller (UTB-YDA / GDA)



Group remote controller		
DIP SW	1	Memory backup setting
	2	Forbidden

2-1-8 External Switch Controller Circuit Board

External switch controller (UTR-YESA)



External switch controller			
DIP SW	SW 1	1	MODE setting
		2	
		3	Delay-time setting
		4	Special installation methods
		5	
		6	
	SW 2	1	Operation mode setting of parameter setting 1 (P1)
		2	
		3	
		4	
		5	
		6	
	SW 3	1	
		2	
		3	
		4	
		5	Setting contact input of SW1 at MODE 0
		6	Operation conditions :
	SW 4	1	Operation mode setting of parameter setting 2 (P2)
		2	
		3	
		4	
		5	
		6	
	SW 5	1	
		2	
		3	
		4	
		5	Setting contact input of SW2 at MODE 0
		6	Forbidden

2-2 MICROPROCESSOR FUNCTION LIST

2-2-1 Indoor Unit

INDOOR UNIT TYPE			Duct (compact) Silent	Duct Silent	Duct	High Pressure Duct		Cassette		Ceiling Floor	Ceiling
						36/45/60	90	Compact	Standard		
MODEL CODE	90						○				
	60					○					
	54								○		○
	45			○	○	○			○		○
	36			○	○	○			○		○
	30			○	○				○		○
	25 (24)			○ 25	○ 25				○ 25	○	
	20								○		
	18							○		○	
	14							○		○	
	12							○		○	
	9		○					○			
	7							○			
CN1	AC IN		○	○	○	○	○	○	○	○	○
CN2	TH. FUSE		—	—	—	—	—	○	○	—	—
CN3	FAN CAPA		○	○	○	—	—	○	○	○	○
CN4	FAN MOTOR		○	○	○	—	○	○	○	○	○
CN5	D. PUMP		○	○	○	○	○	○	○	○	○
CN6	S. VALVE		○	○	○	○	○	○	○	○	○
CN10	SP-M (U,D)		—	—	—	—	—	○	○	○	○
CN11	SP-M (R,L)		—	—	—	—	—	—	—	○	○
CN12	HEATER		○	○	○	○	○	○	○	○	○
CN13	DISPLAY		○	○	○	○	○	○	○	○	○
CN14	E.E.VALVE		○	○	○	○	○	○	○	○	○
CN15	FLOAT SW		○	○	○	○	○	○	○	○	○
CN16	MOTOR F. BACK		—	—	—	—	—	—	○	—	○
CN17	REMOCON		○	○	○	○	○	○	○	○	○
CN18	TEST		○	○	○	○	○	○	○	○	○
CN19	R. TH		○	○	○	○	○	○	○	○	○
CN20	P. TH		○	○	○	○	○	○	○	○	○
CN21	S. TH		—	—	—	—	—	—	—	—	—
CN22	EX. OUT1		○	○	○	○	○	○	○	○	○
CN23	EX. OUT2		○	○	○	○	○	○	○	○	○
CN24	EX. OUT3		○	○	○	○	○	○	○	○	○
CN25	FLASH		○	○	○	○	○	○	○	○	○
CN26	COMMUNICATION-PWB		○	○	○	○	○	○	○	○	○
CN27	EX. IN		○	○	○	○	○	○	○	○	○
CN101	NETWORK		○	○	○	○	○	○	○	○	○
CN201	COMMUNICATION		○	○	○	○	○	○	○	○	○
SW1	FUNCTION 1		○	○	○	○	○	○	○	○	○
SW2	FUNCTION 2		○	○	○	○	○	○	○	○	○
SW3	FUNCTION 3		○	○	○	○	○	○	○	○	○
SW4	FUNCTION 4		○	○	○	○	○	○	○	○	○
SW5	FUNCTION 5		○	○	○	○	○	○	○	○	○
SW6	INDOOR UNIT ADDRESS SWITCH 1		○	○	○	○	○	○	○	○	○
SW7	INDOOR UNIT ADDRESS SWITCH 2		○	○	○	○	○	○	○	○	○
SW8	REFRIGERATION CIRCUIT ADDRESS 1		○	○	○	○	○	○	○	○	○
SW9	REFRIGERATION CIRCUIT ADDRESS 2		○	○	○	○	○	○	○	○	○
SW10	REMOTE CONTROLLER ADDRESS		○	○	○	○	○	○	○	○	○

INDOOR UNIT TYPE			Ceiling Wall	Big Wall Mounted
MODEL CODE		90		
		60		
		54		
		45		
		36		
		30	○	○
		25 (24)	○	○
		20		
		18	○	○
		14	○	
		12	○	
		9	○	
		7	○	
	CN1	TH. FUSE	○	○
	CN2	FAN MOTOR	—	○
	CN3	FAN MOTOR	○	—
	CN4	D. PUMP	○	○
	CN5	S. VALVE	○	○
	CN6	DIFFUSER/SP (U,D)	○	○
	CN7	SP-M (R/L)	○	○
	CN8	DISPLAY-1	○	—
	CN9	DISPLAY-2	○	○
	CN10	F. BACK	—	—
	CN11	TEST	○	○
	CN12	E.E.VALVE	○	○
	CN13	REMOCON	○	○
	CN14	FLOAT. SW	○	○
	CN15	NETWORK	○	○
	CN16	R-TH	○	○
	CN17	P-TH	○	○
	CN18	S-TH	—	—
	CN19	FLASH	○	○
	CN20	HEATER	○	○
	CN21	EX. IN	○	○
	CN22	EX. OUT1	○	○
	CN23	EX. OUT2	○	○
	CN24	EX. OUT3	○	○
	CN25	COMMUNICATION-PWB	○	○
	CN26	COMMUNICATION	○	○
	SW1	FUNCTION 1	○	○
	SW2	FUNCTION 2	○	○
	SW3	FUNCTION 3	○	○
	SW4	FUNCTION 4	○	○
	SW5	FUNCTION 5	○	○
	SW6	INDOOR UNIT ADDRESS SWITCH 1	○	○
	SW7	INDOOR UNIT ADDRESS SWITCH 2	○	○
	SW8	REFRIGERATION CIRCUIT ADDRESS 1	○	○
	SW9	REFRIGERATION CIRCUIT ADDRESS 2	○	○
	SW10	REMOTE CONTROLLER ADDRESS	○	○

INDOOR UNIT TYPE			Compact Wall Mounted (E chassis)
MODEL CODE		14	○
		12	○
		9	○
		7	○
	CN1	FLASH_R/W	○
	CN2	TEST	○
	CN3	TH-FUSE	○
	CN4	SP-MOTOR	○
	CN5	DISPLAY	○
	CN6	FAN MOTOR	○
	CN7	REMOCON	○
	CN8	EX. OUTPUT	○
	CN9	EX. IN	○
	CN10	R-TH	○
	CN11	P-TH	○
	CN12	P-TH	○
	CN13	E .E .VALVE	○
	CN14	S. VALVE	○
	CN15	COMMUNICATION	○
	CN16	NETWORK	○
	CN17	COMMUNICATION-PWB	○
	CN18	(S-TH)	—
	SW1	FUNCTION 1	○
	SW2	FUNCTION 2	○
	SW3	FUNCTION 3	○
	SW4	INDOOR UNIT ADDRESS SWITCH 2, 3	○
	SW5	REFRIGERATION CIRCUIT ADDRESS 2 - 4	○
	SW6	INDOOR UNIT ADDRESS SWITCH 1	○
	SW7	REFRIGERATION CIRCUIT ADDRESS 1	○
	SW8	REMOTE CONTROLLER ADDRESS	○

2-2-2 Outdoor Unit

OUTDOOR UNIT TYPE		AJ□126LATF	AJ□A90/72LATF	AJ□126UATF	AJ□A90/72UATF
CN1	AC IN	○	○	○	○
CN2	NET	○	○	○	○
CN3	FAN.1	○	○	○	○
CN4	FAN.2	○	○	○	○
CN5	CRANK CASE HEATER 1	—	—	○	○
CN6	CRANK CASE HEATER 2	○	○	○	○
CN7	CRANK CASE HEATER 3	○	—	○	—
CN8	S.V.1	○	○	○	○
CN9	S.V.2	○	○	○	○
CN10	S.V.3	○	○	○	○
CN11	S.V.4	○	○	○	○
CN12	S.V.5	○	○	○	○
CN13	S.V.6	○	○	○	○
CN14	4WV	○	○	○	○
CN15	BASE HEATER	○	○	○	○
CN16	CRANK CASE HEATER (INVERTER)	○	○	—	—
CN17	S.V.7	○	○	○	○
CN18	S.V.8-1	—	—	○	○
	S.V.8-2	○	○	○	○
	S.V.8-3	○	—	○	—
CN19	TH.5	○	○	○	○
CN20	COMMUNICATION	○	○	○	○
CN22	TERMINATOR	○	○	—	—
CN24	S.V.8-1	○	○	—	—
	COMP.1	—	—	○	—
CN25	COMP.2	○	○	○	○
CN26	COMP.3	○	—	○	○
CN27	TH.1	○	○	○	—
CN28	FLASH R/W	○	○	○	○
CN29	E.E.V1	○	○	○	○
CN30	E.E.V2	○	○	○	○
CN31	INVERTER.1	○	○	—	—
CN32	INVERTER.2	○	○	—	—
CN33	P.SEN-H	○	○	○	○
CN34	P.SEN-L	○	○	○	○
CN35	CT1	○	○	—	—
CN36	CT2	—	—	—	—
CN38	TH. 2	○	○	○	○
CN45	TH. 3	○	○	○	○
CN46	TH. 4	○	○	○	○
CN48	EXT.OUTPUT 2	○	○	○	○
CN49	EXT.OUTPUT 1	○	○	○	○
CN50	EXT.INPUT 1	○	○	○	○
CN51	COMMUNICATION PWB	○	○	○	○
CN52	EXT.INPUT 2	○	○	○	○
SW 1	FUNCTION 1	○	○	○	○
SW 2	FUNCTION 2	○	○	○	○
SW 3	FUNCTION 3	○	○	○	○
SW 4	FUNCTION 4	○	○	○	○
SW 5	FUNCTION 5	○	○	○	○
SW 6	FUNCTION 6	○	○	○	○
SW 7	FUNCTION 7	○	○	○	○
SW 8	REFRIGERATION CIRCUIT ADDRESS 1	○	○	○	○
SW 9	REFRIGERATION CIRCUIT ADDRESS 2	○	○	○	○
SW10	FUNCTION 10	○	○	○	○

2-3 FUNCTION AND SETTING OF EACH SWITCH

2-3-1 Indoor Unit

● SW1 setting

✳ DIP-SW1-1, SW1-2 setting forbidden

◆	SW1-1	OFF
◆	SW1-2	OFF

✳ Room temperature correct coefficient of heating.

Set the heating correct coefficient value for setting temperature. Indoor unit will be continued to operate until reaching to "Set Temperature" + "Coeffecient value".
It takes effect for mounting the unit at higher position in order to correct the temperature difference between floor and ceiling side.

HEATING TEMPERATURE CORRECTION (◆ ▪ ▪ ▪Factory setting)

	SW1-3	SW1-4	Coefficient value
◆	OFF	OFF	+ 4 deg
	ON	OFF	+ 8 deg
	OFF	ON	0 deg
	ON	ON	- 2 deg

● SW2 setting

✳ Room temperature correct coefficient of cooling.

Set the cooling correct coefficient value for setting temperature. Indoor unit will be continued to operate until reaching to "Set Temperature" + "Coeffecient value".
It takes effect for mounting the unit on floor position in order to correct the temperature defference between human around and floor side.

COOLING TEMPERATURE CORRECTION (◆ ▪ ▪ ▪Factory setting)

	SW2-1	Coefficient value
◆	OFF	0 deg
	ON	+ 2 deg

✳ DIP-SW2-2 setting forbidden

◆	SW2-2	OFF

✳ Refrigerant type

Selecting refrigerant type

REFRIGERNT TYPE (◆ ▪ ▪ ▪Factory setting)

	SW2-3	Refrigerant type
◆	OFF	R410A / R22
	ON	R407C

✳ Auto restart validity / invalidity

Auto restart function can be selected by turning this switch ON / OFF.

AUTO RESTART SETTING (◆ ▪ ▪ ▪Factory setting)

	SW2-4	Auto restart
◆	OFF	Invalidity
	ON	Validity

● SW3 setting (Never change at the site)

Indoor unit fan speed switch

This switch can select fan speed corresponding to each model.

✳ Compact Cassette Type

	AUXB07	AUXB09	AUXB12	AUXB14	AUXB18
SW 3-1	OFF	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF	OFF

✳ Cassette Type

	AU*A20	AU*A25	AU*A30	AU*A36	AU*A45	AU*A54
SW 3-1	ON	OFF	OFF	OFF	ON	OFF
SW 3-2	ON	ON	OFF	ON	OFF	OFF
SW 3-3	ON	ON	ON	OFF	OFF	OFF

✳ Compact Duct Type

	ARQB07	ARQB09	ARQB12	ARQB14	ARQB18
SW 3-1	OFF	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF	OFF

✳ Duct Type , Low Static Pressure Duct type

	ARXB25 ARXA25	ARXB30 ARXA30	ARXB36 ARXA36	ARXB45 ARXA45
SW 3-1	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF

✳ High Static Pressure Duct type

	ARXC36	ARXC45	ARXC60	ARXC90
SW 3-1	OFF	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF	OFF

✳ Floor Ceiling Type

	AB*A12	AB*A14	AB*A18
SW 3-1	OFF	OFF	OFF
SW 3-2	OFF	OFF	OFF
SW 3-3	OFF	OFF	OFF

✳ Ceiling Type

	AB*A30	AB*A36	AB*A45	AB*A54
SW 3-1	OFF	OFF	OFF	OFF
SW 3-2	OFF	ON	OFF	ON
SW 3-3	OFF	OFF	ON	ON

✳ Wall mounted Type

	AS*A18	AS*A24	AS*A30
SW 3-1	OFF	OFF	ON
SW 3-2	OFF	ON	ON
SW 3-3	ON	ON	ON

✳ Ceiling Wall Type

	AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30
SW 3-1	OFF	ON	OFF	ON	OFF	OFF	ON
SW 3-2	OFF	OFF	ON	ON	OFF	ON	ON
SW 3-3	OFF	OFF	OFF	OFF	ON	ON	ON

✳External input select edge / pulse

This switch is used to select the format of external input command as shown in the table below.

(◆ ▪ ▪ ▪Factory setting)

	SW3-4	External input select
◆	OFF	Edge
	ON	Pulse

●SW4 setting (Never change at the site)

✳Indoor unit model code

This switch for changing the model code information of indoor unit PCB.

INDOOR UNIT MODEL CODE

	7	9	12	14	18	20	25(24)	30	36	45	54	60	90
SW 4-1	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF	ON	OFF
SW 4-2	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	ON	ON	OFF
SW 4-3	OFF	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON
SW 4-4	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	ON	ON

●SW5 setting

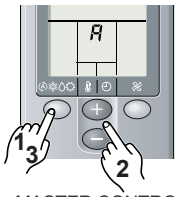
✳Wireless remote controller custom code switch

Decide the custom code and restrict the type of infrared control signal, in order to prevent mixing of multiple indoor unit signals.

Remote controller custom code switch

(◆ ▪ ▪ ▪Factory setting)

	SW5-1	SW5-2	Custom code
◆	OFF	OFF	Type A
	ON	OFF	Type B
	OFF	ON	Type C
	ON	ON	Type D



1. Press the MASTER CONTROL button for more than five seconds to start the code change.
2. Press the (+) or (-) button to select the desired code. → A → B → C → D
3. Press the MASTER CONTROL button again to end the code change.



Remote controller

✳Connected outdoor unit series

Selecting outdoor unit series.

(◆ ▪ ▪ ▪Factory setting)

	SW5-3	Outdoor unit series
◆	OFF	VRF V series
	ON	VRF S series

Set to ON for connecting S series outdoor unit.

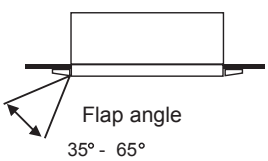
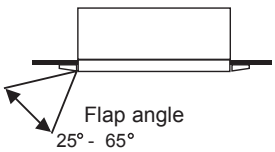
✳Draft prevention setting switch (only for cassette type)

Set the flap angle of cassette type unit.

Draft prevention switch

(◆ ▪ ▪ ▪Factory setting)

	SW5-4	flap angle
◆	OFF	Normal position
	ON	Draft prevention position

Normal position	Draft prevention position
	

An air flow direction, by moving the flap angle horizontally, It can prevent that a cold wind directly hits.

*If air conditioning cooling operation is performed in long time and a humid place, there is a possibility that waterdrop may hang down from a blow-off mouth.

■ROTARY SWITCH SETTING

● SW6,7 setting

✳ Indoor unit address switch

Sets the indoor unit addresses.
Please see "6-5-3 address setting" for type A indoor unit address conversion table.

INDOOR UNIT ADDRESS SWITCH (Factory setting SW 6: 0 SW 7: 0)

Rotary SW	Description	Remarks
6	Indoor unit address SW 1	Indoor unit address (the first digit)
7	Indoor unit address SW 2	Indoor unit address (the second digit)

● SW8,9 setting

✳ Refrigerant circuit address switch

Sets the refrigerant circuit address.
Please see "6-5-3 address setting" for type A refrigerant circuit address conversion table.

REFRIGERANT CIRCUIT ADDRESS SWITCH (Factory setting SW 8: 0 SW 9: 0)

Rotary SW	Description	Remarks
8	Refrigerant circuit address SW 1	Refrigerant circuit address (the first digit)
9	Refrigerant circuit address SW 2	Refrigerant circuit address (the second digit)

● SW10 setting

✳ Remote controller address switch

When the indoor unit is wired by remote controller group, to identity the indoor unit in the remote controller group, the number (remote controller address) in the remote controller group is set.
Set the remote controller address in the 0.1.2,~,15 order (Blank is not allowed)

REMOTE CONTROLLER ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
10	Remote controller address	Remote controller address

■EXTERNAL INPUT AND OUTPUT

Connector	Indoor unit type	Input	Output	Remarks
CN21	Wall mounted / Ceiling wall types	CONTROL INPUT (OPERATION / STOP)	——	See 2-4-1 for details
CN27	Other types			
CN22	All types	——	OPERATION DISPLAY (DC12V)	
CN23			ERROR DISPLAY (DC12V)	
CN24			INDOOR UNIT FAN STATUS DISPLY(DC12V)	

2-3-2 Indoor Unit (COMPACT WALL MOUNTED TYPE)

* *COMFORT MODEL*

● SW1 setting

✳ Fan speed setting switch (Never change at the site)

The fan speed corresponding to each model is set with the switch.

	AS*E07	AS*E09	AS*E12	AS*E14
SW1-1	OFF	ON	OFF	ON
SW1-2	OFF	OFF	ON	ON

DIP-SW 1-3 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW 1-3	OFF

✳ External input select edge / pulse

This switch is used to select the format of external input command as shown in the table below.

(◆ ▪ ▪ ▪Factory setting)

	SW1-4	External input select
◆	OFF	Edge
	ON	Pulse

● SW2 setting

✳ Model code setting switch (Never change at the site)

The model code information corresponding to each model is provided with the switch.

	AS*E07	AS*E09	AS*E12	AS*E14
SW2-1	OFF	ON	OFF	ON
SW2-2	OFF	OFF	ON	ON

DIP-SW 2-3 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW 2-3	OFF

✳ Auto restart validity / invalidity.

The auto restart function becomes validity by changing the switch position from OFF to ON.

AUTO RESTART SETTING (◆ ▪ ▪ ▪Factory setting)

	SW2-4	Auto restart
◆	OFF	Invalidity
	ON	Validity

● SW3 setting

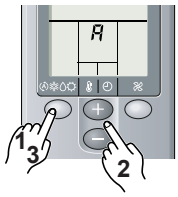
✳ Wireless remote controller custom code switch

Decide the custom code and restrict the type of infrared control signal, in c
mixing of multiple indoor unit signals.

Remote controller custom code switch

(◆ ▪ ▪ ▪Factory setting)

	SW3-1	SW3-2	Custom code
◆	OFF	OFF	Type A
	ON	OFF	Type B
	OFF	ON	Type C
	ON	ON	Type D



1. Press the MASTER CONTROL button for more than five seconds to start the code change.
2. Press the (+) or (-) button to select the desired code. → A → B → C → D →
3. Press the MASTER CONTROL button again to end the code change.



Remote controller

✳ Connected outdoor unit series

Selecting outdoor unit series.

(◆ ▪ ▪ ▪Factory setting)

	SW3-3	Outdoor unit series
◆	OFF	VRF V series
	ON	VRF S series

Set to for connecting Sseries outdoor unit.

✳ Refrigerant type

Selecting refrigerant type

REFRIGERNT TYPE (◆ ▪ ▪ ▪Factory setting)

	SW3-4	Refrigerant type
◆	OFF	R410A / R22
	ON	R407C

● SW4 setting

✳ Indoor unit address switch

By combined with Rotary SW6, the indoor unit address(0 - 63)can be set.
Please refer "6-5-3 ADDRESS SETTING (Type B)" for the indoor unit address conversion table.

(◆ ▪ ▪ ▪Factory setting)

		SW 4-1	SW 4-2	Remarks
◆	0-15	OFF	OFF	Set with rotary SW6
	16-31	ON	OFF	
	32-47	OFF	ON	
	48-63	ON	ON	

✳ DIP-SW 4-3 and 4-4 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW4-3	OFF
◆	SW4-4	OFF

● SW5 setting

✳ Refrigerant circuit address

By combined with Rotary SW7 ,the refrigerant circuit address (0-99) can be set.
Please refer "6-5-3 ADDRESS SETTING" for refrigerant address conversion table.

(◆ ▪ ▪ ▪Factory setting)

Refrigerant circuit address	SW5-1	SW5-2	SW5-3	Remarks
◆ 0 - 15	OFF	OFF	OFF	Set with Rotary SW7,
16 - 31	ON	OFF	OFF	
32 - 47	OFF	ON	OFF	
48 - 63	ON	ON	OFF	
64 - 79	OFF	OFF	ON	
80 - 95	ON	OFF	ON	
96 - 99	OFF	ON	ON	

✳ DIP SW 5-4 setting forbidden

Selecting outdoor unit series.

(◆ ▪ ▪ ▪Factory setting)

	SW 5-4	OFF
◆		

■ ROTARY SWITCH SETTING

● SW6 setting

✳ Indoor unit address switch

By combined with DIP switch 4-1 and 4-2,the indoor unit address(0 - 63)can be set.
Please refer "6-5-2 ADDRESS SETTING for type B" indoor unit address conversion table.

INDOOR UNIT ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
SW6	Indoor unit address SW	Set with DIP switch 4-1 and 4-2

● SW7 setting

✳ Refrigerant circuit address switch

By combined with DIP switch 5-1,5-2 and 5-3,the refrigerant circuit address(0 - 99)can be set.
Please refer "6-5-3 ADDRESS SETTING for type B" for the refrigerant circuit address conversion table.

REFRIGERANT CIRCUIT ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
SW7	Refrigerant circuit address SW	Set with DIP switch 5-1,5-2 and 5-3

● SW8 setting

✳ Remote controller address switch

When the indoor unit is wired by remote controller group, to identity the indoor unit in the remote controller group, the number (remote controller address) in the remote controller group is set.
Set the remote controller address in the 0.1.2,• • • ,15 order (Blank is not allowed)

REMOTE CONTROLLER ADDRESS SWITCH (Factory setting : 0)

Rotary SW	Description	Remarks
SW8	Remote controller address	Remote controller address

■ EXTERNAL INPUT AND OUTPUT

Connector	Input	Output	Remarks
CN10	CONTROL INPUT (OPERATION / STOP)	——	See 2-4-2 for details
CN11	——	OPERATION DISPLAY (DC12V)	

2-3-3 Outdoor Unit

■ DIP SWITCH SETTING

				Master unit	Slave unit
DIP SW	SW 1	1	Test run (Cooling)	○	—
		2	Test run (Heating) (For heat pump type)	○	—
		3	Pump down operation	○	—
		4	Forbidden	—	—
	SW 2	1	Silent operation mode	○	○
		2	Snow falling protection fan mode	○	○
		3	Sequential start shift switch 1	○	—
		4	Sequential start shift switch 2	○	—
	SW 3	1	Outdoor unit capacity switch 1	○	○
		2	Outdoor unit capacity switch 2	○	○
		3	Outdoor unit address switch 1	○	○
		4	Outdoor unit address switch 2	○	○
	SW 4	1	Number of slave unit	○	—
		2	Number of slave unit	○	—
		3	Forbidden	—	—
		4	Error reset	○	○
	SW 5	1	Cooling capacity shift switch 1	○	—
		2	Cooling capacity shift switch 2	○	—
		3	Heating capacity shift switch 1 (For heat pump type)	○	—
		4	Heating capacity shift switch 2 (For heat pump type)	○	—
	SW 6	1	Pipe length switch 1	○	—
		2	Pipe length switch 2	○	—
		3	Defrost temperature setting switch	○	○
		4	Forbidden	—	—
	SW 7	1	System type switch 1	○	○
		2	Forbidden	—	—
		3	Forbidden	—	—
		4	Forbidden	—	—
	SW 10	1	Forbidden	—	—
		2	Forbidden	—	—
		3	Forbidden	—	—
		4	Forbidden	—	—
Rotary SW	SW 8		Refrigeration circuit address 1	○	○
	SW 9		Refrigeration circuit address 2	○	○

"—" : DIP SW setting forbidden.

"○" : Check current setting.
If the setting is wrong, set the DIP SW as per specifications.

■ DIP SW SETTING

● SW1 setting

✳ Test run (cooling & Heating) (Only for master unit)

All the indoor units connected to the outdoor unit can be test-operated by DIP switch setting.

SELECTOR SWITCH FOR TEST RUN AND NORMAL OPERATION (◆ ▪ ▪ ▪Factory setting)

	SW1-1	SW1-2	Test Run	Remarks
◆	OFF	OFF	Normal operation	SW1-1/SW1-2:OFF/ON or ON/OFF→OFF/OFF
	ON	OFF	Cooling test run	SW1-1/SW1-2:OFF/OFF or ON/ON→ON/OFF
	OFF	ON	Heating test run	SW1-1/SW1-2:OFF/OFF or ON/ON→OFF/ON
	ON	ON	Normal operation	SW1-1/SW1-2:OFF/ON or ON/OFF→ON/ON

✳ Pump down operation (Only for master unit)

Pump down operation is set with SW1-3

PUMP DOWN OPERATION (◆ ▪ ▪ ▪Factory setting)

	SW1-3	Pump down operation	Remarks
◆	OFF	Release	ON →OFF
	ON	Operate	OFF→ON

✳ Dip SW 1-4 setting forbidden

◆	SW1-4	OFF

●SW2 setting

✳ Silent operation mode (Cooling mode only) (Setting for master and slave unit)

Sound level can be reduced using silent operation mode at cooling operation.
(when the outdoor temperature falls to 29℃, and the discharge pressure decreases to 3.0MPa or below.)

SILENT OPERATION MODE (◆ ▪ ▪ ▪Factory setting)

	SW 2-1	Silent operation mode	Remarks
◆	OFF	Release	ON →OFF
	ON	Oparate	OFF→ON

✳ Snow falling protection fan mode (Setting for master and slave unit)

When the outdoor temperature falls to 5 C, to prevent the unit from being covered with snow , the outdoor fan is periodically operated by this switch even when the compressor is stopped.

SNOW FALLING PROTECTION FAN MODE (◆ ▪ ▪ ▪Factory setting)

	SW2-2	Snow falling protection fan mode	Remarks
◆	OFF	Release	ON →OFF
	ON	Operate	OFF→ON

✳ Sequential start shift (Only for master unit)

The start-up timing of outdoor unit (compressor) can be set up so that it can delay several seconds.
(◆ ▪ ▪ ▪Factory setting)

	SW2-3	SW2-4	Sequential start shift timing
◆	OFF	OFF	Normal
	OFF	ON	21 sec. delay
	ON	OFF	42 sec. delay
	ON	ON	63 sec. delay

*This feature is useful when multiple number of outdoor units are installed and turned on at the same time to limit the starting current.

● SW3 setting

✳ Outdoor unit capacity switch (Setting for each unit. Never change at the site)

Set the Dip SW to correspond to the outdoor unit capacity.

(◆ - - - Factory setting)

	SW3-1	SW3-2	Capacity range
◆	OFF	OFF	8 HP
◆	OFF	ON	10 HP
◆	ON	OFF	14 HP
	ON	ON	Forbidden

✳ Outdoor unit address switch (Setting for each unit)

Set the Dip SW to correspond to the outdoor unit address.

(◆ - - - Factory setting)

	SW3-3	SW3-4	Address
◆	OFF	OFF	Master
◆	OFF	ON	Slave 1
	ON	OFF	Slave 2
	ON	ON	Forbidden

● SW4 setting

✳ Number of slave unit (Only for master unit)

Set the Dip SW to correspond to the number of slave unit.

(◆ - - - Factory setting)

	SW4-1	SW4-2	Number of slave unit
◆	OFF	OFF	0
	OFF	ON	1
	ON	OFF	2
	ON	ON	Forbidden

✳ Dip SW 4-3 setting forbidden

◆	SW4-3	OFF

✳ Error reset (Setting for master and slave unit)

In the event of compressor failure etc., error information is stored in PCB.
After repairing the parts and turn ON the power, set the DIP-SW for reset the error.
(Note : without above setting, error information can't be released and continue to Error display.)

SW4-4	Error reset
OFF→ON ON→OFF	Error reset

● SW5 setting

✳Cooling Capacity shift SW (Only for master unit)

This setting makes it possible to vary the outflow air temperature with in the range of about 2 degrees, by which 15% capacity increase and energy saving operation are realized.

COOLING CAPACITY SHIFT SW (◆ ▪ ▪ ▪ Factory setting)

	SW 5-1	SW 5-2	Capacity shift
◆	OFF	OFF	Normal mode
	OFF	ON	Save energy mode
	ON	OFF	High power mode 1
	ON	ON	High power mode 2

✳Heating Capacity Shift SW (Only for master unit)

HEATING CAPACITY SHIFT SW (◆ ▪ ▪ ▪ Factory setting)

	SW 5-3	SW 5-4	Capacity shift
◆	OFF	OFF	Normal mode
	OFF	ON	Save energy mode
	ON	OFF	High power mode 1
	ON	ON	High power mode 2

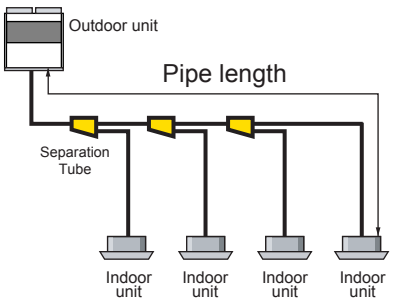
● SW6 setting

✳Pipe Length Setting SW (Only for master unit)

Set up SW6-1 and SW6-2 to match up with the pipe length as follows.

PIPING LENGTH SETTING SW (◆ ▪ ▪ ▪ Factory setting)

	SW6-1	SW6-2	Applicable piping length	Remarks: Pipe Length(m)
◆	OFF	OFF	Standard	40<Pipe Length≦80
	OFF	ON	Short	Pipe Length≦40
	ON	OFF	Medium	80<Pipe Length≦120
	ON	ON	Long	120<Pipe Length≦150



Pipe length:
Between the master outdoor unit and the farthest indoor unit

✳Dip SW 6-3, SW6-4 setting forbidden

◆	SW6-3	OFF
◆	SW6-4	OFF

● SW7 setting

✳System type of the outdoor unit (Setting for master and slave unit)

The system type of the outdoor unit can be selected by setting up SW7-1 and SW7-2 as follows.

OUTDOOR UNIT SYSTEM TYPE SELECTION (◆ ▪ ▪ ▪ Factory setting)

	SW7-1	System type
◆	OFF	Heat pump
	ON	Cooling only

✳Setting up connecting capacity of indoor units

Set up this switch at ON, if the total capacity of connecting indoor units is less than 80% of outdoor unit capacity.

SETTING UP CONNECTING CAPACITY OF INDOOR UNIT (◆ ▪ ▪ ▪ Factory setting)

	SW7-3	Indoor unit connecting capacity
◆	OFF	90% and over
	ON	90% less than

✳Dip SW 7-2, SW7-4 setting forbidden

◆	SW7-2	OFF
◆	SW7-4	OFF

● SW10 setting

✳ Dip SW 10-1, 10-2, 10-3, 10-4 setting forbidden

(◆ ▪ ▪ ▪ Factory setting)

◆	SW10-1	OFF
◆	SW10-2	OFF
◆	SW10-3	OFF
◆	SW10-4	OFF

■ROTARY SWITCH SETTING (setting for each unit)

● SW8,9 setting

✳ **Set the refrigerant circuit address**

See "6-5 system setting" for detail.

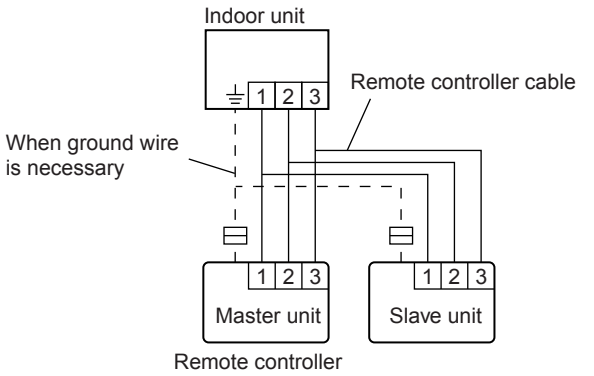
Rotary SW	Description	Remarks
8	Refrigerant circuit address 1	Refrigerant circuit address (the first digit)
9	Refrigerant circuit address 2	Refrigerant circuit address (the second digit)

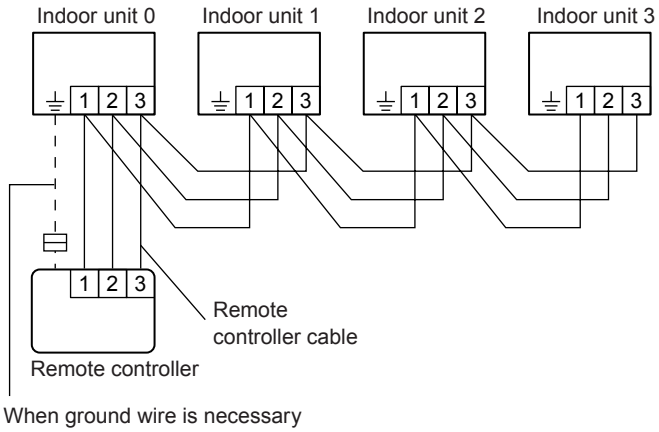
■EXTERNAL INPUT AND OUTPUT (only for master unit)

Connector	Input	Output	
CN48	————	Compressor ON Compressor OFF	DC12V 0V
CN49	————	Normal Error	0V DC12V
CN50	OFF:Remote controller priority ON :External Input priority	————	
CN52	Cool or Heat Select switch	————	

2-3-4 Wired, Simple Remote Controller

■ DIP SWITCH SETTING





● SW1 setting

✳ Dual remote controller setting

Set the remote controller DIP switch No.1 and 2 according to the following table.

(◆ ▪ ▪ ▪Factory setting)

	Number of remote controller	Master unit		Slave unit	
		DIP-SW No.1	DIP-SW No.2	DIP-SW No.1	DIP-SW No.2
◆	1 (Normal)	ON	OFF	—	—
	2 (Dual)	OFF	OFF	ON	ON

✳ Group control setting

Number of indoor unit connection (One/Multiple)
This is switched according to the number of connected indoor units.

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.3	Number of indoor unit
◆	OFF	One unit connection
	ON	Multiple unit connection

✳ Model setting

The system type of the outdoor unit can be selected by setting up DIP switch No.4 as follows.

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.4	Model
◆	OFF	Heat Pump model
	ON	Cooling only model

Do not forget to set to ON when system uses for cooling only.

✳ Auto changeover setting

Selecting auto changeover validity / invalidity.
Set to OFF for AIRSTAGE™ (VRF system) Heat Pump models.

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.5	Auto changeover
◆	OFF	Invalidity
	ON	Validity

✳ Memory backup setting (Wired remote controller only)

Set to ON to use batteries for thr memory backup.
If batteries are not used, all of the settings stored in memory will be deleted if there is a power failure.

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW No.6	Memory backup
◆	OFF	Invalidity
	ON	Validity

Never turn it ON in the case of simple remote controller.

2-3-5 Central Remote Controller

●SW2 SETTING

✳ External input validity / invalidity

For validity / invalidity the external input function.

(◆ ▪ ▪ ▪Factory setting)

	SW2-1	External input function
◆	OFF	Invalidity
	ON	Validity

✳ External input select edge / pulse

Select the external input command function.

(◆ ▪ ▪ ▪Factory setting)

	SW2-2	External input select
◆	OFF	Edge
	ON	Pulse

(Refer to 2-4-4 about external input & output)

✳ Filter sign indication ON / OFF

Filter check sign indication or not when filter check signal come from indoor unit.

(◆ ▪ ▪ ▪Factory setting)

	SW2-3	Filter check sign indication
◆	OFF	Non-Display
	ON	Display

✳ Temperature display℃ / ℉

Temperature display is centigrade(℃) / Fahrenheit(℉)

(◆ ▪ ▪ ▪Factory setting)

	SW2-4	Temperature display
◆	OFF	℃
	ON	℉

✳ RC operation prohibit function validity / invalidity

For validity / invalidity the wired ,simple and wireless remote controller operation prohibit function.

(◆ ▪ ▪ ▪ Factory setting)

	SW2-5	RC operation prohibit function
◆	OFF	Validity
	ON	Invalidity

✳ SW2-6 2-7 setting forbidden.

SW 2-6	OFF
SW 2-7	OFF

✳ Memory backup setting

When installing the central remote controller, this switch must be set to ON.
(factory setting : OFF)

(◆ ･ ･ ･ Factory setting)

	SW2-8	Memory backup setting
◆	OFF	OFF
	ON	ON

At the time of shipment, the battery is turned off to avoid electricity consumption.
Be sure to set this switch to ON.

✳ SW42 Initial setting button

This switch is used when initializing the central remote controller.

2-3-6 Network Convertor

■ Network convertor (UTR-YRDA)

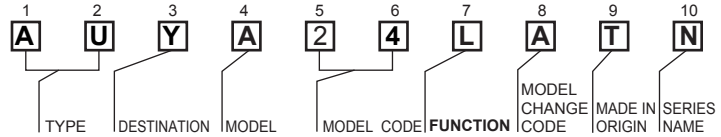
Compatible indoor unit

Table 1. Compatible indoor units

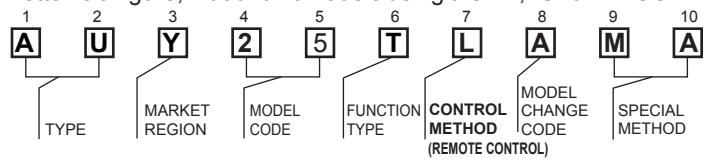
J-series		○
	Wireless RC model	×
Big multi	Simultaneous model	○
	Individual model	○
Single split type		○
	Wired RC model	○
	Wireless RC model	×
Window type		×

The following indoor unit models may be controlled from a network convertor. However, the indoor unit cannot be controlled if a wired remote controller cannot be connected to it.

1) When 4th letter is an alphabet, indoor unit models using the "N", "U" or "R" SERIES NAME.



2) When 4th letter is a figure, indoor unit models using the "L", "U" or "F" CONTROL METHOD.



- When connecting an indoor unit that has an "L" control method, connect the remote controller for VRF (UTB-*U*, UTB-*R* and UTB-*P*) to control from a wired remote controller. Do not connect the wired remote controller included with the indoor unit.
- As the network convertor is not compatible with "Flow direction setting" (except for wired remote controller), "Anti-freeze" , "Filter sign", "Set temperature 10-15℃ "(except for models using the "U" control method), "Room temperature detection location" (except for models using the "U" control method), "Model name display" , and "Electricity charge calculation", control and display are not possible with the controller units.
- When connecting the J-series heat pump model, the set operation conditions will be displayed on the control unit. Therefore, the indoor unit may enter the operation standby condition as described below.

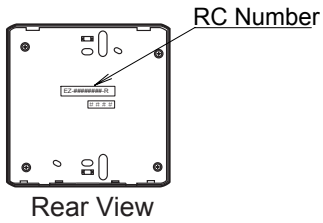
  Ex. 1) If FAN setting is selected from the control unit, the LED on the indoor unit will flash and the unit will enter the operation standby condition. Select another operation mode to clear the standby condition.

  Ex. 2) If an operation mode that is different from a currently operating indoor unit is selected from the control unit, the LED on the indoor unit will flash and the unit will enter the operation standby condition. Select the operation mode of the other indoor unit to clear the standby condition. In addition, if operation becomes possible, such as by stopping the other indoor units, the standby condition will be cleared and the indoor unit will automatically start operating with the selected mode.

1. DIP-SW 103 <1, 2, 3, 4> RC model or system type setting

① Indoor unit models using the "L" CONTROL METHOD

- Refer to in Compatible indoor unit for information about the control method.
- Set the remote controller model compatible with the number on the back of the wired remote controller packaged with the single model or big multi model as shown in the following Table.



RC number	RC model	DIP-SW103			
		1	2	3	4
EZ-099DHSE-R, EZ-000DHSE-R, EZ-0001HSE-R, EZ-000GHSE-R, EZ-00004HSE-R, EZ-00005HSE-R, EZ-0015HSE-R, EZ-0019HSE-R	Weekly timer and heat pump model	OFF	OFF	OFF	OFF
EZ-0994HSE-R ,EZ-000EHSE-R	Big multi and heat pump model	OFF	OFF	OFF	ON
EZ-09907WSE-R, EZ-000KHSE-R, EZ-09503HSE-R, EZ-0950DHSE-R	Program timer and heat pump model	OFF	OFF	ON	OFF
EZ-099CWSE-R, EZ-000AWSE-R, EZ-0001WSE-R, EZ-000FWSE-R, EZ-0012WSE-R	Weekly timer and cooling only model	ON	OFF	OFF	OFF
EZ-09906WSE-R,EZ-000BWSE-R	Big multi and cooling only model	ON	OFF	OFF	ON
EZ-09907WSE-R,EZ-095YWSE-R	Program timer and cooling only model	ON	OFF	ON	OFF
EZ-098VWSE-R		ON	ON	OFF	OFF

② Indoor unit models using the "U" or "F" control method or "N", "U" or "R" SERIES NAME

- Refer to 1) and 2) in "Compatible indoor units" for information about the CONTROL METHOD and SERIES NAME.
- Set the system type in accordance with Table to the right.

Outdoor unit System type	DIP-SW103			
	1	2	3	4
Heat pump model	OFF	ON	OFF	OFF
Cooling only model	ON	ON	OFF	ON

2. DIP- SW103 (5, 6, 7, 8) Setting the number of connected indoor units

Set the number of connected indoor units as shown in Table 4.

Table 4 Connected indoor units setting

(◆ ▪ ▪ ▪Factory setting)

	Number of connected Indoor unit	DIP-SW 103			
		5	6	7	8
◆	1	OFF	OFF	OFF	OFF
	2	OFF	OFF	OFF	ON
	3	OFF	OFF	ON	OFF
	4	OFF	OFF	ON	ON
	5	OFF	ON	OFF	OFF
	6	OFF	ON	OFF	ON
	7	OFF	ON	ON	OFF
	8	OFF	ON	ON	ON
	9	ON	OFF	OFF	OFF
	10	ON	OFF	OFF	ON
	11	ON	OFF	ON	OFF
	12	ON	OFF	ON	ON
	13	ON	ON	OFF	OFF
	14	ON	ON	OFF	ON
	15	ON	ON	ON	OFF
	16	ON	ON	ON	ON

3. DIP-SW 107 Setting

(1) DIP SW 107-1 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

◆	SW 107-1	OFF

(2) Wired RC validity / invalidity setting

Select the wired RC validity / invalidity

(◆ ▪ ▪ ▪Factory setting)

	SW 107-2	Wired RC
◆	OFF	Invalidity
	ON	validity

4. DIP-SW 108 setting

(1) External input validity / invalidity setting

Select the external input function validity / invalidity

(◆ ▪ ▪ ▪Factory setting)

	SW 108-1	External input function
◆	OFF	Invalidity
	ON	validity

(2) External input

Select the external input command type

(◆ ▪ ▪ ▪Factory setting)

	SW 108-2	External input
◆	OFF	Edge
	ON	Pulse

5. DIP-SW109 setting

(1) Auto changeover validity / invalidity setting

Select auto changeover function validity / invalidity
Set to OFF when connecting the duct model.
Set to OFF when connecting the J series.

(◆ ▪ ▪ ▪Factory setting)

	SW 109-1	Auto changeover function
◆	OFF	Invalidity
	ON	validity

(2) Auto restart validity / invalidity setting

Select auto restart function validity / invalidity

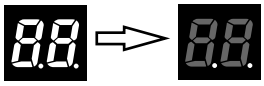
(◆ ▪ ▪ ▪Factory setting)

	SW 109-2	Auto restart function
◆	OFF	Invalidity
	ON	validity

2-3-7 Signal Amplifier

■ Signal Amplifier (UTR-YRPC)

1. Turn on the power for the signal amplifier.



2. While holding down the set button (SW4), press and release the reset button (SW7) to enter the address setting mode. The address setting mode is activated only if the set button is held down when the reset button is released.



Address setting mode

3. Press the set button (SW4) to display the current address. The address is set to A1 at the factory.



4. Press the mode button (SW3) to select the address*. The displayed address changes as follows each time the mode button is pressed.

A1 → A2 → A3 → A4 → A5
A8 ← A7 ← A6 ←

* If connecting multiple signal amplifiers, be sure to select a different address for each amplifier.
If the same address is used for different signal amplifiers, communication cannot occur.



Ex.) Address No. 5 is selected.

5. Press the set button (SW4) to set the selected address.



Ex.) Address No. 5 is set.

6. Turn the power off and on or press the reset button (SW7) to exit the address setting mode and return to the normal mode.
If an address setting error occurs ("𝒾" is displayed on the right side of the D19 LED display), the address will not be set. Perform address setting again.



Normal mode



Address setting error

2-3-8 Group Remote Controller

■ Group Remote Controller (UTB-YDA / GDA)

● SW1 setting

✳ Set SW1 to ON to enable the memory backup.

If there is a power failure when the memory backup is enabled, the setting stored in the memory will be saved.

(◆ . . . Factory setting)

	SW1	Memory backup
◆	OFF	Invalidity
	ON	Validity

● SW2 setting : Forbidden

(◆ . . . Factory setting)

	SW2	OFF
◆		

2-3-9 External Switch Controller

■ External Switch Controller (UTR-YESA)

1. DIP SW SETTING

(1) MODE setting.

Sets the mode.

(◆ ▪ ▪ ▪Factory setting)

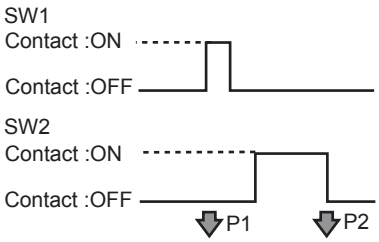
	SW1-1	SW1-2	MODE setting	Detail
◆	OFF	OFF	MODE 0	This MODE sets to P1 operation mode if SW1 has a contact input of DIP-SW3-5. This MODE sets to P2 operation mode if SW2 has a contact input of DIP-SW5-5.
	OFF	ON	MODE 1	This MODE sets to P1 operation mode if a contact of SW1 is switched ON ⇒ OFF. This MODE sets to P2 operation mode if a contact of SW1 is switched OFF⇒ON.
	ON	OFF	MODE 2	This MODE sets to P1 operation mode in 1 minute after stop operation if a contact of SW1 is switched ON ⇒OFF. This MODE sets to P2 operation mode in 1 minute after stop operation if a contact of SW1 is switched OFF ⇒ ON.
	ON	ON	No setting	

Example :

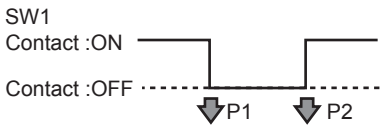
① MODE 0

DIP-SW3-5 : ON

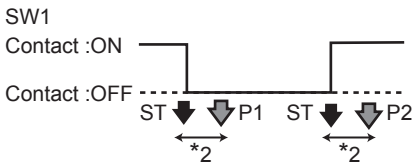
DIP-SW5-5 : OFF



② MODE 1



③ MODE 2



*1 : ST means “Stop operation”.

*2 : If the indoor unit is operated between ST and P1 or ST and P2, it may not be set at the operational status of P1 or P2.

(2) Delay-time setting

Set to ON for switching operation mode in 1 minute after contact.

(◆ ▪ ▪ ▪Factory setting)

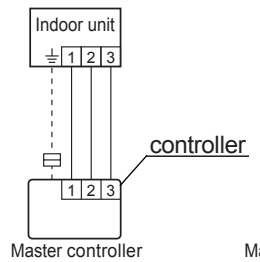
	SW1-3	Delay-time setting
◆	OFF	Instant (200msec)
	ON	Delay (1 min)

(3) External switch controller and remote controller, or dual external switch controllers setting

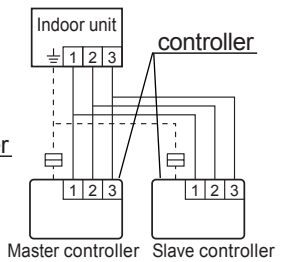
Set the external switch controller DIP switch No.1-4,1-5 according to the following table.

(◆ ▪ ▪ ▪Factory setting)

	Number of remote controllers	Master controller		Slave controller	
		DIP-SW1 No.4	DIP-SW1 No.5	DIP-SW1 No.4	DIP-SW1 No.5
◆	One controller	ON	OFF	—	—
	Two controllers	OFF	OFF	ON	ON



One controller



Two controllers

(4) Group control setting

Number of indoor unit connection (One/Multiple)

This is switched according to the number of connected indoor units.

(◆ ▪ ▪ ▪Factory setting)

	DIP-SW1 No.6	Number of indoor unit
◆	OFF	One unit connection
	ON	Multiple unit connection

(5) Operation mode setting

Operation mode setting of parameter setting 1(P1)

SW2-1	SW2-2	Operation
OFF	OFF	invalidity
OFF	ON	OFF
ON	OFF	ON
ON	ON	SET BACK *1

SW3-1	SW3-2	Operation mode
OFF	OFF	invalidity
OFF	ON	COOL *3
ON	OFF	HEAT *2*3
ON	ON	Not setting

SW3-3	SW3-4	Fan speed
OFF	OFF	invalidity
OFF	ON	HIGH *3
ON	OFF	MID *3
ON	ON	LOW *3

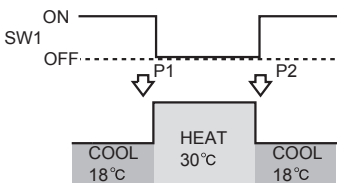
SW2-3	SW2-4	SW2-5	SW2-6	Set temperature
OFF	OFF	OFF	OFF	invalidity
OFF	OFF	OFF	ON	16℃ *2*3
OFF	OFF	ON	OFF	17℃ *2*3
OFF	OFF	ON	ON	18℃
OFF	ON	OFF	OFF	19℃
OFF	ON	OFF	ON	20℃
OFF	ON	ON	OFF	21℃
OFF	ON	ON	ON	22℃
ON	OFF	OFF	OFF	23℃
ON	OFF	OFF	ON	24℃
ON	OFF	ON	OFF	25℃
ON	OFF	ON	ON	26℃
ON	ON	OFF	OFF	27℃
ON	ON	OFF	ON	28℃
ON	ON	ON	OFF	29℃
ON	ON	ON	ON	30℃

*1 Setting of SETBACK turns back the operation state to that of before switching parameter setting. (Example on the right shows that the operation state is set back to before switching to P1 setting.)

*2 Do not set the operation mode “HEAT”, or the setting temperature “16°C” or “17°C” for COOLING ONLY MODEL. These settings do not function.

*3 Units cannot operate correctly under the settings shown below:
- Set the operation mode to “HEAT” and temperature to “16°C” or “17°C” during operation in Cooling priority.
- Set the operation mode to “COOL” during operation in Heating priority.
- Set the Fan speed during the operation mode “DRY”.

Ex. MODE 1, P2 is SETBACK.



(6) Contact input

Setting contact input of SW1 at MODE 0.

(◆ ▪ ▪ ▪Factory setting)

	SW3-5	Contact input of SW1
◆	OFF	ON ⇒ OFF
	ON	OFF ⇒ ON

(7) Operation conditions

Set to ON when switched to P1 or P2 setting by contact input only during indoor unit is in operation.

(◆ ▪ ▪ ▪Factory setting)

	SW3-6	Operation conditions
◆	OFF	No condition
	ON	Unit in operation only

(8) Operation mode setting

Operation mode setting of parameter setting 2(P2)

SW4-1	SW4-2	Operation
OFF	OFF	invalidity
OFF	ON	OFF
ON	OFF	ON
ON	ON	SET BACK *1

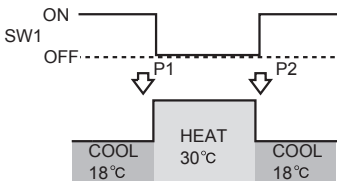
SW5-1	SW5-2	Operation mode
OFF	OFF	invalidity
OFF	ON	COOL *3
ON	OFF	HEAT *2*3
ON	ON	Not setting

SW5-3	SW5-4	Fan speed
OFF	OFF	invalidity
OFF	ON	HIGH *3
ON	OFF	MID *3
ON	ON	LOW *3

SW4-3	SW4-4	SW4-5	SW4-6	Set temperature
OFF	OFF	OFF	OFF	invalidity
OFF	OFF	OFF	ON	16℃ *2*3
OFF	OFF	ON	OFF	17℃ *2*3
OFF	OFF	ON	ON	18℃
OFF	ON	OFF	OFF	19℃
OFF	ON	OFF	ON	20℃
OFF	ON	ON	OFF	21℃
OFF	ON	ON	ON	22℃
ON	OFF	OFF	OFF	23℃
ON	OFF	OFF	ON	24℃
ON	OFF	ON	OFF	25℃
ON	OFF	ON	ON	26℃
ON	ON	OFF	OFF	27℃
ON	ON	OFF	ON	28℃
ON	ON	ON	OFF	29℃
ON	ON	ON	ON	30℃

*1 Setting of SETBACK turns back the operation state to that of before switching parameter setting. (Example on the right shows that the operation state is set back to before switching to P1 setting.)

Ex. MODE 1, P2 is SETBACK.



*2 Do not set the operation mode “HEAT”, or the setting temperature “16°C” or “17°C” for COOLING ONLY MODEL. These settings do not function.

*3 Units cannot operate correctly under the settings shown below:
- Set the operation mode to “HEAT” and temperature to “16°C” or “17°C” during operation in Cooling priority.
- Set the operation mode to “COOL” during operation in Heating priority.
- Set the Fan speed during the operation mode “DRY”.

(9) Contact input

Setting contact input of SW2 at MODE 0.

(◆ ▪ ▪ ▪Factory setting)

	SW5-5	Contact input of SW2
◆	OFF	ON ⇒ OFF
	ON	OFF ⇒ ON

(10) DIP SW5-6 setting forbidden

(◆ ▪ ▪ ▪Factory setting)

	SW5-6	ON
◆		

2-4 EXTERNAL INPUT & OUTPUT

2-4-1 Indoor Unit

1. Control input (Operation/Stop)

Indoor unit can be operated or stopped by using the connector CN27(RED) on indoor unit PCB.

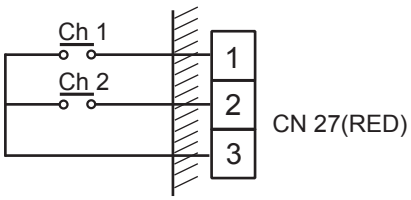
※ Resistance ≦ 500(ohm) (Switch : ON)
Resistance ≧ 100(Kilo-ohm) (Switch : OFF)
A twisted-pair cable(AWG22) should be used maximum length of cable is 25m.

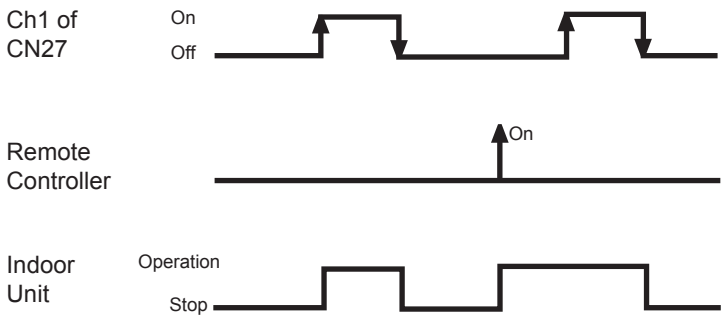
(1) Input select

Dip SW3-4	Input select
OFF	Edge
ON	Pulse

(2) In the case of "Edge" input

CONNECTOR	INPUT SIGNAL	COMMAND
Ch1 of CN27 (RED)	OFF ⟶ ON	Operation
	ON ⟶ OFF	Stop



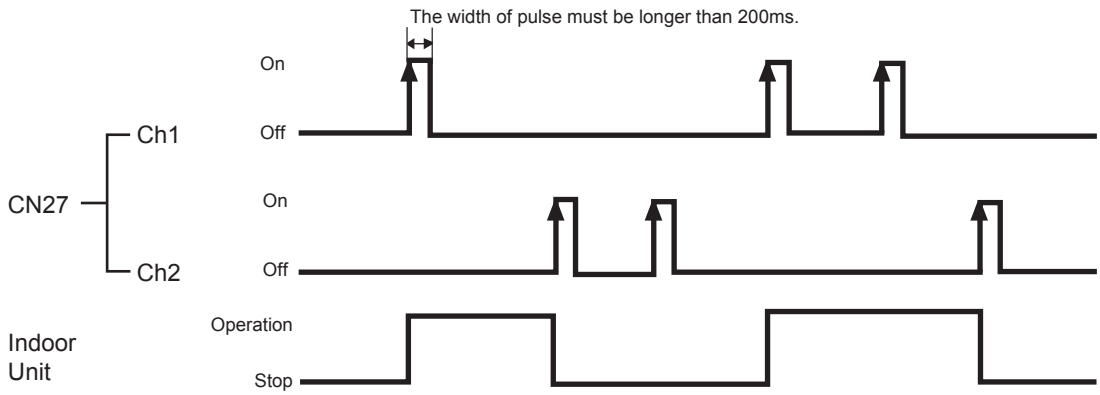


NOTE

1. The last command has priority.
2. The indoor units within the same remote controller group operates in the same mode.
3. The wire connection shall be separate from the power cable line.

(3) In the case of "pulse" input

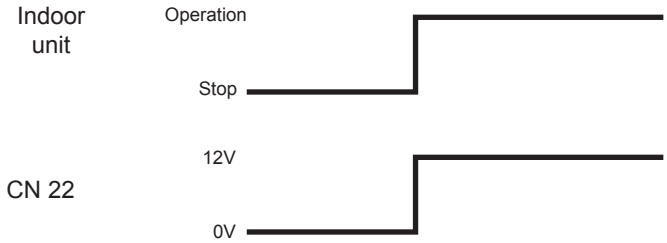
CONNECTOR		INPUT SIGNAL	COMMAND
CN27 (RED)	Ch1	OFF ⟶ ON	Operation
	Ch2	OFF ⟶ ON	Stop

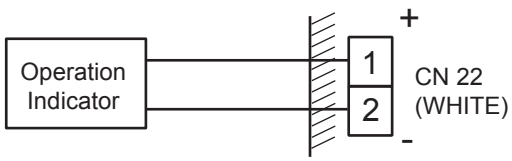


2. Output

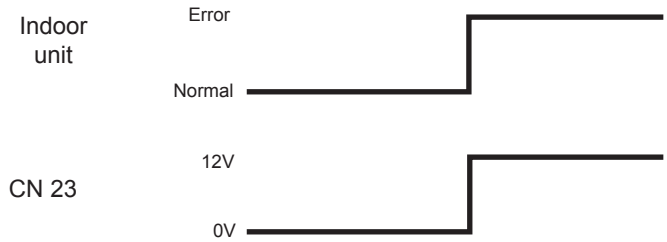
CONNECTOR	OUT VOLTAGE	STATUS
CN22	12V	Operation
	0V	Stop
CN23	12V	Error
	0V	Normal
CN24	12V	Fan run
	0V	Fan stop

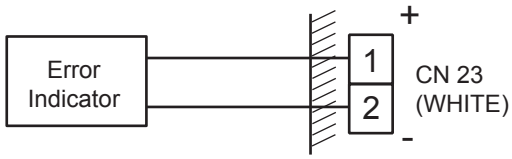
(1) Operation display



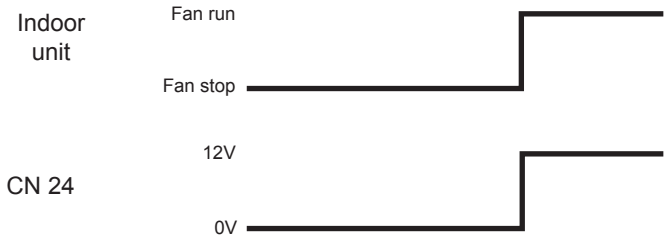


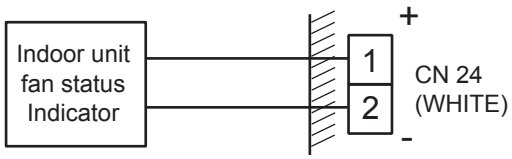
(2) Error display





(3) Inter locking output with indoor unit fan

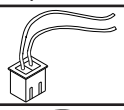
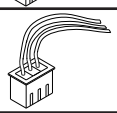




EX) Used for inter lock energize for exhaust fan.

3. Parts

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Usage	Name and shapes	Q'ty	Parts No.
For output port	EXTERNAL INPUT WIRE 	1	9368778002
For control input port	EXTERNAL INPUT WIRE 	1	9368779009

■ CONTROL INPUT (Operation / Stop)

Indoor unit can be operated or stopped by using the connector CN9 (RED) ON indoor unit PCB.

- Open circuit voltage : ≦ 5.25 (V).
- Short circuit current : ≦ 0.6 (mA).
- Short circuit detection resistance (R_{ON}) : ≦ 500 (ohm).
- Open circuit detection resistance (R_{OFF}) : ≧ 100 (kilo-ohm).

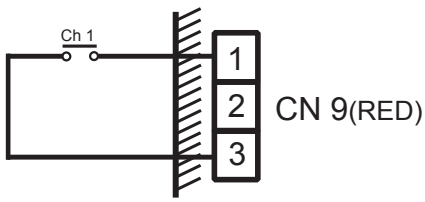
A twisted pair cable(22AWG) shoud be used. Maximum length of cable is 25m.

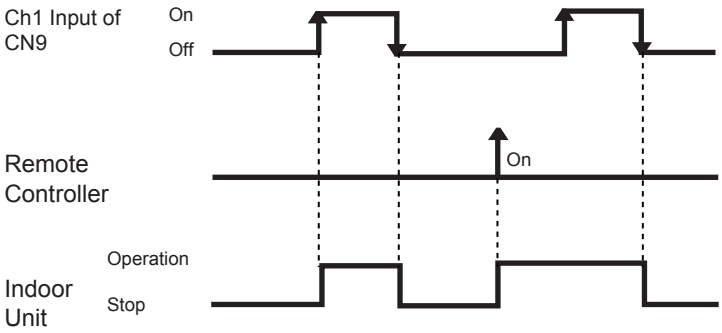
● Input select

Dip SW1-4	Input select
OFF	Edge
ON	Pulse

● In the case of "Edge" input

CONNECTOR	INPUT SIGNAL	COMMAND
CN9 (RED)	OFF ⟶ ON	Operation
	ON ⟶ OFF	Stop



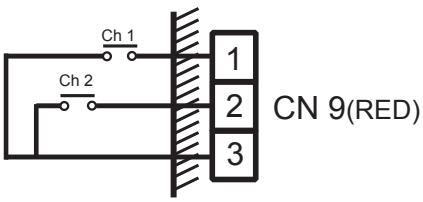


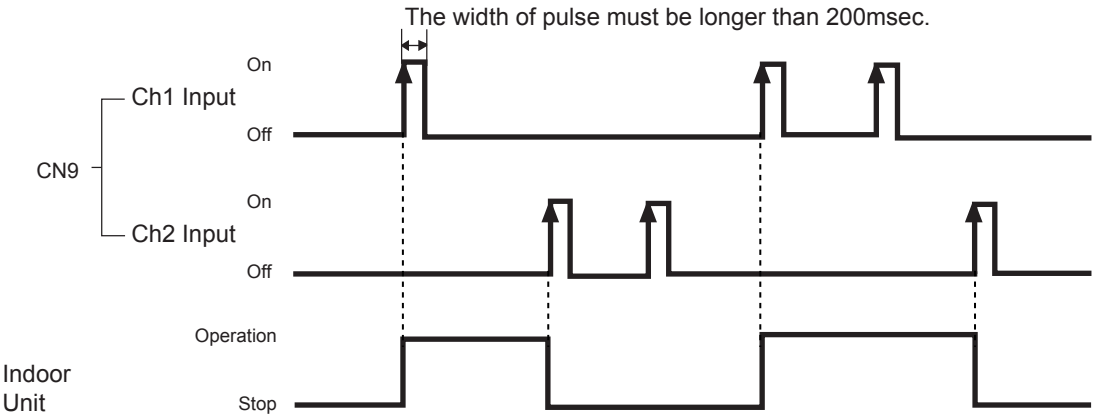
NOTE

1. The last command has priority.
2. The indoor units within the same remote controller group operates in the same mode.
3. The wire connection should be separate from the power cable line.

● In the case of "pulse" input

CONNECTOR		INPUT SIGNAL	COMMAND
CN9 (RED)	Ch1	OFF ⟶ ON	Operation
	Ch2	OFF ⟶ ON	Stop





■ OUTPUT

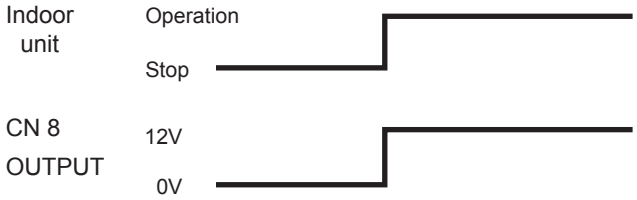
CONNECTOR	OUTPUT VOLTAGE	STATUS
CN8 (WHITE)	12V	Operation
	0V	Stop

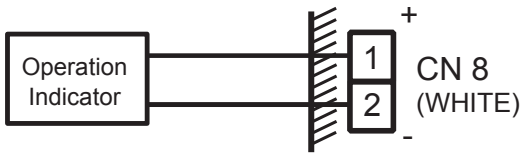
・Output voltage : Hi DC12V ± 2V
Lo 0V

・Permissible current : 15mA

● Operation display

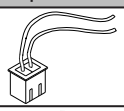
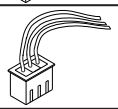
The output for CN8 is ON when the indoor unit is operating.
The output is off when the unit is stopped.



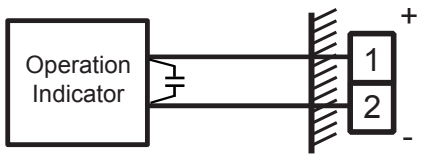


■ PARTS

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Usage	Name and shapes	Q'ty	Parts No.
For output port	EXTERNAL INPUT WIRE 	1	9368778002
For control input port	EXTERNAL INPUT WIRE 	1	9368779009

※ If the external indicator has malfunction, due to noise please insert a ceramic capacitor (0.1μF 25V or more) near the input port of the equipment.



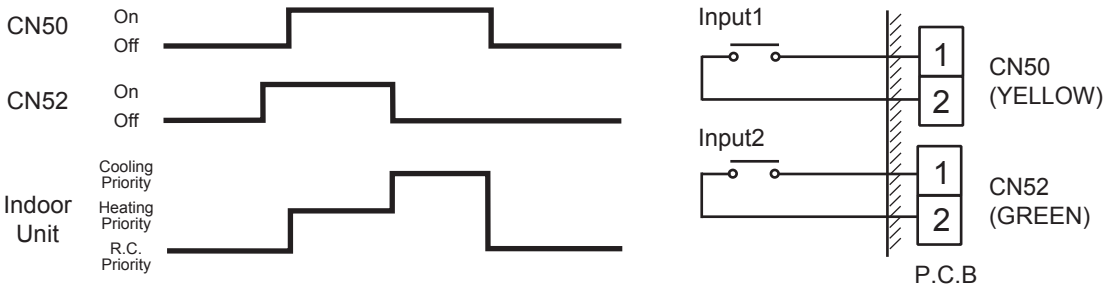
2-4-3 Outdoor Unit

1. Input

Heat and Cool switch (Heat pump and Master unit only)

"Cooling priority" or "Heating priority" can be selected by this input.

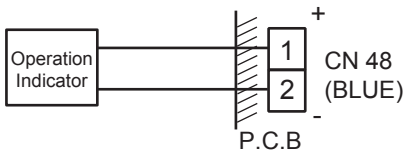
CONNECTOR	INPUT SIGNAL	STATUS	REMARKS
CN50 (YELLOW)	OFF	Remote Controller priority	
	ON	External input priority	
CN52 (GREEN)	OFF	Cooling priority	CN50 need to be "ON".
	ON	Heating priority	



2. Output

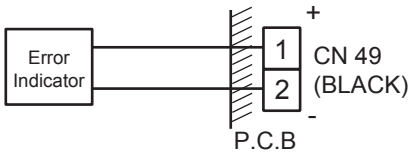
(1) Operation display (Master unit only)

This output indicates the outdoor unit's "Operation" status.

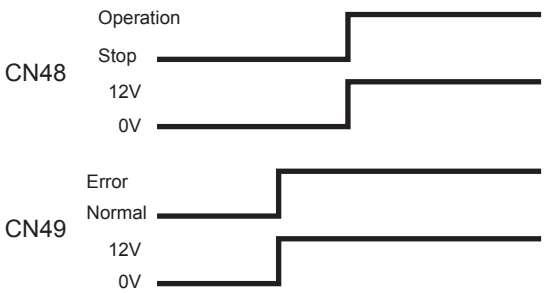


(2) Error display (Master unit only)

This output indicates the outdoor unit and connected indoor unit's "Normal" or "Error" status.

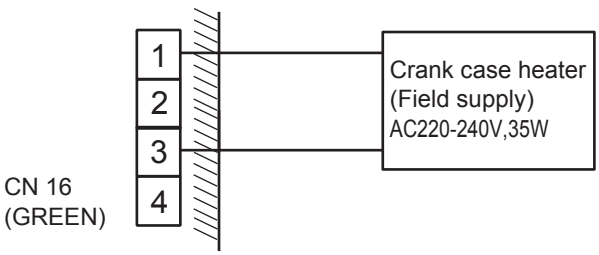


CONNECTOR	OUTPUT VOLTAGE	STATUS
CN48 (BLUE)	0V	Stop
	12V	Operation
CN49 (BLACK)	0V	Normal
	12V	Error



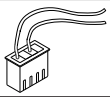
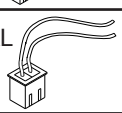
※ Maximum output current (CN48, CN49) is 15mA.
(Output voltage DC12V ± 5%)
A twisted-pair cable(AWG22) should be used.
Maximum length of cable is 25m.

(3) Crank case heater (Master unit only)



3. Parts

Following cord (service parts) is required.
Please use the parts number shown below to order the cord from your sales representative.

Name and shapes	Q'ty	Parts No.
BASE HEATER WIRE 	1	9368776008
EXTERNAL INPUT WIRE 	1	9368777005

2-4-4 Central Remote Controller / PC Controller

1. Input

(1) Control input (All on / All off)

Indoor units which stored into Central R.C. or PC controller can be operated or stopped by this input.

① Input select

• Central remote controller

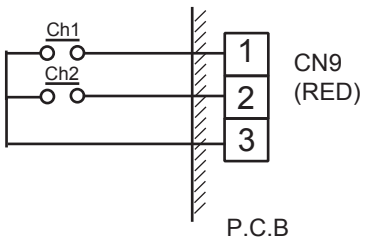
DipSW2-1	DipSW2-2	Input select
ON	OFF	"Edge"
ON	ON	"Pulse"

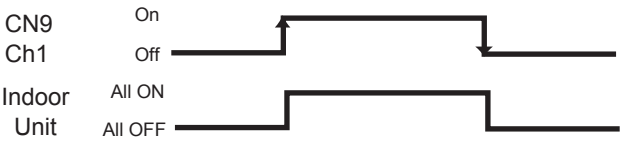
• **PC controller**

Input select can be set in environmental set up.
(Please refer to PC Controller's setting manual.)

② In the case of "Edge" input

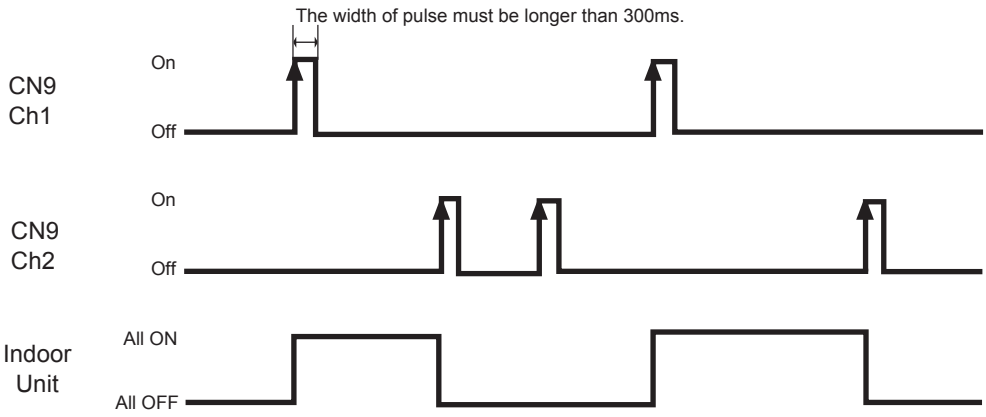
CONNECTOR		INPUT SIGNAL	COMMAND
CN9 (RED)	Ch1	OFF ⟶ ON	All ON
		ON ⟶ OFF	All OFF





③ In the case of "Pulse" input

CONNECTOR		INPUT SIGNAL	COMMAND
CN9 (RED)	Ch1	OFF ⟶ ON	All ON
	Ch2	OFF ⟶ ON	All OFF

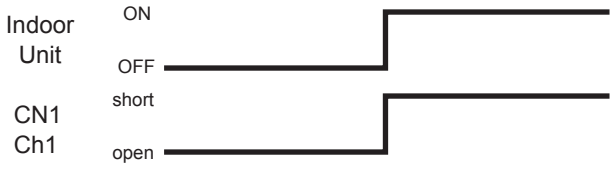


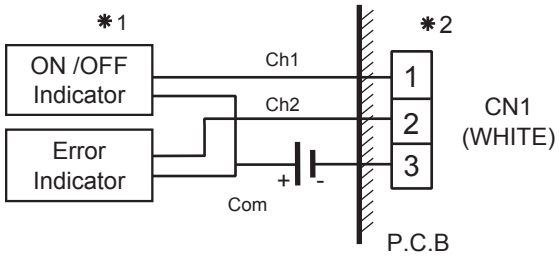
2. Output

(1) Operation display

This output indicates the indoor unit's "Operate" or "Stop" status.

CONNECTOR		OUTPUT SIGNAL	STATUS
CN1 (WHITE)	Ch1	open	All of indoor units "OFF"
		short	At least one more indoor units "ON"





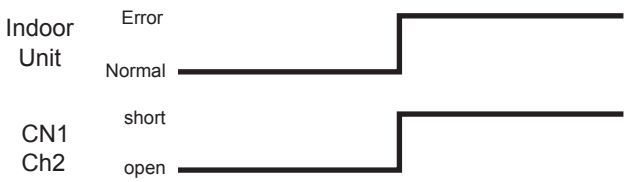
*1
Necessary to insert a diode on both ends of relay coil.

*2
Pin1 - Pin3
Pin2 - Pin3
max 15V,70mA

(2) Error display

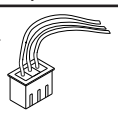
This output indicates the indoor unit's "Normal" or "Error" status.

CONNECTOR		OUTPUT SIGNAL	STATUS
CN1 (WHITE)	Ch2	open	All of indoor units "Normal"
		short	At least one more indoor units "Error"



3. Parts

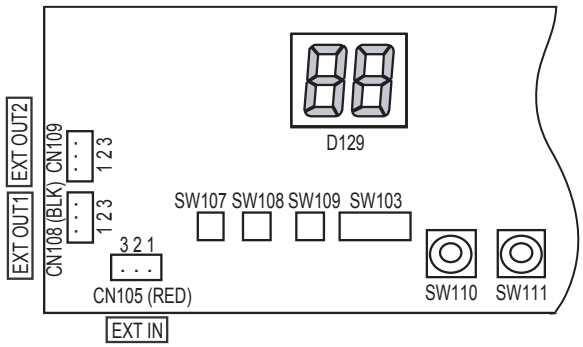
Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Name and shapes	Q'ty	Parts No.
EXTERNAL INPUT WIRE 	1	9368779009

2-4-5 Network Convertor

The connector positions and pin number of network convertor (UTR-YSSA) for external input and output are shown in the right figure.

*UTR-YRDA doesn't provide the function of external Input/Output.



1. Control input (Operation / Stop)

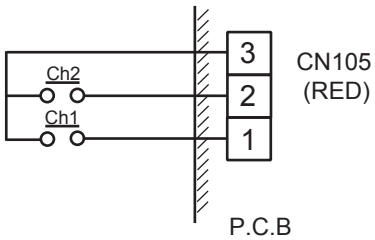
Indoor units that connected to network convertor can be controlled all operation / all stop by this input.

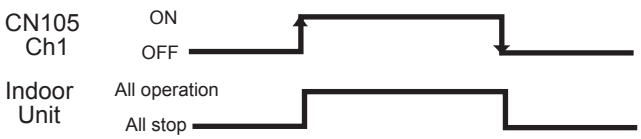
(1) Input select

DIP SW108-1	DIP SW108-2	Input select
ON	OFF	"Edge"
ON	ON	"Pulse"

(2) In the case of "Edge" input

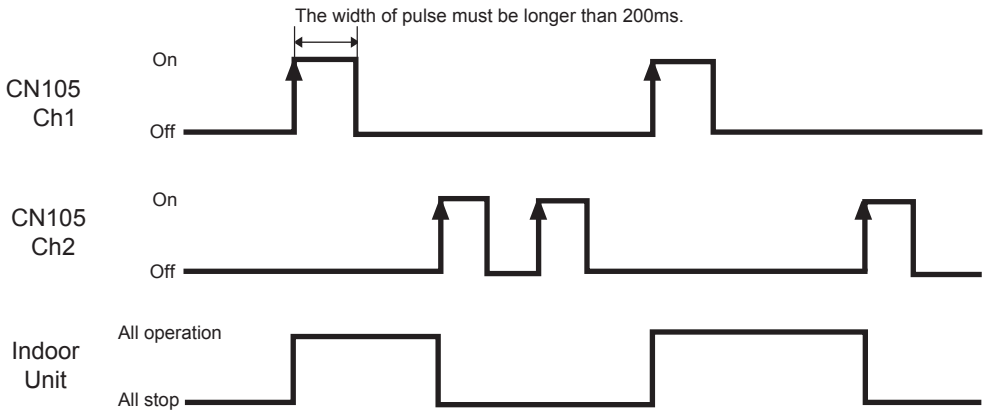
CONNECTOR		INPUT SIGNAL	COMMAND
CN105 (RED)	Ch1	OFF ⟶ ON	All operation
		ON ⟶ OFF	All stop





(3) In the case of "Pulse" input

CONNECTOR		INPUT SIGNAL	COMMAND
CN105 (RED)	Ch1	OFF ⟶ ON	All operation
	Ch2	OFF ⟶ ON	All stop

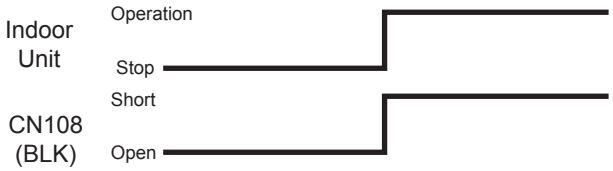


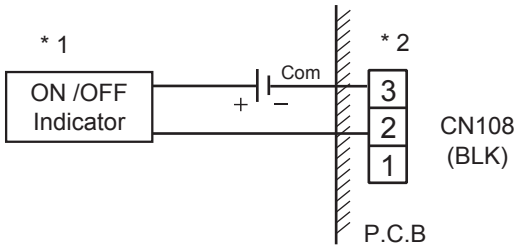
2. Output

(1) Operation display (EXT OUT1)

This output indicates the indoor unit's "Operation" or "Stop" status.

CONNECTOR	OUTPUT SIGNAL	STATUS
CN108 (BLACK)	Open	Indoor units "Stop"
	Short	Indoor units "Operation"



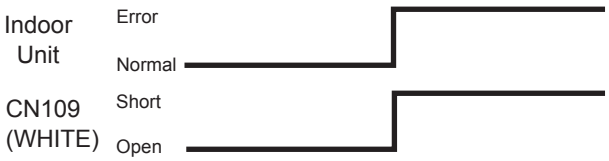


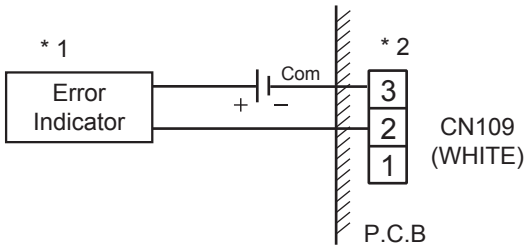
* 1 Always insert a diode on both ends of relay coil.
* 2 Pin 2 - Pin 3 Max 15V, 50mA

(2) Error display (EXT OUT2)

This output indicates the indoor unit's "Normal" or "Error" status.

CONNECTOR	OUTPUT SIGNAL	STATUS
CN109 (WHITE)	Open	All of the indoor units "Normal"
	Short	At least one more indoor units "Error"

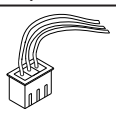




* 1 Always insert a diode on both ends of relay coil.
* 2 Pin 2 - Pin 3 Max 15V, 50mA

3. Parts

Following cord (service parts) is required. Please use the parts number shown below to order the cord from your sales representative.

Usage	Name and shapes	Q'ty	Parts No.
For control input and output port	EXTERNAL INPUT WIRE 	1	9368779009

Refrigerant R410A
INVERTER

AIRSTAGE™
V SERIES

3 . INVERTER CONTROL

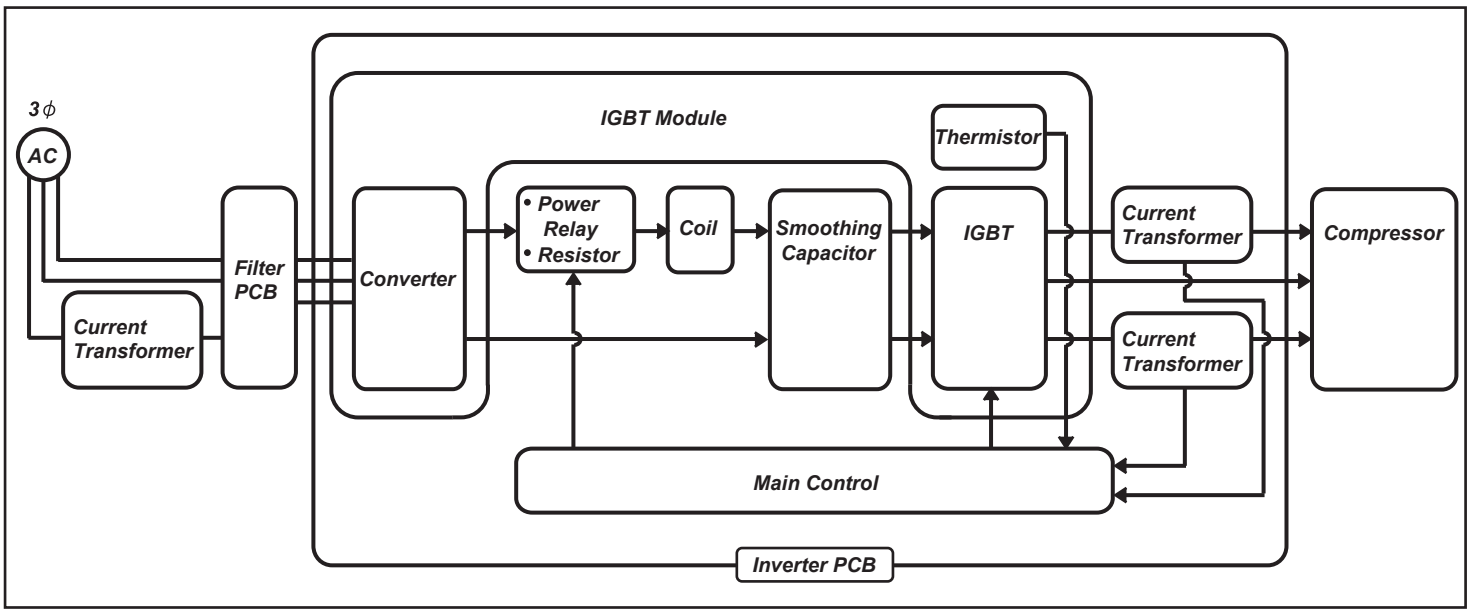
3. DC INVERTER CONTROL METHOD

3-1 INVERTER CONTROL

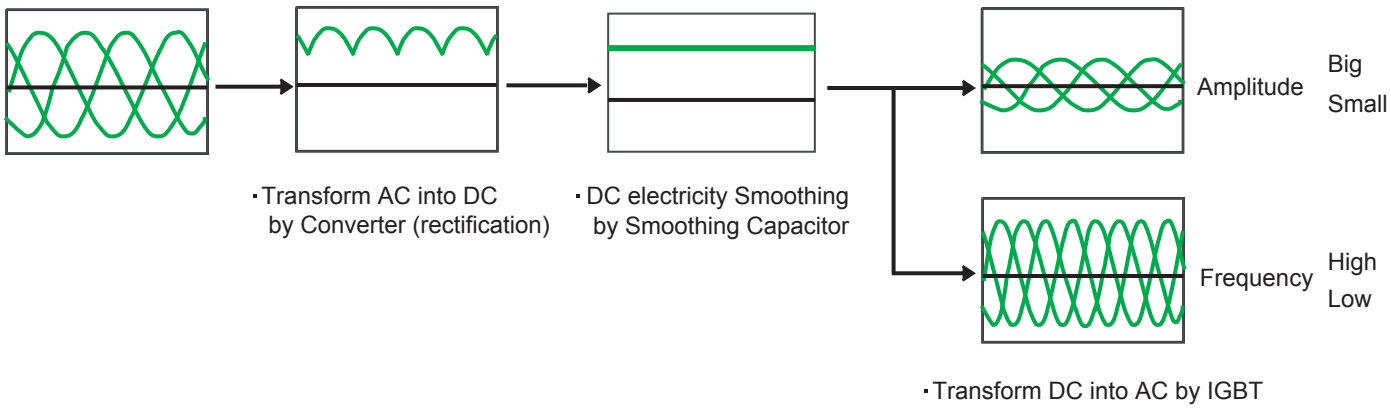
3-1-1 What is Inverter

"Inverter" is the word used against "Converter", and it is the equipment to change DC to AC.
Converter (Transformer) : To transform AC to DC (Rectifier)
Inverter (Reverse Transformer) : To transform DC to AC
As a generic term, the equipment that varies the output (Frequency or Voltage) is normally called as Inverter.

3-1-2 Inverter Block of Outdoor unit

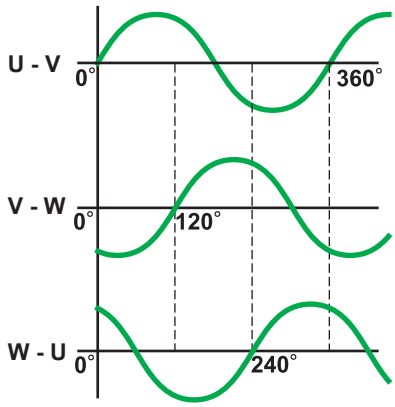


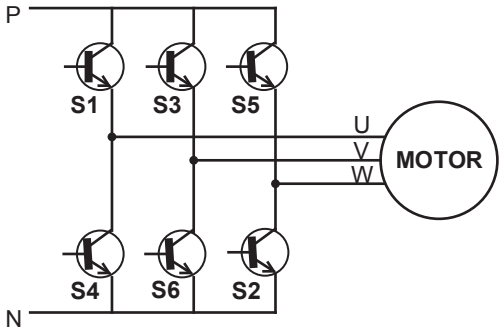
• **VOLTAGE CONVERSION**



- Transform AC into DC by Converter (rectification)
- DC electricity Smoothing by Smoothing Capacitor
- Transform DC into AC by IGBT

3-1-3 Basic Circuit of 3 Phase Inverter





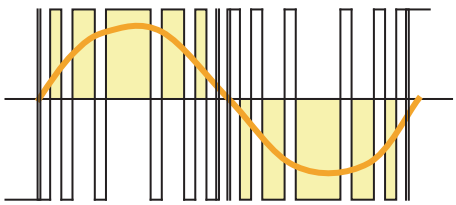
By changing the ON-OFF cycle of the switch, the rotation of the motor can be varied at the desired frequency. If the DC voltage is changed, the input voltage of the motor can be also varied. Practically, the motor is rotated by using 6pcs of transistors instead of a switch, and the transistor is alternately turned ON-OFF.

3-1-4 PWM Control (General consideration)

· Sinewave Inverter (For V series)

PWM Control System

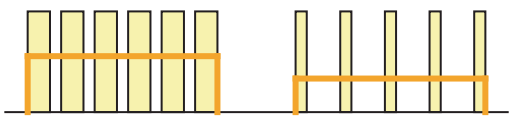
The motor needs a sign wave input. The pulse width of the DC voltage from the converter is varied and cut out by the switching at the inverter as shown in the figure, and the motor rotation is controlled by the quasi-sign wave that is created by varying it to the desired average voltage.



· Rectangularwave Inverter

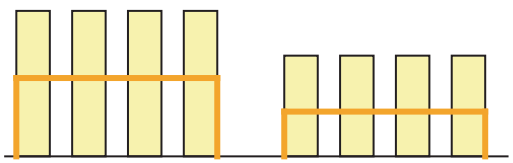
PWM Control System

By using a brush less motor, the DC voltage pulse width from the converter is varied and cut out by the switching of the inverter, and the DC motor rotation is controlled by varying it to the desired average voltage It differs from AC compressor and the pulse becomes the equal interval waveform



PAM Control System

By using a brush less motor, the motor rotation is controlled by applying a variable voltage of DC140V through 390V to the motor winding directly with the voltage booster which is composed of a reactor and a switching component.



3-2 CIRCUIT DISCRIPTION

3-2-1 Filter PCB

1. Varistor

When an abnormal voltage is applied between the terminal of varistor (VA101),
it shorts out and the circuit protection is carried out.

2. Noise Filter

A lot of different kinds of pulse noise come out of inverter since it Controls transistors by switching.
Noise filter protects these noises to come out of inverter by absorbing the noise with the coil and
bypassing the high harmonic frequency with capacitor.

3-2-2 Current Transformer

It is the circuit which always detects the input current. The compared value to 5 V standard voltage is
input to the MICON and detects CT error so that the supplied current to the circuit does not exceed the setup value.
(Total current value decrease of the outdoor unit is detected during the compressor operation.)

3-2-3 Power Relay & Resistor

They control the serge current when turning on outdoor unit power,
and they prevent destruction of the parts from the serge current.

3-2-4 Coil (Reactor)

It conditions the current waveform and removes the noise.

3-2-5 Smoothing Capacitor

This is used to remove the ripple of DC voltage that is output from the converter.

3-2-6 IGBT (Insulated Gate Bipolar Transistor)

1. Converter (3-phase)

It conducts the full-wave rectification of the AC voltage that passed through the noise filter.

2. IGBT

It is composed of 6 transistors and drives the motor by high speed switching.
The drive voltage signal is transferred to the drive circuit from MICON,
and varies the supply frequency to the motor (PWM system) to rotate the motor.

3. Thermistor

It detects the temperature rise of Heatsink and prevents the electronic parts
from a breakage by an excessive temperature rise.

Refrigerant R410A
INVERTER

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4. OUTDOOR UNIT OPERATION CONTROL

4. OUTDOOR UNIT

4-1 INPUT / OUTPUT LIST

		Input / output or kind of detail	Control range
INPUT	Discharge pressure sensor	Pressure sensor	Measure range 0.0 to 5.0MPa
	Suction pressure sensor	Pressure sensor	Measure range 0.0 to 5.0MPa
	Discharge temperature sensor 1	Themistor	Measure range 10 to 130℃
	Discharge temperature sensor 2	Themistor	Measure range 10 to 130℃
	Discharge temperature sensor 3 (AO126 only)	Themistor	Measure range 10 to 130℃
	Heat exchanger temperature sensor	Themistor	Measure range -35 to 70℃
	Receiver tanker liquid level (low) sensor	Themistor	Measure range -35 to 70℃
	Receiver tanker liquid level (mid) sensor	Themistor	Measure range -35 to 70℃
	Receiver tanker liquid level (high) sensor	Themistor	Measure range -35 to 70℃
	Sub-cool heat exchanger (outlet) sensor	Themistor	Measure range -35 to 70℃
	Sub-cool heat exchanger (inlet) sensor	Themistor	Measure range -35 to 70℃
	Liquid temperature sensor 1	Themistor	Measure range -35 to 70℃
	Liquid temperature sensor 2	Themistor	Measure range -35 to 70℃
	Suction temperature sensor	Themistor	Measure range -35 to 70℃
	Outdoor temperature sensor	Themistor	Measure range -20 to 58℃
	Operation current sensor	Current transformer	
	Rotary SW & DIP-SW	Address and function setting	
OUTPUT	Compressor 1	Magnetic relay (Slave unit only)	Operation coil AC220-240V, 50Hz
	Compressor 2	Magnetic relay	Operation coil AC220-240V, 50Hz
	Compressor 3	Magnetic relay	Operation coil AC220-240V, 50Hz
	Fan motor 1 (Hi/Lo/OFF)	Fan motor	AC220-240V, 50Hz
	Fan motor 2 (Hi/Lo/OFF)	Fan motor	AC220-240V, 50Hz
	Electronic expansion valve 1	EEV coil	Operating voltage DC12V
	Electronic expansion valve 2	EEV coil	Operating voltage DC12V
	Solenoid valve 1	Hot gas bypass	AC220-240V, 50Hz, 6W
	Solenoid valve 2	Receiver tanker liquid level adjustment	AC220-240V, 50Hz, 6W
	Solenoid valve 3	Receiver tanker liquid level detection	AC220-240V, 50Hz, 6W
	Solenoid valve 4 (Master unit)	Refrigerant flow control	AC220-240V, 50Hz, 8W
	Solenoid valve 4 (Slave unit)	Refrigerant flow control	AC220-240V, 50Hz, 8W
	Solenoid valve 5	Receiver tanker gas bypass	AC220-240V, 50Hz, 8W
	Solenoid valve 6	Oil adjustment among outdoor unit	AC220-240V, 50Hz, 6W
	Solenoid valve 7	Oil adjustment among outdoor unit	AC220-240V, 50Hz, 6W
	Solenoid valve 8-1	Oil return valve	AC220-240V, 50Hz, 6W
	Solenoid valve 8-2	Oil return valve	AC220-240V, 50Hz, 6W
	Solenoid valve 8-3 (AO126 only)	Oil return valve	AC220-240V, 50Hz, 6W
	Crank case heater 1-3	Compressor	AC240V, 35W
	Base heater	Field supply	AC220-240V, 35W
	External output 1 (CN49) (Error display)	ON (Error) / OFF (Normal)	Control output: DC 0/12V, Max.15mA
	External output 2 (CN48) (Operation display)	ON (Operation) / OFF (Stop)	Control output: DC 0/12V, Max.15mA
Communication Input / Output	LON WORKS Inverter communication		
External Input / Output	External input 1 (CN50) (Remote controller / External priority) External input 2 (CN52) (Cooling / Heating priority)	Non-voltage contact input	
	External output 1 (CN48) (Operation display)	ON (Operation) / OFF (Stop)	Control output: DC 0/12V, Max.15mA
	External output 2 (CN49) (Error display)	ON (Error) / OFF (Normal)	Control output: DC 0/12V, Max.15mA
LED display	LED 1 to LED 6	Display the information on operation, error and setting with LED (1-6)	

4-2 COMPRESSOR OPERATION

4-2-1 Operation / Stop Condition

(1) Compressor operation condition

When cooling requirement capacity or heating requirement capacity from either of the indoor units in the same refrigerant system is input, the compressor operates.
But in the following case, the compressor operates in accordance with operation of each mode.

- During 3 minute restart prevention operation
- During deicing operation
- Failure (except for a part) (Refer to 6-2-4)
- Oil recovery
- Under expansion valve initialization
- At protective operation

(2) Compressor stop condition

When all the indoor units in no "cooling requirement capacity" or "heating requirement capacity ", the compressor is stopped.
But, in the following case, the compressor operates in accordance with operation of each mode.

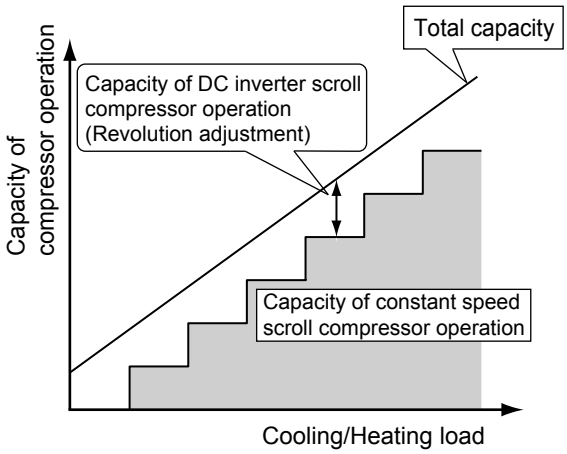
- Oil recovery operation
- Defrost operation

4-2-2 Capacity control

(1) Capacity of compressor operation

By combining the operation of DC inverter scroll compressor and the constant speed scroll compressor,
the amount of required refrigerant circulation acceding to cooling and heating load can be supplied from compressor efficiently.

DC inverter scroll compressor is able to control the amount of required refrigerant circulation in details.



(2) Target low-pressure and high-pressure control

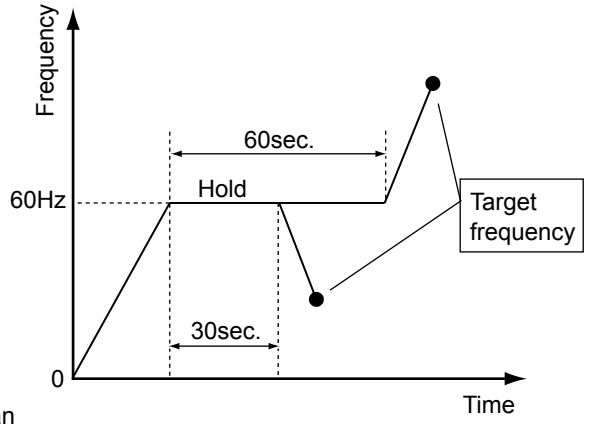
<Cooling>
In order to make the evaporation pressure of the indoor unit at the proper pressure on a variety of operations, capacity of the compressor will be controlled by low-pressure sensor of the outdoor unit (Master unit).

<Heating>
In order to make the condensation pressure of the indoor unit at the proper pressure on a variety of operations, capacity of the compressor will be controlled by high-pressure sensor of the outdoor unit (Master unit).

Target low-pressure and high pressure temperature depends on system capacity, capacity of compressor operation, pipe length, and capacity shift switch settings.

4-2-3 Frequency range of start, stop, and operation (For DC inverter scroll compressor)

- On stop mode : 0 Hz
- On operating mode : 30 - 94Hz
- Frequency limit of after starting : After starting, frequency of the compressor makes the shift to the target frequency after holding 60Hz in operation frequency for a while.
- Holding time at 60Hz is as follows.
  Target frequency < 60Hz : Holding time is 30 sec.
  Target frequency ≧ 60Hz : Holding time is 60 sec.*



* Upon 60sec hold, if the difference between discharge temperature sensor and the high pressure saturation temperature that was calculated from high pressure sensor detection value is higher than 10degC, the capacity is increased by 2Hz/60sec toward the upper limit frequency.
And if Discharge SH becomes less than 4degC during operation, the similar limit control same as 40Hz is applied. (Oil rise prevention)
It is same as the start up control, but the highest limit frequency is different.

4-2-4 Oil return control

When the compressor operates, SV8 is turned on automatically.

When inverter is running, oil return valve of inverter always opens.

4-2-5 Compressor Sequence Operation

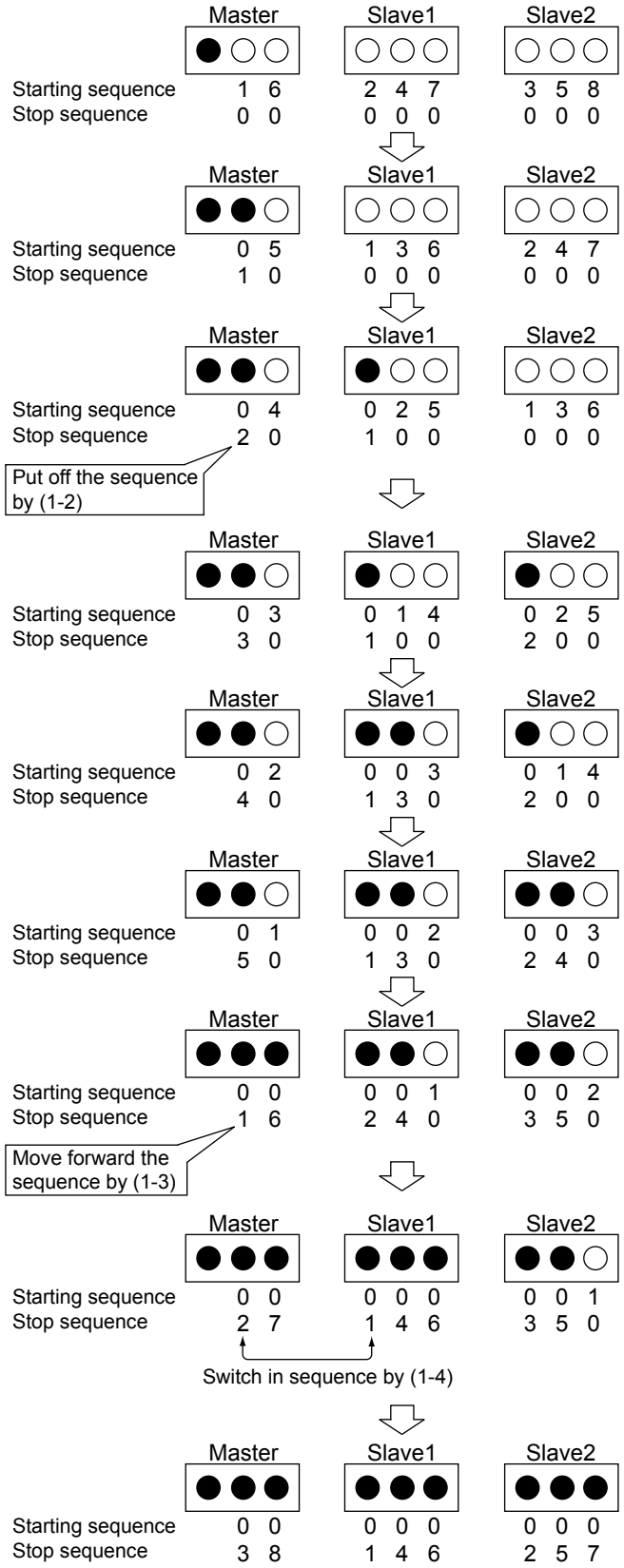
(1) Starting and stop control of the outdoor unit is performed by starting sequence and stop sequence of the compressor. (Example: Three 14HP outdoor units are connected.)
But the following conditions shall be fulfilled.

(1-1) DC inverter scroll compressor is not placed in the sequence.

(1-2) If the DC inverter scroll compressor is in operation, the constant speed scroll compressor that starts first and stops last has to be the one in the master unit.

(1-3) Difference in unit of operated compressor between the outdoor units is below 1 unit.

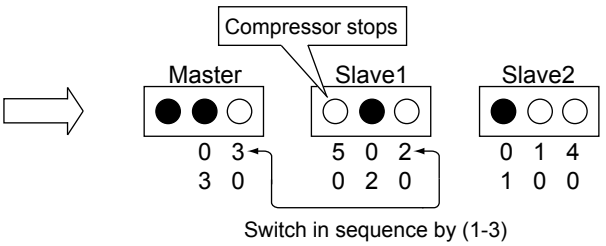
(1-4) Total capacity of operation of the master unit > Total capacity of operation of the slave unit.



* Exception

Cooling : When 2 compressors of Master are operating, and high pressure is high, constant speed compressor of Slave is started.

Heating : When 2 compressors of Master are operating, and low pressure is low, constant speed compressor of Slave is started.



(2) In order to enhance reliability and endurance of system, it is monitoring accumulating time of each compressor operating in the same refrigerant system.

And when accumulating time of operating is over predetermined time, the compressor is stopped and the rest of stopped compressor is started.

Thus, operating time of each compressor is averaged(Rotation operation).

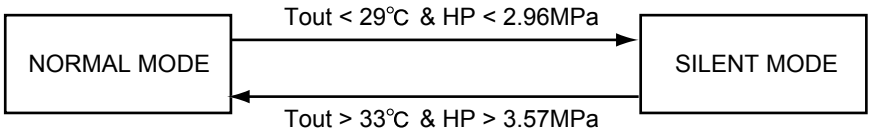
4-3 FAN CONTROL

4-3-1 Cooling operation

After starting the outdoor unit, the fan speed of outdoor unit is decided by outdoor air temperature.

	FAN SPEED				OUTDOOR AIR TEMPERATURE (Tout)
	NORMAL MODE		SILENT MODE		
	FAN 1	FAN 2	FAN 1	FAN 2	
Step 1	Hi	Hi	Lo	Lo	Tout > 25℃
Step 2	Hi	Lo	Lo	Lo	15℃ < Tout ≦ 25℃
Step 3	Lo	Lo	Lo	Lo	5℃ < Tout ≦ 15℃
Step 4	Lo	stop	Lo	stop	
Step 5	stop	stop	stop	stop	Tout ≦ 5℃

When turning on DipSW2-1(Silent operation mode),
switching conditions of Normal mode and Silent mode are as follows.

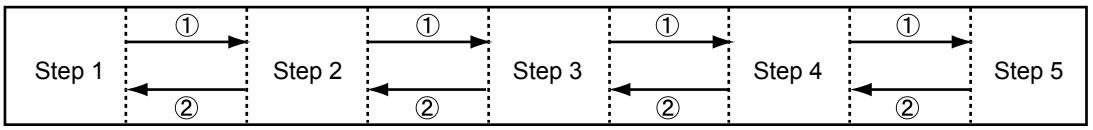


Tout : Outdoor air temperature
HP : High pressure

Switching conditions of step

① High pressure saturation temperature < Target high pressure temperature,
and inverter heatsink temperature ≦ 75℃
(The thermistor is built- in the inverter PCB.)

② (High pressure saturation temperature - Target high pressure temperature) > About 10℃
(It depends on the outdoor air temperature)
Or inverter heatsink temperature ≧ 80℃



4-3-2 Heating Operation

Heating operation is performed at Hi all the time.

4-3-2 Snow falling protection fan mode

When turning on DipSW2-2(Snow falling protection fan mode) and the outdoor unit is stopping and Tout is below 5℃, fan control enters Snow falling protection fan mode.

When the outdoor unit starts the operation or Tout is above 7℃,
fan control exits Snow falling protection fan mode.

Snow falling protection fan mode : Outdoor unit fan operates on
"Hi" mode for 1 minute in every 30 minutes.

4-4 EXPANSION VALVE CONTROL

	Initialization conditions	Control range			
		operation	stop	refrigerant discharge	refrigerant storage
EEV 1	①Turn on outdoor unit power ②24 hours have passed since the last initialization,and the outdoor unit has stopped.	0 - 500 pulses	0 pulses	400 pulses	500 pulses
EEV 2	Turn on outdoor unit power	0 - 500 pulses	0 pulses	Controlled	0 pulses

< Cooling mode >
500 pulses basically.

< Heating mode >
EEV is controlled so that the system reaches closer to the target discharge temperature that is calculated from high and low pressure.

4-5 SPECIAL OPERATION

4-5-1 Oil recovery operation

(1) Purpose of the operation

The amount of refrigerant lubricant oil which has been transported to the indoor units and the connection pipe with the refrigerant will become large as the operation time of compressor increases. It is necessary to recover the oil back into the outdoor unit for a certain time interval in order to prevent compressors from damaging due to lack of lubrication oil.

(2) Starting conditions

Starting conditions of oil recovery operation are as follows.

① Oil recovery from the gas main pipe (Only cooling mode)
If the overheating condition is continued over 30 minutes, where the difference between compressor suction sensor temperature and low pressure sensor temperature (Suction SH) is higher than 10degC (Normal control if Suction SH becomes small afterward),

② Accumulated time of oil recovery operation ≧ 3(Cooling) / 8(Heating) hours

(3) Operation

① Indoor EEV is gradually opened. (Oil is recovered together with refrigerant.)

② Operating compressor : 2 compressors of each slave type outdoor unit
DC inverter compressor of master type outdoor unit (at 70Hz) and 1 constant speed compressor.
EEV Opening (Indoor/Outdoor unit): Controlled pulse (as normal operation mode).
FAN speed (Indoor/Outdoor unit) : Controlled fan speed (as normal operation mode).
Oil recovery operation time : When suction sensor temperarure(Thermistor11) of master unit detects fall in the certain temperature, oil recovery operation is terminated.
Oil recovery operation time is a maximum of 6 minutes.

(4) Others

During the oil recovery operation, ❄/⏻ appears on the display of wired and central remote controller, and ⏻ appears on the simple remote controller.
The operation indicators (LED) of the indoor units flash slowly.

4-5-2 Oil balance operation

(1) Purpose of the operation

Divide the oil equally between the outdoor units.
When only one outdoor unit is connected : Oil balance operation does not operate.

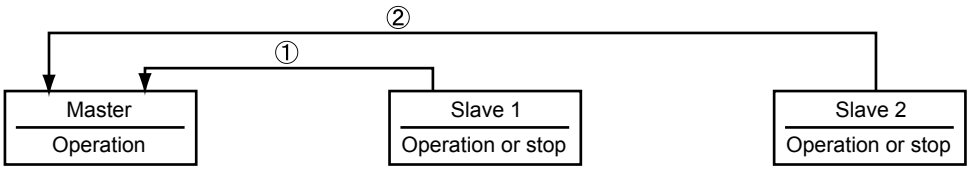
(2) Starting conditions

- Accumulated time of compressor operation ≧ 20 min.
- After oil balance and defrost operation, when discharge SH is15 ℃ or more.

(3) About oil balance operation (Example)

- The master unit is operating

a) Oil recovery operation (Slave unit → Master unit)



① SV7(Slave1) and SV6(Master) : Open for 1 min.
② SV7(Slave2) and SV6(Master) : Open for 1 min.
Oil is recovered to the master unit by operation ① & ② .

b) Oil distribution operation (Master unit → Slave unit)

60 seconds after the oil recovery finish, master unit sends accumulated oil to the slave unit.
Oil shares in only a operating slave unit.
(Master unit SV7 open, operating slave unit SV6 open)
Oil distribution operation for 60 seconds and is finished.

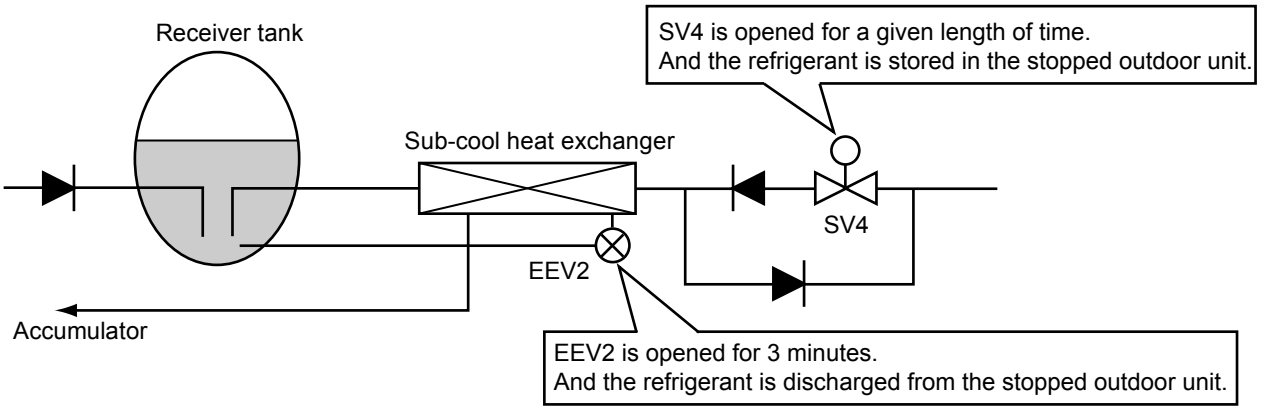
This is the end of oil balance operation.

4-5-3 Excess refrigerant adjustment operation

< Cooling mode >

The master unit monitors liquid level of Receiver tank of operating outdoor unit,
and if the liquid level is below the setting value, the master unit controls the stopped outdoor unit to discharge refrigerant.

And if the liquid level is above the setting value,
the master unit controls the stopped outdoor unit to store refrigerant.



< Heating mode >

The master unit monitors the liquid level of the receiver tank in the outdoor unit which is currently operating.
If the average value of the liquid level becomes lower than the set value, the refrigerant in the stopped outdoor unit is controlled to discharge.
And if it is higher than the average value, the refrigerant is controlled to be stored into the stopped outdoor unit.

[Discharge]

SV4 Close
SV7 Open
EEV1 is slightly opened and the refrigerant inside the receiver tank is sent to the slave unit.

[Store]
SV4 Open
The excessive refrigerant in the operating unit is stored into the stopped outdoor unit through SV4.

4-5-4 Pre-heat operation

When all compressors in the unit are turned off for 30 min. and regardless of outside temperature,
crank case heater turns ON automatically.
Crank case heater turns OFF again when any kind of outside temperature or one of compressor in the unit starts operation.
This pre-heat operation protects the start up failure by preventing the refrigerant from soaking into the oil in compressor.

4-6 PROTECTIVE FUNCTION

4-6-1 Protective Function List

< Cooling mode >

Protective Function	Detect Parts	Operating Condition	Operation
Discharge Temp Protection 1	Discharge Temp Thermistor	Start: After 3 min startup, keep DISTH≧100℃ or when the accumulated time of operation at over 10degC of Suction SH (Suction temperature - TSLP) continues over 30 minutes. Release: DISTH≦95℃ and THII - TSLP≦5℃	The signal that opens the EEV is sent to the indoor unit DISTH: Actual discharge Temp DISTR: Target discharge Temp THII: Suction Temp TSLP: Low pressure power saturation
Discharge Temp Protection 2	Discharge Temp Thermistor	Start: DISTH≧110℃ Release: DISTH≦100℃	EEV2 increases 30Pulse/30sec.
Discharge Temp Protection Stop	Discharge Temp Thermistor	① Start: DISTH≧120℃ Release: 3 minutes have passed, and DISTH≦80℃	The compressor stops. (more than 3 minutes)
		Start: The operation ① repeats 3 times in an hour. Release: 10 minutes have passed, and DISTH≦80℃	The compressor stops. (above 10 minutes) Error indication : refer to 06-23
High Pressure Protection	High Pressure Sensor	Start: HPS≧3.74MPa Release: 2 minutes have passed, HPS<3.5MPa and release of the of the High Pressure Protection Stop.	SV1 opens HPS:High Pressure Sensor value
High Pressure Protection Stop	High Pressure Sensor	② Start: HPS≧4.1MPa Release: 3 minutes have passed, and HPS<3.5MPa.	All the compressors of the outdoor unit stop. (more than 3 minutes)
		Start: The operation ② repeats 3 times in an hour. Release: 10 minutes have passed, and HPS<3.5MPa.	All the compressors of the outdoor unit stop. (more than 10 minutes) HPS : High pressure sensor value Error indication : refer to 06-26
Abnormal high pressure protection control	High pressure saturation temperature (calculated from discharge pressure sensor value)	- If the high pressure saturation temperature becomes higher than 60.5degC for 25 seconds, the capacity increase of the compressor is prohibited. - If the high pressure saturation temperature further keeps the condition higher than 62degC for 25 seconds, the compressor capacity is reduced. - It is released when the high pressure saturation temperature becomes lower than 59.5degC and continues for 25 seconds.	
Low Pressure Protection	Low Pressure Sensor	Start: LPS≦0.65MPa and INV≦30Hz and Release: 5 minutes have passed, INV≧50Hz and release of the of the Low Pressure Protection Stop.	SV1 opens LPS: Low Pressure Sensor value INV: Operation frequency of the DC scroll compressor
Low Pressure Protection Stop	Low Pressure Sensor	③ Start: LPS≦0.1MPa and 10 minutes have passed. (Stop : LPS≦0.1Mpa 2min at TEST RUN) Release: 3 minutes have passed, and LPS≧0.2MPa.	All the compressors of the outdoor unit stop. (more than 3 minutes)
		Start: The operation ③ repeats 5 times in 3 hours. Release: Reset the outdoor unit.	All the compressors of the outdoor unit stop. permanent stop Error indication : refer to 06-27

< Heating mode >

Protective Function	Detect Parts	Operating Condition	Operation
Discharge Temp Protection 2	Discharge Temp Thermistor	Start: DISTH≧110℃ Release: DISTH≦100℃	EEV2 increases 30Pulse/30sec.
Discharge Temp Protection Stop	Discharge Temp Thermistor	① Start: DISTH≧120℃ Release: 3 minutes have passed, and DISTH≦80℃	The compressor stops. (more than 3 minutes)
		Start: The operation ① repeats 3 times in an hour. Release: 10 minutes have passed, and DISTH≦80℃	The compressor stops. (above 10 minutes) Error indication : refer to 06-23
High Pressure Protection Stop	High Pressure Sensor	② Start: HPS≧4.1MPa Release: 3 minutes have passed, and HPS<3.5MPa.	All the compressors of the outdoor unit stop. (more than 3 minutes)
		Start: The operation ② repeats 3 times in an hour. Release: 10 minutes have passed, and HPS<3.5MPa.	All the compressors of the outdoor unit stop. (more than 10 minutes) HPS : High pressure sensor value Error indication : refer to 06-26
High pressure protection control (Only on heating mode)	High Pressure Sensor	Function/Release judgment is done in every 2 minutes with the discharge pressure sensor detection value on heating operation mode. - Function : HPS ≧ 3.54MPa - Release HPS < 3.30MPa Note) It functions if it exceeded 3.80MPa within 20seconds even it did not pass 2 minutes.	Master unit : Outdoor fan speed is reduced in every 1 step If the high pressure still does not decrease, SV1 is opened. Slave unit : SV1 is opened.
Low Pressure Protection Stop	Low Pressure Sensor	③ Start: LPS≦0.1MPa and 10 minutes have passed. (Stop : LPS ≦ 0.1Mpa 2min at TEST RUN) Release: 3 minutes have passed, and LPS≧0.2MPa.	All the compressors of the outdoor unit stop. (more than 3 minutes)
		Start: The operation ③ repeats 5 times in 3 hours. Release: Reset the outdoor unit.	All the compressors of the outdoor unit stop. permanent stop Error indication : refer to 06-27
Abnormal low pressure protection control (Only on heating mode)	Low pressure saturation temperature (calculated from suction pressure sensor value)	- If the low pressure saturation temperature continues below -30.9degC for 2 minutes or more, the capacity increase of the compressor is prohibited. - If the low pressure saturation temperature further keeps the condition lower than the setting value for 1 minute, the compressor capacity is reduced. - It is released when the low pressure saturation temperature becomes higher than -24.1degC and continues for 25 seconds.	

< Common >

Protective Function	Detect Parts	Operating Condition	Operation
Overcurrent Break Stop	Overcurrent Protection Circuit	- Inverter compressor is stopped when the over current protection circuit in the inverter PC Board detects an abnormal current during the operation. If it repeated 5 times, the inverter compressor becomes permanent stop. - Inverter compressor is stopped when the over current protection circuit in the inverter PC Board detects an abnormal current at the time of start up. Inverter compressor becomes permanent stop if it repeated over the number of set time. Release : condition is to reset the power.	The DC inverter scroll compressor stops. Error indication : refer to 6-46, 47
Heatsink Temp Protection Stop	Heatsink Temp Detector Circuit	① Start: Abnormal heatsink temp occurred. ② If Abnormal heatsink temp occurred 3 times in 60 minutes, restart of the DC inverter scroll compressor is restricted. Release: 120 minutes have passed. Or 5 minutes have passed, operation capacity rate ≦ 70%	The DC inverter scroll compressor stops.
Frequency Maximum Setting Protection	Current Detector Circuit	Start: Detected current ≧ Limit value (Vary with the outdoor air temperature) Release: Detected current < Limit value - 0.5A	The DC inverter scroll compressor operates on limit frequency. Until conditions are met for a release.

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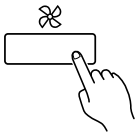
5 . INDOOR UNIT OPERATION

5. INDOOR UNIT OPERATION

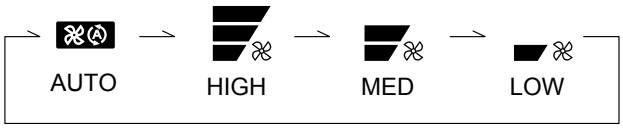
5-1 FAN CONTROL

5-1-1 Fan Speed Setting

Fan speed setting



Press the FAN CONTROL button to set the fan speed.

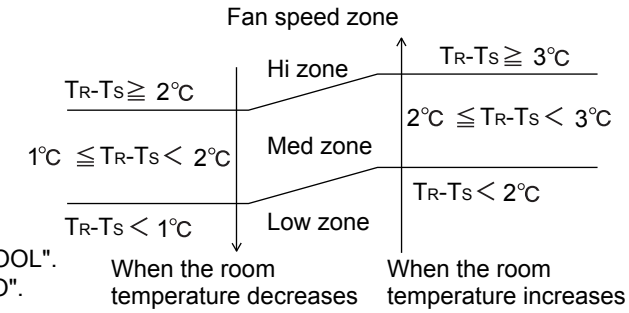


5-1-2 "AUTO" Position

1. COOLING OPERATION

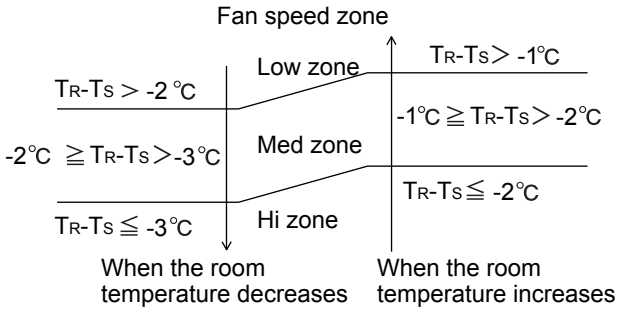
The fan speed is determined automatically in accordance with the condition "(T_R(corrected room temperature) - T_S (corrected set temperature)" as shown on the right. However, the fan speed zone is determined in the manner as the room temperature increases for the following cases.

(1) When the T_S is changed.
(2) When the operation mode is changed from other mode to "COOL".
(3) When the fan control is changed from other position to "AUTO".



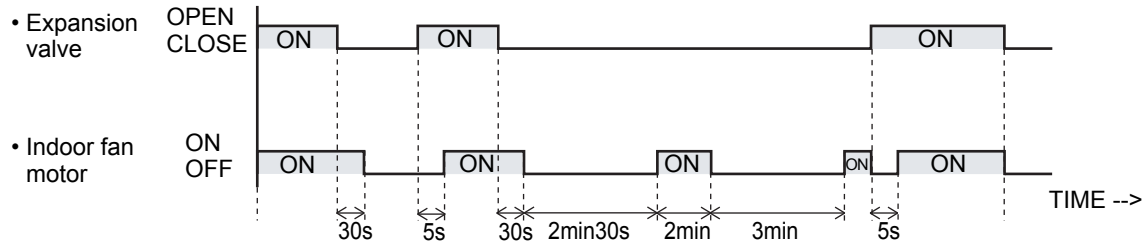
2. HEAT OPERATION

Same as Cooling operation, fan speed is decided by the difference between the room temperature and the set temperature.



3. DRY OPERATION

The indoor fan always rotates at "Lo" speed.



(1) The indoor fan starts operation 5 seconds after the electric expansion valve opens. However, when the indoor unit just starts its operation or the operation mode is changed from other to "DRY" and the refrigerant circulation is not stopped, the fan will rotate immediately without a delay time of 5 seconds.
(2) The indoor fan will stop in 30 seconds when the refrigerant circulation stops.
(3) The indoor fan will stop immediately when the indoor unit is stopped by pushing the stop button or by a setting of ON timer.
(4) When the refrigerant circulation is stopped due to a lower room temperature for more then 3 minutes, the fan will rotate 2 minutes at intervals of 3 minutes.
(5) When the indoor unit just starts its operation or the operation mode is changed from other to "DRY" and the refrigerant circulation is stopped, the fan will rotate for 1 minute and then it will operate according to the statement (4).

5-2 MASTER CONTROL

5-2-1 Operation Mode Control

Each operation mode is controlled as below.

(1) Stop mode

Indoor fan motor : OFF
Electric expansion valve : Stop pulse
Drain pump : Turns ON-OFF by the drain pump control function

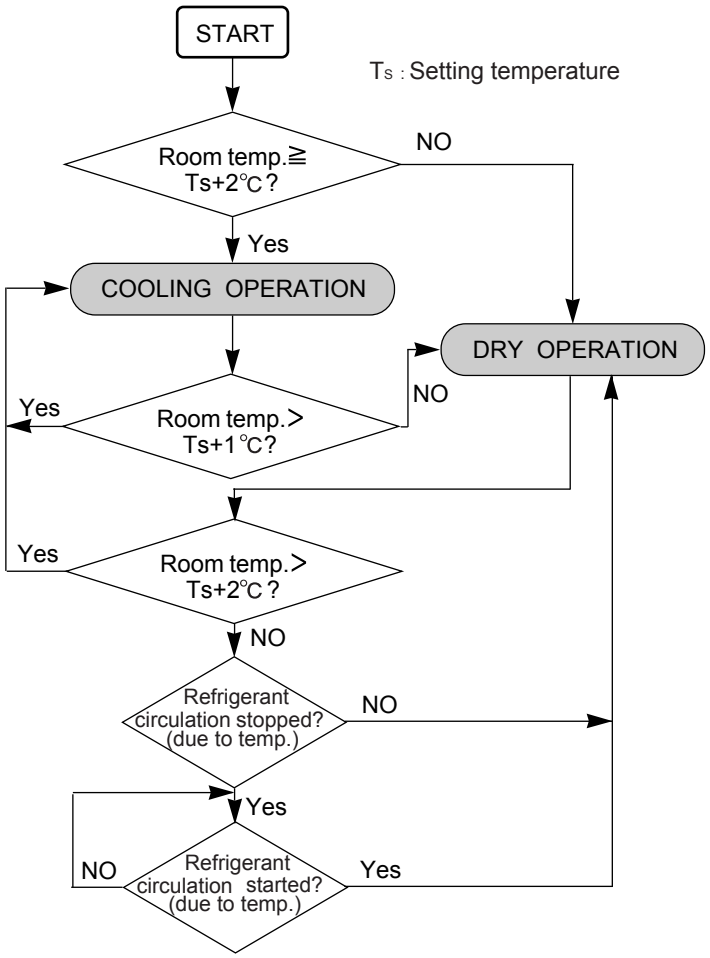
(2) Cool, Fan, Dry and Heat Mode

	Cool	Fan	Dry	HEAT
Indoor fan motor	Operates according to the AIR FLOW-MODE setting.	Operates according to the AIR FLOW-MODE setting.	See the fan control page.	Operates according to the AIR FLOW-MODE setting, and besides cold air prevention operation
Drain pump	Turns ON-OFF by the drain pump control function			
Electrical expansion valve	Pulse controlled by the temperature difference calculation and frost prevent fuction	Stop pulse	Pulse controlled by the temperature difference calculation and frost prevent function	Pulse controlled by the temperature difference.

5-2-2 Auto Changeover

■ AUTO CHANGEOVER operation (COOLING ONLY TYPE)

Operation flow chart



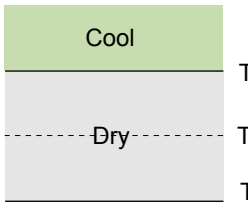
(1) When the indoor unit starts the operation at “AUTO" or it is switched to “AUTO” from other modes, if the room temperature is higher than the set temperature + 2℃ (Room temp. ≧ Set temp.(Ts) + 2℃), "COOL" operation will start automatically.

(2) When the room temperature decreases under the set temp. (Ts) + 1℃ during the "COOL" operation, the indoor unit will switch to "DRY" operation automatically.

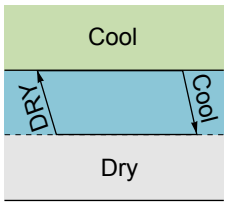
(3) When the room temperature increases up to the set temp. (Ts) + 2℃ during the "DRY" operation, the indoor unit will switch to "COOL" operation automatically.

(4) When the indoor unit starts the operation at “AUTO" or it is switched to “AUTO” from other modes, if the room temperature is lower than the set temperature + 2℃ (Room temp. < Set temp.(Ts) + 2℃), "DRY" operation will start automatically.

The cases of (1) and (4)



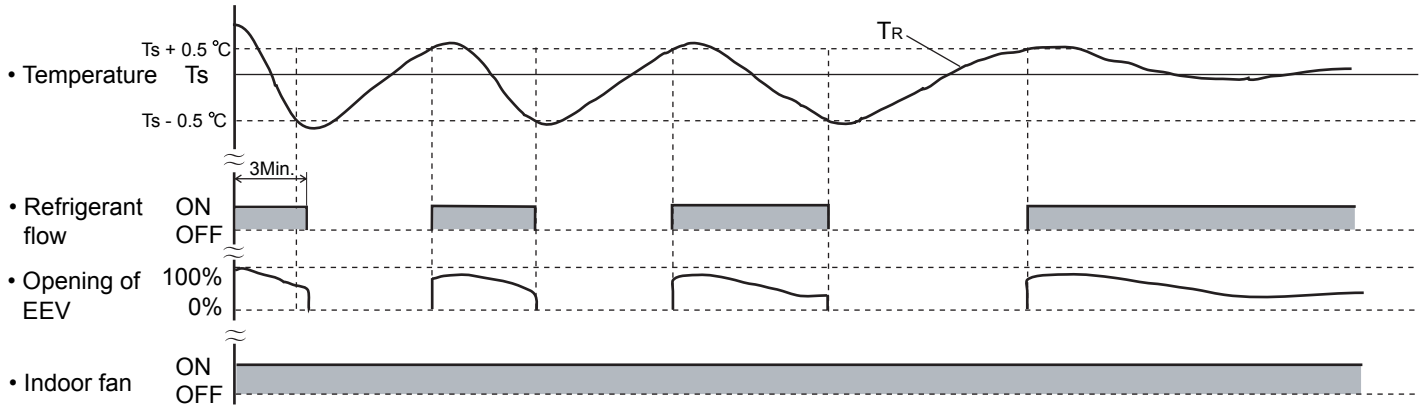
The cases of (2) and (3)



5-2-3 "COOL" Position

When using the cooling mode, set the temperature to a value lower than the current room temperature, otherwise the indoor unit will not start the cooling operation and only the fan will rotate.

An example for COOLING TEMPERATURE CONTROL time chart (Manual setting)

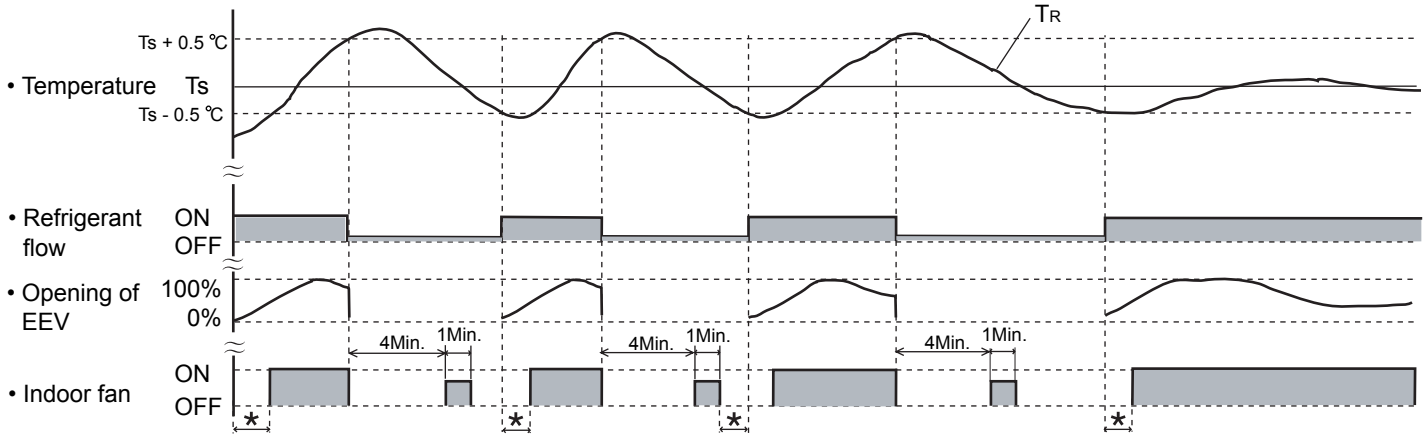


Ts : Corrected setting temperature
TR : Corrected room temperature
Ts + 0.5 ℃: The thres hold temperature of start of refrigrant flow
Ts - 0.5 ℃ : The thres hold temperature of stop of refrigrant flow

5-2-4 "HEAT" POSITION

(1) When using the heating mode, set the temperature to a value higher than the current room temperature, otherwise the indoor unit will not start the heating operation.
(2) After the start of heating operation, the fan of indoor unit will not rotate until the heater exchange is warmed up to blow out warm air.
(3) During defrosting, the OPERATION indicator lamp flashes 3 sec. ON and 1 sec. OFF, and repeat. The heating operation will be temporarily interrupted.

An example for HEATING TEMPERATURE CONTROL time chart (Manual setting)



Ts : Corrected setting temperature
TR : Corrected room temperature
* : Duration of cold air prevention
Ts + 0.5 ℃: The thres hold temperature of start of refrigrant flow
Ts - 0.5 ℃ : The thres hold temperature of stop of refrigrant flow

5-2-4 "FAN" Position

(1) In this position, the fan merely rotates to circulate air, so the room temperature will not change.
(2) The fan will rotate at a fan speed set with the FAN CONTROL button.
(3) When only the “FAN” mode is being used, setting the fan speed at “AUTO” is equivalent to setting it at “LOW”.

5-3 LOUVER CONTROL

(1) ADJUSTING THE DIRECTION OF AIR CIRCULATION

Instructions relating to heating (✳) are applicable only to heat pump type outdoor unit.

Begin air conditioner operation before performing this procedure.

Vertical Air Direction Adjustment

This instructions are applicable to "LARGE CEILING TYPE", "UNIVERSAL FLOOR/CEILING TYPE", "CASSETTE TYPE", "WALL MOUNTED TYPE","COMPACT WALL MOUNTED TYPE" and "CEILING WALL TYPE".

Press the VERTICAL AIR FLOW DIRECTION SET button.

Each time the button is pressed, the air direction will change as follows, expept for compact wall mounted type indoor units operating under cooling mode.

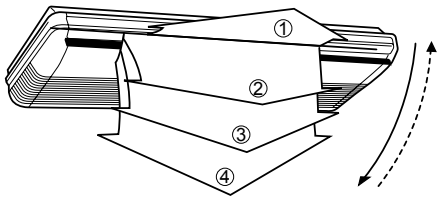
① → ② → ③ → ④

For compact wall mounted type indoor units operating under cooling mode.

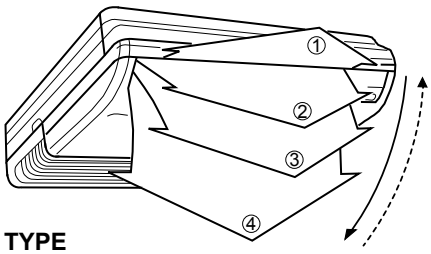
① → ②

The remote controller's display does not change.

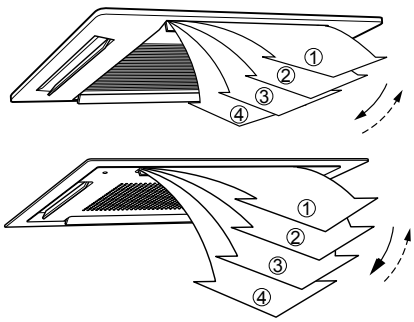
■ **LARGE CEILING TYPE**



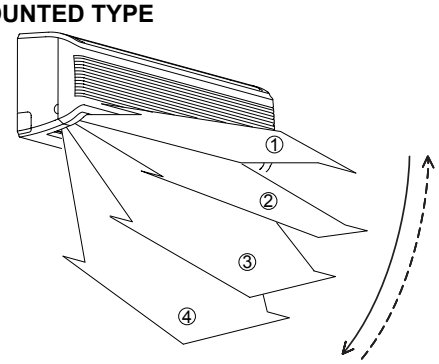
■ **UNIVERSAL FLOOR/CEILING TYPE**

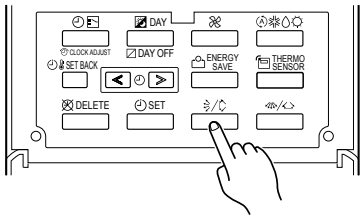


■ **CASSETTE TYPE**



■ **WALL MOUNTED TYPE**





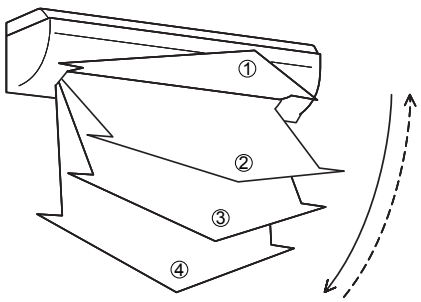
Example : When set to vertical air direction.

⚠ DANGER!

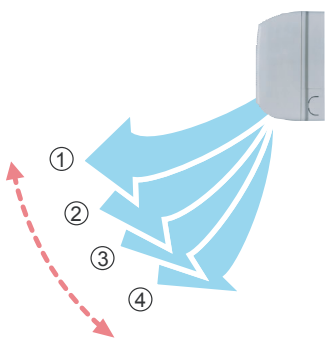
Never place fingers or foreign objects inside the outlet ports, since the internal fan opertes at high speed and could cause personal injury.

- Always use the remote control umit's AIR FLOW DIRECTION button to adjust the UP/DOWN air direction flaps or RIGHT/LEFT air direction louvers. Attempting to move them manually could result in improper operation; in this case, stop operation and restart. The louvers should begin to operate properly again.
- During use of the Cooling and Dry modes, do not set the UP/DOWN air direction flaps in the position of ④ (Compact wall mounted type ③&④ for long periods of time, since water vapor may condense near the outlet port and drops of water may drip from the air conditioner.
- When used in a room with infants, children, elderly or sick persons, the air direction and room temperature should be considered carefully when making settings.

■ **CEILING WALL TYPE**



■ **COMPACT WALL MOUNTED TYPE**



- Use the air direction adjustments within the ranges shown above.
- The vertical airflow direction is set automatically as shown, in accordance with the type of operation selected.
  During Cooling mode : Horizontal flow ①
  ＊ During Heating mode : Downward flow ④
- During AUTO mode operation, for the first minute after beginning operation, airflow will be horizontal ①, the air direction cannot be adjusted during this period.

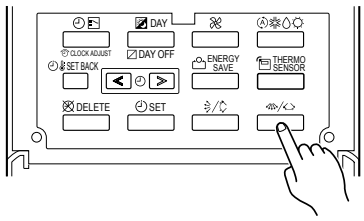
Horizontal Air Direction Adjustment

This instructions are applicable to "LARGE CEILING TYPE", "UNIVERSAL FLOOR/CEILING TYPE", "WALL MOUNTED TYPE" and "CEILING WALL TYPE".

Press the HORIZONTAL AIR FLOW DIRECTION SET button.
Each time the button is pressed, the air direction range will change as follows:

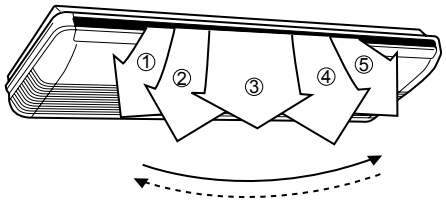
① → ② → ③ → ④ → ⑤

The remote controller's display does not change.

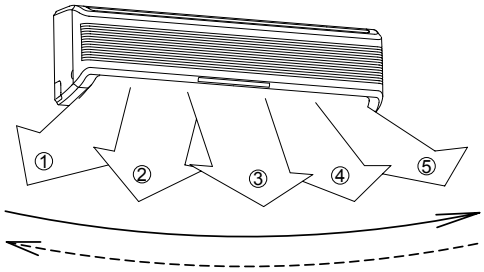


Example : When set to horizontal air direction.

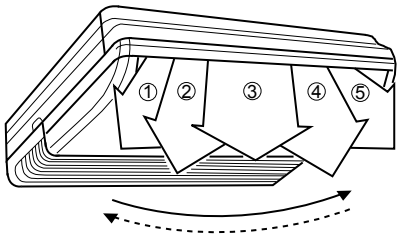
■ **LARGE CEILING TYPE**



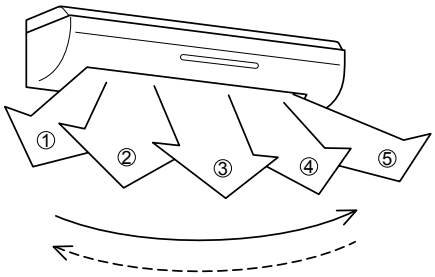
■ **WALL MOUNTED TYPE**



■ **UNIVERSAL FLOOR/CEILING TYPE**



■ **CEILING WALL TYPE**



(2) SWING OPERATION

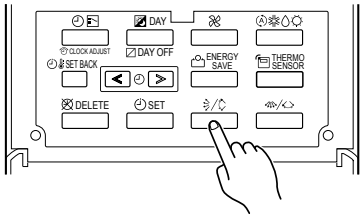
Instructions relating to "the indoor unit's indicator lamp" (＊＊) are applicable to "LARGE CEILING TYPE", "UNIVERSAL FLOOR / CEILING TYPE", "CASSETTE TYPE", "WALL MOUNTED TYPE","COMPACT WALL MOUNTED TYPE" and "CEILING WALL TYPE".

Begin air conditioner operation before performing this procedure.

To select Vertical airflow SWING Operation

This instructions are applicable to "LARGE CEILING TYPE", "UNIVERSAL FLOOR/CEILING TYPE", "CASSETTE TYPE", "WALL MOUNTED TYPE", "COMPACT WALL MOUNTED TYPE" and "CEILING WALL TYPE".

Press the VERTICAL SWING button for more than two seconds.
The remote controller's VERTICAL SWING lamp (orange) **and indoor unit's SWING indicator lamp (VERTICAL SWING) (orange) will light up.
In this mode, the UP/DOWN air direction flaps will swing automatically to direct the air flow both up and down.



Example : When set to vertical swing.

To Stop Vertical airflow SWING Operation

Press the VERTICAL SWING button for more than two seconds once and again.

The remote controller's VERTICAL SWING lamp **and indoor unit's SWING indicator lamp (VERTICAL SWING) will go out. Airflow direction will return to the setting before swing was begun.

Instructions relating to "the indoor unit's indicator lamp" (**) are applicable to "LARGE CEILING TYPE", "UNIVERSAL FLOOR / CEILING TYPE", "CASSETTE TYPE", "WALL MOUNTED TYPE", "COMPACT WALL MOUNTED TYPE" and "CEILING WALL TYPE".

About Vertical Airflow SWING Operation

- The range of swing is relative to the currently set airflow direction.
- If the swing range is not as desired, use the remote controller's VERTICAL AIR FLOW DIRECTION SET button to change the range of swing.
- The SWING operation may stop temporarily when the air conditioner's fan is not operating, or when operating at very low speeds.

Air swing range (Expect for compact wall mounted type indoor unit)

Air flow direction set	Range of swing
①	① to ③
②	② to ④
③	② to ④
④	① to ④ (All range)

Air swing range (Compact wall mounted type indoor unit)

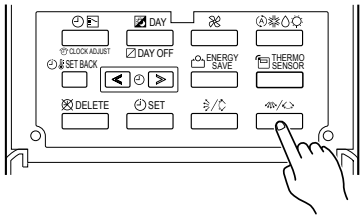
Air flow direction set	Range of swing
① or ②	① to ②
③	② to ④
④	① to ④

To select Horizontal Airflow SWING Operation

This instructions are applicable to "LARGE CEILING TYPE", "UNIVERSAL FLOOR / CEILING TYPE", "WALL MOUNTED TYPE" and "CEILING WALL TYPE".

Press the HORIZONTAL SWING button for more than two seconds.

The remote controller's HORIZONTAL SWING lamp (orange) **and indoor unit's SWING indicator lamp (HORIZONTAL SWING) (orange) will light up.
In this mode, the RIGHT/LEFT air direction louvers will swing automatically to direct the airflow both right and left.



Example : When set to horizontal swing.

To stop Horizontal airflow SWING Operation

Press the HORIZONTAL SWING button for more than two seconds once and again.

The remote controller's HORIZONTAL SWING lamp **and indoor unit's SWING indicator lamp (HORIZONTAL SWING) will go out. Airflow direction will return to the setting before swing was begun.

About Horizontal Airflow Swing Operation

- The range of swing is relative to the currently set airflow direc tion.
- If the swing range is not as desired, use the remote controller's HORIZONTAL AIR FLOW DIRECTION SET button to change the range of swing.
- The SWING operation may stop temporarily when the air conditioner's fan is not operating, or when operating at very low speed.

Air swing range

Air flow direction set	Range of swing
①	① to ⑤ (All range)
②	① to ③
③	② to ④
④	③ to ⑤
⑤	① to ⑤ (All range)

Air direction range

5-4 ELECTRONIC EXPANSION VALVE CONTROL

1. Initialization

- When the power is turned ON.
- When it has passed the limited time since the last initialization.

2. Operation Control

- When indoor unit stopping

Outdoor unit Condition	EEV Condition
OFF	Fully closed
Cooling	Fully closed
Heating	Slightly open

- When starting up

  (Cooling) Move to the cooling control base pulse.
  (Heating) Move to the heating control base pulse in steps.

- Automatic operatic control
  Automatic PI control is performed based on the indoor unit heat exchanger mid temp and inlet temp.

- Room temperature control
  The room temperature is controlled so that it reaches to the set-up temperature based on the difference between the room temperature and the set-up temperature, and the change of indoor unit temperature.
  if the room temperature becomes 0.5℃ lower than the set-up temperature, EEV is fully closed.

3. Special Control

- Oil recovery operation : Controlled pulse.
- Test run operation : Controlled pulse.
- Icing protection control : Fully closed.
- Pump down operation : Fully open.
- Defrost operation : Controlled pulse

5-5 DRAIN PUMP OPERATION

(1) When cooling and refrigerant circulation starts, the drain pump starts simultaneously.
(2) The drain pump operates continuously for 3 minutes after the refrigerant circulation stopped.
(3) When the refrigent circulation is stopped by a start of indoor heat exchanger frost prevention operation, the drain pump will turn off in 1 hour after the end of indoor heat exchanger frost prevention operation.
(4) When the water level in the drain pan rises up and then the float switch functions:
  ① Microcomputer stops the refrigerant circulation and indoor fan motor operation.
  ② Drain pump operates continuously for 3 minutes after the float switch is turned off.
  (Almost condensing water may be drained)
(5) When the float switch turns ON continuously for 3 minutes, 'FAILURE INDICATION' operates.
(6) When the float switch turns OFF within 3 minutes, the unit starts cooling operation.

5-6 FUNCTION

5-6-1 Auto Restart

The air conditioner restarts with the previous setting operation.

5-6-2 Icing Protection Control

The icing of the indoor heat exchanger is prevented during the cooling and dry mode operation.

(1) Starting Condition
- Compressor is operation more than 3 minutes.
  When "Heat exchanger inlet temperature ≦ T_A" continues *10 minutes or more.
- Compressor is operation more than 3 minutes.
  When "Heat exchanger middle temperature ≦ T_A" continues 4 minutes or more.

*Compact wall and Ceiling wall are 4 minutes

(2) Operation
EEV is closed.
Fan is at the setting amount.

(3) Completing Condition
Heat exchanger inlet and middle temperature ≧T_B
After more than 5 minutes

* Drain pump turns off at 60 minutes past the completion of the icing protection operation.

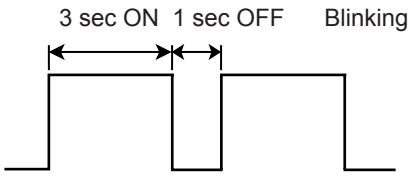
T_A	T_B
*1°C	7°C

*Compact wall and Ceiling wall are 3°C

5-6-3 Oil Recovery Operation

[Oil recovery operation] : It periodically returns the residual refrigerant ion oil in the indoor unit and the connection piping back to the outdoor unit , and prevents the compressor oil level from decreasing.

Indoor unit LED : Operation LED



Indoor fan : Same operation before oil recovery operation. (Cooing mode)
Stop (Heating mode)
Indoor EEV : Control pulse

* During the above operation, a refrigerant noise may be from the indoor unit.

5-7 TIMER CONTROL

5-7-1 Wireless Remote Controller

There are following 4 kinds of timer modes are available.

- ON Timer
- OFF Timer
- PROGRAM Timer
- SLEEP Timer

1. ON / OFF TIMER

Instructions relating to heating are applicable only to "HEAT & COOL MODEL" (Reverse Cycle).
The timer functions cannot be used when this controller is used together with the remote controller (Wired type).
A beeping sound is made when a signal is received.

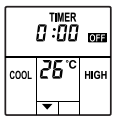
To set the ON / OFF timer

Press the START/ STOP button to start the air conditioner, and then proceed as follows.

1 **Select "OFF TIMER" or "ON TIMER"**

RESET → OFF TIMER → ON TIMER
PROGRAM TIMER (OFF ← ON, OFF → ON)

2 **Adjust the OFF or ON time.**
(About 5 seconds later , the entire display will reappear.)



2. PROGRAM TIMER

To set the PROGRAM timer

Press the START/ STOP button to start the air conditioner, and then proceed as follows.

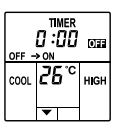
1 **Select "OFF TIMER"**

2 **Adjust the OFF time.**

3 **Select "ON TIMER"**

4 **Adjust the ON time.**
(About 5 seconds later, the entire display. will reappear.)

5 **Select "PROGRAM TIMER"**
(Either OFF ON or OFF ON will display.)
(If the ON timer has been selected to operate first, the unit will stop operating at this point.)



To cancel the TIMER

Select "TIMER RESET".
The air conditioner will return to normal operation.

***To change operating conditions**

If you wish to change the operating conditions (ON/OFF,Mode, Fan Speed, Temperature Setting), after making the time setting, wait until the entire display reappears, then press the appropriate buttons to change to the desired operating condition.

*** Even ON/OFF and Sleep timer are valid.**

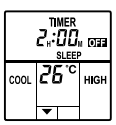
3. SLEEP TIMER

To set the SLEEP timer

Unlike other timer functions, the SLEEP timer is designed to set the duration of time in which the unit does not operate. The SLEEP timer can be set regardless of whether the indoor unit is operating or stopped.

1 (Both the indoor unit's OPERATION indicator lamp (red) and the TIMER indicator lamp (green) will light.)

2 **Adjust the OFF time.**
(About 5 seconds later,the entire display will reappear.)



To change the timer settings

1

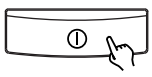
2

The OFF time is displayed when the "▼" mark is flashing.

***To cancel the TIMER**

Select "TIMER RESET".
The air conditioner will return to normal operation.

***To stop air conditioner operation during timer operating**



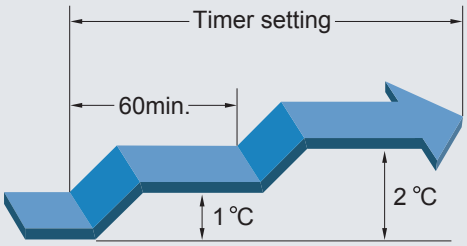
*** Even ON/OFF and Program timer are valid.**

Sleep timer

The sleep timer function automatically corrects the temperature thermostat setting according to the time setting to prevent excessive cooling and heating while sieeping.

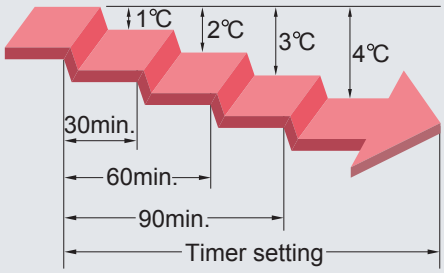
Cooling operation / dry operation

When the sleep timer is set, the set temperature automatically rises 1 °C every hour.The set temperature can rise up to a maximum of 2 °C



Heating operation

When the sleep timer is set, the set temperature sutomatically drops 1 ℃ every 30 minutes. The set temperature can drop to a maximum of 4 ℃



5-7-2 Group Remote Controller

UTB - YDA/GDA

- WEEKLY TIMER

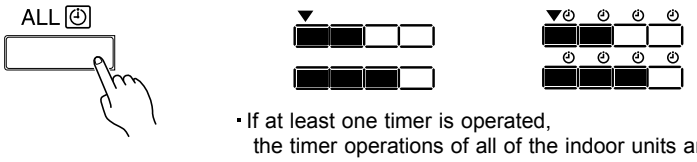
1. WEEKLY TIMER

Instructions related to heating are applicable to "HEAT PUMP MODELS" and "HEAT RECOVERY MODELS" only.
The timer function is not available depending on the initial setting.

- The timer can be set up on different schedule for every day of the week.
- The timer can be set up 4 times in a day.
- Each timer can be set up operation/stop, operation mode, setting temperature.

To start / cancel the WEEKLY timer operation

Press the ALL TIMER button to start or cancel the WEEKLY timer operation.



- If at least one timer is operated,
  the timer operations of all of the indoor units are canceled at one time.
- If all of timers are not operated,
  the timer operations of all of the indoor units are set up at one time.

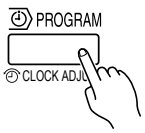
Press the Timer Mode(DELETE) button to start or cancel the WEEKLY timer operation.



The operating time for the current day is displayed.

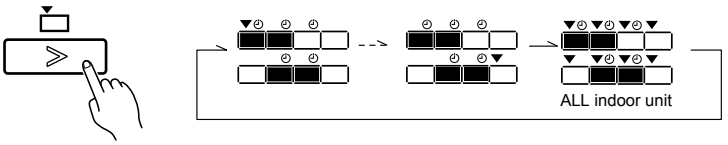
To set the WEEKLY timer

1



Press the PROGRAM(CLOCK ADJUST) button.
* Don't press the PROGRAM button for more than 2 seconds, otherwise it enters to the time setting mode.

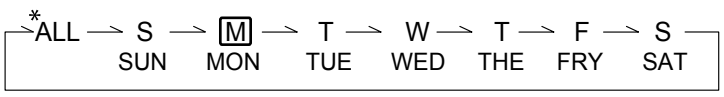
2

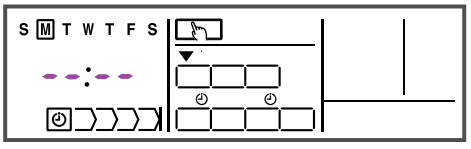


Press the Select buttoin to select the indoor unit.
*If the "ALL indoor unit" is selected, the timer of all of registered indoor units are set up at one time.

3 ●Day of the week setting

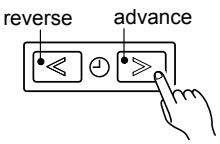


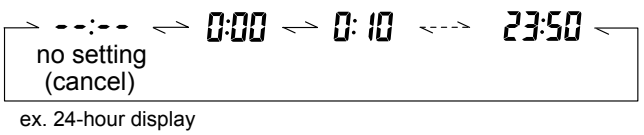




Press the DAY button to select the day of the week
* For ALL, all of the days can be set together when a ▭ appears around each day.

4 ● Time setting



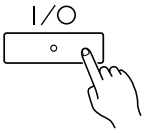


ex. 24-hour display

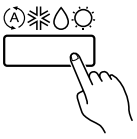
Press the Set Time buttons to set the time in 10-minute increments.

5

● Operation setting



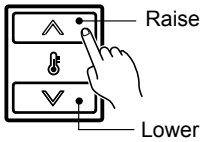
no display → no setting → ON → OFF



no display → no setting → AUTO** → COOL → DRY → FAN** → HEAT*

* If the "ALL indoor unit" is selected and all of the indoor units are "COOLING ONLY MODEL", it can't be selected.

** If the "ALL" is selected and all of the indoor units were mixture of "HEAT PUMP MODEL" and "COOLING ONLY MODEL", it can't be selected.



no display → no setting → 10℃ → 11℃ → 15℃ → 17℃ → 18℃ → 30℃

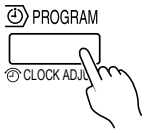
depend on initial setting

HEAT only

* The setting temperature range depends on the operation mode or the initial setting.

Press the Start/Stop button or the Master Control button or the Set Temperature button to set the operation.

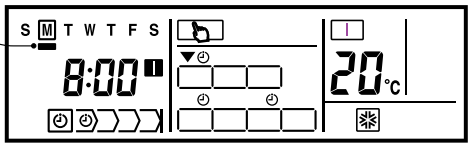
6



Press again the PROGRAM (CLOCK ADJUST) button to complete the weekly timer setting.

* ((•)) flashes for 2 seconds.

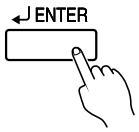
When the operating time is set, the ■ mark appears.



ex. The TIMER-1 is set 8:00 ON COOL 20℃ .

7

● To set up the next timer on the same day.

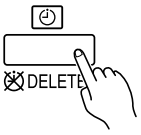


TIMER-1 → TIMER-2 → TIMER-3 → TIMER-4

Then press the ENTER button to proceed to the time setting, and repeat steps from *4* to *6* .

● To set up the timer on another day of the week and another indoor units, repeat steps from *2* to *6*.

● To delete the operating time



If the Timer Mode(DELETE) button is pressed during steps *3* or *5* , the operating time for the selected day will be deleted.
If all the days are selected, the operating times for all of the day will be deleted.

NOTES

(1) For HEAT PUMP MODEL, Does not operate according to the settings for the HEAT timer during the cooling mode and for the COOL or DRY timer during the heating mode.

(2) Even if the timer operation is set, the timer lamp of the indoor unit does not light up.(The timer lamp is used for wireless cemote controller only.)

5-7-3 Wired Remote Controller

UTB - ＊UB

- ON / OFF TIMER
- WEEKLY TIMER
- TEMPERATURE SET BACK TIMER

1. ON / OFF TIMER

Instructions related to heating are applicable to "HEAT PUMP MODELS" and "HEAT RECOVERY MODELS" only.
The timer function is not available depending on the model.

To set the ON / OFF timer

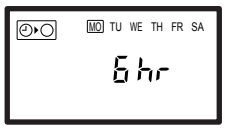
1 Press the TIMER MODE button to select the ON TIMER or OFF TIMER.



No display → OFF TIMER → ON TIMER → WEEKLY TIMER

NON STOP

2 From 1 to 24 hours



ex.OFF timer set for 6 hours

Press the SET TIME buttons to set time.
After the time is set, the timer will start automatically.
The amount of time until the OFF timer operates that is displayed on the timerdisplay decreasesas time passes.

To cancel the timer mode



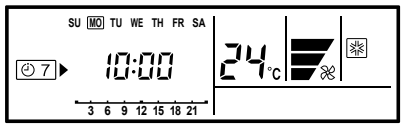
- Press the DELETE button to cansel the timer mode.
- The timer mode can also be canceled by changing the timer mode using the TIMER MODE botton.

2. WEEKLY TIMER

Instructions related to heating are applicable to "HEAT PUMP MODELS" and "HEAT RECOVERY MODELS" only.
The timer function is not available depending on the model.

To set the WEEKLY timer

1 Press the TIMER MODE button to select the weekly timer.



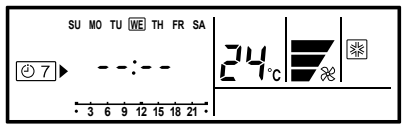
2 Press the SET button for 2 seconds or more.

3 **Day of the week setting**

Press the DAY button to select the day of the week, and then press the SET button to confirm the setting.

＊ For ALL, all of the days can be set together when a ☐ appears around each day.

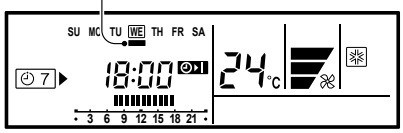
＊ALL → SU → MO → TU → WE → TH → FR → SA



4 **Time setting**

ON-1 → OFF-1 → ON-2 → OFF-2

When the operating time is set, the ■ mark appears.



ex. The timer is set for 7:00-18:00.

Press the SET TIME buttons to set the ON time in 30-minute increments, then press the SET button to proceed to the OFF time setting. Set the OFF time in the same way. If necessary, set the second weekly timer settings in the same way.

5 Repeat steps **3** and **4** to set the weekly timer for another day of the week.

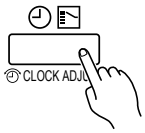
6 Press the SET button for 2 seconds or more to complete the weekly timer settings.

To delete the operating time

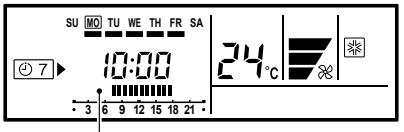
If the DELETE button is pressed during steps **3** or **4**, the operating time for the selected day will be deleted.
If all the days are selected, the operating times for all of the days will be deleted.

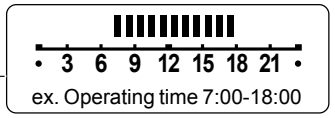
To start/cancel the WEEKLY timer operation

To start



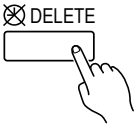
When the weekly timer is selected, the timer starts automatically.





The operating time for the current day is displayed.

To cancel



- Press the DELETE button to cancel the timer mode.
- The timer mode can also be canceled by changing the timer mode using the TIMER MODE button.

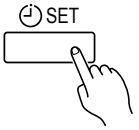
NOTES

(1) PRECAUTIONS DURING WEEKLY TIMER SET UP
Setup is not possible in the following cases, so amend the time.
- Be sure to set the ON time first, then the OFF time. If either the ON time or the OFF time is not set correctly, the timer will not operate properly.
- The WEEKLY 2 settings cannot be set earlier than the WEEKLY 1 settings.
- The WEEKLY 1 and WEEKLY 2 time spans cannot overlap.

(2) The earliest OFF time you can set is 30 minutes after the ON time.
(3) The OFF time can be carried over to the next day.
(4) Even if the timer operation is set, the timer indicator lamp of the indoor unit does not light up. (The timer indicator lamp is used for wireless remote controllers only.)

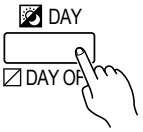
To set the DAY OFF (for a holiday)

1



During the weekly timer , press the SET button for 2 seconds or more to set the day.

2



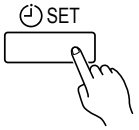
Select the day to set the DAY OFF.

3

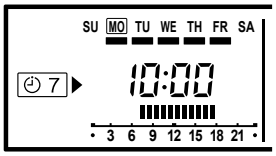


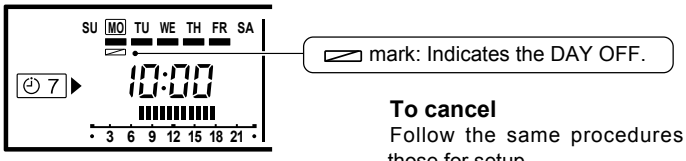
Press the DAY(DAY OFF) button for 2 seconds or more to set the DAY OFF.

4



Press the SET button for 2 seconds or more to complete the DAY OFF setting.





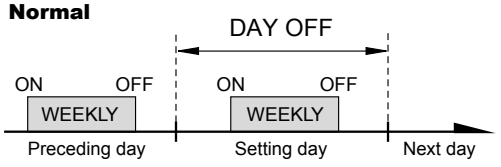
ex. The DAY OFF is set for Monday.

To cancel
Follow the same procedures as those for setup.

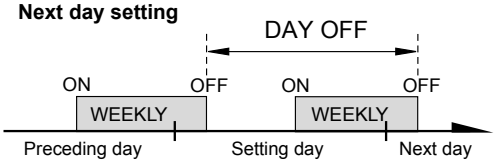
NOTES

(1) The DAY OFF setting is only available for days for which weekly settings already exist.
(2) If the operating time carries over to the next day (during a next day setting), the effective DAY OFF range will be set as shown below.

Normal



Next day setting



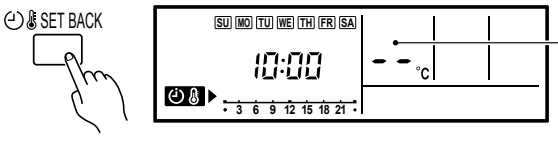
(3) The DAY OFF setting can only be set one time. The DAY OFF setting is cancelled automatically after the set day has passed.

3. TEMPERATURE SET BACK TIMER

Instructions related to heating are applicable to HEAT PUMP MODELS and HEAT RECOVERY MODELS only.
The timer function is not available depending on the model.

To set the temperature SET BACK timer

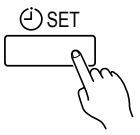
1



If there is no existing SET BACK temperature setting, "- -" will be displayed for the tempreature.

Press the SET BACK button to change to the SET BACK confirmation display.
The SET BACK operating time and the set temperature will be displayed.

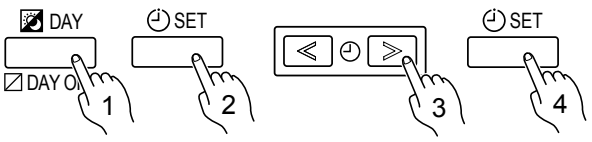
2

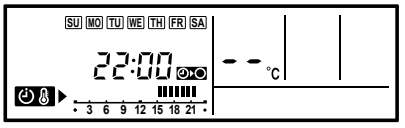


Press the SET button for 2 seconds or more.

3

Day setting **Operating time setting**



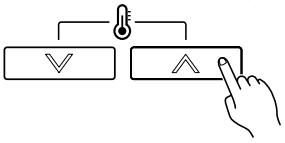


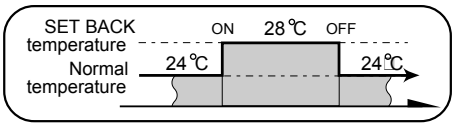
ex. When setting all days together

Follow steps **3** and **4** in "To set the WEEKLY timer " (p.10). The DELETE button is also used as described in the procedures for the weekly timer.

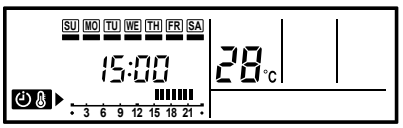
4

Temperature setting



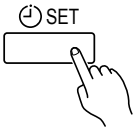


Press the SET TEMPERATURE button to set the temperature (from 10 ℃ to 30 ℃).



ex. Operating time 15:00 - 22:00

5

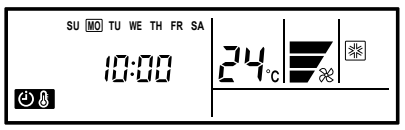


Repeat steps **3** and **4**.
Press the SET button for 2 seconds or more to complete the temperature SET BACK timer settings.

To start/ cancel the temperature SET BACK timer operation

To start

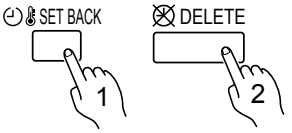




ex. Display during SET BACK timer operation
(The operating time will not be displayed.)

Press the SET BACK button. The SET BACK confirmation display appears for 5 seconds, and then the timer starts automatically.

To cancel



Press the SET BACK button, and then press the DELETE button while the SET BACK confirmation display is displayed. Even if the SET BACK button is pressed again, the SET BACK timer will be cancelled.

NOTES

(1) The SET BACK timer only changes the set temperature, it cannot be used to start or stop air conditioner operation.
(2) The SET BACK timer can be set to operate up to two times per day but only one temperature setting can be used.
(3) The SET BACK timer can be used together with the ON, OFF , and weekly timer functions.
(4) During the COOL/DRY mode, the air conditioner will operate at a minimum of 18℃ even if the SET BACK temperature is set to 17℃ or lower.
(5) The SET BACK operating time is displayed only in the SET BACK confirmation display. (Refer to step 1 for the SET BACK confirmation display.)
(6) Room temperatures as low as 10, 12, and 14℃ cannot be set depending on the model.

Refrigerant R410A
INVERTER

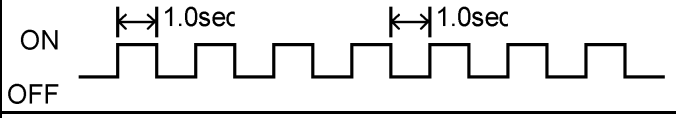
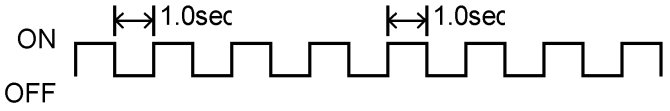
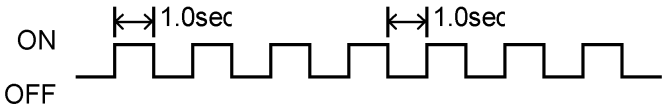
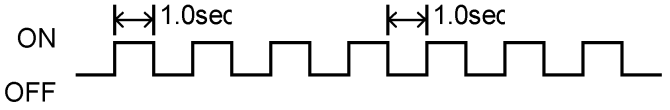
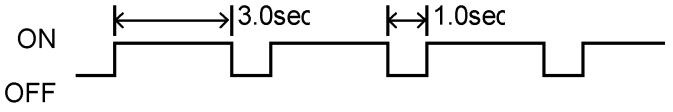
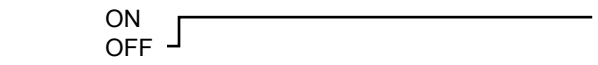
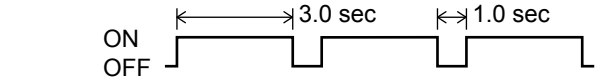
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6 . TROUBLE SHOOTING

6. TROUBLESHOOTING

6-1 NORMAL OPERATION

6-1-1 Indoor Unit Display

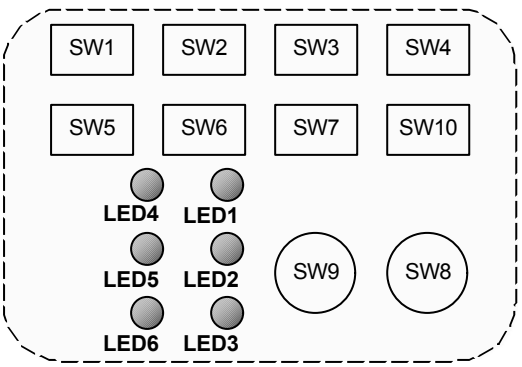
Indication type	Indication Lamp	Flashing Pattern
Operation	Operation LED	Continuous lighting
Anti freeze *		Continuous lighting(lowered light)
Timer	Timer LED	Continuous lighting
Vertical Swing	Vertical Swing LED	Continuous lighting
Horizontal Swing	Horizontal Swing LED	Continuous lighting
Power Failure *	Operation LED	
	Timer LED	
Test Operation *	Operation LED	
	Timer LED	
Defrosting *	Operation LED	
Oil recovery *		
* Opposite Operatoion mode	Operation LED	
	Timer LED	

* Please refer to "Operation Not Trouble".

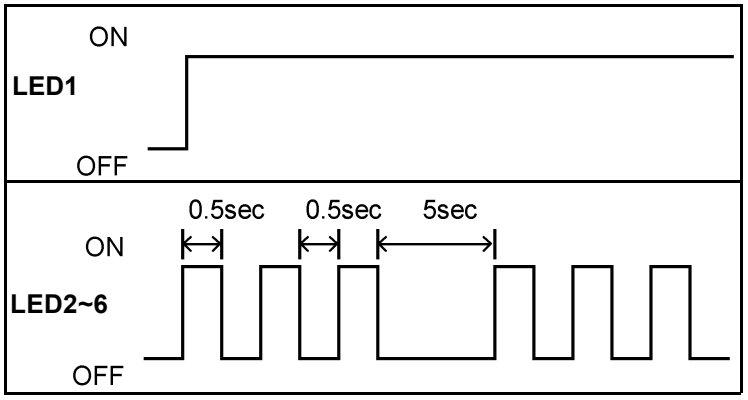
6-1-2 OUTDOOR UNIT DISPLAY

Indication type	LED Flashing Pattern		
Idling(stop) *	LED1 Continuous Lighting		
Cooling mode	LED1 Continuous Lighting	LED2	Flashes 1 time
Heating mode			Flashes 2 times
Compressor 1 Output		LED3	Flashes 1 time
Compressor 2 Output			Flashes 2 times
Compressor 3 Output			Flashes 3 times
Compressors 1,2 Output			Flashes 4 times
Compressors 1,3 Output			Flashes 5 times
Compressors 2,3 Output			Flashes 6 times
Compressors 1,2,3 Output			Flashes 7 times
During Pressure Balance *		LED4	Continuous lighting
Oil Recovery Operation *		LED5	Flashes 1 time
Defrost Operation *			Flashes 2 times
Test Operation *			Flashes 3 times
Oil Balance Operation *			Flashes 4 times
Pump Down Completed *		LED2,3,4,5,6	Flashes 2 times
Discharge Temp. Protection is stopped *		LED6	Flashes 1 time
High Pressure Protection is stopped *			Flashes 2 times
Low Pressure Protection is stopped *			Flashes 3 times

* Please refer to “Operation not trouble”.



Outdoor Control PCB LED Indication



6-1-3 Operation Not Trouble

Following conditions of Indoor unit are not defects.

Operation	Description
Operation LED is flashing	If a power is cut off during the operation by such as power failure, Operation LED and Timer LED flashes alternately.
	During a test operation, Operation LED and Timer LED repeat flashing at the same time.
	During the defrost and the oil recovery operation, only Operation LED flashes.
Operation LED is lighting (Low light)	During the anti-freezing, Operation LED lights up (Low Light).
Operation LED is lighting Timer LED is 3 sec ON, 1sec OFF	At the heat pump type, indoor unit operation will be different from outdoor unit operation mode. The timer lamp indicate as above mentioned.

Following conditions of Outdoor unit are not defects.

Operation	Description
Only LED1 is lighting	While stopping (idling), only LED1 lights up continuously.
LED1 and LED4 are lighting	During pressure balance, LED1 and LED4 light up continuously.
LED1 is lighting, and LED5 is flashing	During oil recovery, LED1 lights up continuously and LED5 repeats 1 time flashing.
	During defrost operation, LED1 lights up continuously and LED5 repeats 2 times flashing.
	During test operation, LED1 lights up continuously and LED5 repeats 3 times flashing.
	During oil balance operation, LED1 lights up continuously and LED5 repeats 4 times flashing.
LED1 is lighting, and LED6 is flashing	During discharge temperature protection stop (when higher than 120°C of discharge temperature is detected), LED1 lights up continuously and LED6 repeats 1 time flashing.
	During high pressure protection stop (when higher than 4.1MPa of high pressure is detected), LED1 lights up continuously and LED6 repeats 2 times flashing.
	During low pressure protection stop (when lower than 0.1MPa of low pressure is detected), LED1 lights up continuously and LED6 repeats 3 times flashing.
LED1 is lighting, and all other LEDs are flashing	When the pump down is completed, LED1 lights up continuously and LED2,3,4,5,6 repeat 2 times flashing.

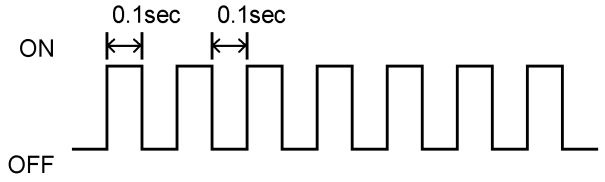
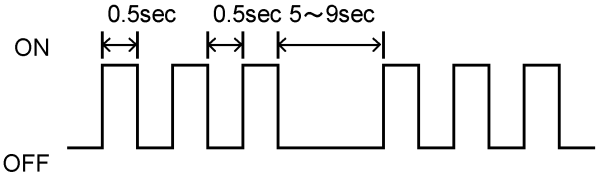
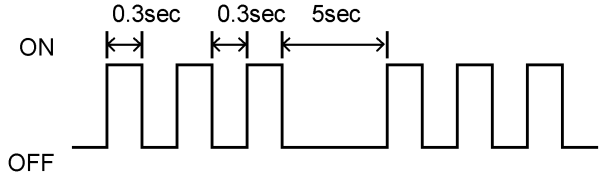
6-2 ABNORMAL OPERATION

6-2-1 Indoor Unit Display

Please refer the flashing pattern as follows.

Error Contents	Operation LED	Timer LED	Vertical Swing LED	Horizontal Swing LED	Trouble shooting
Model Information Error	Continuous flash	Continuous flash	OFF	OFF	1
Power Freq. Error	Continuous flash	Continuous flash	Continuous flash	Continuous flash	2
EEPROM Access Error	Continuous flash	4 times flash	1 time flash	OFF	3
Room Temp. Sensor Error	2 times flash	Continuous flash	OFF	OFF	4
Heat Ex. Inlet Sensor Error	3 times flash	Continuous flash	1 time flash	OFF	5
Heat Ex. Middle Sensor Error	3 times flash	Continuous flash	2 times flash	OFF	6
Drain Error	4 times flash	Continuous flash	OFF	OFF	7
Indoor Fan Motor Error	6 times flash	Continuous flash	OFF	OFF	8
Standard Wired Remote Control Error	5 times flash	Continuous flash	1 time flash	OFF	9
Standard Wired Token Error	5 times flash	Continuous flash	4 times flash	OFF	10
Main PCB - Transmission PCB Communication Error	Continuous flash	6 times flash	OFF	OFF	11
Network Communication Error	Continuous flash	5 times flash	1 time flash	OFF	12
Outdoor Unit Error *	Continuous flash	3 times flash	3 times flash	OFF	13 ~ 48

*** Depending on contents of Outdoor unit, it may not indicate. (Refer to "TROUBLE LEVEL OF SYSTEM")**

Error Indication Flashing Pattern	
Indoor/Outdoor LED Cont. Flash **0.1 sec ON / 0.1 sec OFF flashing**	
Indoor LED Flash (1 to 6 times) **0.5 sec ON / 0.5 sec OFF flashing**	
Outdoor LED Flash (1 to 12 times) **0.3 sec ON / 0.3 sec OFF flashing**	

6-2-2 Remote Controller

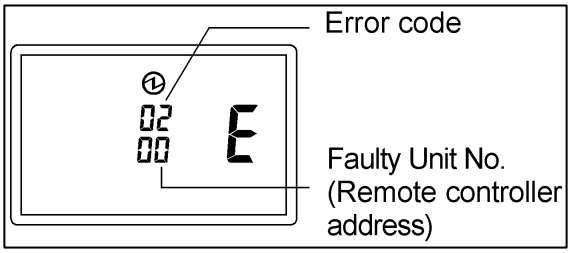
<< *SIMPLE REMOTE CONTROLLER* >>

Run [Self-Diagnosis] if [EE] flashes on the display of the remote controller.
The error of the indoor unit is displayed.

I. Stop the air conditioner operation.

II. Press the [FAN SPEED] button and the [▲TEMP.] button at the same time for more than 5 seconds to start the self-diagnosis.
*Please refer to the error codes as follows.

III. Press the [FAN SPEED] button and the [▲TEMP.] button at the same time for more than 5 seconds to stop the self-diagnosis.



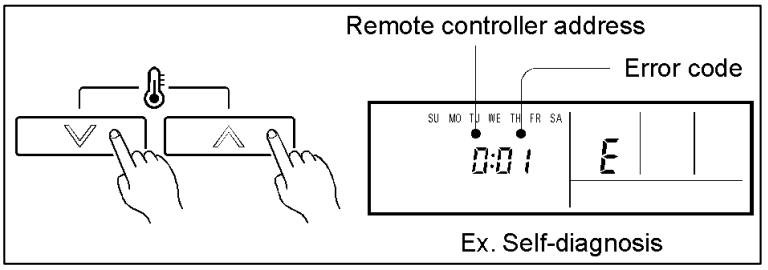
<< *WIRED REMOTE CONTROLLER* >>

Run [Self-Diagnosis] if [E:EE] flashes on the clock display of the remote controller.
The error of the indoor unit is displayed.

I. Stop the air conditioner operation.

II. Press the Set Temperature buttons [▽] and [△] at the same time for more than 5 seconds to start the self-diagnosis.
*Please refer to the error codes as follows.

III. Press the Set Temperature buttons [▽] and [△] at the same time for more than 5 seconds to stop the self-diagnosis.



ERROR CODE	ERROR CONTENT	Trouble Shooting	ERROR CODE	ERROR CONTENT	Trouble Shooting
E : 00	No Error		**E : 11**	Drain Error	**7**
E : 02	Model information Error	**1**	**E : 13**	Indoor fan motor Error	**8**
E : 04	Power frequency Error	**2**	**E : 18**	Standard wired remote Error	**9**
E : 06	EEPROM access Error	**3**	**E : 18**	Standard wired token Error	**10**
E : 09	Room sensor Error	**4**	**E : 1F**	Network communication Error	**12**
E : 0A	Heat Ex. Middle Sensor Error	**5**	**E : 21**	Communication Error between Main PCB & Transmission PCB	**11**
E : 0b	Heat Ex. Inlet sensor error	**6**	**E : 32**	Outdoor unit Error	**13 ~ 48**

6-2-3 Outdoor Unit Display

Please refer to “TROUBLE LEVEL OF SYSTEM” for Outdoor unit condition of following errors.
Please refer to previous page for flashing pattern.

Error Contents	LED Flashing Pattern			Trouble shooting
Compressor 1 Error	LED1 Continuous flash	LED2	1 time flash	13
Compressor 2 Error			2 times flash	14
Compressor 3 Error			3 times flash	15
Discharge Temperature 1 Error			4 times flash	16
Discharge Temperature 2 Error			5 times flash	17
Discharge Temperature 3 Error			6 times flash	18
High pressure Error			7 times flash	19
Low pressure Error			8 times flash	20
Pomp down Error			9 times flash	21
4-way valve Error			10 times flash	49
All compressor of 1 unit Error			11 times flash	50
Discharge Temp Sensor 1 Error		LED3	1 time flash	22
Discharge Temp Sensor 2 Error			2 times flash	23
Discharge Temp Sensor 3 Error			3 times flash	24
Heat Ex. Liquid Temperature Sensor Error			4 times flash	25
RCV Liquid surface detection sensor 1 (Lower limit) Error			5 times flash	26
RCV Liquid surface detection sensor 2 (Middle limit) Error			6 times flash	27
RCV Liquid surface detection sensor 3 (Higher limit) Error			7 times flash	28
Sub-cool Heat Exchanger Gas output temp. sensor Error			8 times flash	29-1
Liquid pipe temp. sensor 1 Error			9 times flash	30
Liquid pipe temp. sensor 2 Error			10 times flash	31
Suction gas temp. sensor Error			11 times flash	32
Outdoor temp. sensor Error			12 times flash	33
Sub-cool Heat Exchanger Gas inlet temp. sensor Error			13 times flash	29-2
Discharge pressure sensor Error		LED4	1 time flash	34
Suction pressure sensor Error			3 times flash	35
Current sensor Error *			4 times flash	36
Reverse phase, missing phase wire Error		LED5	1 time flash	37
Inverter Error *			2 times flash	38
EEPROM Access Error			3 times flash	39
Inverter star up current value Error *			4 times flash	40
Inverter normal current value Error *			5 times flash	41
Inverter communication Error *			6 times flash	42
Parallel communication Error			7 times flash	43
Communication error between Outdoor units			8 times flash	44
Network communication Error *			9 times flash	45
Master unit, Slave unit set-up Error			10 times flash	46
Indoor unit Error **		LED6	1 time flash	1 ~ 12
Slave unit Error *			2 times flash	47
Initial setting Error		LED2,3,4,5,6	Continuously lighting	48

*** Error with occurs on Master unit only**
**** It indicates when the error signal is received from one of Indoor units within the same refrigerant system.**

6-2-4 TROUBLE LEVEL OF SYSTEM

<< System Condition when Outdoor Unit Error is occurred >>

System Error Flag	Outdoor unit Error Flag		Trouble Level 1 (1) It is not indicated on Indoor Unit. It is indicated on Peripheral Unit.	Trouble Level 2 (2) It is indicated on Indoor Unit. It is also indicated on Peripheral
System is not stopped compulsorily	Some Error LED indication Outdoor unit does not stop	It operates continuously. (Only the subject unit stops)	> Discharge temp. sensor error (Subject compressor stops) > Liquid surface temp. sensor error > Sub cool heat exchanger sensor error > Discharge temp. 1-2-3 error (Subject compressor stops) > EEPROM access error > Network communication error (Some of indoor unit does not communicate)	> Compressor failure > Current sensor error (Inverter compressor stops) > Inverter error (all errors) > Inverter start up current error (Inverter compressor stops) > Inverter normal current error (Inverter compressor stops) > Inverter communication error (Inverter compressor stops)
	Some Error LED indication Outdoor unit stops. It is possible to operate later. No problem on continuous operation.	Only the subject outdoor unit stops.	> High pressure error > Pump down error	(No subjective error)
	Some Error LED indication Outdoor unit stops. It is not possible to operate. Repair needed. Possible secondary trouble or failure	Only the subject outdoor unit stops.	(No subjective error)	(No subjective error)
System is compulsorily stopped		Subject refrigerant system is stopped.	(No subjective error)	> Low pressure error > Master unit - Slave unit setting error > Parallel communication error > Reverse phase/Missing phase wiring error > Heat exchanger liquid temp. sensor error (It stops due to no defrosting.) > Suction temp. sensor error (It stops due to broken heating EEV control) > Outdoor temp. sensor error (It stops due to the reverse liquid flow with mismatching of EEV initial opening > Pressure sensor error > 4 way valve error (it is judged by Master unit) > All compressors are not operative within the same outdoor unit > Network communication error (No communication of all indoor units) > Priority receiving on Bus

Items shown in red apply for only Master Unit.

<Important>

LED error indication does not disappear even if the power is reset when the following error occurs.

- Compressor failure
- Low pressure error
- Current sensor error
- Inverter start up current error
- Inverter normal current error
- 4 way valve error

The following is the reason why this error does not disappear.
These errors can not be judged without operating the system, and the serviceman would not be able to check it if the system power is turned off before visiting the site for repair.
To reset this error and operate the system, DIP-SW4-4 setting shall be changed.

6-3 TROUBLE SHOOTING

6-3-1 How to Trouble Shoot From the Symptom

Symptom	Check method	Details
Does not operate	Check power supply	Isn't the breaker down? (Refer to Trouble shooting 49, 50)
	Check system	Is this model possible to connect the subject indoor unit, outdoor unit, and remote control? (Refer to Installation Manual, D&T Manual)
	Check setting up and connection	Address set up of indoor and outdoor correct? Is the transmission line connected? (Refer to Trouble shooting 51)
	Diagnose by Indoor unit LED	Is LED indicating error? (Refer to Trouble shooting 1~12)
	Diagnose by Outdoor unit LED	Is LED indicating error? (Refer to Trouble shooting 13~48)
It is operating but no cooling or no heating	Check operation condition	Does it indicate Normal operation? (Refer to Operation not trouble)
	Check User environment	Is the unit capacity fitting to the size of the room? Is the remote set up (temp./fan) correct? (Refer to installation Manual and D&T Manual)
	Check condition of equipment	Isn't air Filter of Indoor unit dirty? Are Indoor / Outdoor heat exchanger clogged? (Refer to Trouble shooting 52)
	Diagnose by Indoor unit LED	Is LED indicating error? (Refer to Trouble shooting 1~12)
	Diagnose by Outdoor unit LED	Is LED indicating error? (Refer to Trouble shooting 13~48)
Noise during the operation is noticeable	Check Indoor unit	Is the Main unit installation stable? Is there anything obstructing the fan rotation? (Refer to Trouble shooting 53)
	Check Outdoor unit	Is the Main unit installation stable? Is there anything obstructing the fan rotation? (Refer to Trouble shooting 53)
Water leakage from Indoor unit	Check Drain route	Is the main cabinet broken? Does drain water come out of drain hose? (Refer to Trouble shooting 54)

6-3-2 Trouble shooting with error code (INDOOR UNIT)

Trouble shooting 1 **INDOOR UNIT Error Method:** **Model Information Error**	**Indicate or Display:** **Indoor Unit : Operation LED Flash, Timer LED Flash** **Swing LED OFF** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 02**
Detective Actuators: Indoor Unit Controller PCB Circuit	**Detective details:** 3 continuous failure of lead test of EEPROM at Power ON, or Apparent Model information error from EEPROM. Also, Error on Model information upon model information test of EEPROM, or Model information of EEPROM not possible to recover.

Forecast of Cause : 1. Outside cause 2. Connection failure of electric components 3. Controller PCB defective

Check Point 1-1 : Reset Power Supply

Does abnormal LED indication show again?

NO

YES

Check Point 2 :
Check Indoor Unit electric components

- ☐ Check all connectors (loose connector or incorrect wiring)
- ☐ Check any shortage or corrosion on PCB.

OK

Check Point 3 : Replace Controller PCB

▶ **Change Controller PCB and set up the original address.**

Check Point 1-2 :
Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave). Check the complete insulation of grounding.

Note : EEPROM
EEPROM(Electronically Erasable and Programmable Read Only Memory) is a non-volatile memory which keeps memorized information even if power is turned off. It can change the contents electronically.
To change the contents, it uses higher voltage than normal, and it can not change a partial contents. (Rewriting shall be done upon erasing the all contents.)
There is a limit in a number of rewriting.

Trouble shooting 2 **INDOOR UNIT Error Method:** **Power Frequency Abnormal**	**Indicate or Display:** **Indoor Unit : Operation LED Flash, Timer LED Flash** **Swing LED Flash** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 04**
Detective Actuators: Indoor Unit Controller PCB Circuit	**Detective details:** When 5 continuous failures occurred at Power frequency test. Or, 2 times match under 45Hz or 2 times match over 66Hz.

Forecast of Cause : 1. Outside cause 2. Installation failure 3. Defective connection of electric components
4. Controller PCB defective

Check Point 1-1 : Reset Power Supply

Does abnormal LED indication show again?

NO

YES

Check Point 1-2 :
Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave). Check the complete insulation of grounding.

Check Point 2 : Check Installation condition

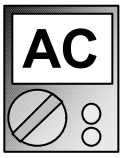
- ☐ Check Cable/Breaker
- ☐ Check loose or removed connection

>> If Installation defect is found, correct it by referring to Installation Manual.

OK

Check Point 3 : Check connection of electric components

- ☐ Check power supply voltage (AC220V between Indoor unit terminal 1 and 2)
- ☐ Check connection of Connector (any lose connector or incorrect wiring)
- ☐ Check any shortage or corrosion on PCB.



OK

Check Point 4 : Replace Controller PCB

▶ **Change Controller PCB and set up the original address.**

Trouble shooting 3 **INDOOR UNIT Error Method:** **EEPROM Access Abnormal**	**Indicate or Display:** **Indoor Unit : Operation LED Flash, Timer LED 4 Times Blink** **Swing LED 1 Time Blink** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E: 06**
Detective Actuators: Indoor Unit Controller PCB Circuit	**Detective details:** When 3 continuous failure occurred on lead test of EEPROM.

Forecast of Cause : 1. Outside cause 2. Defective connection of electric component 3. Controller PCB defective

Check Point 1-1 : Reset Power Supply

Does abnormal LED indication show again?

NO

YES

Check Point 2 :
Check Indoor Unit electric components

- ☐ Check all connectors (loose connector or incorrect wiring)
- ☐ Check any shortage or corrosion on PCB.

OK

Check Point 3 : Replace Controller PCB

- ▶ **Change Controller PCB and set up the original address.**

Check Point 1-2 :
Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave). Check the complete insulation of grounding.

Trouble shooting 4 **INDOOR UNIT Error Method:** **Indoor Temperature sensor error**	**Indicate or Display:** **Indoor Unit : Operation LED 2 Times Blink、Timer LED Flash** **Swing LED OFF** **Outdoor Unit : LED1 Flash、LED6 1Time Blink** **ERROR CODE : E : 09**
Detective Actuators: Indoor Unit Controller PCB Circuit Indoor Temperature Thermistor	**Detective details:** When Indoor thermistor open or shortage is detected at power ON.

Forecast of Cause : 1. Connector defective connection 2. Thermistor defective 3. Controller PCB defective

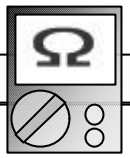
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

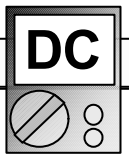
Temperature (°C)	0	5	10	15	20	25	30	35
Resistance Value (kΩ)	33.6	25.2	20.1	15.8	12.5	10.0	8.0	6.5

Temperature (°C)	40	45	50
Resistance Value (kΩ)	5.3	4.3	3.5

▶ **If Thermistor is either open or shorted, replace it and reset the power.**

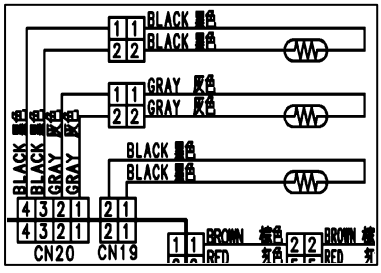
OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)



Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Duct Schematic Diagram (Connector connection)

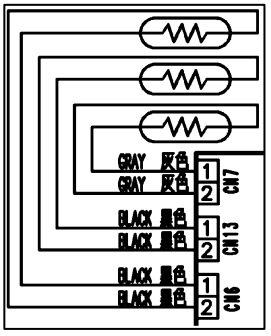


H/E Inlet Thermistor
(CN20 Wire:Black)

H/E Middle Thermistor
(CN20 Wire:Gray)

Room Temp. Thermistor
(CN19 Wire:Black)

Small size Wall mount Schematic Diagram(Direct soldering to PCB)



Room Temp. Thermistor
(CN6 Wire:Black)
H/E Inlet Thermistor
(CN13 Wire:Black)
H/E Middle Thermistor
(CN7 Wire:Gray)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 5 **INDOOR UNIT Error Method:** Heat Exchanger Inlet Sensor Error	**Indicate or Display:** Indoor Unit : Operation LED 3 Times Blink、Timer LED Flash Swing LED 1 Time Blink Outdoor Unit : LED1 Flash、LED6 1Time Blink ERROR CODE : E : 0b

Detective Actuators:	**Detective details:**
Indoor Unit Controller PCB Circuit Heat Exchanger Inlet Thermistor	When open or shorted Heat Exchanger Inlet Thermisor is detected at Power ON.

Forecast of Cause : 1. Connector defective connection 2. Thermistor defective 3. Controller PCB defective

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

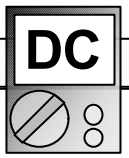
Temperature (°C)	0	5	10	15	20	25	30	35
Resistance Value (kΩ)	176.0	134.2	103.3	80.3	62.9	49.7	39.6	31.7

Temperature (°C)	40	45	50
Resistance Value (kΩ)	25.6	20.8	17.1

▶ **If Thermistor is either open or shorted, replace it and reset the power.**

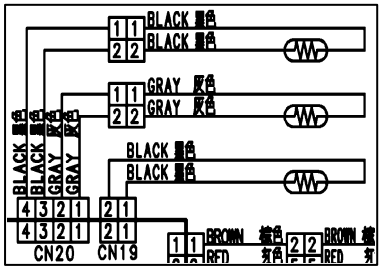
OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)



Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Duct Schematic Diagram (Connector connection)

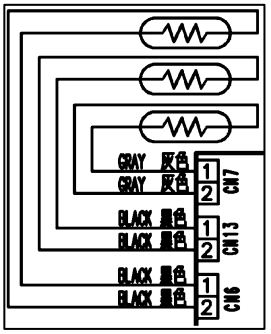


H/E Inlet Thermistor (CN20 Wire:Black)

H/E Middle Thermistor (CN20 Wire:Gray)

Room Temp. Thermistor (CN19 Wire:Black)

Small size Wall mount Schematic Diagram(Direct soldering to PCB)



Room Temp. Thermistor (CN6 Wire:Black)

H/E Inlet Thermistor (CN13 Wire:Black)

H/E Middle Thermistor (CN7 Wire:Gray)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 6 **INDOOR UNIT Error Method:** **Heat Exchanger Middle Sensor Error**	**Indicate or Display:** **Indoor Unit : Operation LED 3 Times Blink, Timer LED Flash** **Swing LED 2 Times Blink** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 0A**

Detective Actuators:	**Detective details:**
Indoor Unit Controller PCB Circuit Heat Exchanger Middle Thermistor	When open or shorted Heat Exchanger middle Thermisor is detected at Power ON.

Forecast of Cause : 1. Connector defective connection 2. Thermistor defective 3. Controller PCB defective

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

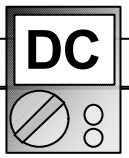
Temperature (°C)	0	5	10	15	20	25	30	35
Resistance Value (kΩ)	176.0	134.2	103.3	80.3	62.9	49.7	39.6	31.7

Temperature (°C)	40	45	50
Resistance Value (kΩ)	25.6	20.8	17.1

▶ **If Thermistor is either open or shorted, replace it and reset the power.**

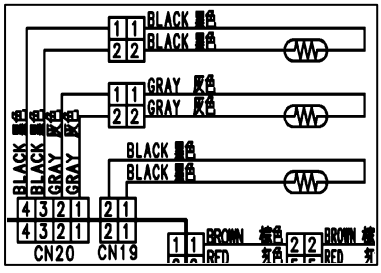
OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)



Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Duct Schematic Diagram (Connector connection)

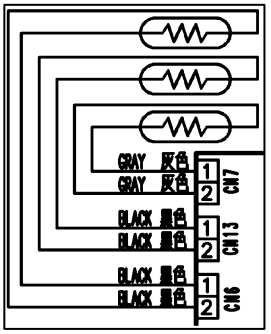


H/E Inlet Thermistor
(CN20 Wire:Black)

H/E Middle Thermistor
(CN20 Wire:Gray)

Room Temp. Thermistor
(CN19 Wire:Black)

Small size Wall mount Schematic Diagram(Direct soldering to PCB)



Room Temp. Thermistor
(CN6 Wire:Black)
H/E Inlet Thermistor
(CN13 Wire:Black)
H/E Middle Thermistor
(CN7 Wire:Gray)

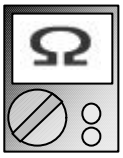
▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

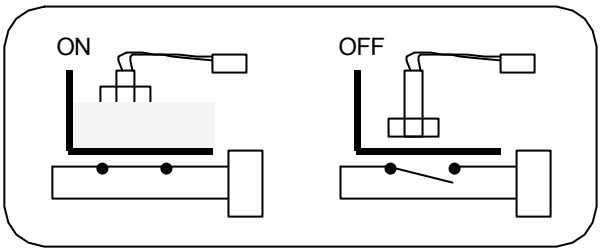
Trouble shooting 7 **INDOOR UNIT Error Method:** **Water Drain Abnormal**	**Indicate or Display:** **Indoor Unit : Operation LED 4 Times Blink, Timer LED Flash** **Swing LED OFF** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 11**
Detective Actuators: Indoor Unit Controller PCB Circuit Float Switch	**Detective details:** When Float switch is ON for more than 3 minutes.

Forecast of Cause : 1. Float switch defective 2. Shorted connector/wire 3. Controller PCB defective 4. Drain pump defective

Check Point 1 : Check Float Switch

- ☐ Check operation of float switch. (any blocking by dust, etc.)
- ☐ Remove Float switch and check ON/OFF switching operation by using a meter.
  >>If Float switch is defective, replace it.





OK

Check Point 2 : Check Connector (CN 15) / Wire

- ☐ Check loose contact of CN15 /shorted wire (pinched wire).
  >>Replace Float switch if the wire is abnormal

OK

Check Point 3 : Check Controller PCB

- **If Check Point 1 & 2 do not improve the symptom, change Controller PCB and set up the original address.**

Attention!!
Small size wall mount type does not have a float switch. In this case, replace Control PCB and set up the original address.

Trouble shooting 8 **INDOOR UNIT Error Method:** **Indoor Unit Fan Motor Abnormal**	**Indicate or Display:** **Indoor Unit : Operation LED 6 Times Blink, Timer LED Flash** **Swing LED OFF** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 13**
Detective Actuators: Indoor Unit Controller PCB Circuit Indoor Fan Motor	**Detective details:** When Indoor fan control is either phase control or DC control and rotation feed back control is ON, the feed back rotation value becomes 0 and lasts for more than 1 minute at motor operation condition. Or, the feed back rotation value continues at 1/3 of target value for more than 1 minute.

Forecast of Cause : 1. Fan rotation failure 2. Fan motor winding open 3. Motor protection by surrounding temp. increase
4. Capacitor failure 5. Control PCB failure

Check Point 1 : Check rotation of Fan

- Rotate the fan by hand when operation is off.
  (Check if fan is caught, dropped off or locked motor)
  >>If Fan or Bearing is abnormal, replace it.

OK

Check Point 2 : Check Motor winding

- Check Indoor Fan motor **(PARTS INFORMATION10, 11)**
  >>If Fan motor is abnormal, replace it.

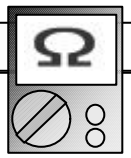
OK

Check Point 3 : Check ambient temp. around motor

- Check excessively high temperature around the motor.
  (If there is any surrounding equipment that causes heat)
  >>Upon the temperature coming down, restart operation.

OK

Check Point 4 : Check Motor Capacitor

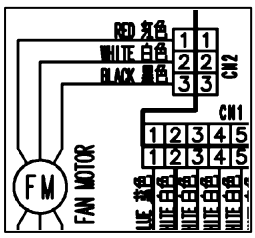


- Check continuity of motor capacitor
  >>If it is shorted, replace the capacitor.

OK

Check Point 5 : Check Output Voltage (DC5.0V) of Control PCB

Check each indoor unit circuit diagram and the voltage (DC5.0V).



Measure at Control PCB side connector (CN2)



▶ **If the voltage is not correct, replace Controller PCB.**

Attention!!
In case of Duct type, replace Controller PCB and set up the original address, since it is a tapping control.

Trouble shooting 9 **INDOOR UNIT Error Method:** **Standard Wired Remote Error**	**Indicate or Display:** **Indoor Unit : Operation LED 5 Times Blink, Timer LED Flash** **Swing LED 1 Time Blink** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 18**
Detective Actuators: Indoor unit controller PCB circuit Wired Remote Control	**Detective details:** Upon receiving the signal more than 1 time from Wired Remote or other Indoor unit, but the same signal has not been received more than 1 minute.

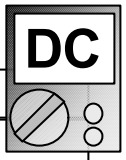
Forecast of Cause : 1. Terminal connection abnormal 2. Wired Remote Control failure 3. Controller PCB failure

Check Point 1 : Check the connection of terminal

After turning off the power, check & correct the followings.

- Indoor Unit - Check the connection of terminal between remote control and Indoor unit, or between Indoor units, and check if there is a disconnection or short of the cable.

OK



Check Point 2 : Check Remote and Controller PCB

- Check terminal voltage of Control PCB CN17(Power supply for Remote)
  If DC12V, Remote Control failure (Control PCB is OK) >>> Replace Remote
  If DC0V, Control PCB failure (Remote is OK) >>> Replace Control PCB

▶ **In case of re-installation is done due to removed connector or incorrect wiring, turn on the power again.**

Attention!!
Since Small Wall mount type can not connect the wired remote, replace Controller PCB and set up the original address.

Trouble shooting 10 **INDOOR UNIT Error Method:** **Standard Wired Token Error**	**Indicate or Display:** **Indoor Unit : Operation LED 5 Times Blink, Timer LED Flash** **Swing LED 4 Times Blink** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 18**
Detective Actuators: Indoor unit Controller PCB circuit Wired Remote Control	**Detective details:** More than 1 time of Token (Communication between wired remote controllers) is received, but it was not received more than 1 minute.

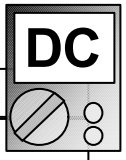
Forecast of Cause : 1. Terminal connection abnormal 2. Mis-setting 3. Wired Remote Control failure 4. Controller PCB failure

Check Point 1 : Check the connection of terminal

After turning off the power, check & correct the followings.

- Indoor Unit - Check the connection of terminal between remote control and Indoor unit, or between Indoor units, and check if there is a disconnection or short of the cable.

OK



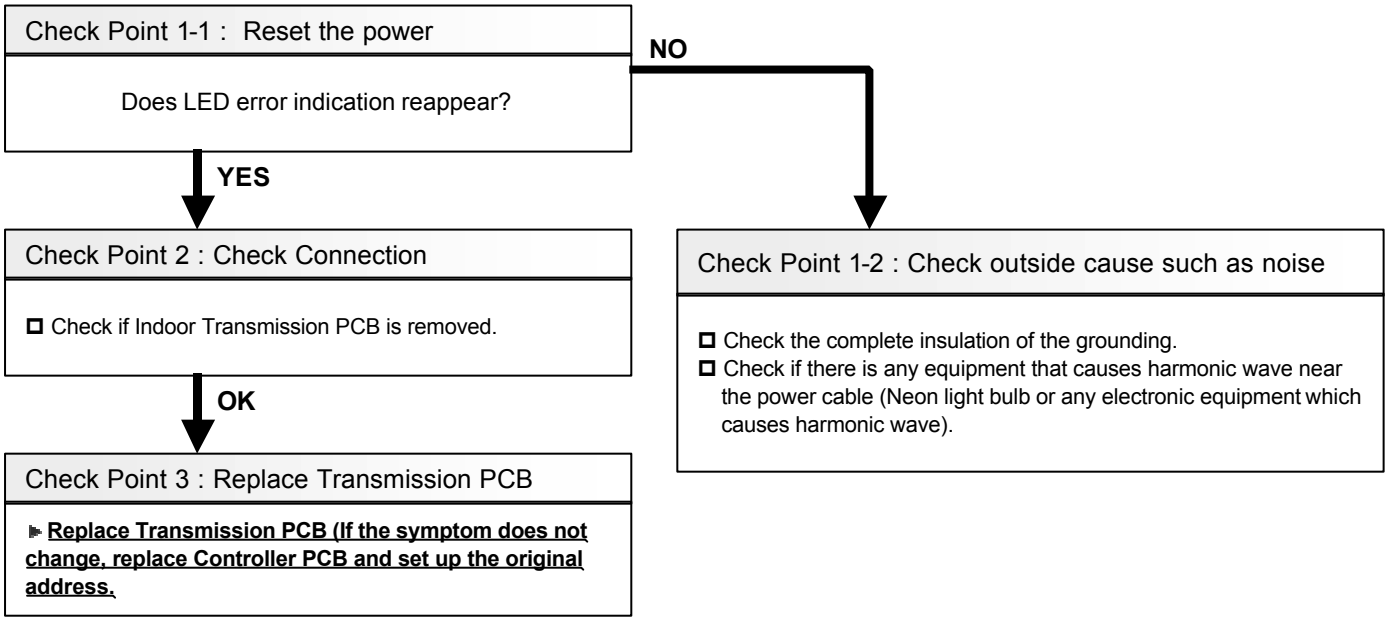
Check Point 2 : Check Setting, Remote and Controller PCB

- Check the remote controller address of indoor unit and remote controller DIP SW1-1~3.
- Check terminal voltage of Control PCB CN17(Power supply for Remote)
  If DC12V, Remote Control failure (Control PCB is OK) >>> Replace Remote
  If DC0V, Control PCB failure (Remote is OK) >>> Replace Control PCB

▶ **In case of re-installation is done due to removed connector or incorrect wiring, turn on the power again.**

Trouble shooting 11 **INDOOR UNIT Error Method:** **Communication Error between Controller PCB and Transmission PCB**	**Indicate or Display:** **Indoor Unit : Operation LED Flash, Timer LED 6 Times Blink** **Swing LED OFF** **Outdoor Unit : LED1 Flash, LED6 1Time Blink** **ERROR CODE : E : 21**
Detective Actuators: Indoor unit Controller PCB circuit Indoor unit Transmission PCB	**Detective details:** When Parallel communication error (Transmission reset occurs continuously more than specified times) is detected.

Forecast of Cause : 1. Connection failure 2. Outside cause 3. Transmission PCB failure 4. Controller PCB failure



Trouble shooting 12 **INDOOR UNIT Error Method:** Network Communication Error	**Indicate or Display:** Indoor Unit : Operation LED Flash, Timer LED 5 Times Blink Swing LED 1 Time Blink Outdoor Unit : LED1 Flash, LED6 1Time Blink ERROR CODE : E : 1F

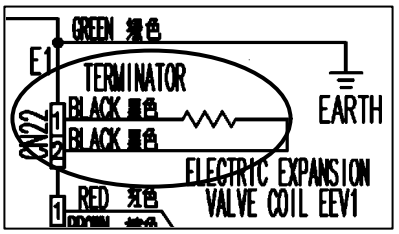
Detective Actuators:	**Detective details:**
Indoor unit Controller PCB circuit Indoor unit Transmission PCB	When the cut-off of network communication is detected (more than 90 seconds passed since the last receipt of Outdoor unit signal).

Forecast of Cause : 1. Connection failure 2. Outside cause 3. Transmission PCB failure 4. Controller PCB failure

Check Point 1 : Check the connection

After turning off the power, check and correct followings.

- ☐ Is Indoor Transmission PCB loose?
- ☐ Check loose or removed connection of communication line between Indoor and Outdoor unit.
- ☐ Make sure Terminator (CN22) is located at Controller PCB of Main Unit.



Master Unit Schematic(CN22:TERMINATOR)

OK

Check Point 2 : Check if any outside cause such as voltage drop or noise

- Instant voltage drop ------ Check if there is any electric equipment with a large load within the same circuit.
- Momentary power failure ----- Check contact failure or leak current in power supply circuit
  >>Check Outdoor Unit as well.

- Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave). And check the complete insulation of grounding.
  >>If the same symptom does not reappear after resetting the power, possibility of noise is high.

OK

Check Point 3 : Check Transmission PCB and Controller PCB

- ☐ If some of Indoor units have errors, replace Transmission PCB of the Indoor units that have the error.
  >>If the symptom does not change, replace Indoor unit Controller PCB.

- ☐ If all the Indoor units have error, check if the Outdoor Unit Transmission PCB has a loose connection (Refer to Trouble Shooting 45).
  >>If the symptom does not change, replace Outdoor unit Transmission PCB (Replace Controller PCB if it does not change).

Note : Communication error factor

1)System design (Wiring length or connection number over)
2)Mis-install (Address setting,Terminal resister, Disconnection, Ground wire)
3)No power (Include a signal amplifier and turn on all power supplies.)

Note : Terminator

Terminator is a resistance that prevents the reflection of the signal at the end terminal of the circuit which causes abnormal data transmission when connecting multiple devices with 1 piece of cable.

6-3-3 Trouble Shooting With Error Code (OUTDOOR UNIT)

Trouble shooting 13 **OUTDOOR UNIT Error Method:** **Compressor 1 Abnormal** **(Constant Speed)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 1 Time Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Time Blinks,** **ERROR CODE : E : 32 Swing LED 3 Time Blinks**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Compressor 1 detects 5 times of cases that discharge temperature does not rise to more than 5 °C within 10 minutes after start.

Forecast of Cause : 1. Discharge Thermistor mis-installed 2. Magnet Relay failure 3. Constant speed Compressor failure

Check Point 1 : Check Discharge Thermistor

- ☐ Check if other type of thermistor is wrongly installed.
- ☐ Check if the thermistor is removed from the holder.
- ☐ Check if the cable of the thermistor is pinched.

>>Check characteristics of Thermistor (Refer to Trouble shooting 22, 23, 24)
If defective, replace the thermistor.

OK

Check Point 2 : Check Magnet Relay

- ☐ Check if the connector between Magnet Relay and PCB is loose.
- ☐ Check if the connector between Magnet Relay and PCB is reversed.
- ☐ Check the operation by pressing the Magnet Relay.

>>If it does not operate, check if it is corrected by replacing with other magnet relay, and if it operates, replace the Magnet Relay.

OK

Check Point 3 : Check Compressor

▶ If the symptom does not change with Check Point 1 and 2, a failure of Constant speed Compressor can be suspected. (PARTS INFORMATION 1,2)

Trouble shooting 14 **OUTDOOR UNIT Error Method:** **Compressor 2 Abnormal** **(Constant Speed)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 2 Times Blink** **Indoor Unit : Operation LED Blink , Timer LED 3 Time Blinks,** **ERROR CODE : E : 32 Swing LED 3 Time Blinks**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Compressor 2 detects 5 times of cases that discharge temperature does not rise to more than 5 °C within 10 minutes after start.

Forecast of Cause : 1. Discharge Thermistor mis-installed 2. Magnet Relay failure 3. Constant speed Compressor failure

Check Point 1 : Check Discharge Thermistor

- ☐ Check if other type of thermistor is wrongly installed.
- ☐ Check if the thermistor is removed from the holder.
- ☐ Check if the cable of the thermistor is pinched.

>>Check characteristics of Thermistor (Refer to Trouble shooting 22, 23, 24)
If defective, replace the thermistor.

OK

Check Point 2 : Check Magnet Relay

- ☐ Check if the connector between Magnet Relay and PCB is loose.
- ☐ Check if the connector between Magnet Relay and PCB is reversed.
- ☐ Check the operation by pressing the Magnet Relay.

>>If it does not operate, check if it is corrected by replacing with other magnet relay, and if it operates, replace the Magnet Relay.

OK

Check Point 3 : Check Compressor

▶ If the symptom does not change with Check Point 1 and 2, a failure of Constant speed Compressor can be suspected. (PARTS INFORMATION 1,2)

Trouble shooting 15 **OUTDOOR UNIT Error Method:** **Compressor 3 Abnormal** **(Constant Speed)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 3 Times Blink** **Indoor Unit : Operation LED Blink, Timer LED 3Time Blinks,** **ERROR CODE : E : 32 Swing LED 3Time Blinks,**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Compressor 3 detects 5 times of cases that discharge temperature does not rise to more than 5 °C within 10 minutes after start.

Forecast of Cause : 1. Discharge Thermistor mis-installed 2. Magnet Relay failure 3. Constant speed Compressor failure

Check Point 1 : Check Discharge Thermistor

- ☐ Check if other type of thermistor is wrongly installed.
- ☐ Check if the thermistor is removed from the holder.
- ☐ Check if the cable of the thermistor is pinched.

>>Check characteristics of Thermistor (Refer to Trouble shooting 22, 23, 24)
If defective, replace the thermistor.

OK

Check Point 2 : Check Magnet Relay

- ☐ Check if the connector between Magnet Relay and PCB is loose.
- ☐ Check if the connector between Magnet Relay and PCB is reversed.
- ☐ Check the operation by pressing the Magnet Relay.

>>If it does not operate, check if it is corrected by replacing with other magnet relay, and if it operates, replace the Magnet Relay.

OK

Check Point 3 : Check Compressor

▶ If the symptom does not change with Check Point 1 and 2, a failure of Constant speed Compressor can be suspected. (PARTS INFORMATION 1,2)

Trouble shooting 16 **OUTDOOR UNIT Error Method:** **Discharge Temperature 1 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 4 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Within 60 minutes of detecting Compressor 1 Discharge temperature at higher than 120°C, Discharge temperature of higher than 120°C is detected 2 times repeatedly.

Forecast of Cause : 1. Valve is close 2. EEV, Solenoid Valve failure 3. Gas Leak, less 4. Discharge Thermistor failure
5. Outdoor Fan Operation failure 6. Outdoor Heat Exchanger clogged

< Cooling mode >

Check Point 1 : Check if Gas Valve is open

- ☐ If it is not open, open it and check the operation.
  (If Liquid valve close, High pressure error.)

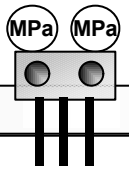
OK

Check Point 2 : Check EEV, Solenoid Valve and Strainer

- ☐ Is EEV (EEV2, Indoor unit EEV) open? **(PARTS INFORMATION 5,7)**
- ☐ Is Solenoid Valve (SV4 of Main Unit) open? **(PARTS INFORMATION 9)**
- ☐ Is Liquid side Strainer open? **(PARTS INFORMATION 5)**

>>If EEV or Solenoid Valve or Strainer is defective, replace it.

OK



Check Point 3 : Check if gas leak or less gas

- ☐ Measure Gas pressure, if there is a leak, correct it.

>>If recharging refrigerant, make sure to perform vacuuming and recharge the specified amount.

OK

Check Point 4 : Check Discharge Thermistor 1

- ☐ Isn't it fallen off the holder?
- ☐ Is there a cable pinched?

>>Check characteristics of thermistor (Refer to Trouble shooting 22), If defective, replace the thermistor

OK

Check Point 5 : Check Outdoor FAN, Heat Exchanger

- ☐ Is there anything obstructing the air distribution circuit?
- ☐ Is there any clogging of Outdoor Heat Exchanger?
- ☐ Is the Fan rotating? (Check by hand and if it is locked, replace the motor)
- ☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**

>>If the Fan Motor is defective, replace it.

< Heating mode >

Check Point 1 : Check if Liquid Valve is open

- ☐ If it is not open, open it and check the operation.
  (If Gas valve close, High pressure error.)

OK

Check Point 2 : Check if EEV1, SV4 is open

- ☐ Is EEV (EEV1) open?
  (PARTS INFORMATION 6)
  If the service tool is connected, check if there is an indoor unit that is extremely low heat exchanger temperature.
  (On heating, the refrigerant flows to the stopped indoor unit as well.)
- ☐ Is Solenoid Valve (SV4 of Slave Unit) open?
  (PARTS INFORMATION 9)

OK

Trouble shooting 17 **OUTDOOR UNIT Error Method:** **Discharge Temperature 2 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 5 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Within 60 minutes of detecting Compressor 2 Discharge temperature at higher than 120°C, Discharge temperature of higher than 120°C is detected 2 times repeatedly.

Forecast of Cause : 1. Valve is close 2. EEV, Solenoid Valve failure 3. Gas Leak, less 4. Discharge Thermistor failure
5. Outdoor Fan Operation failure 6. Outdoor Heat Exchanger clogged

< Cooling mode >

Check Point 1 : Check if Gas Valve is open

- ☐ If it is not open, open it and check the operation. (If Liquid valve close, High pressure error.)

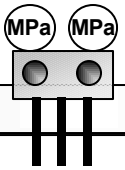
OK

Check Point 2 : Check EEV, Solenoid Valve and Strainer

- ☐ Is EEV (EEV2, Indoor unit EEV) open? **(PARTS INFORMATION 5,7)**
- ☐ Is Solenoid Valve (SV4 of Main Unit) open? **(PARTS INFORMATION 9)**
- ☐ Is Liquid side Strainer open? **(PARTS INFORMATION 5)**

>>If EEV or Solenoid Valve or Strainer is defective, replace it.

OK



Check Point 3 : Check if gas leak or less gas

- ☐ Measure Gas pressure, if there is a leak, correct it.

>>If recharging refrigerant, make sure to perform vacuuming and recharge the specified amount.

OK

Check Point 4 : Check Discharge Thermistor 1

- ☐ Isn't it fallen off the holder?
- ☐ Is there a cable pinched?

>>Check characteristics of thermistor (Refer to Trouble shooting 22), If defective, replace the thermistor

OK

Check Point 5 : Check Outdoor FAN, Heat Exchanger

- ☐ Is there anything obstructing the air distribution circuit?
- ☐ Is there any clogging of Outdoor Heat Exchanger?
- ☐ Is the Fan rotating? (Check by hand and if it is locked, replac e the motor)
- ☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**

>>If the Fan Motor is defective, replace it.

< Heating mode >

Check Point 1 : Check if Liquid Valve is open

- ☐ If it is not open, open it and check the operation. (If Gas valve close, High pressure error.)

OK

Check Point 2 : Check if EEV1, SV4 is open

- ☐ Is EEV (EEV1) open? **(PARTS INFORMATION 6)**

If the service tool is connected, check if there is an indoor unit that is extremely low heat exchanger temperature.
(On heating, the refrigerant flows to the stopped indoor unit as well.)

- ☐ Is Solenoid Valve (SV4 of Slave Unit) open? **(PARTS INFORMATION 9)**

OK

Trouble shooting 18 **OUTDOOR UNIT Error Method:** **Discharge Temperature 3 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 6 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Within 60 minutes of detecting Compressor 3 Discharge temperature at higher than 120°C, Discharge temperature of higher than 120°C is detected 2 times repeatedly.

Forecast of Cause : 1. Valve is close 2. EEV, Solenoid Valve failure 3. Gas Leak, less 4. Discharge Thermistor failure
5. Outdoor Fan Operation failure 6. Outdoor Heat Exchanger clogged

< Cooling mode >

Check Point 1 : Check if Gas Valve is open

- ☐ If it is not open, open it and check the operation.
  (If Liquid valve close, High pressure error.)

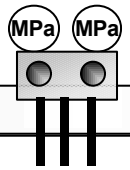
OK

Check Point 2 : Check EEV, Solenoid Valve and Strainer

- ☐ Is EEV (EEV2, Indoor unit EEV) open? **(PARTS INFORMATION 5,7)**
- ☐ Is Solenoid Valve (SV4 of Main Unit) open? **(PARTS INFORMATION 9)**
- ☐ Is Liquid side Strainer open? **(PARTS INFORMATION 5)**

>>If EEV or Solenoid Valve or Strainer is defective, replace it.

OK



Check Point 3 : Check if gas leak or less gas

- ☐ Measure Gas pressure, if there is a leak, correct it.

>>If recharging refrigerant, make sure to perform vacuuming and recharge the specified amount.

OK

Check Point 4 : Check Discharge Thermistor 1

- ☐ Isn't it fallen off the holder?
- ☐ Is there a cable pinched?

>>Check characteristics of thermistor (Refer to Trouble shooting 22), If defective, replace the thermistor

OK

Check Point 5 : Check Outdoor FAN, Heat Exchanger

- ☐ Is there anything obstructing the air distribution circuit?
- ☐ Is there any clogging of Outdoor Heat Exchanger?
- ☐ Is the Fan rotating? (Check by hand and if it is locked, replac e the motor)
- ☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**

>>If the Fan Motor is defective, replace it.

< Heating mode >

Check Point 1 : Check if Liquid Valve is open

- ☐ If it is not open, open it and check the operation.
  (If Gas valve close, High pressure error.)

OK

Check Point 2 : Check if EEV1, SV4 is open

- ☐ Is EEV (EEV1) open?
  (PARTS INFORMATION 6)
  If the service tool is connected, check if there is an indoor unit that is extremely low heat exchanger temperature.
  (On heating, the refrigerant flows to the stopped indoor unit as well.)
- ☐ Is Solenoid Valve (SV4 of Slave Unit) open?
  (PARTS INFORMATION 9)

OK

Trouble shooting 19 **OUTDOOR UNIT Error Method:** **High Pressure Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 7 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Pressure Sensor	**Detective details:** When Discharge pressure of higher than 4.1 Mpa is detected 3 times repeatedly within 60 minutes, upon Discharge (High Pressure) pre is detected at higher than 4.1 Mpa.

Forecast of Cause : 1. Liquid Pipe Valve is close 2. Outdoor FAN failure 3. Outdoor Heat Exchanger clogged
4. Solenoid Valve failure 5. Refrigerant overcharged

< Cooling mode >

Check Point 1 : Check if Liquid Pipe Valve is open

- ☐ If not open, open it and check the operation.
  (If Gas valve close, Low pressure or Discharge temperature error.)

OK

Check Point 2 : Check Outdoor FAN, Heat Exchanger

- ☐ Is there anything obstructing the air distribution circuit?
- ☐ Is there any clogging of Outdoor Heat Exchanger?
- ☐ Is the Fan rotating? (Check by hand and If it is locked, replace the motor)
- ☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**
  >>If the Fan Motor is defective, replace it.

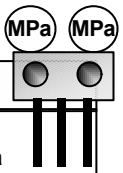
OK

Check Point 3 : Check EEV and Solenoid Valve

- ☐ Is Solenoid Valve (SV1, SV4 of Main Unit) open?
  (PARTS INFORMATION 8,9)
  >>If EEV or Solenoid Valve is defective, replace it.

OK

Check Point 4 : Recharge Refrigerant



- ☐ Check the operation after recharging the refrigerant, because there is a possibility of refrigerant overcharge.
  >>When recharging the refrigerant, make sure to perform vacuuming and charge with the specified amount.

< Heating mode >

Check Point 1 : Check if Gas Valve is open

- ☐ If it is not open, open it and check the operation.
  (If valve close, Low pressure or Discharge temperature error.)

OK

Trouble shooting 20 **OUTDOOR UNIT Error Method:** Low Pressure Error	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED2 8 Times Blink Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink Swing LED 3 Times Blink ERROR CODE : E : 32
Detective Actuators: Outdoor Unit Controller PCB circuit Suction Pressure Sensor	**Detective details:** Low pressure is continued 0.1Mpa or less for 10 minutes and detects it 5 times within 180 minutes. (Low pressure is continued 0.1Mpa or less for 2 minutes in test run)

Forecast of Cause : 1. Gas Pipe Valve is close 2. Gas Leak, less 3. Indoor Unit failure 4. Solenoid Valve failure

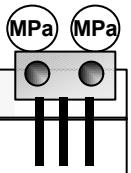
< Cooling mode >

Check Point 1 : Check if Gas Pipe Valve is open

- ☐ If it is not open, open it and check the operation.

OK

Check Point 2 : Check Gas Leak or Less Gas



- ☐ Measure Gas pressure, if there is a leak, correct it.
  >>If recharging refrigerant, make sure to perform vacuuming and recharge the specified amount.

OK

Check Point 3 : Check Indoor Unit Operation

- ☐ Is Indoor Unit EEV open? **(PARTS INFORMATION 5)**
- ☐ Check if Indoor Heat Exchanger is clogged or dirty filter.
- ☐ Stop the operation and rotate the fan by hand.
  (Check if FAN and Bearing is hooked, removed or Locked Motor.)
  >>If Fan or Bearing is abnormal, replace it.
- ☐ Is Liquid side Strainer open? **(PARTS INFORMATION 5)**
  >>If Strainer is defective, replace it.
- ☐ Check Fan Motor of Indoor Unit **(PARTS INFORMATION 10,11)**
  >>If Fan Motor is defective, replace it.

OK

Check Point 4 : Check Solenoid Valve

- ☐ Check Solenoid Valve (SV1) **(PARTS INFORMATION 8)**
  >>If Solenoid Valve is defective, replace it.

< Heating mode >

Check Point 1 : Check if Liquid Valve is open

- ☐ If it is not open, open it and check the operation.

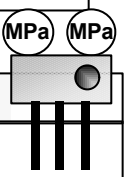
OK

Check Point 2 : Check if EEV1, SV4 is open

- ☐ Is EEV (EEV1) open?
  (PARTS INFORMATION 6)
  If the service tool is connected, check if there is an indoor unit that is extremely low heat exchanger temperature.
  (On heating, the refrigerant flows to the stopped indoor unit as well.)
- ☐ Is Solenoid Valve (SV4 of Slave Unit) open?
  (PARTS INFORMATION 9)

OK

Check Point 3 : Check Gas Leak or Less Gas



- ☐ Measure Gas pressure, if there is a leak, correct it.
  >>If recharging refrigerant, make sure to perform vacuuming and recharge the specified amount.

OK

Check Point 4 : Check Outdoor FAN, Heat Exchanger

- ☐ Is there anything obstructing the air distribution circuit?
- ☐ Is there any clogging of Outdoor Heat Exchanger?
- ☐ Is the Fan rotating?
  (Check by hand and if it is locked, replace the motor)
- ☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**
  >>If the Fan Motor is defective, replace it.
  >>If defrost operation is abnormal, check the thermistor(TH4)

Trouble shooting 21 **OUTDOOR UNIT Error Method:** **Pump Down Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 9 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor Discharge Pressure Sensor	**Detective details:** Pump-down has continued for over 10 minutes. During pump-down, Discharge pressure (High Pressure) is measured higher than 4.0MPa, and Pressure Sensor Error is occurred, then higher than 120℃ of Discharge temperature is detected after 2 minutes of detecting the discharge temperature of higher than 120℃. Pump-down completion indication has lasted longer than 3 minutes.

Forecast of Cause : 1. Valve is close 2. Pressure Sensor failure 3. Outdoor Fan failure
4. Outdoor Heat Exchanger clogged 5. Solenoid Valve failure

Check Point 1-1 : Reset Power

☐ Is Discharge pressure sensor error or Suction pressure sensor error indicated?

YES

Check Point 1-2 : Check Pressure Sensor

☐ Discharge pressure sensor error
(Refer to Trouble Shooting 34)
☐ Suction pressure sensor error
(Refer to Trouble Shooting 35)

NO

Check Point 1 : Check if Gas Pipe Valve is open

☐ If it is not open, open it and check the operation.

OK

Check Point 2 : Check Outdoor FAN, Heat Exchanger

☐ Is there anything obstructing the air distribution circuit?
☐ Is there any clogging of Outdoor Heat Exchanger?
☐ Is the Fan rotating? (Check by hand and If it is locked, replace the motor)
☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**
>>If the Fan Motor is defective, replace it.

OK

Check Point 5 : Check EEV and Solenoid Valve

☐ Check Solenoid Valve (SV4 of Main Unit)**(PARTS INFORMATION 9)**
>>If EEV or Solenoid Valve is defective, replace it.

⚠ CAUTION

To prevent the discharge of the refrigerant into the atmosphere, follow the procedure indicated below to recover the refrigerant from an outdoor unit before moving or discarding the unit.
Up to approximately 20 kg can be recovered per outdoor unit.
If the volume od the refrigerant to be recovered is large, recover it into a refrigerant recovery cylinder while measuring the weight of the refrigerant.

If many refrigerant, it is a cause of a pump down error.

Trouble shooting 22 **OUTDOOR UNIT Error Method:** **Discharge Temp. Sensor 1 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 1 Time Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Discharge thermistor of Compressor 1 is shorted. Discharge thermistor of Compressor 1 is open after 5 minutes of operation.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

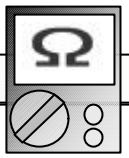
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	0	5	10	15	20	30	40	50	60	70
Resistance Value (kΩ)	176	135	105	81.8	64.5	41.1	26.9	18.1	12.5	8.8

Temperature (°C)	80	90	100	120	140	160	180
Resistance Value (kΩ)	6.3	4.6	3.4	2.0	1.2	0.8	0.5

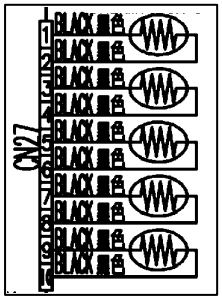
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN27)





Suction Gas Temp. Thermistor(CN27:1-2)

Outdoor Temp. Thermistor(CN27:3-4)

Discharge Thermistor 1 (CN27:5-6)

Discharge Thermistor 2 (CN27:7-8)

Discharge Thermistor 3 (CN27:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 23 **OUTDOOR UNIT Error Method:** **Discharge Temp. Sensor 2 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 2 Time Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Discharge thermistor of Compressor 2 is shorted. Discharge thermistor of Compressor 2 is open after 5 minutes of operation.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

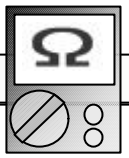
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	0	5	10	15	20	30	40	50	60	70
Resistance Value (kΩ)	176	135	105	81.8	64.5	41.1	26.9	18.1	12.5	8.8

Temperature (°C)	80	90	100	120	140	160	180
Resistance Value (kΩ)	6.3	4.6	3.4	2.0	1.2	0.8	0.5

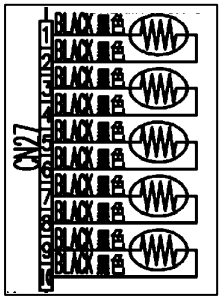
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN27)





Suction Gas Temp. Thermistor(CN27:1-2)

Outdoor Temp. Thermistor(CN27:3-4)

Discharge Thermistor 1 (CN27:5-6)

Discharge Thermistor 2 (CN27:7-8)

Discharge Thermistor 3 (CN27:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 24 **OUTDOOR UNIT Error Method:** **Discharge Temp. Sensor 3 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 3 Time Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** Discharge thermistor of Compressor 3 is shorted. Discharge thermistor of Compressor 3 is open after 5 minutes of operation.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

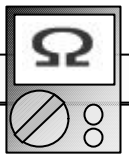
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	0	5	10	15	20	30	40	50	60	70
Resistance Value (kΩ)	176	135	105	81.8	64.5	41.1	26.9	18.1	12.5	8.8

Temperature (°C)	80	90	100	120	140	160	180
Resistance Value (kΩ)	6.3	4.6	3.4	2.0	1.2	0.8	0.5

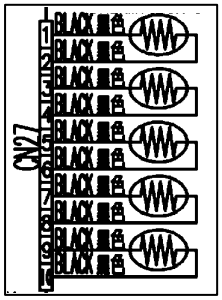
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN27)





Suction Gas Temp. Thermistor(CN27:1-2)

Outdoor Temp. Thermistor(CN27:3-4)

Discharge Thermistor 1 (CN27:5-6)

Discharge Thermistor 2 (CN27:7-8)

Discharge Thermistor 3 (CN27:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 25 **OUTDOOR UNIT Error Method:** Heat Ex. Liquid Temp. Sensor Error	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED3 4 Times Blink Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink Swing LED 3 Times Blink ERROR CODE : E : 32

Detective Actuators:	**Detective details:**
Outdoor Unit Controller PCB circuit Heat Ex. Liquid Temperature Thermistor	When Heat Exchanger Liquid Temperature Thermistor is detected either SHORTED or OPEN.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

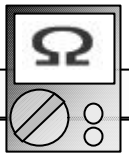
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

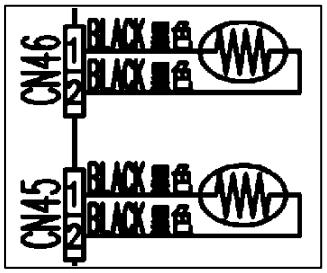
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN45,46)



Liquid Pipe Temp. Thermistor 2 (CN46)

Heat Exchanger Liquid Temp. Thermistor (CN45)



▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 26 **OUTDOOR UNIT Error Method:** **RCV Liquid Surface Sensor 1 (Lower Limit) Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 5 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit RCV Liquid Surface Detection Thermistor	**Detective details:** RCV Liquid Surface Detection Thermistor 1 (Lower Limit) is detected as either SHORTED or OPEN.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

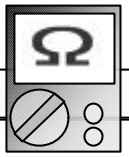
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

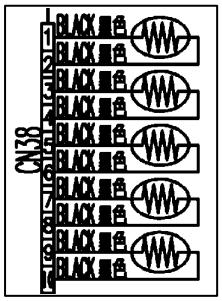
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN38)





RCV Liquid Surface Thermistor 1(CN38:1-2)

RCV Liquid Surface Thermistor 2(CN38:3-4)

RCV Liquid Surface Thermistor 3(CN38:5-6)

SC Heat Exchanger Gas Outlet Temp. Thermistor(CN38:7-8)

Heat Exchanger Temperature Thermistor 1 (CN38:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 27 **OUTDOOR UNIT Error Method:** **RCV Liquid Surface Sensor 2 (Middle Limit) Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 6 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit RCV Liquid Surface Detection Thermistor	**Detective details:** RCV Liquid Surface Detection Thermistor 2 (Middle Limit) is detected as either SHORTED or OPEN.

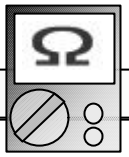
Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK



Check Point 2 : Remove connector and check Thermistor resistance value

Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

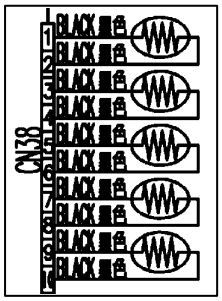
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN38)





RCV Liquid Surface Thermistor 1(CN38:1-2)

RCV Liquid Surface Thermistor 2(CN38:3-4)

RCV Liquid Surface Thermistor 3(CN38:5-6)

SC Heat Exchanger Gas Outlet Temp. Thermistor(CN38:7-8)

Heat Exchanger Temperature Thermistor 1 (CN38:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 28 **OUTDOOR UNIT Error Method:** **RCV Liquid Surface Sensor 3 (Higher Limit) Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 7 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit RCV Liquid Surface Detection Thermistor	**Detective details:** RCV Liquid Surface Detection Thermistor 3 (Higher Limit) is detected as either SHORTED or OPEN.

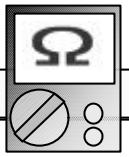
Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK



Check Point 2 : Remove connector and check Thermistor resistance value

Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

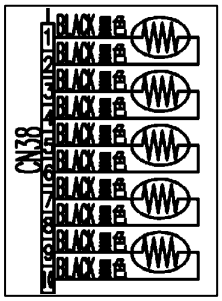
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN38)





RCV Liquid Surface Thermistor 1(CN38:1-2)

RCV Liquid Surface Thermistor 2(CN38:3-4)

RCV Liquid Surface Thermistor 3(CN38:5-6)

SC Heat Exchanger Gas Outlet Temp. Thermistor(CN38:7-8)

Heat Exchanger Temperature Thermistor 1 (CN38:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 29-1 **OUTDOOR UNIT Error Method:** **SC Heat Exchanger Outlet Temp Sensor Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 8 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit SC Heat Ex. Gas Outlet Temp. Thermistor	**Detective details:** When SC Heat Exchanger Gas Outlet Temperature Thermistor is detected as SHORTED or OPEN.

Trouble shooting 29-2 **OUTDOOR UNIT Error Method:** **SC Heat Exchanger Inlet Temp Sensor Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 13 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit SC Heat Ex. Gas Intlet Temp. Thermistor	**Detective details:** When SC Heat Exchanger Gas Inlet Temperature Thermistor is detected as SHORTED or OPEN.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

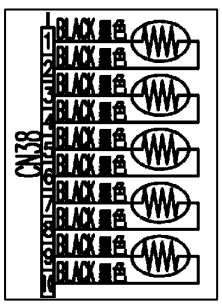
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK (29-1)

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN38)



RCV Liquid Surface Thermistor 1(CN38:1-2)

RCV Liquid Surface Thermistor 2(CN38:3-4)

RCV Liquid Surface Thermistor 3(CN38:5-6)

SC Heat Exchanger Gas Outlet Temp. Thermistor(CN38:7-8)

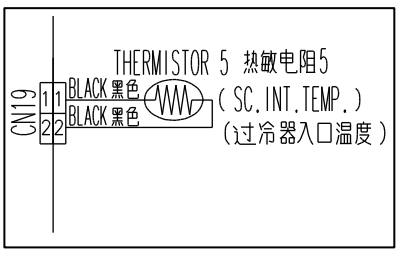
Heat Exchanger Temperature Thermistor 1 (CN38:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

OK(29-2)

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)



SC Heat Exchanger Gas Intlet Temp. Thermistor (CN19)



▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 30 **OUTDOOR UNIT Error Method:** **Liquid Pipe Temp. Sensor 1 Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 9 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Liquid Temperature Thermistor	**Detective details:** When Liquid Pipe Temperature Thermistor 1 is detected as SHORTED or OPEN.

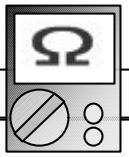
Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK



Check Point 2 : Remove connector and check Thermistor resistance value

Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

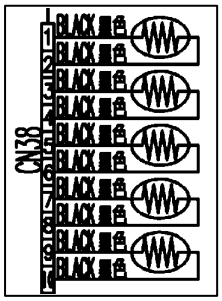
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN38)





RCV Liquid Surface Thermistor 1(CN38:1-2)

RCV Liquid Surface Thermistor 2(CN38:3-4)

RCV Liquid Surface Thermistor 3(CN38:5-6)

SC Heat Exchanger Gas Outlet Temp. Thermistor(CN38:7-8)

Heat Exchanger Temperature Thermistor 1 (CN38:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 31 **OUTDOOR UNIT Error Method:** Liquid Pipe Temp. Sensor 2 Error	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED3 10 Times Blink Indoor Unit : Operation LED Lighted Continuously (Normal Operation) ERROR CODE : E : 32
Detective Actuators: Outdoor Unit Controller PCB circuit Liquid Temperature Thermistor	**Detective details:** When Liquid Pipe Temperature Thermistor 2 is detected as SHORTED or OPEN.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

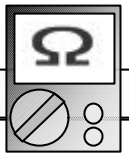
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

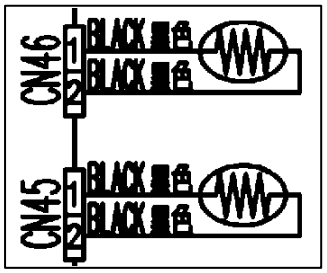
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN45,46)



Liquid Pipe Temp. Thermistor 2 (CN46)

Heat Exchanger Liquid Temp. Thermistor (CN45)



▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 32 **OUTDOOR UNIT Error Method:** Suction Gas Temp. Sensor Error	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED3 11 Times Blink Indoor Unit : Operation LED Blink, Timer LED 3 Time Blinks, ERROR CODE : E : 32 Swing LED 3 Time Blinks

Detective Actuators: Outdoor Unit Controller PCB circuit Suction Gas Temperature Thermistor	**Detective details:** When Suction Gas Temperature Thermistor is detected as SHORTED or OPEN.

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

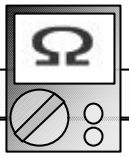
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	-10	-5.0	0	5.0	10	15.0	20	25.0	30
Resistance Value (kΩ)	27.5	20.9	16.1	12.4	9.7	7.7	6.1	4.9	3.9

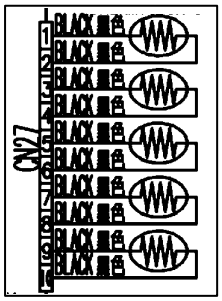
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN27)





Suction Gas Temp. Thermistor(CN27:1-2)

Outdoor Temp. Thermistor(CN27:3-4)

Discharge Thermistor 1 (CN27:5-6)

Discharge Thermistor 2 (CN27:7-8)

Discharge Thermistor 3 (CN27:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

Trouble shooting 33 **OUTDOOR UNIT Error Method:** **Outdoor Temperature Sensor Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED3 12 Times Blink** **Indoor Unit : Operation LED Blink, Timer LED 3 Time Blinks,** **ERROR CODE : E : 32 Swing LED 3 Time Blinks**

Detective Actuators: Outdoor Unit Controller PCB circuit Outdoor Temperature Thermistor	**Detective details:** When Outdoor Temperature Thermistor is detected as SHORTED or OPEN

Forecast of Cause : 1. Connector connection failure 2. Thermistor failure 3. Controller PCB failure

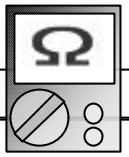
Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if thermistor cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Remove connector and check Thermistor resistance value



Thermistor Characteristics (Rough value)

Temperature (°C)	-20	-10	-5	0	5	10	15	20	30	40
Resistance Value (kΩ)	105	58.2	44.0	33.6	25.9	20.2	15.8	12.5	8.0	5.3

Temperature (°C)	50	60	70
Resistance Value (kΩ)	3.6	2.5	1.8

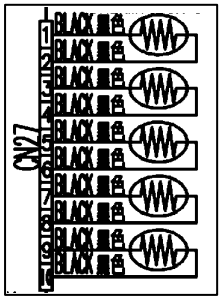
▶ **If Thermistor is either open or shorted, replace it and reset the power.**

OK

Check Point 3 : Check voltage of Controller PCB (DC5.0V)

Make sure circuit diagram of each indoor unit and check terminal voltage at Thermistor (DC5.0V)

Outdoor Unit Schematic(CN27)





Suction Gas Temp. Thermistor(CN27:1-2)

Outdoor Temp. Thermistor(CN27:3-4)

Discharge Thermistor 1 (CN27:5-6)

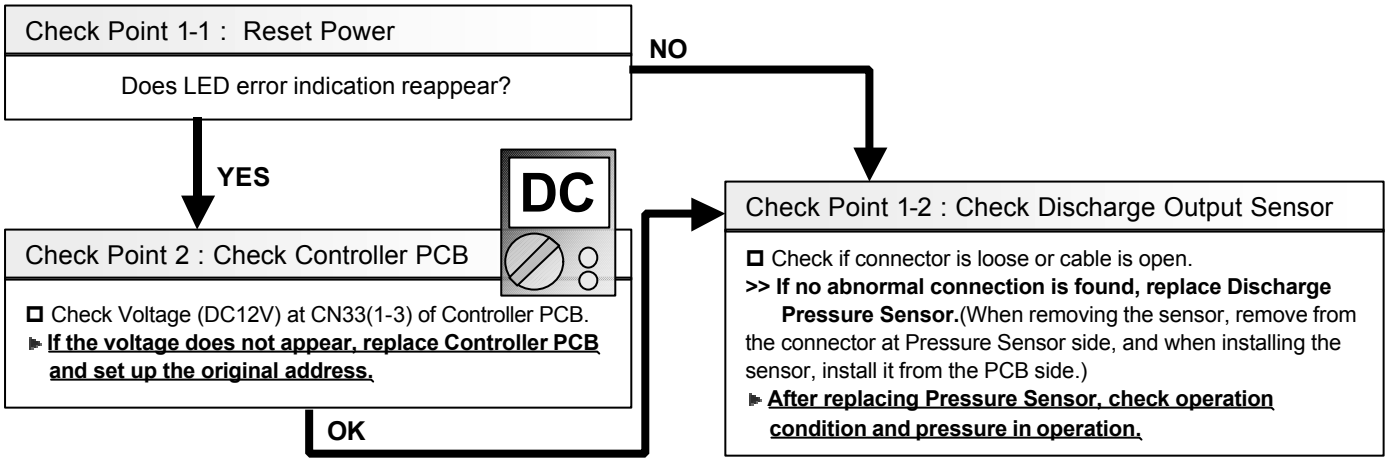
Discharge Thermistor 2 (CN27:7-8)

Discharge Thermistor 3 (CN27:9-10)

▶ **If the voltage does not appear, replace Controller PCB and reset the original address.**

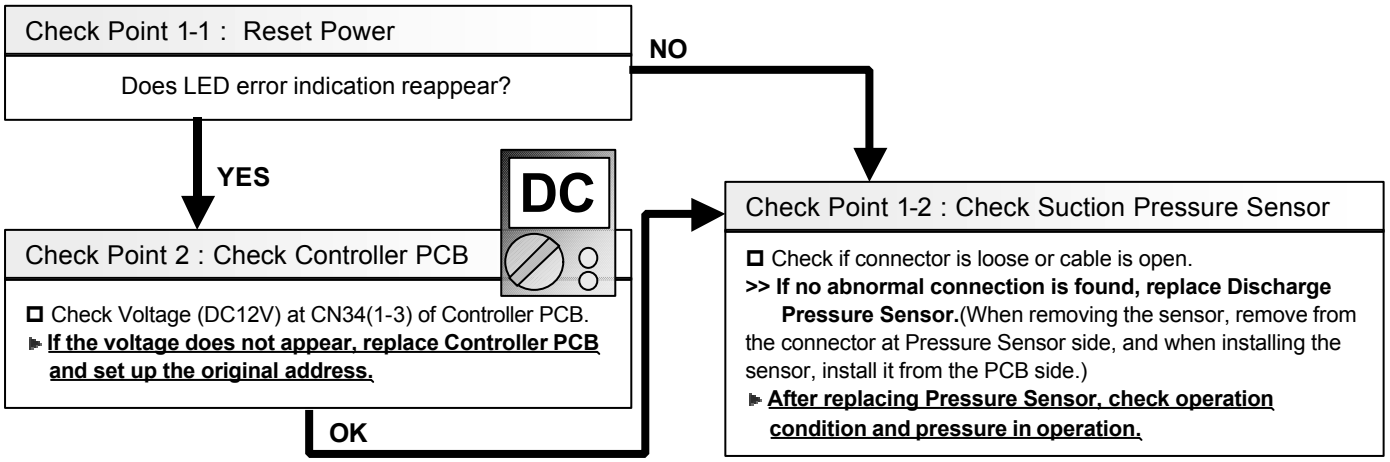
Trouble shooting 34 **OUTDOOR UNIT Error Method:** **Discharge Pressure Sensor Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED4 1 Time Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink** **Swing LED 3 Times Blink** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Pressure Sensor	**Detective details:** When Sensor Detection Voltage is detected at lower than 0.8V for 30 seconds, or higher than 5.0V, upon 30 seconds have passed after turning on Outdoor Unit.

Forecast of Cause : 1. Discharge Pressure Sensor failure 2. Controller PCB failure



Trouble shooting 35 **OUTDOOR UNIT Error Method:** **Suction Pressure Sensor Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED4 3 Time Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink** **Swing LED 3 Times Blink** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Suction Pressure Sensor	**Detective details:** When Sensor Detection Voltage is detected at lower than 0.8V for 30 seconds, or higher than 5.0V, upon 30 seconds have passed after turning on Outdoor Unit.

Forecast of Cause : 1. Suction Pressure Sensor failure 2. Controller PCB failure



Trouble shooting 36 **OUTDOOR UNIT Error Method:** **Current Sensor Error** **(only for Master Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED4 4 Times Blink** **Indoor Unit : Operation LED Blink, Timer LED 3Time Blinks,** **ERROR CODE : E : 32 Swing LED 3Time Blinks,**
Detective Actuators: Outdoor Unit Controller PCB circuit Current Sensor	**Detective details:** When Current Sensor has detected an error for 2 times in a row while Inverter Compressor is operating at higher than 50Hz.

Forecast of Cause : 1. Electrical Component failure 2. Outside Cause 3. Filter PCB failure 4. Inverter PCB failure 5. Current Sensor failure

Check Point 1-1 : Restart Operation

Does LED error indication reappear?

NO

YES

Check Point 2 : Check connections of Outdoor Unit Electrical Components

- ☐ Isn't the terminal connection loose?
- ☐ Is Current Sensor Connector secure?

OK

Check Point 3 :
Check Filter PCB and Inverter PCB

- ☐ Check connection between Inverter PCB and Filter PCB. (If there is loose connector or open cable)
- ☐ Check Filter PCB and Inverter PCB. **(PARTS INFORMATION 4)**

OK

Check Point 4 : Replace Current Sensor

- **If the symptom does not change with above Check 1,2,3, Current Sensor may be defective. Replace Current Sensor.**

Check Point 1-2 :
Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave). Check the complete insulation of grounding.

Trouble shooting 37 **OUTDOOR UNIT Error Method:** Reverse Phase/Missing Phase Error	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED5 1 Time Blink Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink Swing LED 3 Times Blink ERROR CODE : E : 32

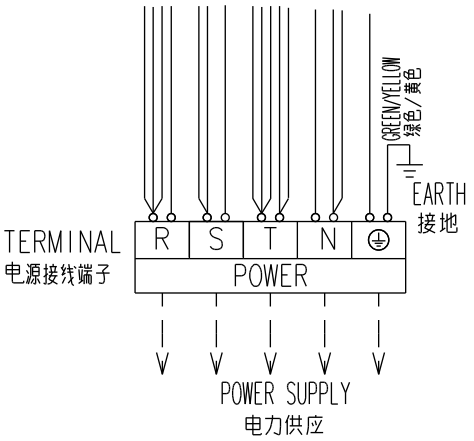
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** When Reverse Protection Circuit (Relay) detects the reverse phase input, or a normal input was not conducted.

Forecast of Cause : 1. Connection failure 2. Controller PCB failure
3. Filter PCB failure or Inverter PCB failure (In case of Master Unit)

Check Point 1 : Check connection failure

- ☐ Check if the terminal connection is loose.
- ☐ Check if cable is cut open.

>> If connection is repaired, turn on the power again and make sure it operates normally.



OK

Check Point 2 : Replace Controller PCB

☐ Which has an error, Main Unit? Or Slave Unit?

Master Unit

Slave Unit

☐ **Replace Controller PCB and set up the original address.**

☐ **Check Inverter PCB and Filter PCB. (PARTS INFORMATION 4)**
If no defect is found, replace Controller PCB and set up the original address.

Trouble shooting 38 **OUTDOOR UNIT Error Method:** Inverter Error (Only for Main Unit)	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED5 2 Times Blink Indoor Unit : Operation LED Blink, Timer LED 3Time Blinks, ERROR CODE : E : 32 Swing LED 3Time Blinks,
Detective Actuators: Outdoor Unit Controller PCB circuit Inverter PCB	**Detective details:** When an error is received from Inverter PCB.

Forecast of Cause : 1. Connection failure 2. Outside cause 3. Heat Sink failure 4. Filter PCB failure 5. Inverter PCB failure

Check Point 1-1 : Restart Operation

Does LED error indication reappear?

NO

YES

Check Point 2 :
Check connection of Inverter PCB

- ☐ Check connection between Inverter PCB and Controller PCB, and Inverter PCB and Filter PCB. (Make sure if connector is loose or cable is cut open.)

OK

Check Point 3 : Check Heat Sink

- ☐ Is there anything obstructing heat radiation from Heat Sink?
- ☐ Check the installation of Heat Sink (Loose screw, or rattling of Heat Sink)

OK

Check Point 4 : Check Filter PCB and Inverter PCB

- ▶ **Check Filter PCB or Inverter PCB as they may be defective. (PARTS INFORMATION 4)**

Check Point 1-2 :
Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave). Check the complete insulation of grounding.

Trouble shooting 39 **OUTDOOR UNIT Error Method:** **EEPROM Access Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 3 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** Upon Outdoor Unit is started up, Access to EEPROM has been failed due to some cause such as outside cause or component failure, etc.)

Forecast of Cause : 1. Outside cause 2. Electrical Component connection failure 3. Controller PCB failure

Check Point 1-1 : Restart Operation

Does LED error indication reappear?

NO

YES

Check Point 2 : Check Electrical Components

- ☐ Check connection of the connector. (loose connection or incorrect wiring)
- ☐ Check any short or corrosion ion PCB.

OK

Check Point 3 : Replace Controller PCB

- **Replace Controller PCB, and set up the original address.**

Check Point 1-2 :
Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave). Check the complete insulation of grounding.

Note : EEPROM
EEPROM(Electronically Erasable and Programmable Read Only Memory) is a non-volatile memory which keeps memorized information even if power is turned off. It can change the contents electronically.
To change the contents, it uses higher voltage than normal, and it can not change a partial contents. (Rewriting shall be done upon erasing the all contents.)
There is a limit in a number of rewriting.

Trouble shooting 40 **OUTDOOR UNIT Error Method:** **Inverter Start-up Current Error** **(Only for Main Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 4 Times Blink** **Indoor Unit : Operation LED Blink, Timer LED 3Time Blinks,** **ERROR CODE : E : 32 Swing LED 3Time Blinks,**
Detective Actuators: Outdoor Unit Controller PCB circuit Inverter PCB	**Detective details:** When Start-up over current shut-down error is detected on Inverter PCB, Inverter compressor is once stopped and restarted, then Start-up over current Shut-down error is detected 10 times continuously at the frequency of lower than 30Hz.

Forecast of Cause : 1. Outside cause 2. Electrical Component connection failure 3. Controller PCB failure

Check Point 1 :Check Filter PCB and Inverter PCB

- ☐ Check connection of Inverter PCB and Filter PCB (Loose connector, Cable cut open, etc.)
- ☐ Check Filter PCB and Inverter PCB. **(PARTS INFORMATION 4)**

OK

Check Point 2 : Check Inverter Compressor

- **If the symptom does not change with above Check 1, check Inverter Compressor since the Inverter Compressor may be defective. (PARTS INFORMATION 1,3)**

Trouble shooting 41 **OUTDOOR UNIT Error Method:** **Inverter Normal Current Error** **(Only for Main Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 5 Times Blink** **Indoor Unit : Operation LED Blink, Timer LED 3Time Blinks,** **ERROR CODE : E : 32 Swing LED 3Time Blinks,**
Detective Actuators: Outdoor Unit Controller PCB circuit Inverter PCB	**Detective details:** Upon detecting Normal Over Current Shut-down Error on Inverter PCB, Inverter Compressor is stopped. And this error is indicated when Normal Over Current Shut-down Error is repeatedly detected 5 times or more within 40 seconds after restarting the Inverter Compressor.

Forecast of Cause : 1. Outdoor Fan Operation failure 2. Outdoor Unit Heat Exchanger clogged
3. Filter PCB failure 4. Inverter PCB failure 5. Inverter Compressor failure

Check Point 1 : Check Outdoor Fan, Heat Exchanger

- ☐ Is there anything obstructing the air distribution circuit?
- ☐ Is there any clogging of Outdoor Heat Exchanger?
- ☐ Is the Fan rotating?
  (Check by hand and if it is locked, replace the motor)
- ☐ Check Outdoor Fan Motor **(PARTS INFORMATION 12)**
  >> If the Fan Motor is defective, replace it.

OK

Check Point 2 :Check Filter PCB and Inverter PCB

- ☐ Check connection of Inverter PCB and Filter PCB (Loose connector, Cable cut open, etc.)
- ☐ Check Filter PCB and Inverter PCB. **(PARTS INFORMATION 4)**

OK

Check Point 3 :Check Inverter Compressor

- **If the symptom does not change with above Check 1,2, check Inverter Compressor since the Inverter Compressor may be defective. (PARTS INFORMATION 1,3)**

Trouble shooting 42 **OUTDOOR UNIT Error Method:** **Inverter Communication Error** **(Only for Main Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 6 Times Blink** **Indoor Unit : Operation LED Blink, Timer LED 3Time Blinks,** **ERROR CODE : E : 32 Swing LED 3Time Blinks,**
Detective Actuators: Outdoor Unit Controller PCB circuit Inverter PCB	**Detective details:** When no signal is received for longer than 10 seconds from Inverter PCB.

Forecast of Cause : 1. Connection failure 2. Outside cause 3. Filter PCB failure 4. Inverter PCB failure

Check Point 1-1 : Restart Operation

Does LED error indication reappear?

NO

YES

Check Point 2 :
Check connection of Inverter PCB

- ☐ Check connection between Inverter PCB and Controller PCB, and between Inverter PCB and Filter PCB. (If there is loose connector or cable open)

OK

Check Point 3 : Check Filter PCB

- ☐ Check Filter PCB **(PARTS INFORMATION 4)**

▶ **If it is not defective, Inverter PCB is considered as defective. Replace Inverter PCB and check operation.**

Check Point 1-2 : Check outside cause such as noise

- ☐ Check the complete insulation of the grounding.
- ☐ Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave).

Trouble shooting 43 **OUTDOOR UNIT Error Method:** **Parallel Communication Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 7 Times Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink** **Swing LED 3 Times Blink** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Outdoor Transmission PCB	**Detective details:** When the parallel communication (communication between the Master Micon and Nuron Chip) is failed for 5 times.

Forecast of Cause : 1. Connection failure 2. Outside cause 3. Transmission PCB failure 4. Controller PCB failure

Check Point 1-1 : Restart Operation

Does LED error indication reappear?

NO → Check Point 1-2 : Check outside cause such as noise

- ☐ Check the complete insulation of the grounding.
- ☐ Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave).

YES

Check Point 2 : Check connections

- ☐ Check if Outdoor Transmission PCB connection is loose.

OK

Check Point 3 : Replace Transmission PCB

- ☐ Replace Transmission PCB
- ▶ **If the symptom does not change, replace Controller PCB and set up the original address.**

Note : Master Micon
Master Micon is the Main Micon that is installed on the Controller PCB.

Note : Nuron Chip
Nuron Chip is the Micon that can be installed into a device, making the device to have an intelligence, and becomes able to communicate each other. This is equipped on Transmission PCB.

Trouble shooting 44 **OUTDOOR UNIT Error Method:** Communication Error between Outdoor Units	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED5 8 Times Blink Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink Swing LED 3 Times Blink ERROR CODE : E : 32
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** In case of Main Unit : When the number of connected Slave Unit does not match to the number of Slave Unit that can be recognized by the communication, and this condition continued for longer than 5 minutes after starting operation. In case of Slave Unit : When the communication from the Main Unit in the same refrigerant system was not received for longer than 5 minutes after starting operation.

Forecast of Cause : 1. Connection failure 2. Outside cause 3. Transmission PCB failure 4. Controller PCB failure

Check Point 1 : Check Power Supply

- ☐ Isn't the breaker off?
- ☐ Check loose or removed connection cable.

OK

Check Point 2 : Check connections

Upon turning off power, check and correct followings.

- ☐ Check connections between each outdoor units. (Check loose or removed wiring of Communication Cable)
- ☐ Check if the connection between Outdoor Controller PCB and Transmission PCB in each Outdoor Units are loose.

OK

Check Point 3 : Replace Transmission PCB

- ▶ **If the symptom does not change by above Check 1, 2, replace Transmission PCB.**

OK

Check Point 4 : Replace Controller PCB

- ▶ **If the symptom does not change by above Check 1,2,3, replace Controller PCB and set up the original address.**

Trouble shooting 45 **OUTDOOR UNIT Error Method:** **Network Communication Error** **(Only for Main Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 9 Times Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink** **Swing LED 3 Times Blink** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** When the network signal from the indoor unit that has a receipt record was not received longer than 5 minutes. (Indoor Unit does not display Error) Or, when the network signals from all the Indoor Units were not received for more than 5 minutes.

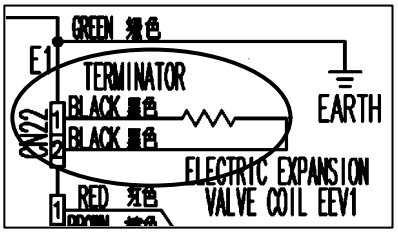
Forecast of Cause : 1. Connection failure 2. Outside cause 3. Transmission PCB failure 4. Controller PCB failure

Check Point 1 : Check connections

Turn off the power and check/correct followings

- ☐ Isn't Outdoor Unit Transmission PCB connection loose?
- ☐ Check loose or removed communication line between Indoor Unit and Outdoor Unit.
- ☐ Make sure Controller PCB for Main Unit has Terminator (CN22).
- ☐ When the signal amplifier is connected, is it failure of signal amplifier?

(Refer to "TROUBLE SHOOTING FOR OPTIONAL PARTS")



Outdoor Unit Schematic (CN22:TERMINATOR)

OK

Check Point 2 : Check outside cause (Voltage drop or Noise)

- ☐ Instant voltage drop ------ Check if there is any electric equipment with a large load within the same circuit.
- ☐ Momentary power failure ----- Check contact failure or leak current in power supply circuit

>> Check Indoor Unit as well.

- ☐ Check if there is any equipment that causes harmonic wave near the power cable (Neon light bulb or any electronic equipment which causes harmonic wave). And check the complete insulation of grounding.

>> If the same symptom does not reappear after resetting the power, possibility of noise is high.

OK

Check Point 3 : Check Transmission PCB and Controller PCB

- ☐ When a signal from some Indoor Unit could not be received, check the connection of its Indoor Unit's Transmission PCB. (Refer to Trouble Shooting 12)

>> If the symptom does not change, replace Indoor Unit Transmission PCB. (If it still does not improve, replace Controller PCB.

- ☐ When the signal from all the Indoor Units could not be received, replace Outdoor Unit Transmission PCB.

>> If the symptom does not change, replace Outdoor Unit Controller PCB.

Note : Terminator

Terminator is a resistance that prevents the reflection of the signal at the end terminal of the circuit which causes abnormal data transmission when connecting multiple devices with 1 piece of cable.

Trouble shooting 46 **OUTDOOR UNIT Error Method:** **Main/Slave Unit Setting Error** **(Only for Slave Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED5 10 Times Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink** **Swing LED 3 Times Blink** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit)	**Detective details:** When Slave Unit becomes successful to communicate with Inverter PCB at the power ON.

Forecast of Cause : 1. DIP-SW Setting failure 2. Controller PCB defective

Check Point 1 : Check DIP-SW setting

- There is a high possibility that Main Unit (Inverter equipped unit) is set up as Slave Unit.
  >>Turn off power and check/correct DIP-SW setting.

Dip-SW3-3,3-4 are for Outdoor Unit Address Setting.

Dip-SW 3-3	Dip-SW 3-4	Outdoor Address
OFF	OFF	0 (Master Unit)
OFF	ON	1 (Slave Unit 1)
ON	OFF	2 (Slave Unit 2)

- **When setting has been changed, reset power and check operation.**

OK

Check Point 2 : Replace Controller PCB

- **If the symptom does not change by above Check 1, replace Controller PCB and set up the original address.**

Trouble shooting 47 **OUTDOOR UNIT Error Method:** **Slave Unit Error (Only for Main Unit)**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED6 2 Times Blink** **Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink** **Swing LED 3 Times Blink** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** When an error is received from any Outdoor Unit in the same refrigerant system.

Forecast of Cause : 1. DIP-SW Setting failure 2. Controller PCB defective

Check Point 1 : Diagnose Outdoor Unit

- Check LED display for connected Slave Unit error.
  >>Refer to Trouble Shooting for Error and repair.

Trouble shooting 48 **OUTDOOR UNIT Error Method:** Initial Setting Error	**Indicate or Display:** Outdoor Unit : LED1 Flash, LED2 ~ 6 Lighted Continuously Indoor Unit : Operation LED Flash, Timer LED 3 Times Blink Swing LED 3 Times Blink ERROR CODE : E : 32
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** In case of Main Unit : At the time of power ON, when the number of connected Indoor Units and the number of Indoor Units which can be received by the communication do not match up. In case of Slave Unit : When no communication data can be received from the Main Unit at the time of power ON.

Forecast of Cause : 1. DIP-SW setting error 2. Power Supply failure 3. Connection failure 4. Transmission PCB failure 5. Controller PCB failure

Check Point 1 : Check DIP-SW setting

☐ Turn off power and check/correct DIP-SW setting.

Dip-SW3-3,3-4 are for Outdoor Unit Address Setting

Dip-SW 3-3	Dip-SW 3-4	Outdoor Address
OFF	OFF	0 (Main Unit)
OFF	ON	1 (Slave Unit 1)
ON	OFF	2 (Slave Unit 2)

Dip-SW4-1,4-2 are for Outdoor Unit Connection Quantity Setting.

Dip-SW 4-1	Dip-SW 4-2	Outdoor Address
OFF	OFF	0 (Main Unit)
OFF	ON	1 (1 Slave Unit)
ON	OFF	2 (2 Slave Units)

▶ **If Setting is changed, reset the power and check operation.**

OK

Check Point 2 : Check Power Supply

☐ Is the power breaker down?
☐ Check loose or removed connection cable.

OK

Check Point 3 : Check connections

Turn off the power and check/correct followings.
☐ Check connection between each Outdoor Units (Loose or removed communication cable)
☐ Check if the connection between Outdoor Controller PCB and Transmission PCB for each Outdoor Unit.

OK

Check Point 4 : Replace Transmission PCB

▶ **If the symptom does not change by above Check 1,2,3, replace Transmission PCB.**

OK

Check Point 5 : Replace Controller PCB

▶ **If the symptom does not change by above Check 1 to 4, replace Controller PCB and set up the original address.**

Trouble shooting 49 **OUTDOOR UNIT Error Method:** **4-way valve Error**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 10 Time Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit	**Detective details:** Upon changing operation from other than heating to heating, and when the difference between high and low pressure becomes lower than 10degC after 60 seconds of the first start up of compressor.

Forecast of Cause : 1. Connector connection failure 2. Coil failure 3. 4-way valve failure

Check Point 1 : Check connection of Connector

- ☐ Check if connector is loose or removed
- ☐ Check erroneous connection
- ☐ Check if 4-way valve cable is open

>>Reset Power when reinstalling due to removed connector or incorrect wiring.

OK

Check Point 2 : Check the solenoid coil and 4-way valve

Refer to the Service Parts Information.

Trouble shooting 50 **OUTDOOR UNIT Error Method:** **All Compressors Abnormal of 1 unit.**	**Indicate or Display:** **Outdoor Unit : LED1 Flash, LED2 11 Times Blink** **Indoor Unit : Operation LED Lighted Continuously (Normal Operation)** **ERROR CODE : E : 32**
Detective Actuators: Outdoor Unit Controller PCB circuit Discharge Thermistor	**Detective details:** When compressor error 1, 2, 3 has been detected within the same outdoor unit

Forecast of Cause : 1. Discharge Thermistor mis-installed 2. Magnet Relay failure 3. Constant speed Compressor failure

Check Point 1 : Check Discharge Thermistor

- ☐ Check if other type of thermistor is wrongly installed.
- ☐ Check if the thermistor is removed from the holder.
- ☐ Check if the cable of the thermistor is pinched.

>>Check characteristics of Thermistor (Refer to Trouble shooting 22, 23, 24)
If defective, replace the thermistor.

OK

Check Point 2 : Check Magnet Relay

- ☐ Check if the connector between Magnet Relay and PCB is loose.
- ☐ Check if the connector between Magnet Relay and PCB is reversed.
- ☐ Check the operation by pressing the Magnet Relay.

>>If it does not operate, check if it is corrected by replacing with other magnet relay, and if it operates, replace the Magnet Relay.

OK

Check Point 3 : Check Compressor

▶ If the symptom does not change with Check Point 1 and 2, a failure of Constant speed Compressor can be suspected. (PARTS INFORMATION 1,2)

6-3-4 Trouble Shooting With NO Error Code

Trouble shooting 51

Indoor Unit - No Power

Forecast of Cause :

1. Power Supply failure 2. Outside cause 3. Electrical Component defective

Check Point 1 : Check Installation Condition

- ☐ Isn't the breaker down?
- ☐ Check loose or removed connection cable.

>>If abnormal condition is found, correct it by referring to Installation Manual or Data & Technical Manual.

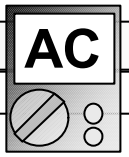
OK

Check Point 2 : Check Outside Cause such as Voltage drop or Noise

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave).
  Check the complete insulation of grounding.

OK

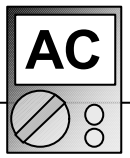
Check Point 3 : Check Electrical Components



☐ Check Voltage of power supply.
>> Check AC220V appears at Indoor Unit Terminal 1-2 (Power Supply).

NO

YES



☐ Check Voltage of Transformer (Only for small wall mount type).
>> Check if AC220V appears at Transformer primary side.

NO

YES

☐ Small Wall mount type: Check Temperature Fuse of Transformer.
>> If Temp. Fuse of Transformer is open, replace the transformer.

OK

☐ Check Fuse (F101) in Power PCB.
>> If Fuse is open, check if the wiring between Terminal and Power PCB is loose, and replace Fuse.

☐ Check Varistor (VA101, VA102) in Power PCB.
>> If Varistor is defective, there is a possibility of an abnormal power supply (BACK CHECK 1). Check the correct power supply and replace Varistor.

OK

▶ **If the symptom does not change by above Check3, replace Power PCB.**

Trouble shooting 52

Outdoor Unit - No Power

Forecast of Cause :

1. Power Supply failure 2. Outside cause 3. Electrical Components defective

Check Point 1 : Check Installation Condition

- ☐ Isn't the breaker down?
- ☐ Check loose or removed connection cable.

>>If abnormal condition is found, correct it by referring to Installation Manual or Data & Technical Manual.

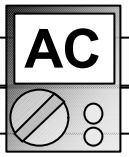
OK

Check Point 2 : Check Outside Cause such as Voltage drop or Noise

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave).
  Check the complete insulation of grounding.

OK

Check Point 3 : Check Electrical Components



☐ Check the voltage of power supply.

>> Check if AC380V appears at Outdoor Unit Terminal R-S, S-T, T-R, and AC220V at R-N, S-N, T-N.

NO

YES

☐ Check Fuse (FU1) in Main PCB.

>> If Fuse is open, check loose terminal or removed connector (CN1) , and replace Fuse.

☐ Check Varistor in Main PCB (VA1, VA2).

>> If Varistor is defective, there is a possibility of an abnormal power supply. (BACK CHECK 1)
Check the correct power supply and replace Varistor.
Upon checking the normal power supply, replace Varistor.

OK

▶ **If the symptom does not change by above Check 3, replace Main PCB.**

Trouble shooting 53

No Operation (Power is ON)

Forecast of Cause :
1. Setting/Connection failure 2. Outside cause
3. Electrical Component defective

Check Point 1 : Check indoor and outdoor installation condition

- ☐ Indoor Unit - Check incorrect wiring between Indoor Unit - Remote Control, or terminals between Indoor Units. Or, check if there is an open cable connection.
- ☐ Check address setting (Are all the address of Indoor and Outdoor correct?)
- ☐ Are these Indoor Unit, Outdoor Unit, and Remote Control suitable model numbers to connect?

>> If there is some abnormal condition, correct it by referring to Installation manual and Data & Technical Manual.

OK

Turn off Power and check/correct followings.
- ☐ Isn't Transmission PCB of Indoor Unit removed?
- ☐ Is there loose or removed communication line of Indoor Unit and Outdoor Unit?
- ☐ Check Terminator (CN22) is installed on Outdoor Controller PCB.
- ☐ Check loose or removed communication line between each Outdoor Unit.
- ☐ Check loose Transmission PCB of each Outdoor Unit.

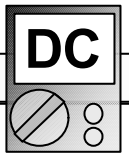
OK

Check Point 2 :Check outside cause at Indoor and Outdoor (Voltage drop or Noise)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave).
  Check the complete insulation of grounding.

OK

Check Point 3 : Check Electrical Components at Indoor and Outdoor



☐ Check Voltage between CN17 of Controller PCB (Power supply to Remote Control).

>> If it is DC12V, Remote Control is defective (Controller PCB is normal) >> Replace Remote Control

>> If it is DC 0V, Controller PCB is defective (Check Remote Control once again) >> Replace Controller PCB

☐ If some of Indoor unit does not operate, replace the Transmission PCB of the non-operative Indoor Unit.

>> If the symptom does not change, replace Controller PCB of Indoor Unit.

☐ If all of Indoor Units do not operate, check the connection between Controller PCB and Transmission PCB of Outdoor Unit (Main Unit).

>> If the symptom does not change, replace Transmission PCB of O utdoor Unit (Main Unit).
(If it did not work, replace Controller PCB.)

Trouble shooting 54

No Cooling or No Heating

Forecast of Cause :
1. Indoor Unit error 2. Outdoor Unit error 3. Effect by Surrounding environment
4. Connection Pipe / Connection Wire failure 5. Refrigeration cycle failure

Check Point 1 : Check Indoor Unit

- ☐ Does Indoor Unit FAN run on HIGH FAN?
- ☐ Is Air Filter dirty?
- ☐ Is Heat Exchanger clogged?

OK

Check Point 2 : Check Outdoor Unit Operation

- ☐ Check if Outdoor Unit is operating
  (If not, refer to Trouble shooting 50).
- ☐ Check any objects that obstruct the air flow route.
- ☐ Check clogged Heat Exchanger.
- ☐ Is the setting of pipe length (DIP-SW 6-1, 6-2) adequate?
- ☐ Is the Valve open?

OK

Check Point 3 : Check Site Condition

- ☐ Is capacity of Indoor Unit fitted to Room size?
- ☐ Any windows open? Or direct sunlight ?

OK

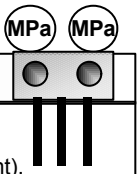
Check Point 4 : Check Indoor/Outdoor Installation Condition

- ☐ Check connection pipe (specified pipe length & Pipe diameter?)
- ☐ Check any loose or removed communication line.

>> If there is an abnormal condition, correct it by referring to Installation Manual or Data & Technical Manual.

OK

Check Point 5 : Check Refrigeration Cycle

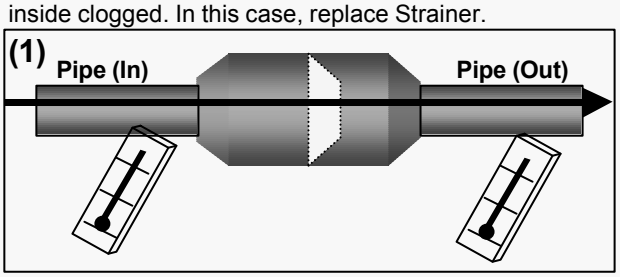


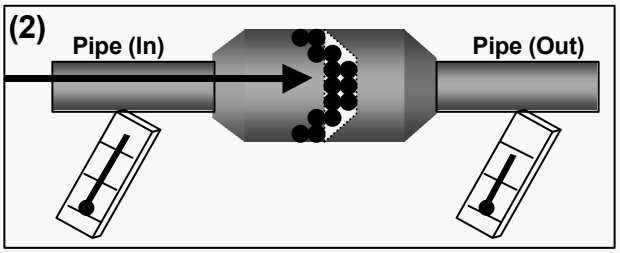
- ☐ Check if Strainer is clogged (Refer to the figure at right).
- ☐ Measure Gas Pressure and if there is a leakage, correct it.

>> When recharging the refrigerant, make sure to perform vacuuming, and recharge the specified amount.

- ▶ Check EEV (PARTS INFORMATION)
- ▶ Check Solenoid Valve (PARTS INFORMATION)
- ▶ Check Compressor (PARTS INFORMATION)

Attention!!
Strainer normally does not have temperature difference between inlet and outlet as shown in (1), but if there is a difference like shown in (2), there is a possibility of inside clogged. In this case, replace Strainer.





Trouble shooting 55

Abnormal Noise

Forecast of Cause :
1. Abnormal installation (Indoor/Outdoor) 2. Fan failure(Indoor/Outdoor)
3. EEV failure (Indoor) 4. Compressor failure (Outdoor)

Diagnosis method when Abnormal Noise is occurred

Abnormal noise is coming from Indoor Unit
(Check and correct followings)

- ☐ Is Main Unit installed in stable condition?
- ☐ Is the installation of Air suction grille and front panel normal?
- ☐ In case of Duct type : Is Static Pressure range normal? (Refer to Data & Technical Manual)

OK

- ☐ Is Fan broken or deformed?
- ☐ Is the screw of Fan loose?
- ☐ Is there any object which obstruct the Fan rotation?

Attention!!
If Refrigerant Noise is occurring, Check if the Indoor and Outdoor Thermistor is wrongly installed. Check and correct the thermistor.

Abnormal noise is coming from Outdoor Unit
(Check and correct followings)

- ☐ Is Main Unit installed in stable condition?
- ☐ Is Bell Mouth installed normally?

OK

- ☐ Is Fan broken or deformed?
- ☐ Is the screw of Fan loose?
- ☐ Is there any object which obstruct the Fan rotation?

OK

- ☐ Check if vibration noise by loose bolt or contact noise of piping is happening.

OK

- ☐ Is Compressor locked?
  >> Check Compressor (PARTS INFORMATION 1,2,3)

Trouble shooting 56

Water Leaking

Forecast of Cause :

1. Erroneous installation 2. Drain hose failure 3. Float Switch failure

Diagnosis method when water leak occurs

- ☐ Is Main Unit installed in stable condition?
- ☐ Is Main Unit broken or deformed at the time of transportation or maintenance?

OK

- ☐ Is Drain Hose connection loose?
- ☐ Is there a trap in Drain Hose?
- ☐ Is Drain Hose clogged?

OK

- ☐ Is Fan rotating?
  >> Check Fan Motor (PARTS INFORMATION 10,11)

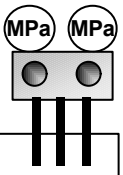
OK

- ☐ Is Float Switch defective?
  >> Check Float Switch (Refer to Trouble Shooting 7)

Diagnosis method when water is spitting out

- ☐ Is the filter clogged?

OK



- ☐ Check Gas Pressure and correct it if there was a gas leak.

Attention!!
If water is leaking from the Indoor Unit that is not in operation, there is a possibility of Indoor EEV is not closed.
==> Check EEV (Refer to PARTS INFORMATION)

6-3-5 Trouble Shooting for Optional Parts

1. External Switch Controller (UTR-YESA)

Trouble shooting 57

Error Contents :	**Symptom :**
Power Supply Error	**No operation & LED does not light up.**

Condition :

1. No power supply.
Voltage error between red and black terminals of External Switch Controller. (Normal voltage: 12V plus minus 10%)
2. Electric circuit error.
Voltage is normal between red and black terminals of External Switch Controller (Normal voltage: 12V plus minus 10%)

Cause 1 : Indoor unit defective
- ☐ Refer to Indoor unit trouble shooting.

OK

Cause 2 : Connection cable is defective or open.
- ☐ Check installation of connection cable.
- ☐ Check if connection cable is open.

OK

Cause 3 : Defective insertion or open connection of the cable between External Switch Controller terminal and PCB.
- ☐ Check connector insertion.
- ☐ Check if connection cable is open.

OK

Cause 4 : Ext. Switch Controller is defective.
- ▶ **Replace External Switch Controller.**

Trouble shooting 58

Error Contents :	**Symptom :**
The abnormality in connection of remote controller cable	**LED repeats flashing 0.5sec ON & 0.5sec OFF.**

Condition :

Communication with Indoor unit has been cut off for longer than 1 minute.

Cause 1 :
Communication cable is defective or open.
- ☐ Check installation of connection cable.
- ☐ Check if connection cable is open.

OK

Cause 2 : Defective insertion or open connection of the cable between External Switch Controller terminal and PCB.
- ☐ Check connector insertion.
- ☐ Check if connection cable is open.

OK

Cause 3 : DIP switch setting defective
- ☐ Check setting of DIP-SW1-4, 1-5, 1-6.

OK

External noise

Cause 4 : External noise
- ☐ Remove or shut out external noise source.

OK

Cause 5 : Ext. Switch Controller is defective.
- ▶ **Replace External Switch Controller.**

Trouble shooting 59

Error Contents :	**Symptom :**
Transmission Error	**LED repeats flashing 0.5sec ON & 1.0sec OFF.**

Condition :
Normal communication with Indoor unit has been suspended for longer than 1 minute.

Cause 1 : DIP switch setting defective
- ☐ Check setting of DIP-SW1-4, 1-5, 1-6.

OK

Cause 2 : External noise
- ☐ Remove or shut out external noise source.

OK

Cause 3 : Ext. Switch Controller is defective.
- ▶ **Replace External Switch Controller.**

Trouble shooting 60

Error Contents :	**Symptom :**
Switch Operation Error	**LED is lighting but Switch (SW1 or SW2) does not operate.**

Condition :
Switch input can not be detected.

Cause 1 : Connection cable is defective or open.
- ☐ Check installation of connection cable.
- ☐ Check if connection cable is open.

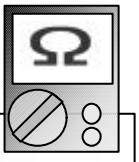
OK

Cause 2 : Defective insertion or open connection of the cable between External Switch Controller terminal and PCB.
- ☐ Check connector insertion.
- ☐ Check if connection cable is open.

OK

Cause 3 : DIP switch setting defective
- ☐ Check DIP Switch setting.

OK



Cause 4 : External Switch is defective
- ☐ Check any short or switch operation failure.
- ☐ Check resistance value between the terminals, at the time of input.
- ▶ **OPEN :** More than 50 kΩ
- ▶ **SHORT :** Less than 1 kΩ

OK

Cause 5 : Ext. Switch Controller is defective.
- ▶ **Replace External Switch Controller.**

2. Signal Amplifier (UTR-YRPC)

Trouble shooting 61

Error Contents :	**Symptom :**
Power Supply Error	**No display**

Details :

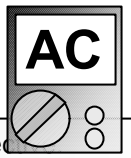
Condition of occurrence : Normal power is not supplied. 7 segment indicator is defective.

Release condition : Normal power is supplied. 7 segment indicator is normal.

Cause 1 :
Power supply cable installation is defective or open.

☐ Check following installation and reset the power supply.
(1) Installation of power cable on power supply terminal.
(2) Connection between Power PCB and Terminal.
(3) Connector condition between power PCB and Main PCB.

OK



Cause 2 : Signal Amplifier is defe

If normal voltage (220V) is applied to power supply terminal of Signal Amplifier, there is a possibility of defective PCB. Proceed as follows.
▶ **Replace Signal Amplifier.**

Trouble shooting 62

Error Contents :	**Symptom :**
Communication Error	**Error code does not appear [. .]** **Communication error occurs at connected equipment side.**

Details :

Condition of occurrence : Network connection cable defective. External noise is applied.
Overlapping of Signal Amplifier address setting. System design mistake.

Release condition : Network cable is connected. External noise is removed.
Overlapping of Signal Amplifier has been corrected. System design is normal.

Cause 1 :
Network cable installation is defective or open.

☐ Check Network cable installation.

OK

Cause 2 : External noise

☐ Remove external noise around Signal Amplifier or Network cable. (Keep enough distance)

OK

Cause 3 :
Overlapped address of Signal Amplifier.

☐ Set up address again which does not overlap on system. After set up again, reset the power supply.

OK

Cause 4 : System Design mistake

☐ Check following items.(Refer to Installation Manual)
(1) Installation location of Terminal Resistor.
(Only 1 location on NS*)
(2) Cable length. (Within 500m maximum on NS*)
(3) Number of units connected
(Up to 64 units maximum on NS*)
(4) Communication cable specification.
(Use specified type.)
(5) Number of Signal Amplifier installed.
(Up to 8 units max. on system)
(6) Network cable shall not be connected in loop.

*NS : Network Segment

Trouble shooting 63

Error Contents :	**Symptom :**
Address Setting Error	**Error display [_1]** **No operation.**

Details :

Condition of occurrence : Address is not set at Signal Amplifier.

Release condition : Address setting mode is started up, and desired address has been set up.

Cause 1 : External noise

☐ Upon pressing RESET button (SW7) or turning on power, proceed as follows.

(1) If error did not appear, it is not a defect of PCB. Remove the surrounding noise source.

(2) If error occurs again, check followings other than removing surrounding noise source.

OK

Cause 2 : Address is not set at Signal Amplifier.

☐ Set up address again.
After set up again, reset the power supply.

OK

Cause 3 : Signal Amplifier is defective.

▶ **Replace Signal Amplifier.**

Trouble shooting 64

Error Contents :	**Symptom :**
Parallel Communication Error B	**Error display [_8]** **No operation.**

Details :

Condition of occurrence : Communication error between CPU and Network Driver IC (CH_B side)

Release condition : Communication is normal between CPU and Network Driver IC (CH_B side)

Cause 1 : External noise

☐ Upon pressing RESET button (SW7) or turning on power, proceed as follows.

(1) If error did not appear, it is not a defect of PCB. Remove the surrounding noise source.

(2) If error occurs again, check followings other than removing surrounding noise source.

OK

Cause 2 : Signal Amplifier is defective.

▶ **Replace Signal Amplifier.**

Trouble shooting 65

Error Contents :	**Symptom :**
Parallel Communication Error A	**Error display [_9]** **No operation.**

Details :

Condition of occurrence : Communication error between CPU and Network Driver IC (CH_A side)

Release condition : Communication is normal between CPU and Network Driver IC (CH_A side)

Cause 1 : External noise

☐ Upon pressing RESET button (SW7) or turning on power, proceed as follows.

(1) If error did not appear, it is not a defect of PCB. Remove the surrounding noise source.

(2) If error occurs again, check followings other than removing surrounding noise source.

OK

Cause 2 : Signal Amplifier is defective.

▶ **Replace Signal Amplifier.**

Trouble shooting 66

Error Contents :	**Symptom :**
Communication Error B	**Error display [D9 (Flashing or Lighting)]** **No operation.**

Details :

Condition of occurrence : Communication error between CPU and Network Driver IC (CH_B side).
Network Driver IC is defective.

Release condition : Communication is normal between CPU and Network Driver IC (CH_B side).
Network Driver IC operation is normal.

Cause 1 : External noise

□ Upon pressing RESET button (SW7) or turning on power, proceed as follows.
(1) If error did not appear, it is not a defect of PCB. Remove the surrounding noise source.
(2) If error occurs again, check followings other than removing surrounding noise source.

OK

Cause 2 : Signal Amplifier is defective.

▶ **Replace Signal Amplifier.**

Trouble shooting 67

Error Contents :	**Symptom :**
Communication Error A	**Error display [D14 (Flashing or Lighting)]** **No operation.**

Details :

Condition of occurrence : Communication error between CPU and Network Driver IC (CH_A side).
Network Driver IC is defective.

Release condition : Communication is normal between CPU and Network Driver IC (CH_A side).
Network Driver IC operation is normal.

Cause 1 : External noise

□ Upon pressing RESET button (SW7) or turning on power, proceed as follows.
(1) If error did not appear, it is not a defect of PCB. Remove the surrounding noise source.
(2) If error occurs again, check followings other than removing surrounding noise source.

OK

Cause 2 : Signal Amplifier is defective.

▶ **Replace Signal Amplifier.**

3. Network Convertor (UTR-YRDA)

1. Whne connecting a group remote controller to a network convertor

Trouble shooting 68

Error Contents :	**Symptom :**
PCB Error 1	**Error Code display [05]** **All the control items do not operate.**

Details :
Condition of occurrence : Synchronization of Network Device was not normally done.
Release condition : When the synchronization of the device is normally done.

Cause 1 : External noise

- ☐ After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power. Does error code display reappear?
  - **YES**
    - ● Remove the surrounding noise source.
      - **OK**
  - **NO**
    - ● It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 : Network Convertor is defective.

▶ **Replace Network Convertor.**

Trouble shooting 69

Error Contents :	**Symptom :**
PCB Error 2	**Error Code display [06]** **Other controls are left as they are.**

Details :
Condition of occurrence : Error of inside information of EEPROM.
Initial setting of Network Converter PCB was not normally performed.
Release condition : When error disappeared and Network Convertor becomes available to control.

Cause 1 : External noise

- ☐ After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power. Does error code display reappear?
  - **YES**
    - ● Remove the surrounding noise source.
      - **OK**
  - **NO**
    - ● It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 : Network Convertor is defective.

▶ **Replace Network Convertor.**

Trouble shooting 70

Error Contents :	**Symptom :**
Communication Error with Group Remote Controller	**Error Code display [18] Control/Display from Group Remote is not available.**

Details :

Condition of occurrence : The communication between Group Remote and Network Convertor was not normally performed.
Release condition : When the communication between Group Remote and Network Convertor resumes normal operation.

Cause 1 : External noise

☐ After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power.
Does error code display reappear?

YES

● Remove the surrounding noise source.

OK

NO

● It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 :
Defective or open connection of cable wire between Network Converter and Connected Remote Controller.

After the following are checked, the power supply is reset.
☐ Check connection cable wire between Network Convertor and Connected Remote Controller.
☐ Check connection between Control PCB and Terminal.

OK

Cause 3 : Incorrect setting of Network Converter's DIP-SW103[1 to 4] (For Convertor setting of Group Remote Controller)

☐ Check Network Convertor PCB DIP-SW103[1 to 4] ON.

OK

Cause 4: Defective Remote Controller or Network Convertor.

▶ **Replace Remote Controller or Network Convertor.**

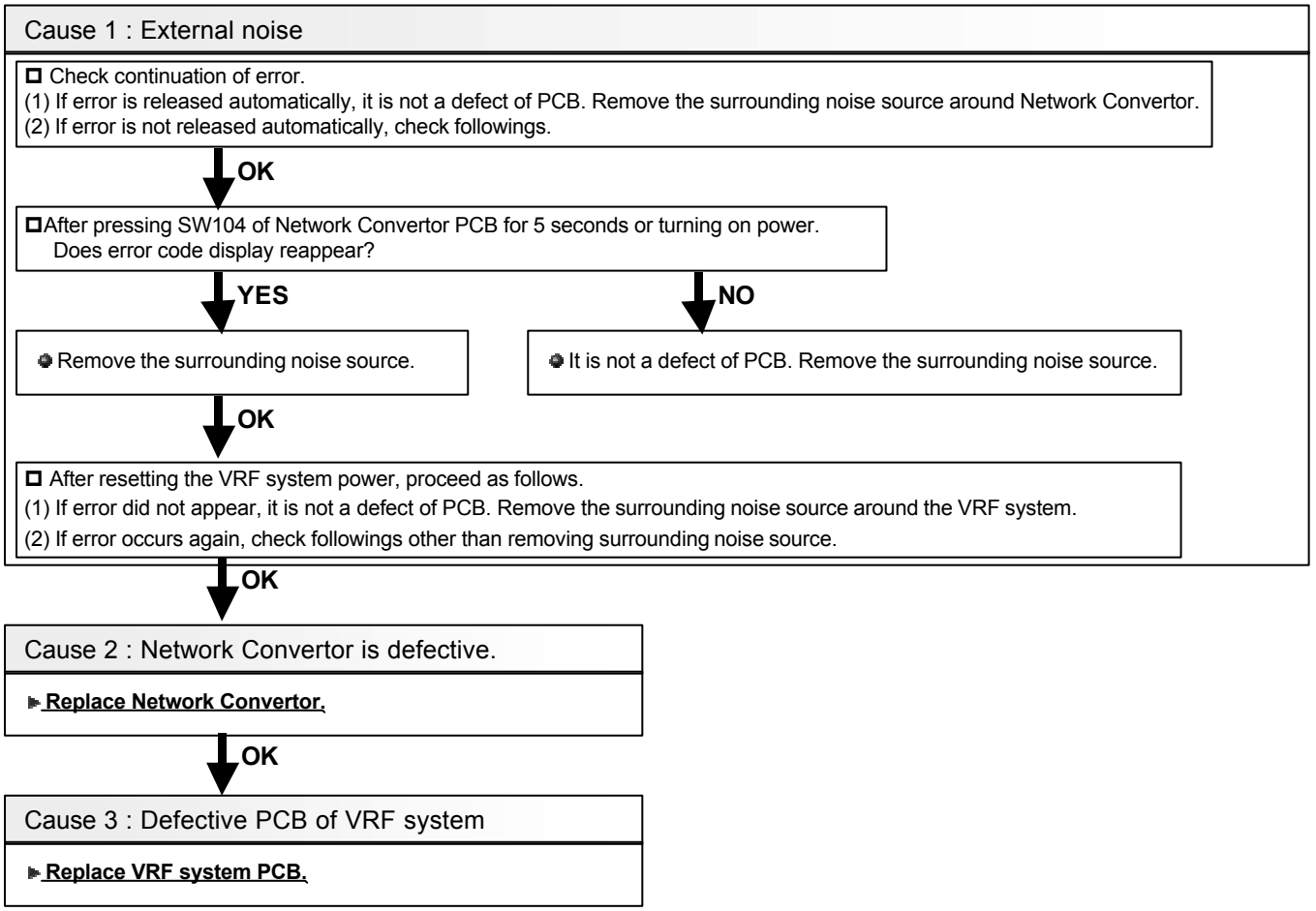
Trouble shooting 71

Error Contents :	**Symptom :**
Communication Error with VRF system	**Error Code display [1F] Control/Display from VRF system is not available. Other controls are left as they are.**

Details :

Condition of occurrence : The communication between VRF system and Network Convertor was not performed normally.
When indefinite signal is input from VRF system.

Release condition : When the communication with VRF system is resumed normally.



Trouble shooting 72

Error Contents :	**Symptom :**
Software Error	**Error Code display [21]** **All the control items do not operate.**

Details :

Condition of occurrence : Micon program performed an abnormal control.

Release condition : Micon has been reset, and the control of Network Convertor became normal.

Cause 1 : External noise

☐ Check continuation of error.
(1) If error is released automatically, it is not a defect of PCB. Remove the surrounding noise source around Network Convertor.
(2) If error is not released automatically, check followings.

OK

☐After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power.
Does error code display reappear?

YES

- Remove the surrounding noise source.

OK

NO

- It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 : Network Convertor is defective.

▶ **Replace Network Convertor.**

3. Network Convertor (UTR-YRDA)

2. Whne connecting a single split type indoor unit to a network convertor

Trouble shooting 73

Error Contents :	**Symptom :**
PCB Error 1	**Error Code display [05]** **All the control items do not operate.**

Details :

Condition of occurrence : Synchronization of Network Device was not normally done.

Release condition : When the synchronization of the device is normally done.

Cause 1 : External noise

☐ After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power.
Does error code display reappear?

YES

● Remove the surrounding noise source.

OK

NO

● It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 : Network Convertor is defective.

▶ **Replace Network Convertor.**

Trouble shooting 74

Error Contents :	**Symptom :**
PCB Error 2	**Error Code display [06]** **Other controls are left as they are.**

Details :

Condition of occurrence : Error of inside information of EEPROM.
Initial setting of Network Converter PCB was not normally performed.

Release condition : When error disappeared and Network Convertor becomes available to control.

Cause 1 : External noise

☐ After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power.
Does error code display reappear?

YES

● Remove the surrounding noise source.

OK

NO

● It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 : Network Convertor is defective.

▶ **Replace Network Convertor.**

Trouble shooting 75

Error Contents :	**Symptom :**
Communication Error with Standard Remote Controller	**Error Code display [18] Control/Display from Standard Remote is not available. Other controls are left as they are.**

Details :

Condition of occurrence : The communication between Standard Remote and Network Convertor was not normally performed.
Release condition : When the communication between Standard Remote and Network Convertor resumes normal operation.

Cause 1 : External noise

- ☐ After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power. Does error code display reappear?
  - **YES** → ● Remove the surrounding noise source.
  - **NO** → ● It is not a defect of PCB. Remove the surrounding noise source.

OK

Cause 2 :
Defective or open connection of cable wire between Network Converter and Connected Remote Controller.

After the following are checked, the power supply is reset.
- ☐ Check connection cable wire between Network Convertor and Connected Remote Controller.
- ☐ Check connection between Control PCB and Terminal.

OK

Cause 3 : Incorrect setting of Network Converter's DIP-SW107[2] (Wired RC Validity setting)

- ☐ Check Network Convertor PCB DIP-SW107[2].

OK

Cause 4 : Incorrect selection of Remote Controller

- ☐ Check connection Remote Controller. (Is it specified with the Installation Manual of Network Convertor?)

OK

Cause 5 :
Incorrect setting of Remote Controller's DIP-SW (Number of connected remote controllers)

- ☐ Check DIP-SW of Remote Controller.

OK

Cause 6 : Defective Remote Controller or Network Convertor.

- ▶ **Replace Remote Controller or Network Convertor.**

Trouble shooting 76

Error Contents :	**Symptom :**
Communication Error with Indoor Unit	**Error Code display [1C]** **All the control items do not operate.**

Details :

Condition of occurrence : The communication between Indoor unit and Network Convertor was not performed normally.

Release condition : When the communication with Indoor unit is resumed normally.

Cause 1 : External noise

☐ After pressing SW104 of Network Converter PCB for 5 seconds or turning on power.
Does error code display reappear?

YES

● Remove the surrounding noise source.

OK

NO

● It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 :
Defective or open connection of Remote Control cable between Network Convertor and Indoor Unit.

After the following are checked, the power supply is reset.
☐ Check connection cable wire between Network Convertor and Indoor unit.
☐ Check connection between Control PCB and Terminal.

OK

Cause 3 : Power to Indoor unit is shut down.

☐ Check the power to Indoor unit.

OK

Cause 4 : Incorrect setting of main unit address of Indoor unit.

☐ Check main unit address setting of Indoor unit.

OK

Cause 5 : Incorrect setting of DIP-SW of Network Convertor. Mis-read of Indoor unit type and RC type.

☐ Check DIP-SW103[1 to 8] of Network Convertor (Indoor unit type, RC type, number of Indoor units connected.)
☐ Check Indoor unit type and RC type of all Indoor units connected to Network Convertor.

OK

Cause 6 : Defective PCB of Indoor unit or Network Convertor.

▶ **Replace PCB of Indoor unit or Network Convertor.**

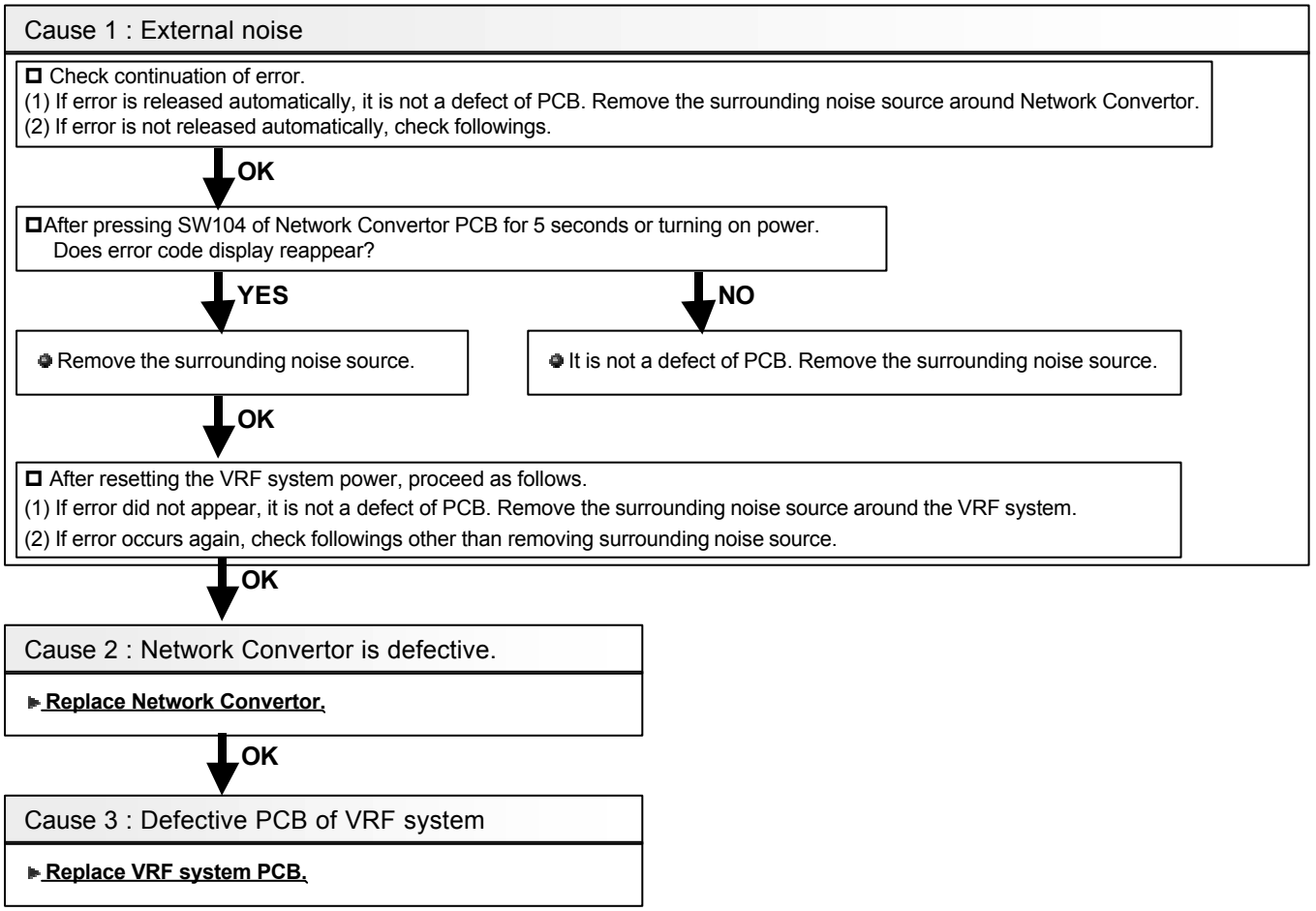
Trouble shooting 77

Error Contents :	**Symptom :**
Communication Error with VRF system	**Error Code display [1F] Control/Display from VRF system is not available. Other controls are left as they are.**

Details :

Condition of occurrence : The communication between VRF system and Network Convertor was not performed normally.
When indefinite signal is input from VRF system.

Release condition : When the communication with VRF system is resumed normally.



Trouble shooting 78

Error Contents :	**Symptom :**
Software Error	**Error Code display [21]** **All the control items do not operate.**

Details :

Condition of occurrence : Micon program performed an abnormal control.

Release condition : Micon has been reset, and the control of Network Convertor became normal.

Cause 1 : External noise

☐ Check continuation of error.
(1) If error is released automatically, it is not a defect of PCB. Remove the surrounding noise source around Network Convertor.
(2) If error is not released automatically, check followings.

OK

☐After pressing SW104 of Network Convertor PCB for 5 seconds or turning on power.
Does error code display reappear?

YES

- Remove the surrounding noise source.

OK

NO

- It is not a defect of PCB. Remove the surrounding noise source.

Cause 2 : Network Convertor is defective.

▶ **Replace Network Convertor.**

Trouble shooting 79

Error Contents :	**Symptom :**
Indoor / Outdoor Unit Error	**Error Code display [32]** **Other controls are left as they are.**

Details :

Condition of occurrence : When error occurred on Indoor/Outdoor unit that is connected to Network Convertor.

Release condition : When the error of Indoor/Outdoor unit that is connected to Network Convertor is released.

Cause 1 : Error occurred in Indoor unit

▶ **Refer to Indoor Unit trouble shooting. (Trouble shooting 1~12)**

OK

Cause 2 : Error occurred in Outdoor unit

▶ **Refer to Outdoor Unit trouble shooting. (Trouble shooting 13~48)**

4. Group Remote Controller (UTB-YDA / GDA)

Trouble shooting 80

Error Contents :	**Symptom :**
PCB Error	**Error Code display [03]** **OPERATION LED is flashing.**

Details :

Condition of occurrence : When EEPROM can not be written, or the control port does not operate.

Release condition : Power is reset.

Cause 1 : Remote Controller is defective.

▶ **Replace Group Remote Controller.**

Trouble shooting 81

Error Contents :	**Symptom :**
Connection Error	**Error Code display [1C]** **OPERATION LED is flashing.**

Details :

Condition of occurrence :

The valid signal has not been received from the converter more than 90 seconds after the communication line became valid.

Release condition : Valid signal is received from Convertor.

Cause 1 : Connection failure

- ☐ Check power to the converter.
- ☐ Check connection of remote control line between controller and convertor.

OK

Cause 2 : Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave).

OK

Cause 3 : Remote Controller is defective.

- ▶ **Replace Group Remote Controller.**

Trouble shooting 82

Error Contents :	**Symptom :**
Address Setting Error	**Error Code display [1A]** **OPERATION LED is flashing.**

Details :

Condition of occurrence :

1. No Indoor unit is registered.

Release condition :

1. The key to enter the function selection process is pressed.
   TIME< key and TIME> key are simultaneously kept pressed.
2. It automatically initializes by itself. After that, it is released by pressing the key to enter the function selection process.

Cause 1 : Setting failure

- ☐ Register Indoor units again by entering to the function selection mode.
  (Keep pressing TIME< key and TIME> key.
  (Refer to the installation manual for the remote controller.)

Trouble shooting 83

Error Contents :	**Symptom :**
System Error	**Error Code display [1d]** **OPERATION LED is flashing.**

Details :

Condition of occurrence :

1. Only the slave unit is registered. (Main unit is not registered.)
2. Indoor unit which is not existing was registered.
3. Outdoor unit is not set in the same refrigerant circuit as the indoor unit.

Release condition : Registered contents have been changed by SELECT key, DAY key, Timer Mode key (DELETE key).

Cause 1 : Setting failure

- ☐ Recheck the registered contents. (Register the main unit.)
- ☐ Check Indoor unit DIP-SW, R-SW.
- ☐ Check outdoor unit R-SW.

OK

Cause 2 : Connection failure

- ☐ Check transmission cable
- ☐ Check if Indoor or Outdoor unit power line is disconnected.
- ☐ Check if the converter power line is disconnected.
- ☐ Check connection between controller and the converter.

OK

Cause 3 : Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave).

OK

Cause 4 : Remote Controller is defective.

▶ **Replace Group Remote Controller.**

Trouble shooting 84

Error Contents :	**Symptom :**
Transmission Error	**Error Code display [1F]** **OPERATION LED is flashing.**

Details :

Condition of occurrence :

When the signal is cut off for more than 10 minutes from the registered Indoor unit (including Slave unit) and Outdoor unit.

Release condition : 1. The signal has been received from the Indoor & Outdoor units that was creating the error.

2. MPU has been booted up. (Release from the reset operation, the power failure stand-by operation.

Cause 1 : Connection failure

- ☐ Check transmission cable
- ☐ Check disconnected power line for Indoor and Outdoor unit.
- ☐ Check if converter power line is disconnected.

OK

Cause 2 : Check outside cause (Voltage drop or noise, etc.)

- Instant drop ----- Check if there is a large load electric apparatus in the same circuit.
- Momentary power failure ----- Check if there is a defective contact or leak current in the power supply circuit.
- Noise ----- Check if there is any equipment causing harmonic wave near electric line (Neon bulb or electric equipment that may cause harmonic wave).

OK

Cause 3 : Remote Controller is defective.

▶ **Replace Group Remote Controller.**

6-4 SERVICE PARTS INFORMATION

SERVICE PARTS INFORMATION 1

Compressor

Diagnosis method of Compressor (If Outdoor Unit LED displays Error, refer to Trouble shooting 13 to 48)

Does not start up

- Is any Indoor Unit in operation?

* If it is operated right after stopping operation, 3 minutes start-up protection by differential pressure is kicked on.

- Check power supply voltage,open fuse.
- Is there open or loose connection cable?

- In case of constant speed compressor, check connection and winding resistance.(Check if Protector is operated) Refer to the next page.
- In case of inverter compressor, check Filter PCB, Inverter PCB, connection of Compressor, and winding resistance (Refer to the next page).

>> If there is no failure, the defect of Compressor is considered (Locked compressor due to clogged dirt or less oil)

Replace Compressor

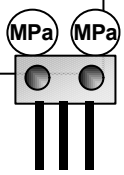
Stops soon after starting up

- Check power supply voltage,open fuse.
- Is there open or loose connection cable?

- Is Gas Pipe Valve open? (Low Pressure is too low)

- Isn't it Liquid Compression?

>> Check Low pressure value and if it too high, check Indoor Unit. (Indoor Unit EEV too much open, or Indoor unit EEV that is not in operation open.



- Check if Refrigerant is leaking. (Recharge Refrigerant)

- Check if Strainer is clogged. (PARTS INFORMATION 5,6,7)

- In case of constant speed compressor, check connection and winding resistance.(Check if Protector is operated) Refer to the next page.
- In case of inverter compressor, check Filter PCB, Inverter PCB, connection of Compressor, and winding resistance. (Refer to the next page).

>> If there is no failure, the defect of Compressor can be considered. (Compression part broken or valve defective.)

Replace Compressor

Abnormal noise

- Check power supply voltage,open fuse. Is there open or loose connection cable?

- **Defective Compressor can be considered. (due to inside dirt clogging or broken component)**

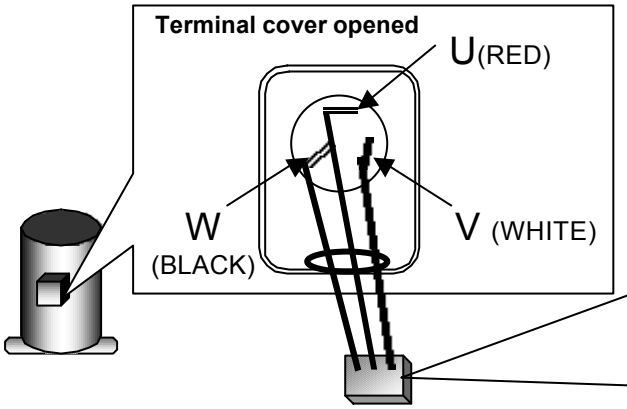
Replace Compressor

SERVICE PARTS INFORMATION 2

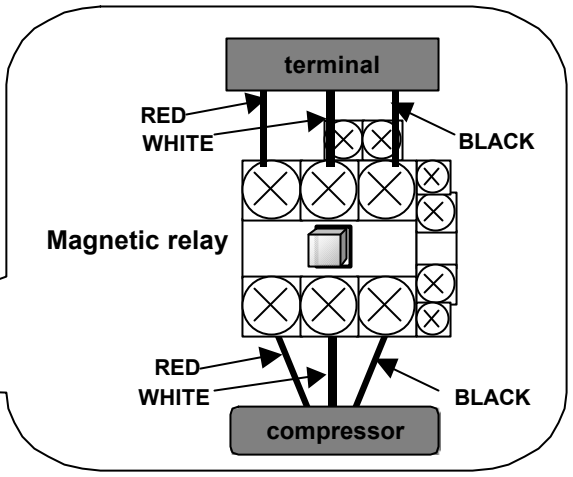
Constant Speed Compressor

Check Point 1 : Check Connection

☐ Check terminal connection of Compressor (loose or incorrect wiring)



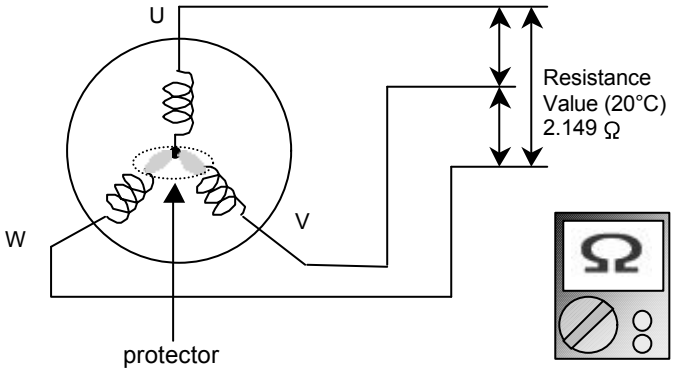
☐ Check connection of magnet relay (Loose or incorrect wiring)



Check Point 2 : Check Winding Resistance

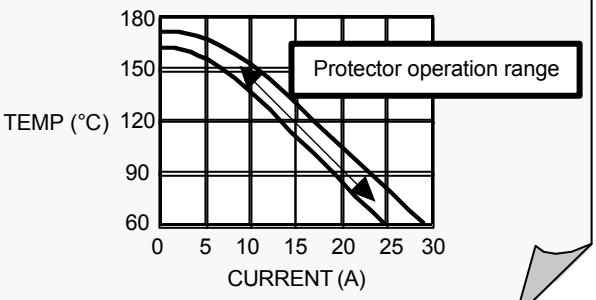
☐ Check winding resistance of each terminal

▶ **If the resistance value is 0 Ω or infinite, replace Compressor. (Check again after several minutes because the protector may be operated.)**



Attention!!

The constant speed compressor is equipped with a protector. It detects the inside temperature and the current value, and if it detects an over current or too high temperature, the protector is operated to stop operation of Compressor. (Protector operates within the range in the following graph, and it is released when the temperature becomes lower than approx. 80 °C.



Check Point 3 : Check Cause of Protector Operation

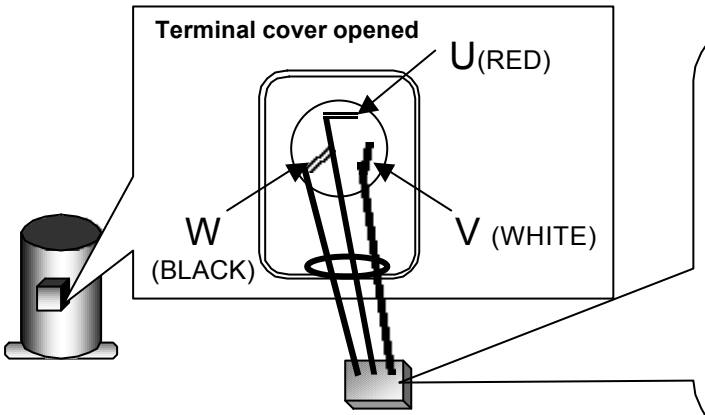
☐ Due to unstable power supply, Compressor is causing an abnormally high temperature.
>> Check Power Voltage once again.
☐ Due to missing phase, Compressor is causing an abnormally high temperature.
>> Check loose or open connection cable once again.
☐ Due to less refrigerant, the cooling effect inside Compressor is decreased.
>> Check if there is a gas leak or less refrigerant.

SERVICE PARTS INFORMATION 3

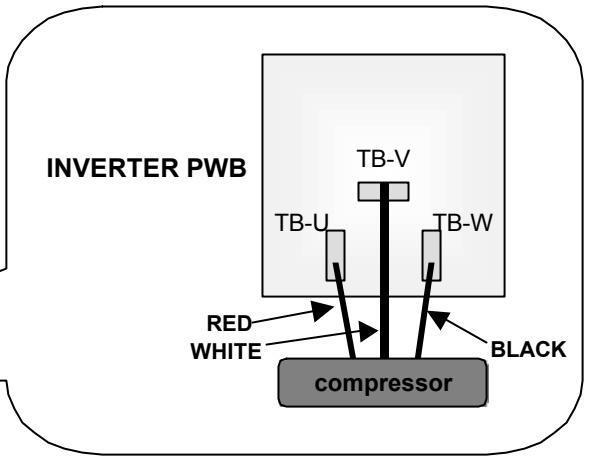
Inverter Compressor

Check Point 1 : Check Connection

☐ Check terminal connection of Compressor (loose or incorrect wiring)



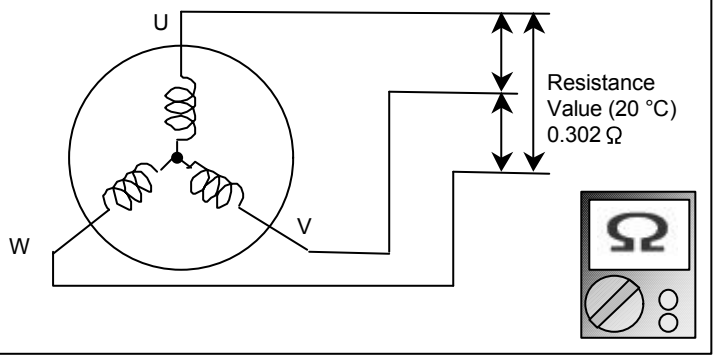
☐ Check connection of Inverter PCB (Loose or incorrect wiring)



Check Point 2 : Check Winding Resistance

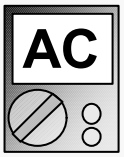
☐ Check winding resistance of each terminal

▸ **If the resistance value is 0Ω or infinite, replace Compressor.**



Attention!!

If Check 1, 2 are normal, make sure the following points.



(1) Check Voltage from Filter PCB to Inverter PCB (AC380V between each terminals of LO1, LO2, LO3).

▸ **If it does not appear, check the power supply terminal.**



(2) Check Voltage from Main PCB to Inverter PCB (DC16.5V between terminals of CN32 (3-4) connector of Main PCB).

▸ **If it does not appear, replace Main PCB.**

◆ **If both of above voltages appear, it is considered to be Inverter PCB circuit failure. Replace Inverter PCB and check operation.**

SERVICE PARTS INFORMATION 4
Inverter PCB
Noise Filter PCB

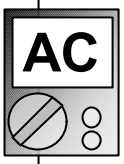
Diagnose Inverter PCB and Filter PCB

- Is Fuse (30A/500V) open?

NO → **Check Voltage at Filter PCB**

(1) Is Voltage from terminal normal?
>> If AC380V does not appear between each terminal of LI1,LI2,LI3, check if terminal connection is loose.

(2) Is Voltage to Inverter PCB appearing at the connector?
>> If AC380V does not appear between each terminals of LO1,LO2,LO3, the circuit inside PCB can be considered as defective. (Replace Filter PCB.)



OK → **Check Inverter PCB Voltage**

- Is Voltage to Capacitor OK?
>> If DC586.8V(±10V) does not appear at terminals TB-P2, TB-N1, the inside circuit may be defective. (Replace Inverter PCB.)



OK → **Check Voltage from Main PCB**

- Is DC16.5V appearing at connector CN32 (3-4) on Main PCB?
>> If it does not appear, Main PCB circuit may be defective.(Replace Main PCB.) If the voltage is normal, check Inverter Compressor.



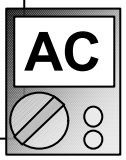
YES ↓ **Check Filter PCB**

(1) If there is loose connector or incorrect wiring, correct it and replace Fuse.
(2) Check shortage or corrosion on Filter PCB.

YES → **Replace Filter PCB**

NO ↓ **Check Voltage at Filter PCB**

- Is the correct voltage to Inverter PCB appearing at the connector?
>> If AC380V is appeared between each terminals of LO1,LO2,LO3, it is normal.



NO → **Filter PCB circuit defective**

Replace Filter PCB

YES ↓ **Check Inverter PCB**

(1) If there is loose connector or incorrect wiring, correct it and replace Fuse.
(2) Check shortage or corrosion on Filter PCB.

YES → **Replace Inverter PCB**

NO ↓ **Check Inverter PCB Voltage**

- Is Voltage to Capacitor normal?
>> If DC586.8V(±10V) is appearing at terminals TB-P2, TB-N1, it is normal.

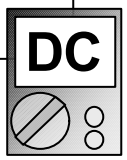


NO → **Inverter PCB circuit defective**

Replace Inverter PCB

YES ↓ **Check Voltage from Main PCB**

- Is DC16.5V appearing at connector CN32 (3-4) on Main PCB?



NO ↓ **Main PCB circuit defective**

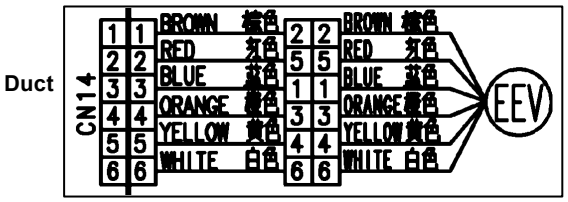
Replace Main PCB

SERVICE PARTS INFORMATION 5

Indoor Unit Electronic Expansion Valve (EEV)

Check Point 1 : Check Connections

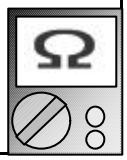
☐ Check Connectors (Loose connector or open cable of CN14 for Duct type.)



Check Point 2 : Check Coil of EEV

☐ Remove connector, check each winding resistance of Coil.

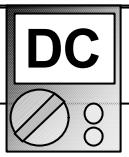
Read wire	Resistance value (20°C)
White - Red	**150 ± 10%** Ω
Yellow - Brown	
Orange - RED	
Blue - Brown	



▶ **If Resistance value is abnormal, replace EEV.**

Check Point 3 : Check Voltage from Controller PCB

☐ Remove Connector and check Voltage (DC12V).
>> If it does not appear, replace Controller PCB.

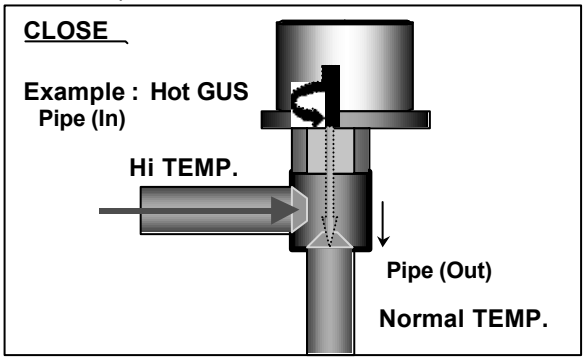


Check Point 4 : Check Noise at start up

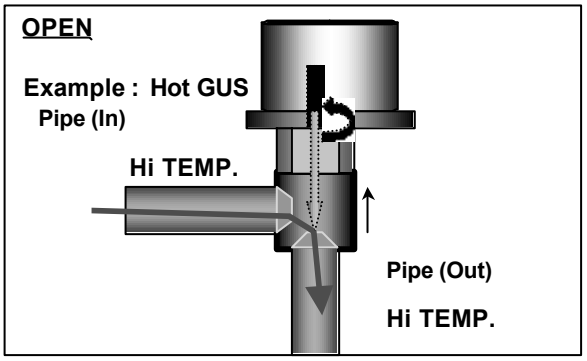
☐ Turn on Power and check operation noise.
>> If an abnormal noise does not show, replace Controller PCB.

Check Point 5 : Check Opening and Closing Operation of Valve

When Valve is closed,
it has a temp. difference between Inlet and Outlet.

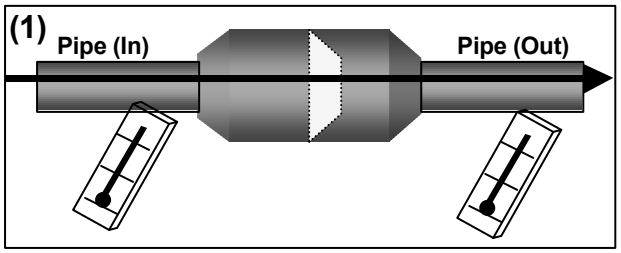


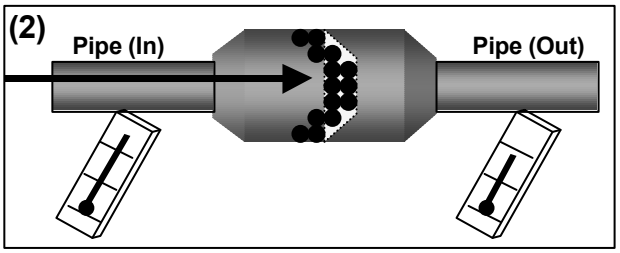
If it is open, it has no temp. difference between Inlet and Outlet.



Check Point 6 : Check Strainer

Strainer normally does not have temperature difference between inlet and outlet as shown in (1), but if there is a difference as shown in (2), there is a possibility of inside clogged. In this case, replace Strainer.



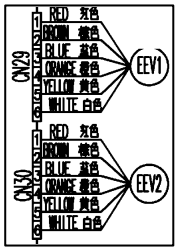


SERVICE PARTS INFORMATION 6

Outdoor Unit Electronic Expansion Valve (EEV1)

Check Point 1 : Check Connections

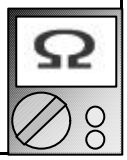
☐ Check connection of connector (CN29)
(Loose connector or open cable)



Check Point 2 : Check Coil of EEV1

☐ Remove connector, check each winding resistance of Coil.

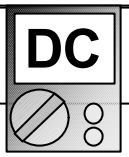
Read wire	Resistance value (20°C)
White - Red	**150 ± 10%Ω**
Yellow - Brown	
Orange - RED	
Blue - Brown	



▶ **If Resistance value is abnormal, replace EEV.**

Check Point 3 : Check Voltage from Controller PCB

☐ Remove Connector and check Voltage (DC12V).
>> If it does not appear, replace Controller PCB.

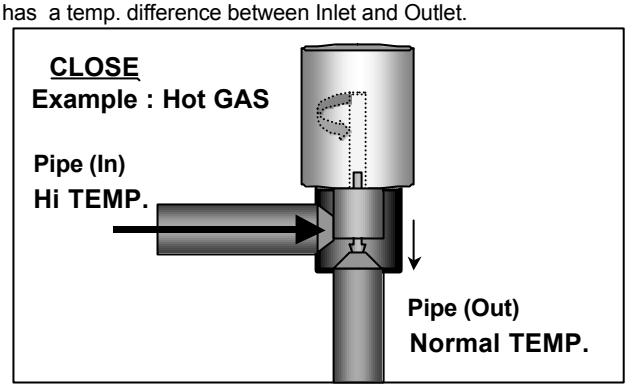


Check Point 4 : Check Noise at start up

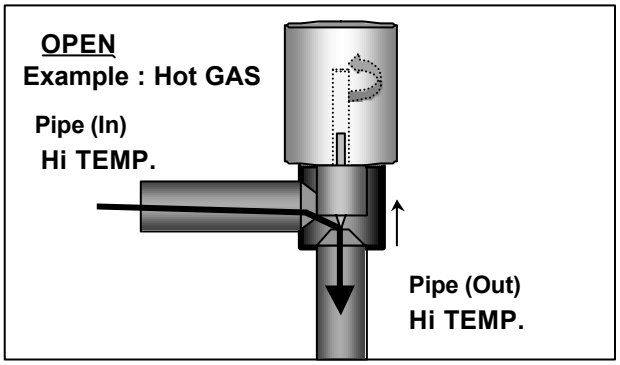
☐ Turn on Power and check operation noise.
>> If an abnormal noise does not show, replace Controller PCB.

Check Point 5 : Check Opening and Closing Operation of Valve

When Valve is closed,
it has a temp. difference between Inlet and Outlet.

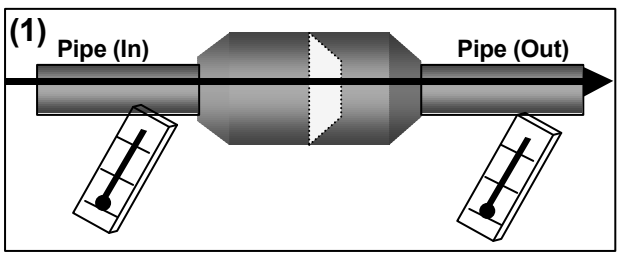


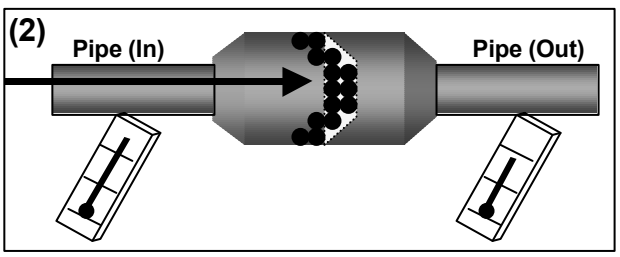
If it is open, it has no temp. difference between Inlet and Outlet.



Check Point 6 : Check Strainer

Strainer normally does not have temperature difference between inlet and outlet as shown in (1), but if there is a difference as shown in (2), there is a possibility of inside clogged. In this case, replace Strainer.



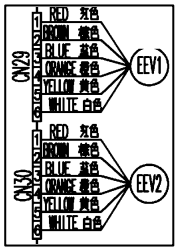


SERVICE PARTS INFORMATION 7

Outdoor Unit Electronic Expansion Valve (EEV2)

Check Point 1 : Check Connections

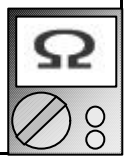
☐ Check connection of connector (CN30)
(Loose connector or open cable)



Check Point 2 : Check Coil of EEV2

☐ Remove connector, check each winding resistance of Coil.

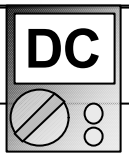
Read wire	Resistance value (20°C)
White - Red	**150 ± 10%** Ω
Yellow - Brown	
Orange - RED	
Blue - Brown	



▶ **If Resistance value is abnormal, replace EEV.**

Check Point 3 : Check Voltage from Controller PCB

☐ Remove Connector and check Voltage (DC12V).
>> If it does not appear, replace Controller PCB.

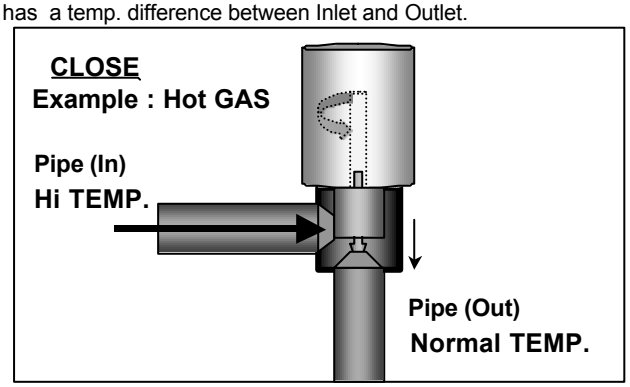


Check Point 4 : Check Noise at start up

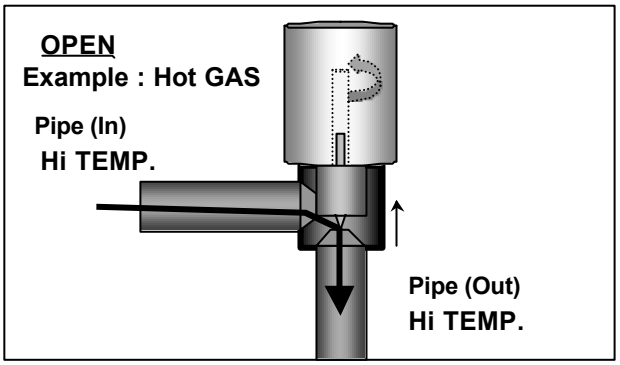
☐ Turn on Power and check operation noise.
>> If an abnormal noise does not show, replace Controller PCB.

Check Point 5 : Check Opening and Closing Operation of Valve

When Valve is closed,
it has a temp. difference between Inlet and Outlet.

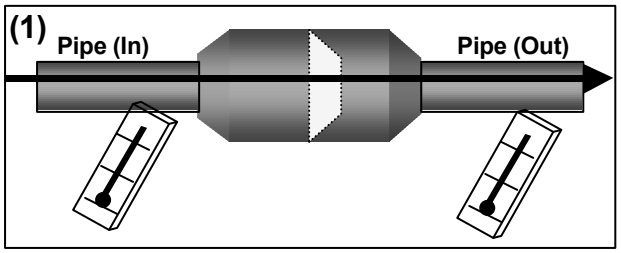


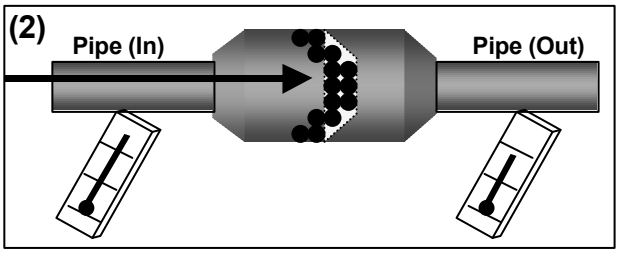
If it is open, it has no temp. difference between Inlet and Outlet.



Check Point 6 : Check Strainer

Strainer normally does not have temperature difference between inlet and outlet as shown in (1), but if there is a difference as shown in (2), there is a possibility of inside clogged. In this case, replace Strainer.

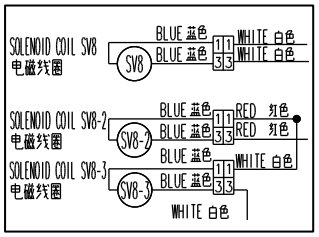


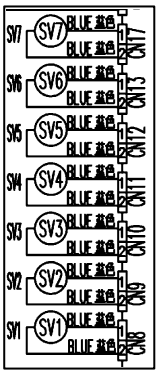


SERVICE PARTS INFORMATION 8
Outdoor Unit Solenoid Valve
(SV1,SV2,SV3,SV6,SV7,
SV8 ,SV8-2,SV8-3)

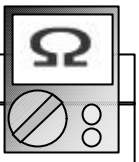
Check Point 1 : Check connections

☐ Check connection of connector.
(Loose connector or open cable)





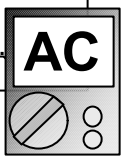
Check Point 2 : Check Solenoid Coil



☐ Remove connector and check if coil is open.
(Normal resistance value of each coil: 1495 ± 7% Ω)
>> If Resistance value is abnormal, replace Solenoid Coil.

Check Point 3 : Check Voltage from Controller PCB

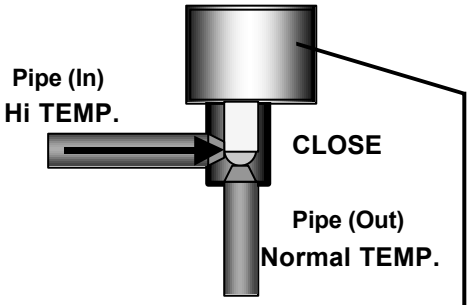
☐ Remove connector and check the voltage (AC220V).
>> If the voltage does not appear, replace Controller PCB.

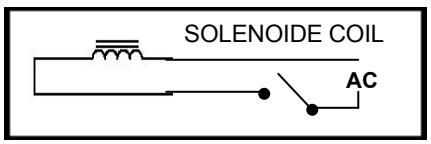


Check Point 4 : Check opening & closing operation of Valve

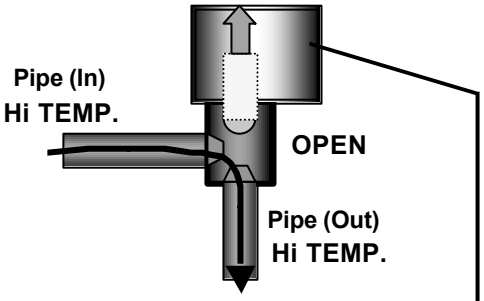
☐ Depending on either during operation or protection control, check if Valve is operating normally.
(When Valve opens, there is no temperature difference between Inlet and Outlet.)

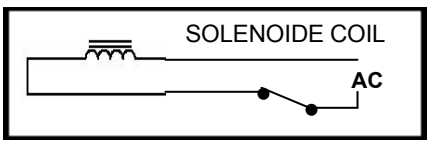
Normal Operation
Pipe (In) TEMP. Hi,
Pipe (Out) TEMP.Normal





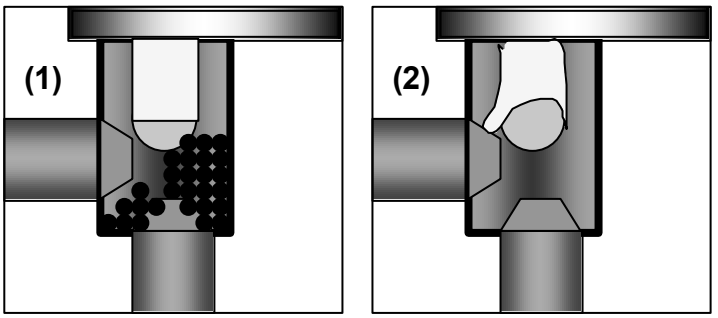
Protection Function
Pipe (In) TEMP. = Pipe (Out) TEMP.





☐ If the valve closes by removing the connector of the valve which does not close, it is considered to be Controller PCB failure. Replace Controller PCB.

☐ If it does not close by removing connector, there is a possibility of (1) clogging by dirt, or (2) deformation by the heat at the time of Solenoid Valve installation.
In this case, replace Solenoid Valve.

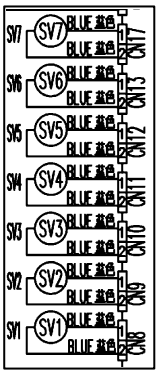


SERVICE PARTS INFORMATION 9

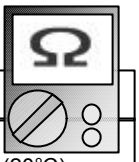
Outdoor Unit Solenoid Valve (SV4,SV5)

Check Point 1 : Check connections

☐ Check connection of connector.
(Loose connector or open cable)



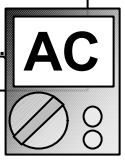
Check Point 2 : Check Solenoid Coil



☐ Remove connector and check if coil is open.
>>Normal resistance value of each coil: 1324 ± 7% Ω (20°C)
>> If Resistance value is abnormal, replace Solenoid Coil.

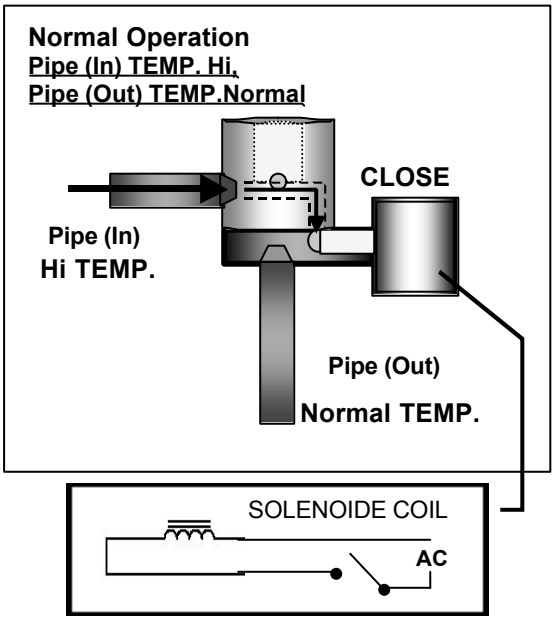
Check Point 3 : Check Voltage from Controller PCB

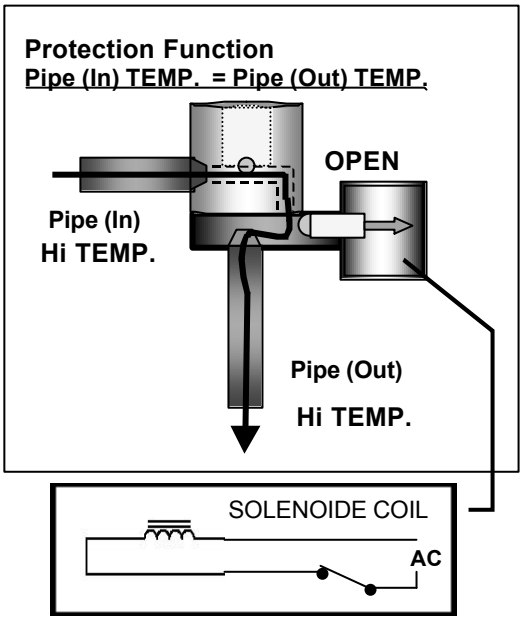
☐ Remove connector and check the voltage (AC220V).
>> If the voltage does not appear, replace Controller PCB.



Check Point 4 : Check opening & closing operation of Valve

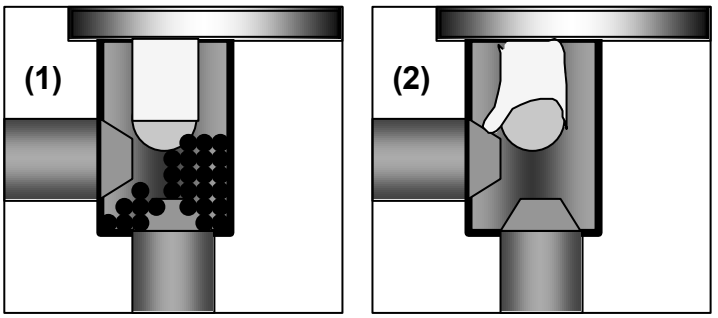
☐ Depending on either during operation or protection control, check if Valve is operating normally.
(When Valve opens, there is no temperature difference between Inlet and Outlet.)





☐ If the valve closes by removing the connector of the valve which does not close, it is considered to be Controller PCB failure. Replace Controller PCB.

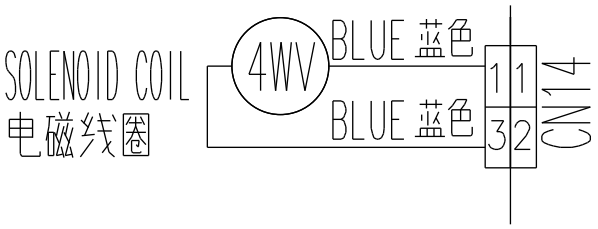
☐ If it does not close by removing connector, there is a possibility of (1) clogging by dirt, or (2) deformation by the heat at the time of Solenoid Valve installation.
In this case, replace Solenoid Valve.



SEVICE PARTS INFORMATION 10
4WAY VALVE

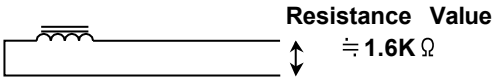
Check Point 1: Check Circuit connection

- **Check the connection of connector CN 14**



Check Point 2: Check Solenoid Coil

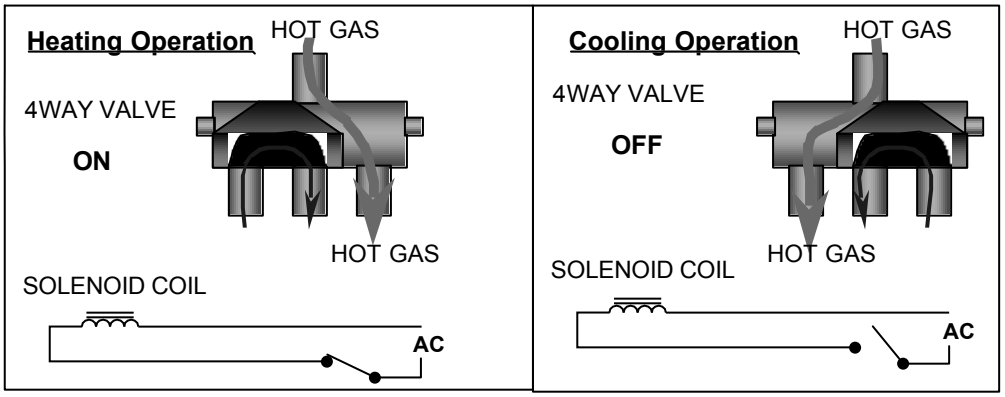
- **Remove CN6 from PCB and check the resistance value of coil**



☆**If it is Open or abnormal resistance value, replace Solenoid Coil**

Check Point 3: Check Operation of 4 Way Valve

- **Check each piping temperature, and confirm the location of the valve by the temperature difference.**



☆If the valve location is not proper, replace 4 way valve.

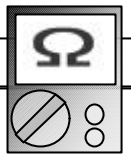
Check Point 4: Check Voltage of Solenoid Coil

- **If CN6 of Control PCB dose not Show 220V +-20 V during Heating operation (Compressor is in operation),replace Control PCB.**

SERVICE PARTS INFORMATION 11

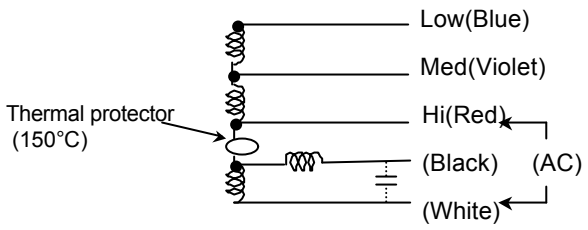
Indoor Unit Fan Motor

Check Point : ABYA12 / 14LATF



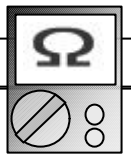
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



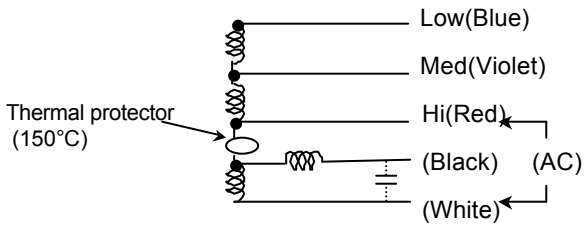
Read Wire	Resistance value(20°C)
White - Red	**252 ± 8%** Ω
Red - Black	**337 ± 8%** Ω
Red - Violet	**59.5 ± 8%** Ω
Violet - Blue	**59.5 ± 8%** Ω

Check Point : ABYA18LATF



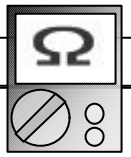
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



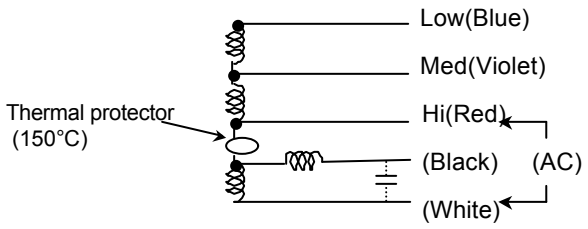
Read Wire	Resistance value(20°C)
White - Red	**134 ± 8%** Ω
Red - Black	**243 ± 8%** Ω
Red - Violet	**63.1 ± 8%** Ω
Violet - Blue	**63.1 ± 8%** Ω

Check Point : ABYA24LATF



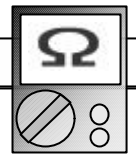
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



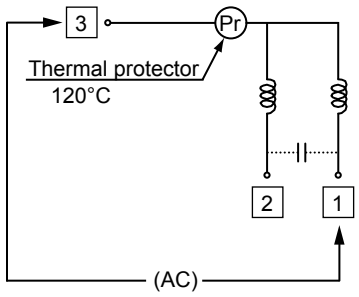
Read Wire	Resistance value(20°C)
White - Red	**110 ± 8%** Ω
Red - Black	**181 ± 8%** Ω
Red - Violet	**64.9 ± 8%** Ω
Violet - Blue	**64.9 ± 8%** Ω

Check Point : ABYA30 / 36 / 45 / 54LATF



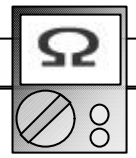
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



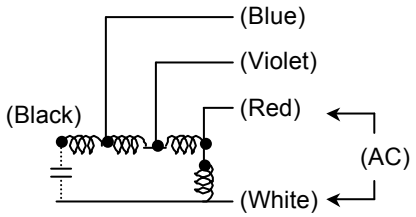
Read Wire	Resistance value(20°C)
1 – 3	**22.8 ± 10%** Ω
2 – 3	**31.9 ± 10%** Ω

Check Point : AUXB07 / 09LATF



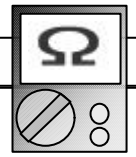
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



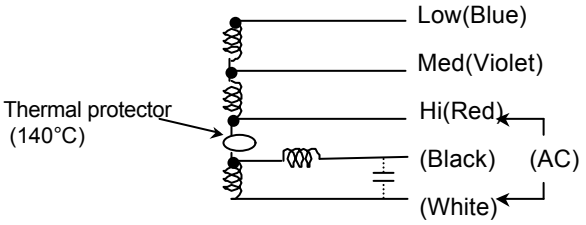
Read Wire	Resistance value(20°C)
White - Red	**658 ± 8%** Ω
Blue - Black	**329 ± 8%** Ω
Red - Violet	**99.6 ± 8%** Ω
Violet - Blue	**99.6 ± 8%** Ω

Check Point : AUXB12 / 14LATF



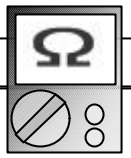
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



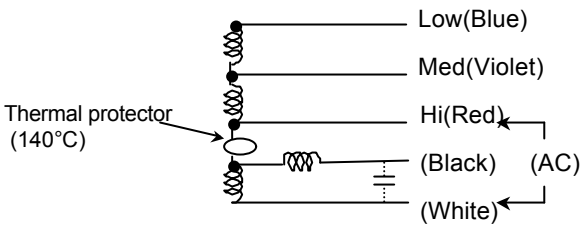
Read Wire	Resistance value(20°C)
White - Red	**455 ± 8%** Ω
Red - Black	**541 ± 8%** Ω
Red - Violet	**103 ± 8%** Ω
Violet - Blue	**103 ± 8%** Ω

Check Point : AUXB18LATF



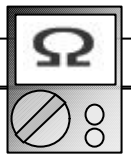
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



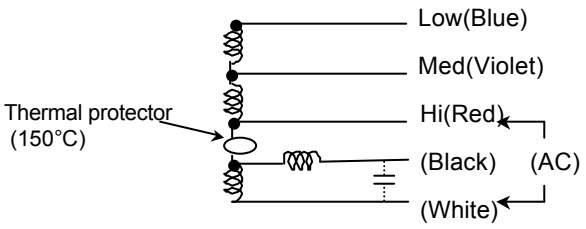
Read Wire	Resistance value(20°C)
White - Red	**446 ± 8%** Ω
Red - Black	**552 ± 8%** Ω
Red - Violet	**117 ± 8%** Ω
Violet - Blue	**117 ± 8%** Ω

Check Point : AUYA20 / 25 / 30LJATF



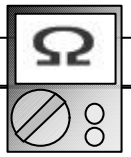
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



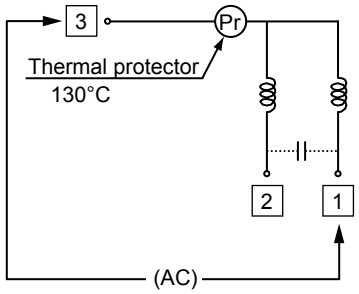
Read Wire	Resistance value(20°C)
White - Red	**120 ± 8%** Ω
Red - Black	**55.3 ± 8%** Ω
Red - Violet	**61.2 ± 8%** Ω
Violet - Blue	**283 ± 8%** Ω

Check Point : AUYA36 / 45 / 54LATF



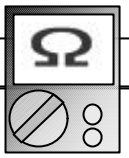
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



Read Wire	Resistance value(20°C)
1 – 3	**44.5 ± 10%** Ω
2 – 3	**40.5 ± 10%** Ω

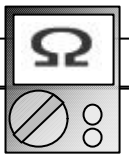
Check Point : ARXB07 / 09LALF



☐ Check each winding resistance of the motor
▶ **If Resistance value is abnormal, replace motor.**

Read Wire	Resistance value(20°C)
White - Red	**86.7 ± 8%** Ω
Red - Black	**57.7 ± 8%** Ω
Red - Pink	**15.7 ± 8%** Ω
Pink - Violet	**15.7 ± 8%** Ω
Violet - Blue	**15.7 ± 8%** Ω

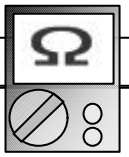
Check Point : ARXB12 /14LALF



☐ Check each winding resistance of the motor
▶ **If Resistance value is abnormal, replace motor.**

Read Wire	Resistance value(20°C)
White - Red	**19.7 ± 8%** Ω
Red - Black	**13.0 ± 8%** Ω
Red - Pink	**5.86 ± 8%** Ω
Pink - Violet	**5.86 ± 8%** Ω
Violet - Blue	**5.86 ± 8%** Ω

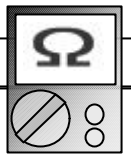
Check Point : ARXB18LALF



☐ Check each winding resistance of the motor
▶ **If Resistance value is abnormal, replace motor.**

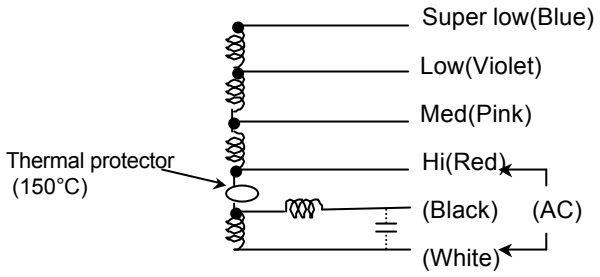
Read wire	Resistance value (20°C)
Black - Yellow	**138 ± 8%** Ω
White - Yellow	**136 ± 8%** Ω

Check Point : ARXB25 / 30LATF



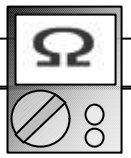
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



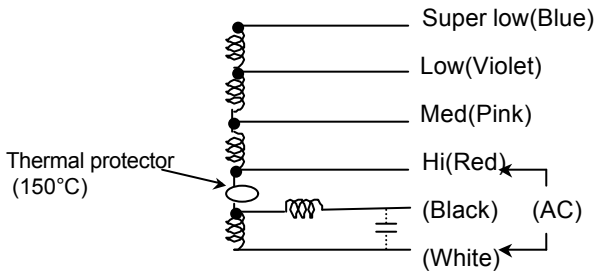
Read Wire	Resistance value(20°C)
White - Red	**44.8 ± 8%** Ω
Red - Black	**37.3 ± 8%** Ω
Red - Pink	**21.3 ± 8%** Ω
Pink - Violet	**12.9 ± 8%** Ω
Violet - Blue	**12.9 ± 8%** Ω

Check Point : ARXB36LATF, ARXA25 / 30LATF



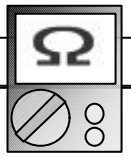
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



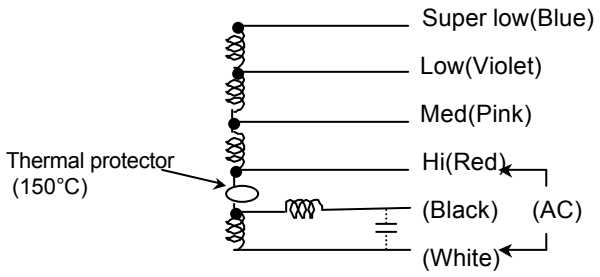
Read Wire	Resistance value(20°C)
White - Red	**50.9 ± 8%** Ω
Red - Black	**29.1 ± 8%** Ω
Red - Pink	**8.96 ± 8%** Ω
Pink - Violet	**8.96 ± 8%** Ω
Violet - Blue	**8.96 ± 8%** Ω

Check Point : ARXB45LATF



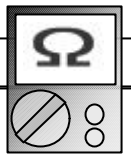
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



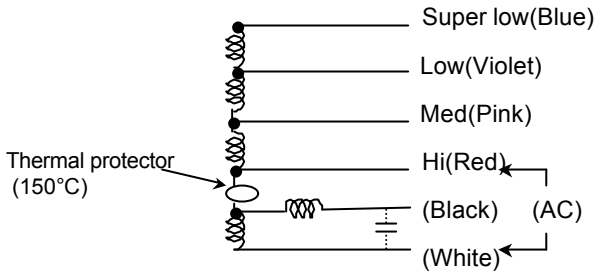
Read Wire	Resistance value(20°C)
White - Red	**40.3 ± 8%** Ω
Red - Black	**23.8 ± 8%** Ω
Red - Pink	**11.4 ± 8%** Ω
Pink - Violet	**7.9 ± 8%** Ω
Violet - Blue	**7.9 ± 8%** Ω

Check Point : ARXA36 / 45LATF



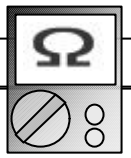
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



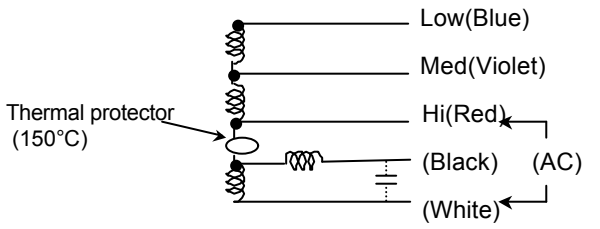
Read Wire	Resistance value(20°C)
White - Red	**19.7 ± 8%** Ω
Red - Black	**13.0 ± 8%** Ω
Red - Pink	**5.86 ± 8%** Ω
Pink - Violet	**5.86 ± 8%** Ω
Violet - Blue	**5.86 ± 8%** Ω

Check Point : ARXC36LATF



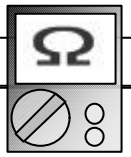
☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



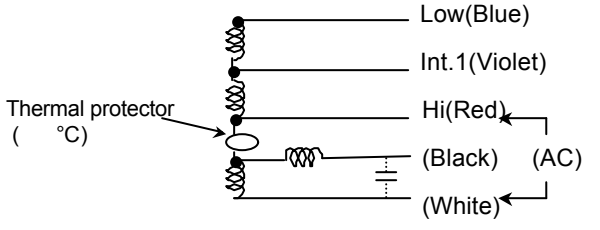
Read Wire	Resistance value(20°C)
White - Red	**13.4 ± 8%** Ω
Red - Black	**16.5 ± 8%** Ω
Red - Violet	**11.2 ± 8%** Ω
Violet - Blue	**12.9 ± 8%** Ω

Check Point : ARXC45 / 60LATF



☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**

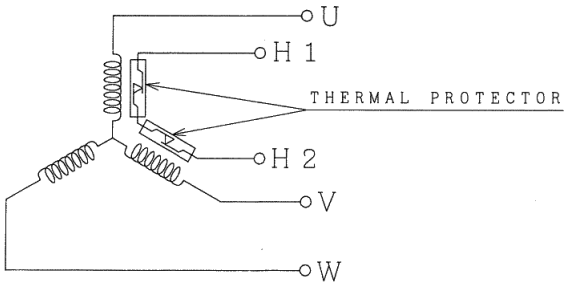


Read Wire	Resistance value(20°C)
White - Red	**6.84 ± 8%** Ω
Red - Black	**9.78 ± 8%** Ω
Red - Violet	**6.1 ± 8%** Ω
Violet - Blue	**6.1 ± 8%** Ω

Check Point : ARXC90LATF

☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**

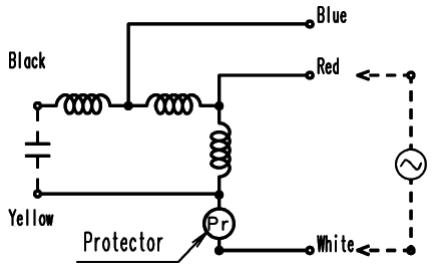


Read Wire	Resistance value(20°C)
U(Red) - V(White)	**26.1 ± 8%** Ω
V(White) - W(Black)	**26.1 ± 8%** Ω
W(Black) - U(Red)	**26.1 ± 8%** Ω

Check Point : ASYA18 / 24 / 30LATF

☐ Check each winding resistance of the motor

▶ **If Resistance value is abnormal, replace motor.**



Read Wire	Resistance value(20°C)
White - Red	**129 ± 8%** Ω
Black - Blue	**21.0 ± 8%** Ω
Blue - Red	**277 ± 8%** Ω

Refrigerant R410A
INVERTER

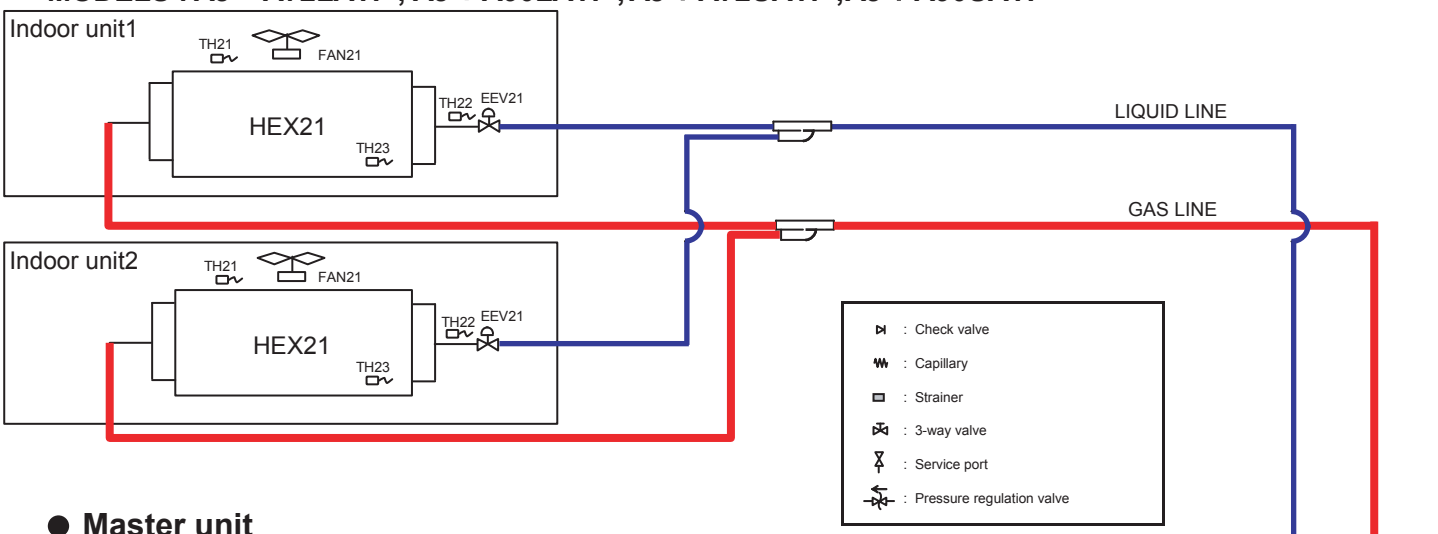
AIRSTAGE™
V SERIES

7 . APPENDING DATA (UNIT)

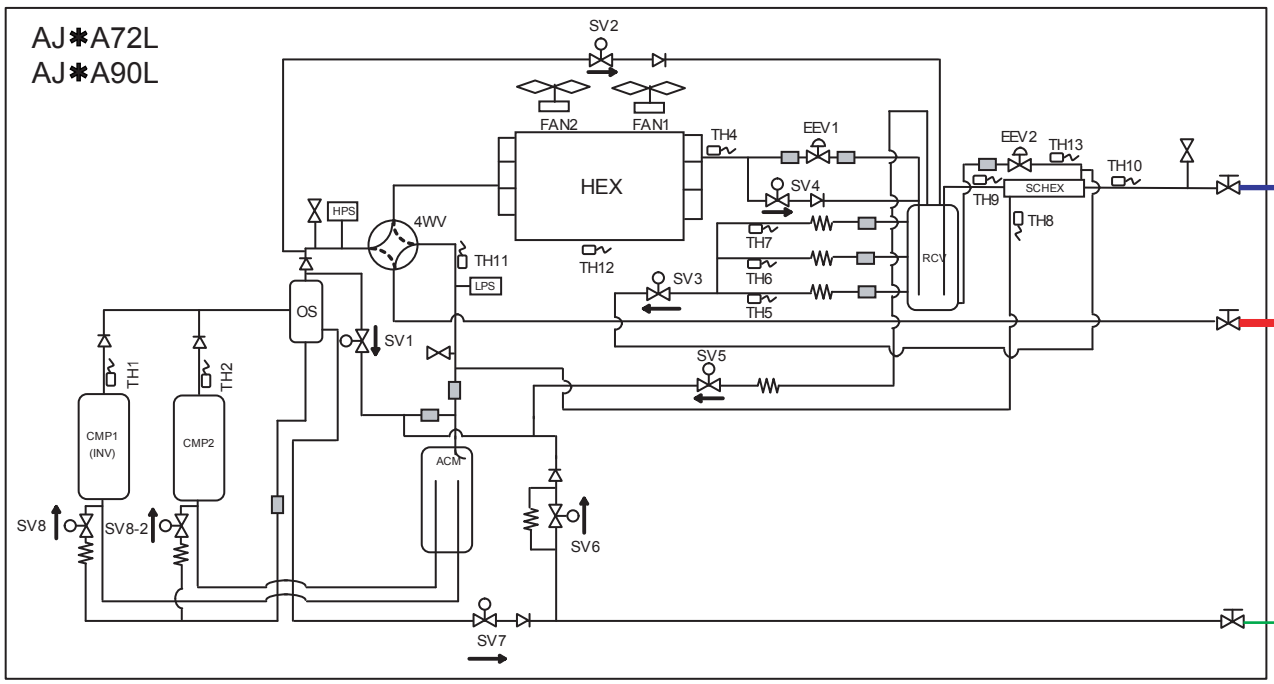
7. APPENDING

7-1 REFRIGERANT PIPE SYSTEM DIAGRAM

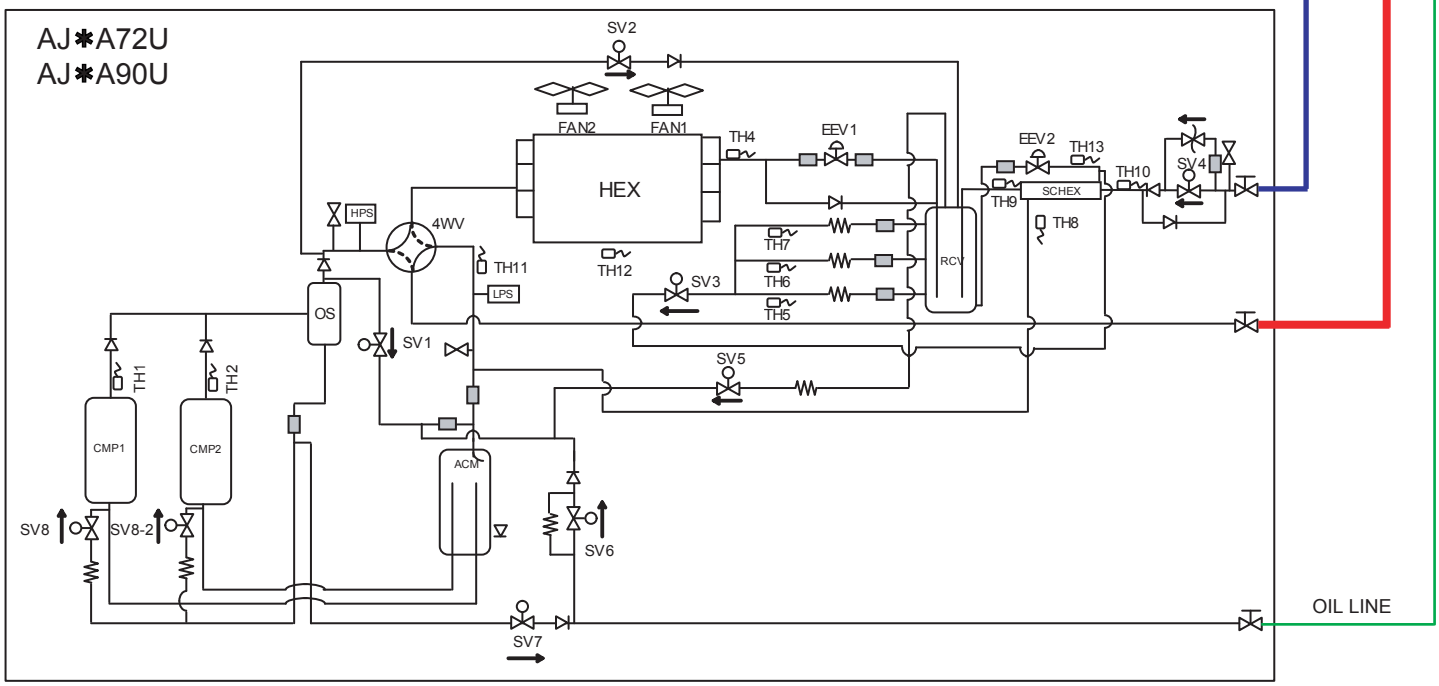
■ MODELS : AJ＊A72LATF , AJ＊A90LATF , AJ＊A72UATF ,AJ＊A90UATF



● Master unit



● Slave unit

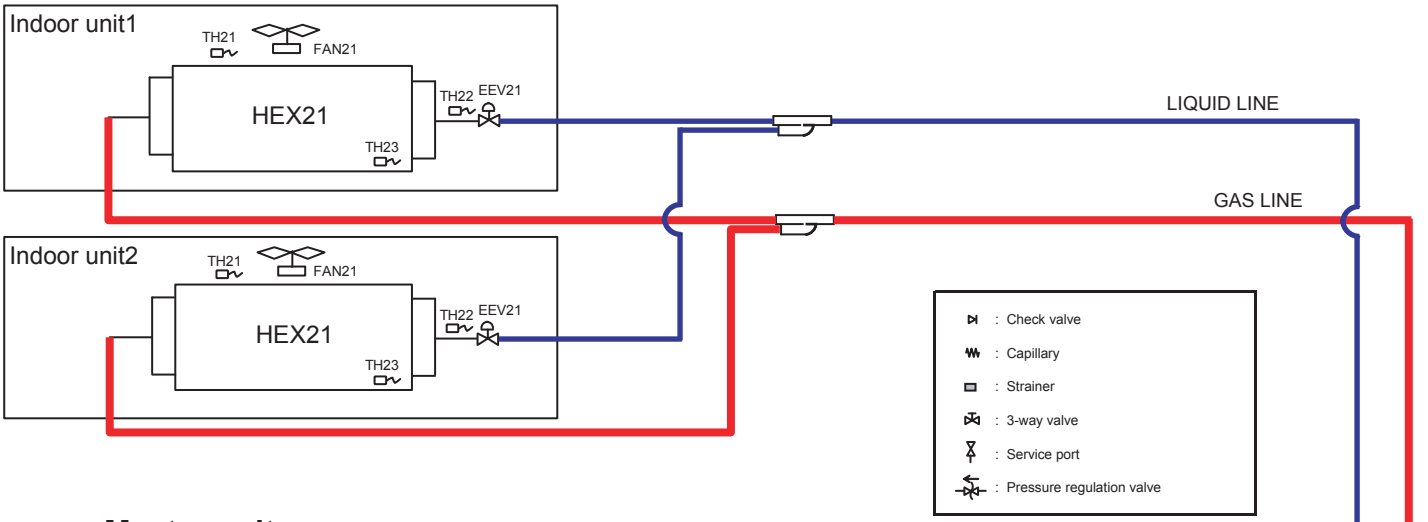


■SYMBOL DESCRIPTION

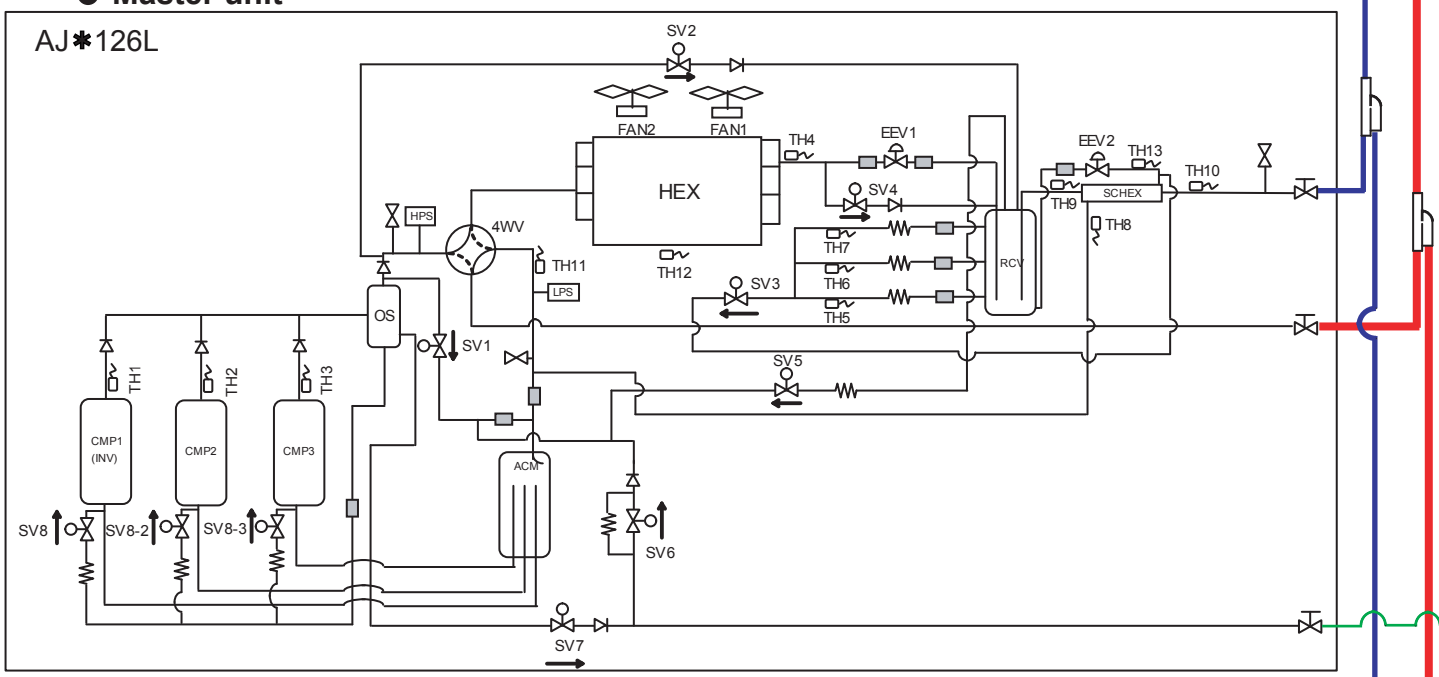
- **MODELS : AJ＊A72LATF , AJ＊A90LATF , AJ＊A72UATF ,AJ＊A90UATF**

MARK	DESCRIPTION
CMP 1	Compressor 1(Master: Inverter type / Slave: Constant speed type)
CMP 2	Compressor 2(Constant speed type)
HEX	Heat exchanger
FAN 1	Fan 1
FAN 2	Fan 2
ACM	Accumulator
RCV	Receiver tanker
OS	Oil separator
SCHEX	Sub-cool heat exchanger
HPS	High pressure sensor
LPS	Low pressure sensor
4WV	4-way valve
EEV 1	Electronic expansion valve 1
EEV 2	Electronic expansion valve 2
SV 1	Solenoid valve 1
SV 2	Solenoid valve 2
SV 3	Solenoid valve 3
SV 4	Solenoid valve 4
SV 5	Solenoid valve 5
SV 6	Solenoid valve 6
SV 7	Solenoid valve 7
SV 8	Solenoid valve 8
SV 8-2	Solenoid valve 8-2
TH 1	Discharge temperature thermistor 1
TH 2	Discharge temperature thermistor 2
TH 4	Heat exchanger (outlet) thermistor
TH 5	RCV level thermistor
TH 6	RCV level thermistor
TH 7	RCV level thermistor
TH 8	Sub-cool heat exchanger (outlet) thermistor
TH 9	Liquid temperature thermistor 1
TH 10	Liquid temperature thermistor 2
TH 11	Suction temperature thermistor
TH 12	Outdoor temperature thermistor
TH 13	Sub-cool heat exchanger (inlet) thermistor
HEX 21	Indoor unit heat exchanger
FAN 21	Indoor unit fan
EEV 21	Indoor unit electronic expansion valve
TH 21	Room temperature thermistor
TH 22	Indoor unit heat exchanger (inlet) thermistor
TH 23	Indoor unit heat exchanger (middle) thermistor

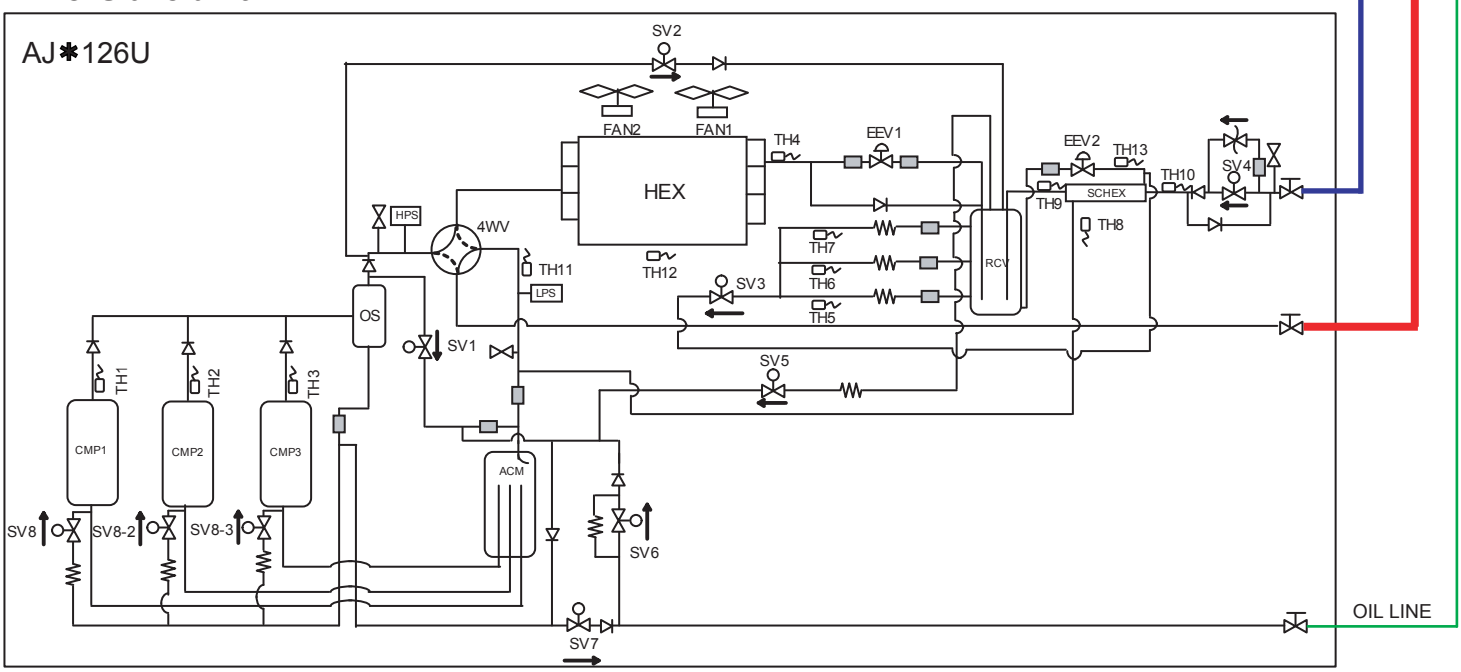
■ MODELS : AJ＊126LATF , AJ＊126UATF



● Master unit



● Slave unit



■SYMBOL DESCRIPTION

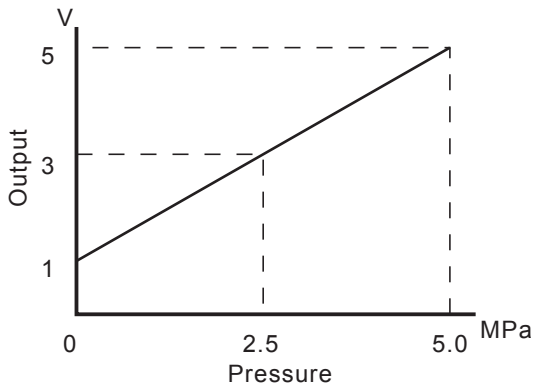
- **MODELS : AJ＊126LATF , AJ＊126UATF**

MARK	DESCRIPTION
CMP 1	Compressor 1(Master: Inverter type / Slave: Constant speed type)
CMP 2	Compressor 2(Constant speed type)
CMP 3	Compressor 3(Constant speed type)
HEX	Heat exchanger
FAN 1	Fan 1
FAN 2	Fan 2
ACM	Accumulator
RCV	Receiver tanker
OS	Oil separator
SCHEX	Sub-cool heat exchanger
HPS	High pressure sensor
LPS	Low pressure sensor
4WV	4-way valve
EEV 1	Electronic expansion valve 1
EEV 2	Electronic expansion valve 2
SV 1	Solenoid valve 1
SV 2	Solenoid valve 2
SV 3	Solenoid valve 3
SV 4	Solenoid valve 4
SV 5	Solenoid valve 5
SV 6	Solenoid valve 6
SV 7	Solenoid valve 7
SV 8	Solenoid valve 8
SV 8-2	Solenoid valve 8-2
SV 8-3	Solenoid valve 8-3
TH 1	Discharge temperature thermistor 1
TH 2	Discharge temperature thermistor 2
TH 3	Discharge temperature thermistor 3
TH 4	Heat exchanger (outlet) thermistor
TH 5	RCV level thermistor
TH 6	RCV level thermistor
TH 7	RCV level thermistor
TH 8	Sub-cool heat exchanger (outlet) thermistor
TH 9	Liquid temperature thermistor 1
TH 10	Liquid temperature thermistor 2
TH 11	Suction temperature thermistor
TH 12	Outdoor temperature thermistor
TH 13	Sub-cool heat exchanger (inlet) thermistor
HEX 21	Indoor unit heat exchanger
FAN 21	Indoor unit fan
EEV 21	Indoor unit electronic expansion valve
TH 21	Room temperature thermistor
TH 22	Indoor unit heat exchanger (inlet) thermistor
TH 23	Indoor unit heat exchanger (middle) thermistor

7-2 CHARACTERISTICS OF SENSORS

7-2-1 Pressure Sensor

1. Characteristics of pressure sensor



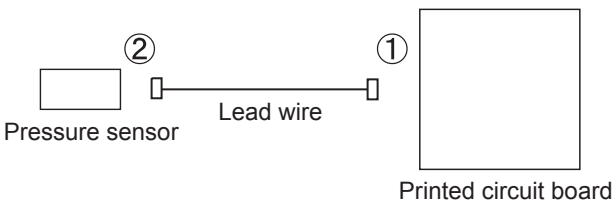
Output voltage of the pressure sensors (HP,LP)

Pressure (MPa)	0.00	0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	1.20	1.40
Output (V)	1.00	1.08	1.16	1.24	1.32	1.40	1.48	1.56	1.64	1.72	1.80	1.96	2.12

Pressure (MPa)	1.60	1.80	2.00	2.20	2.40	2.60	2.80	3.00	3.20	3.40	3.60	3.80	4.00
Output (V)	2.28	2.44	2.60	2.76	2.92	3.08	3.24	3.40	3.56	3.72	3.88	4.04	4.20

Pressure (MPa)	4.20	4.40	4.60	4.80	5.00
Output (V)	4.36	4.52	4.68	4.84	5.00

2. Check point of replacing pressure sensor



When installing the pressure sensor, connect a lead wire to the PCB (①), thereafter connect the other end of a lead wire to the pressure sensor (②). When disconnecting, do the opposite procedure.
Be careful not to install other than above procedure, otherwise the pressure sensor can be failed.

Thermistor resistance values <Outdoor unit side>

(1) Heat exchanger thermistor (TH4)
RCV liquid surface detecting thermistor (TH5 , TH6 , TH7)
Sub-cool heat exchanger thermistor (TH8, TH13)
Liquid temperature thermistor (TH9 , TH10)
Suction temperature thermistor (TH11)

Pipe temperature (°C)	-50	-40	-30	-20	-10	-7.5	-5.0	-2.5	0	2.5	5.0	7.5	10
Resistance value (kΩ)	384.8	182.8	92.3	49.2	27.5	24.0	20.9	18.3	16.1	14.1	12.4	11.0	9.7

Pipe temperature (°C)	12.5	15.0	17.5	20	22.5	25.0	27.5	30	32.5	35	37.5	40	50
Resistance value (kΩ)	8.6	7.7	6.8	6.1	5.5	4.9	4.4	3.9	3.6	3.2	2.9	2.6	1.8

Pipe temperature (°C)	60	70	80	90	100
Resistance value (kΩ)	1.2	0.9	0.6	0.5	0.4

(2) Discharge temperature thermistor (TH1 , TH2 , TH3)

Pipe temperature (°C)	-40	-30	-20	-10	0	5.0	10	12.5	15	17.5	20	22.5	25
Resistance value (kΩ)	2183	1076	561	307	176	135	105	92.4	81.8	72.6	64.5	57.5	51.3

Pipe temperature (°C)	27.5	30	32.5	35	37.5	40	50	60	70	80	90	100	120
Resistance value (kΩ)	45.8	41.1	36.9	33.1	29.8	26.9	18.1	12.5	8.8	6.3	4.6	3.4	2.0

Pipe temperature (°C)	140	160	180
Resistance value (kΩ)	1.2	0.8	0.5

(3) Outdoor temperature thermistor (TH12)

Pipe temperature (°C)	-50	-40	-30	-20	-10	-7.5	-5.0	-2.5	0	2.5	5.0	8.0	10
Resistance value (kΩ)	859	402	200	105	58.2	50.6	44.0	38.4	33.6	29.5	25.9	22.3	20.2

Pipe temperature (°C)	12.5	15	17.5	20	22.5	25	27.5	30	32.5	35	37.5	40	50
Resistance value (kΩ)	17.9	15.8	14.1	12.5	11.2	10.0	9.0	8.0	7.2	6.5	5.9	5.3	3.6

Pipe temperature (°C)	60	70	80
Resistance value (kΩ)	2.5	1.8	1.3

Thermistor resistance values <Indoor unit side>

(1) Room temperature thermistor (TH21)

Room temperature (°C)	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	27.5	30
Resistance value (kΩ)	33.6	29.5	25.9	22.8	20.2	17.9	15.8	14.1	12.5	11.2	10.0	9.0	8.0

Room temperature (°C)	32.5	35	37.5	40	42.5	45	47.5	50
Resistance value (kΩ)	7.2	6.5	5.9	5.3	4.8	4.3	3.9	3.6

(2) Indoor heat exchanger temperature thermistor (TH22 , TH23)

Heat exchanger temperature (°C)	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	27.5	30
Resistance value (kΩ)	176.0	153.5	134.2	117.6	103.3	91.0	80.3	71.0	62.9	55.9	49.7	44.3	39.6

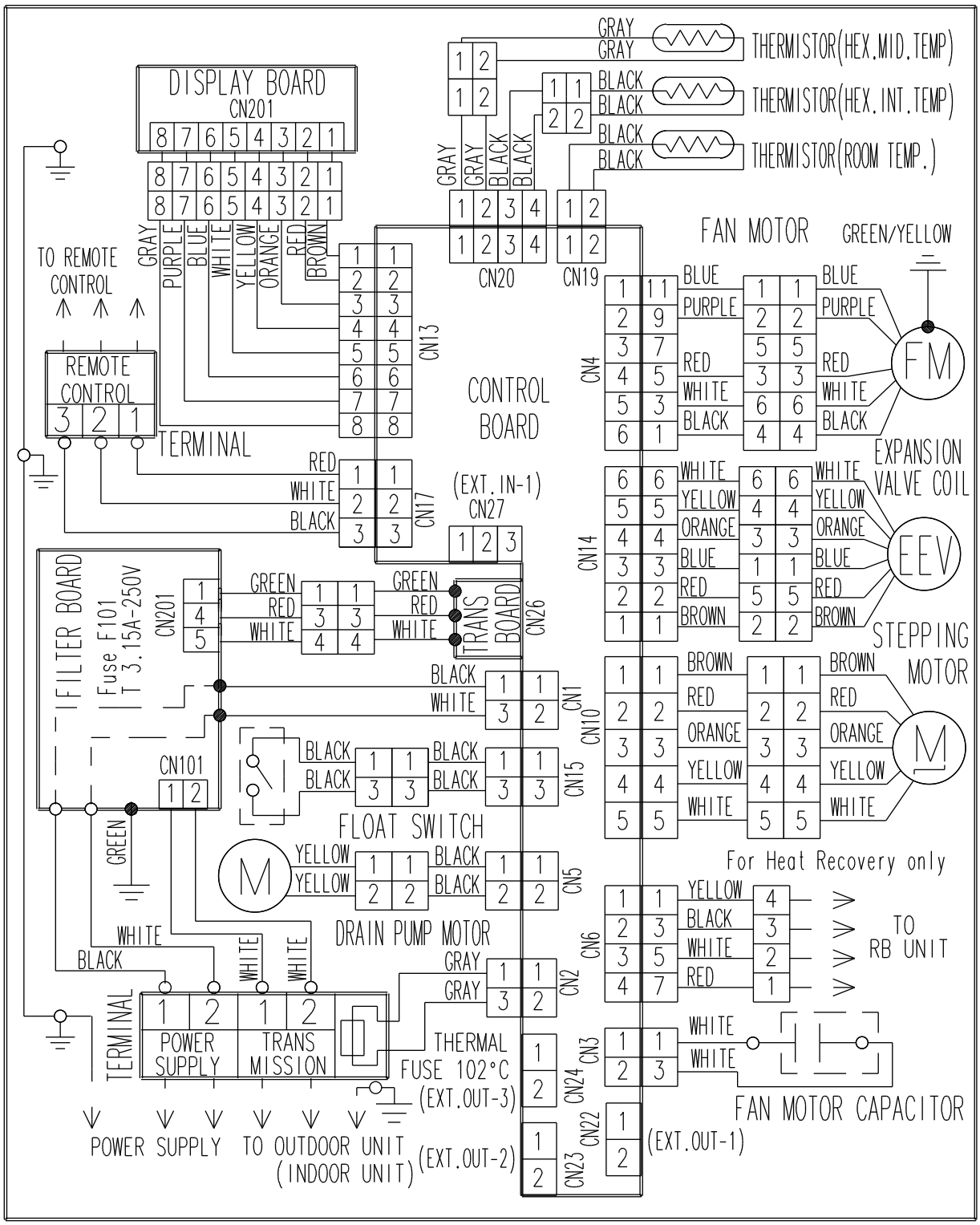
Heat exchanger temperature (°C)	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60
Resistance value (kΩ)	35.4	31.7	28.5	25.6	23.1	20.8	18.8	17.1	15.5	14.1	12.8	11.6

7-3 WIRING DIAGRAM

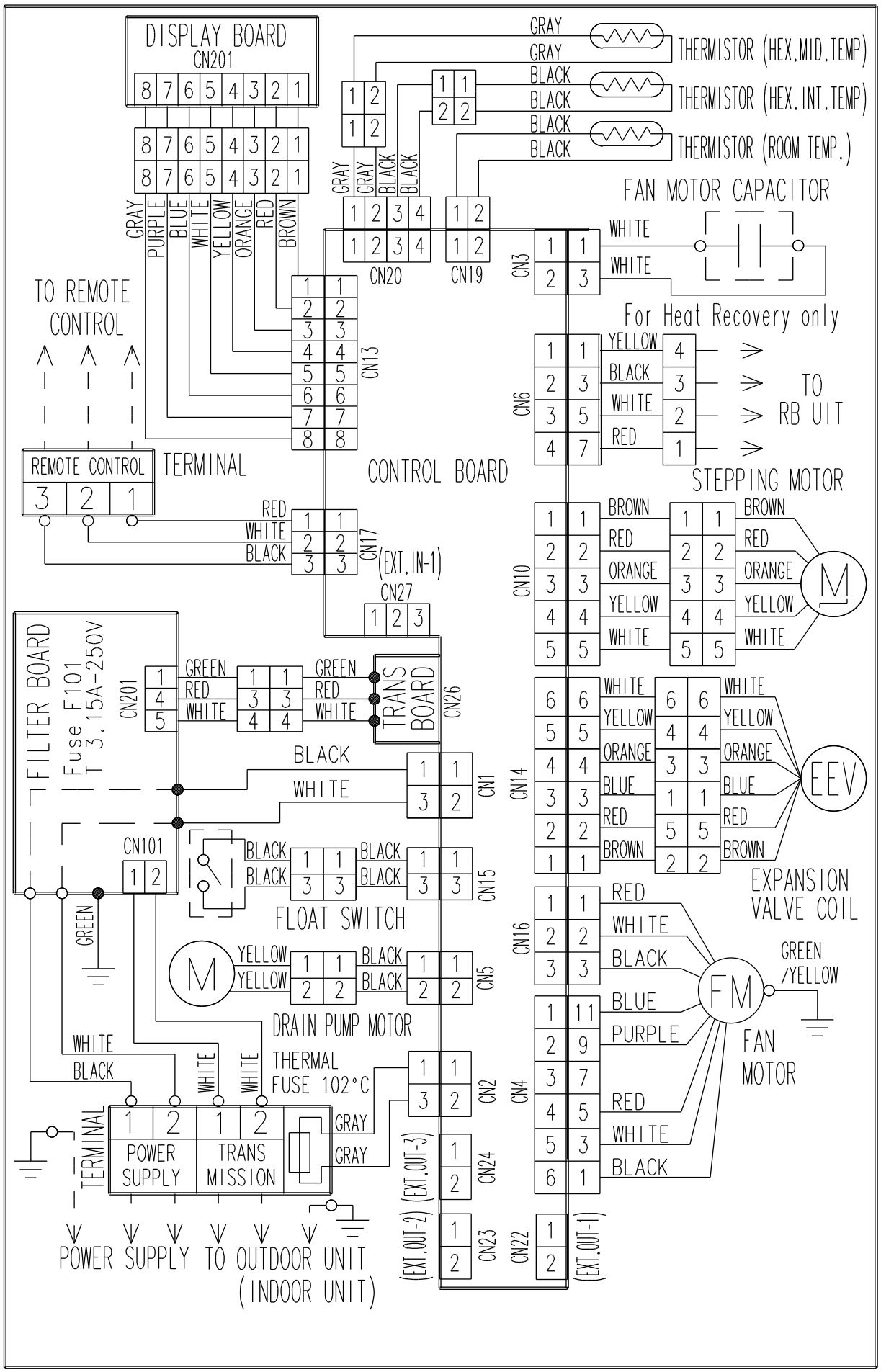
7-3-1 Indoor Unit

COMPACT CASSETTE TYPE

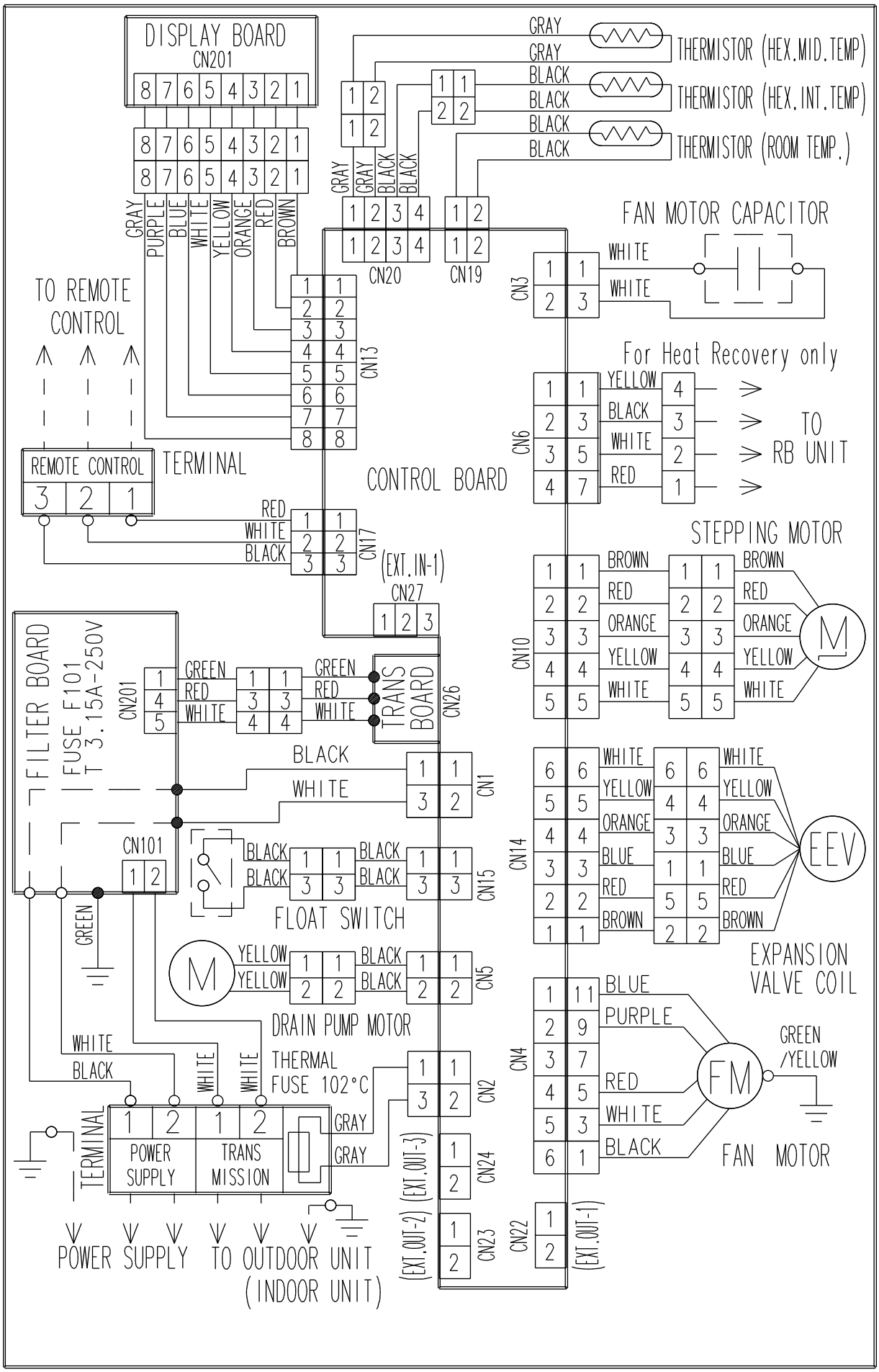
■ MODELS : AUXB07, AUXB09, AUXB12, AUXB14, AUXB18



■ MODELS : AU∗A20, AU∗A25, AU∗A30

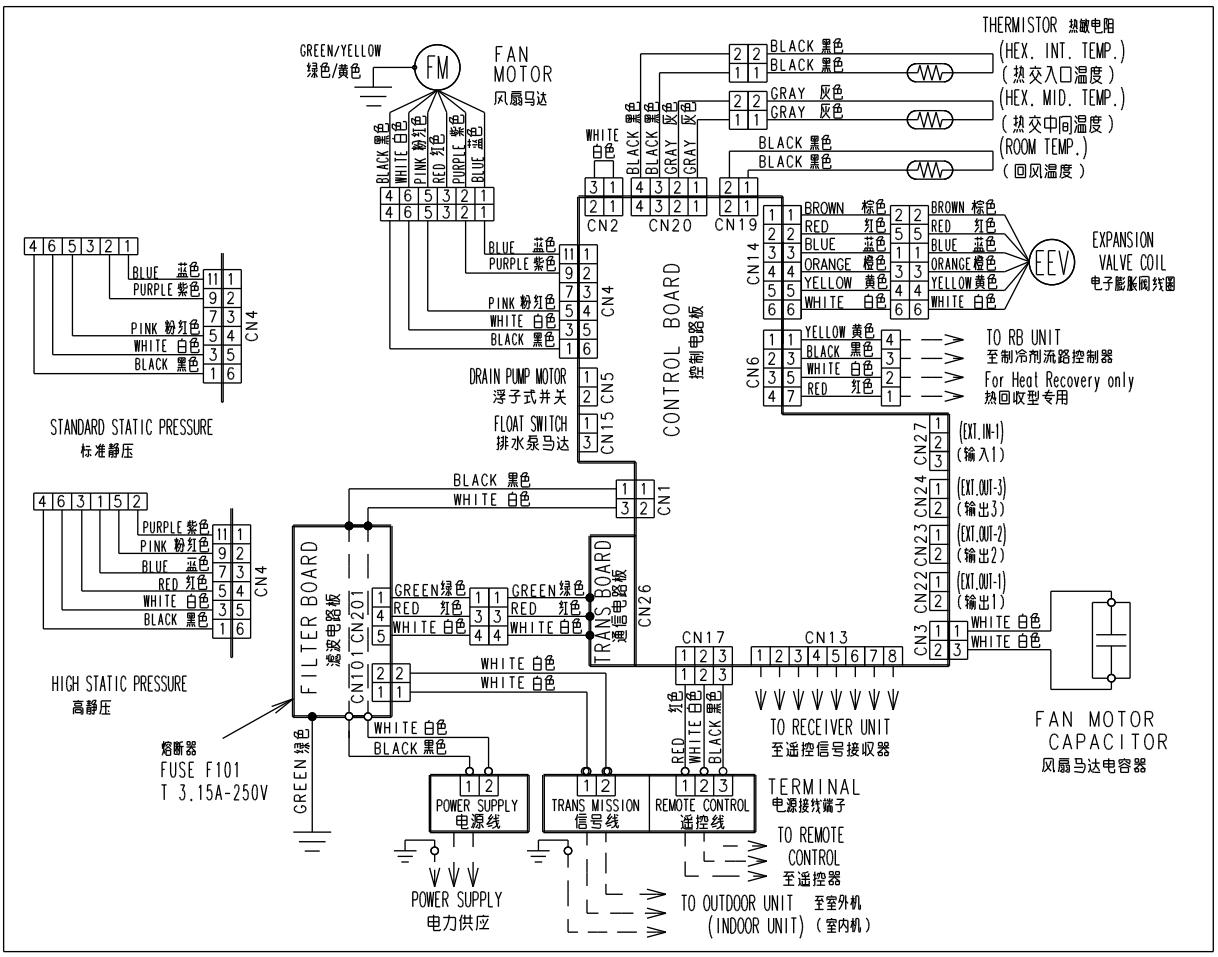


■ MODELS : AU*A36, AU*A45, AU*A54



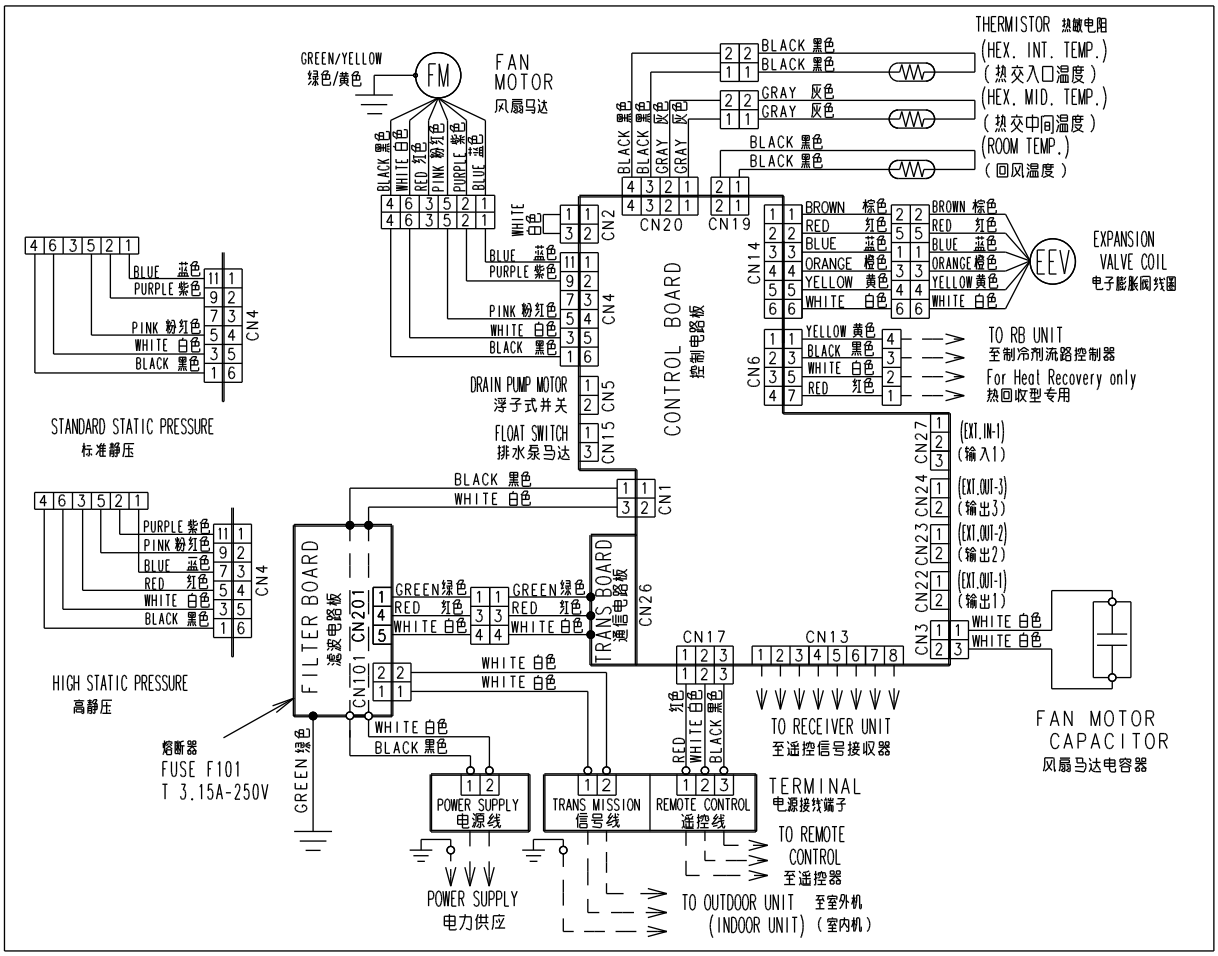
COMPACT DUCT TYPE

■MODELS : ARQB07, ARQB09, ARQB12, ARQB14, ARQB18

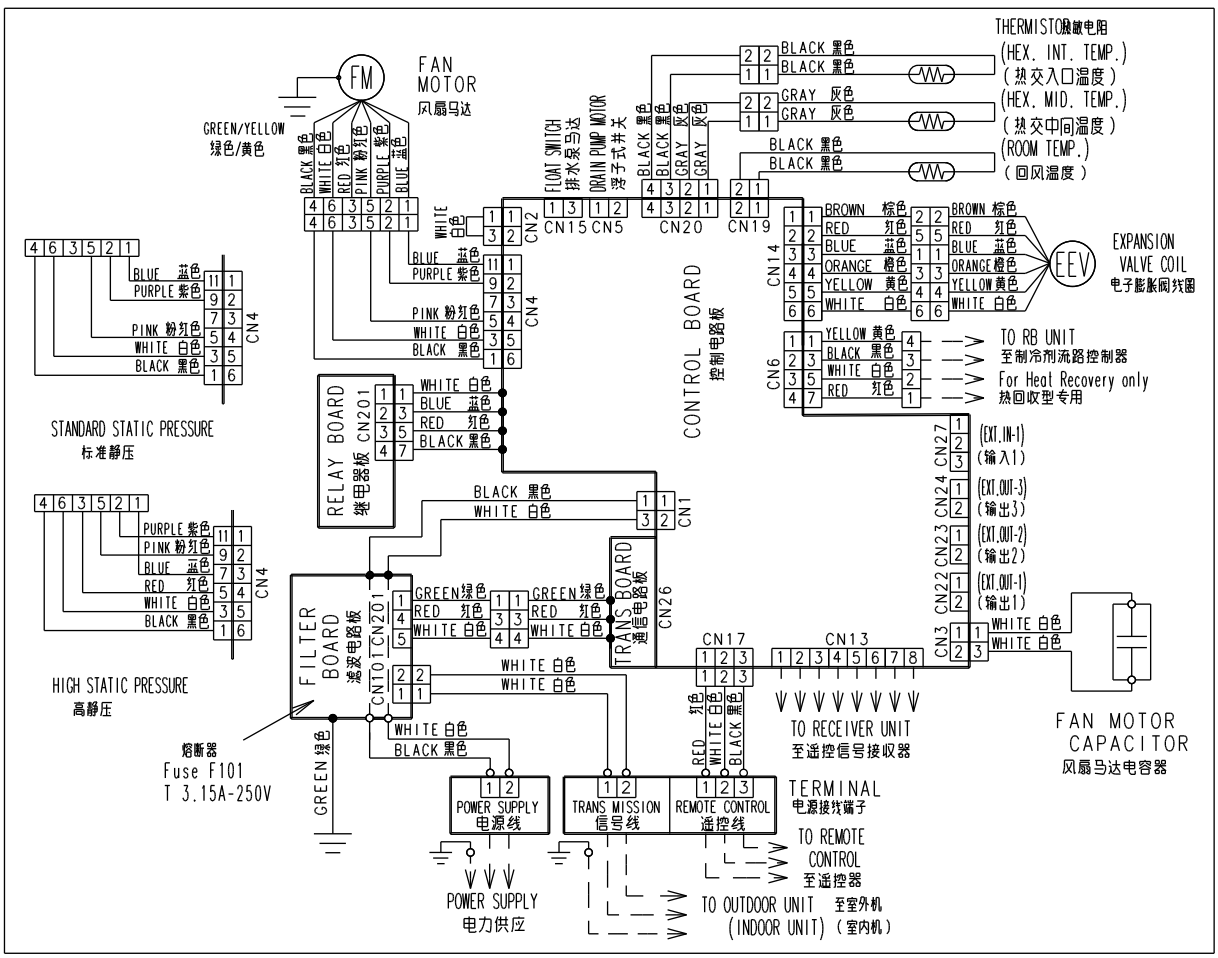


LOW STATIC PRESSURE DUCT TYPE

■ MODEL : ARXB25

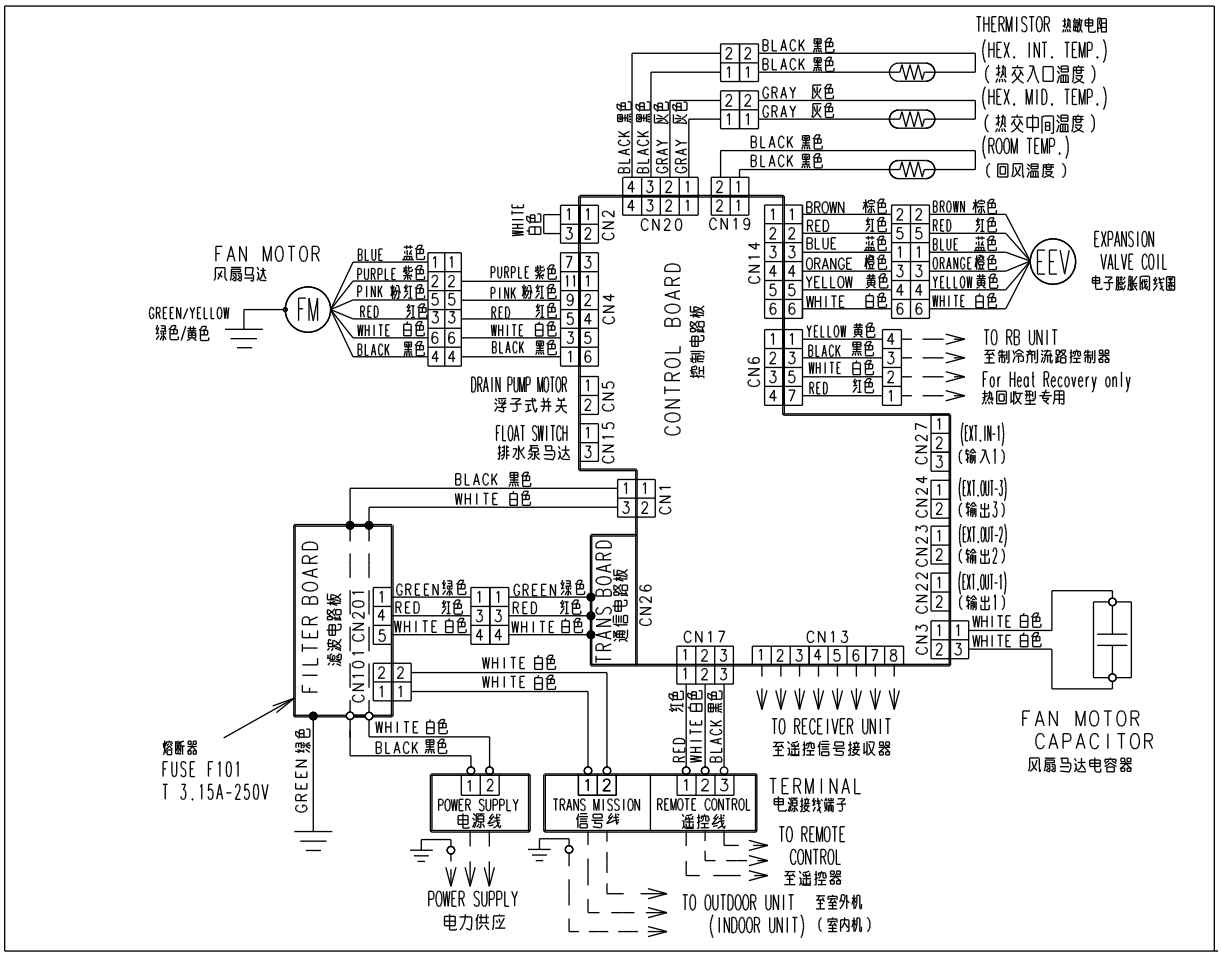


■ MODELS : ARXB30, ARXB36, ARXB45

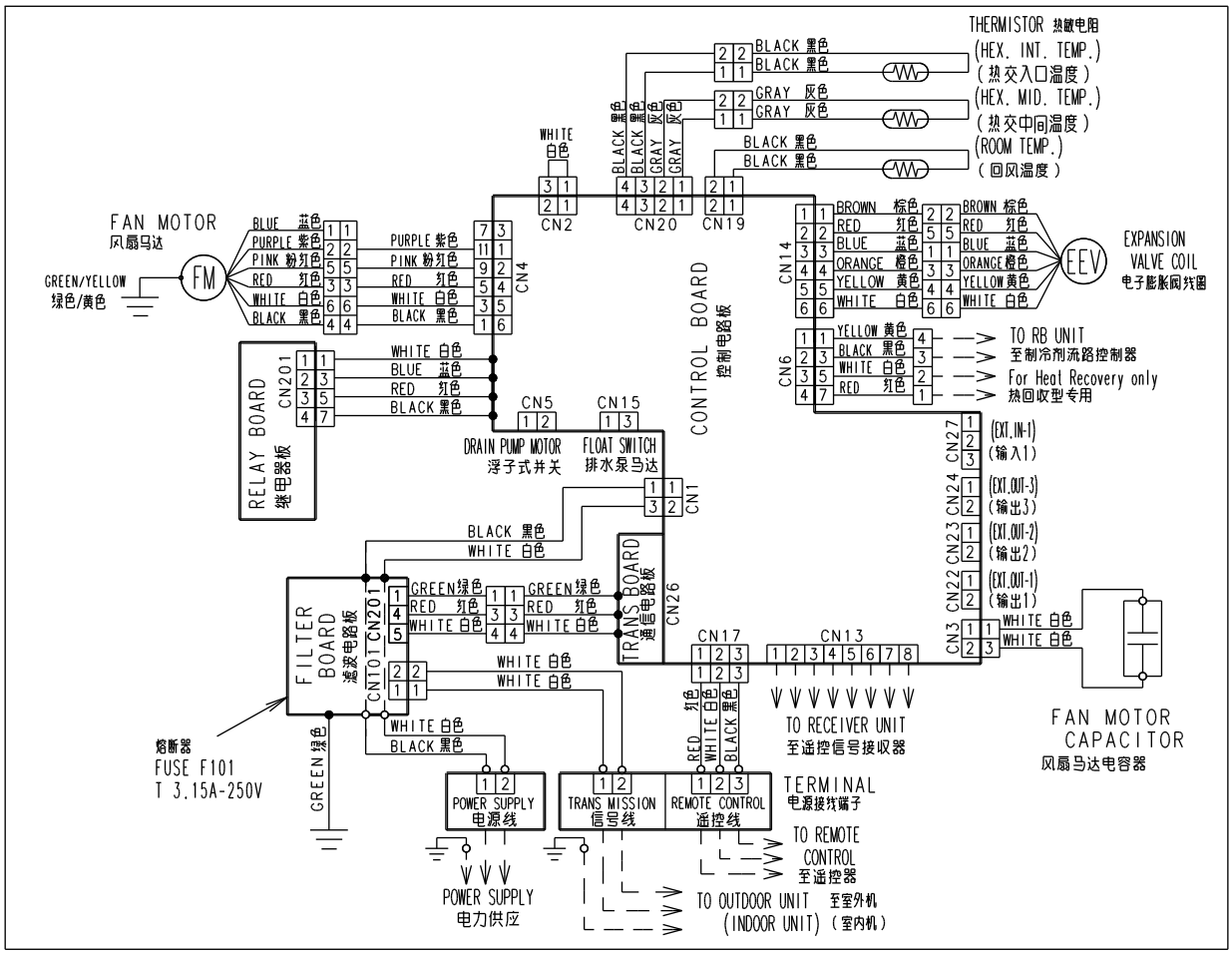


DUCT TYPE

■ MODEL : ARXA25

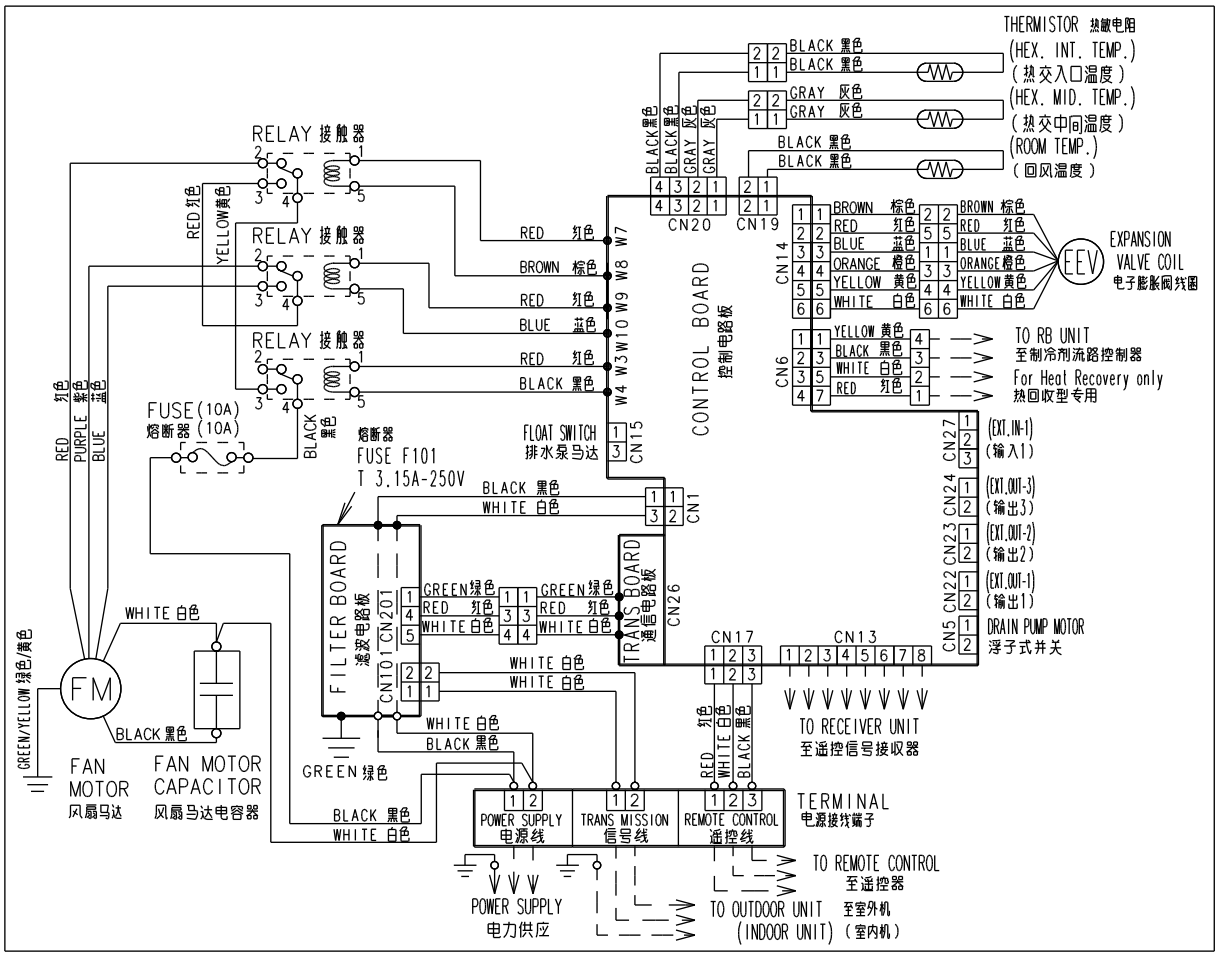


■ MODELS : ARXA30, ARXA36, ARXA45

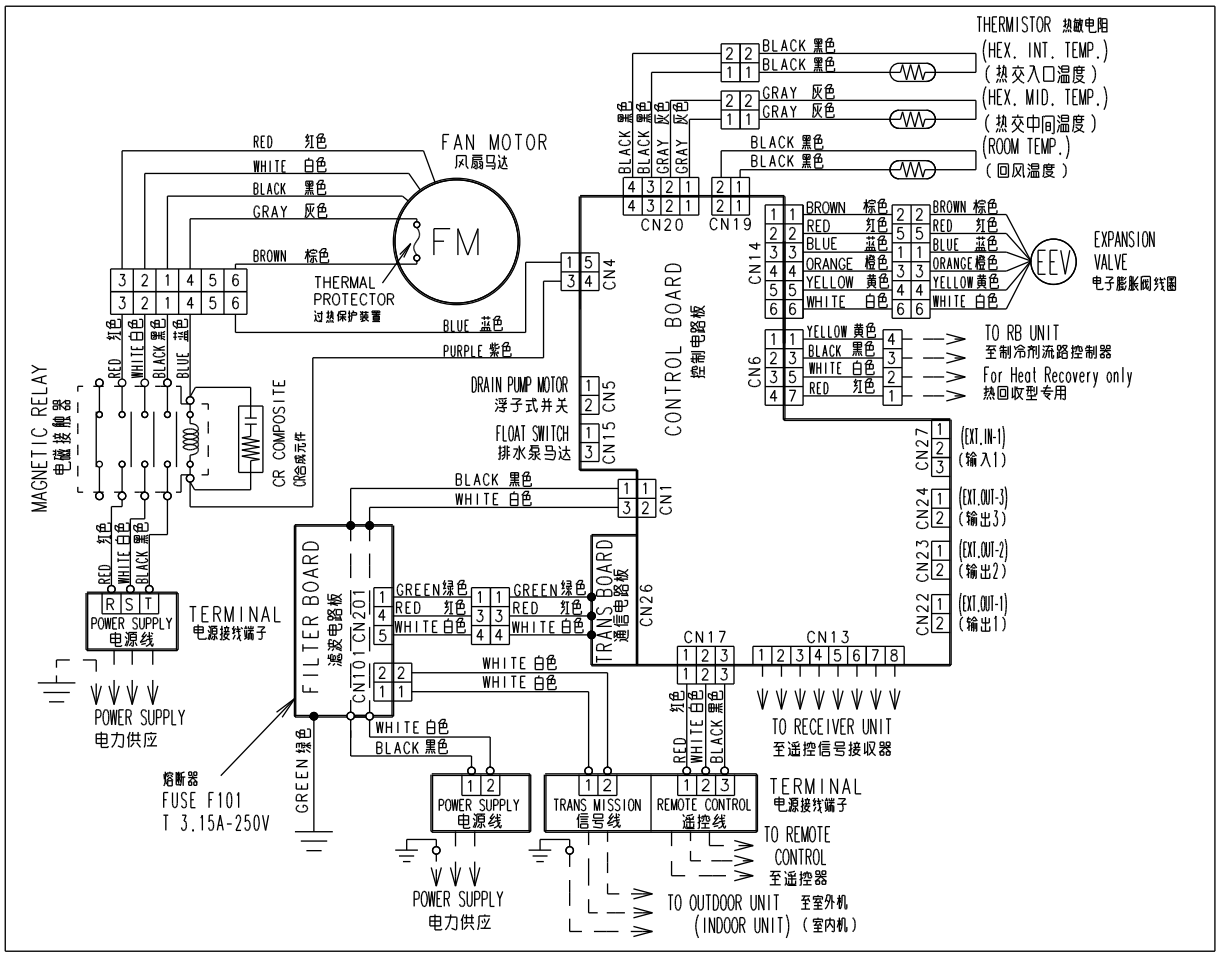


HIGH STATIC PRESSURE DUCT TYPE

■MODELS : ARXC36, ARXC45, ARXC60

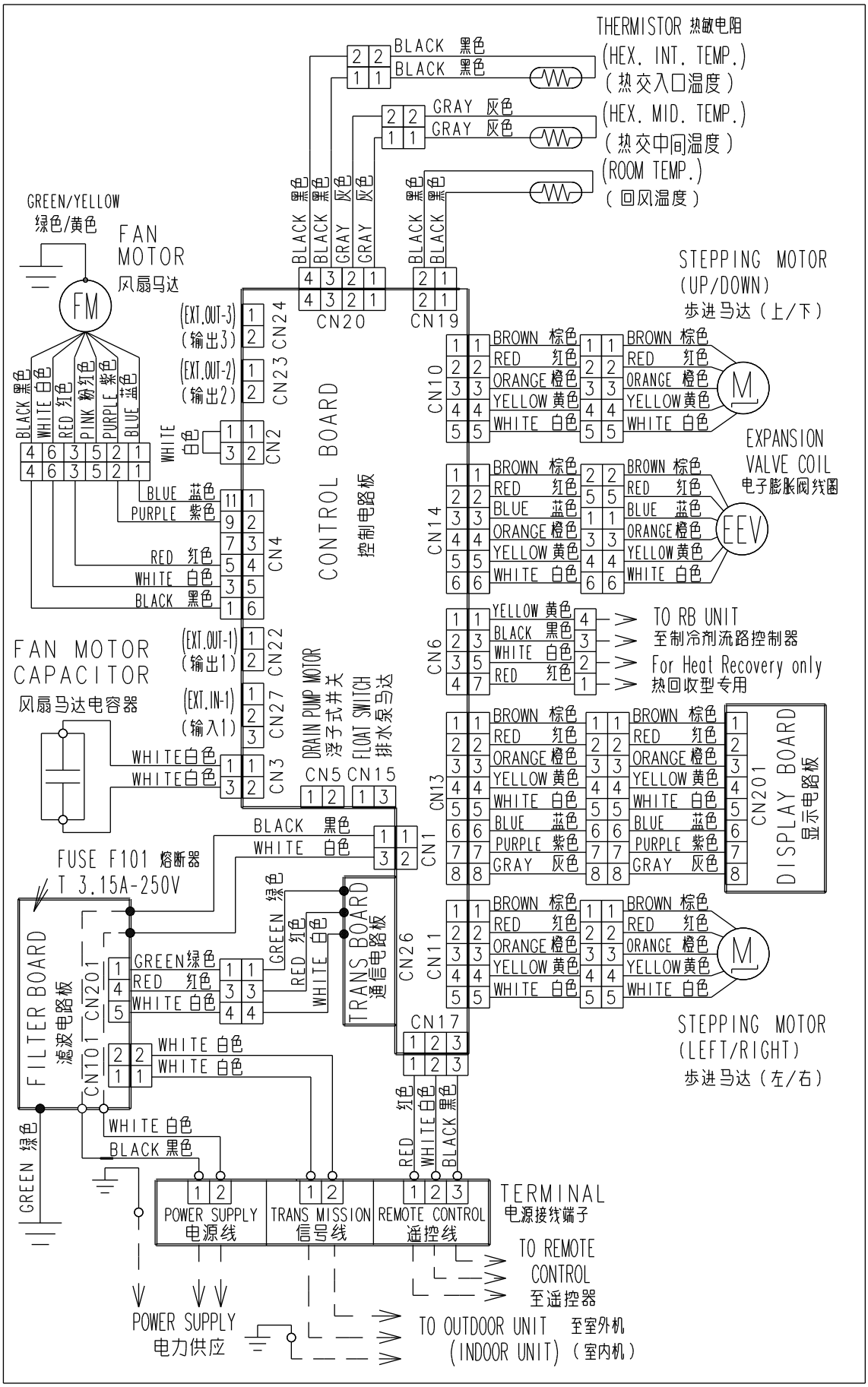


■MODEL : ARXC90



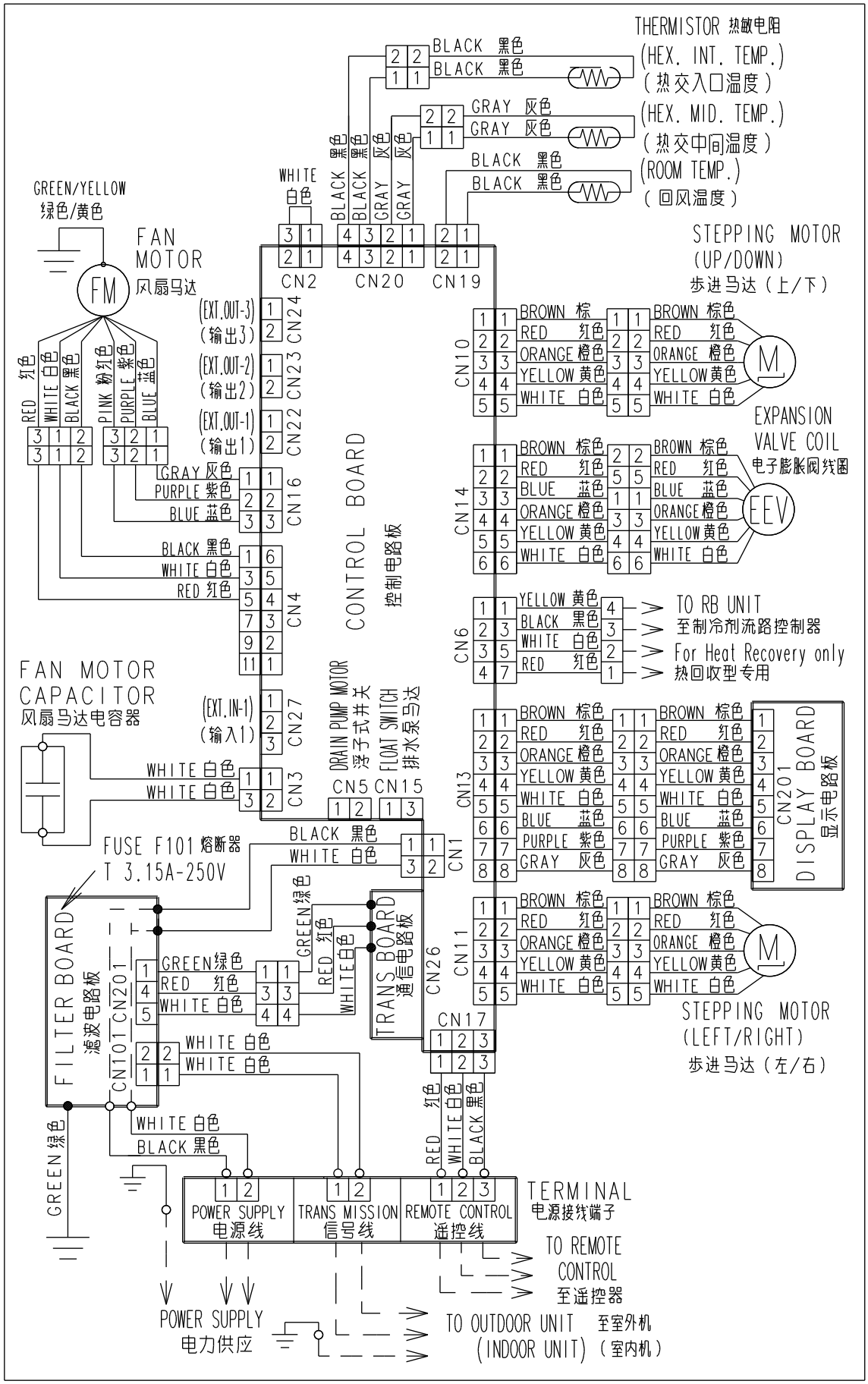
FLOOR / CEILING TYPE

■MODELS : AB∗A12, AB∗A14, AB∗A18, AB∗A24



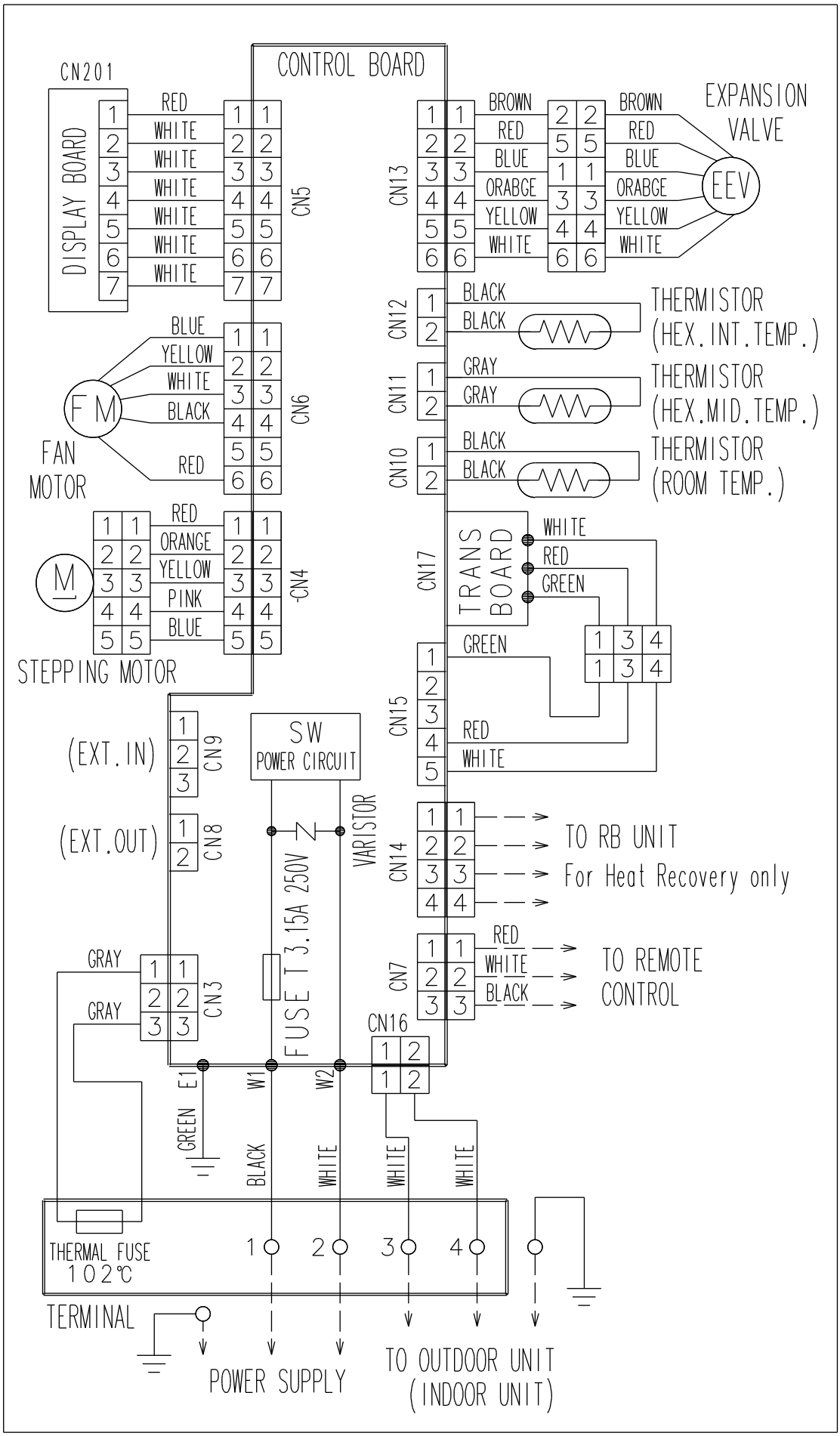
CEILING TYPE

■MODELS : AB∗A30, AB∗A36, AB∗A45, AB∗A54



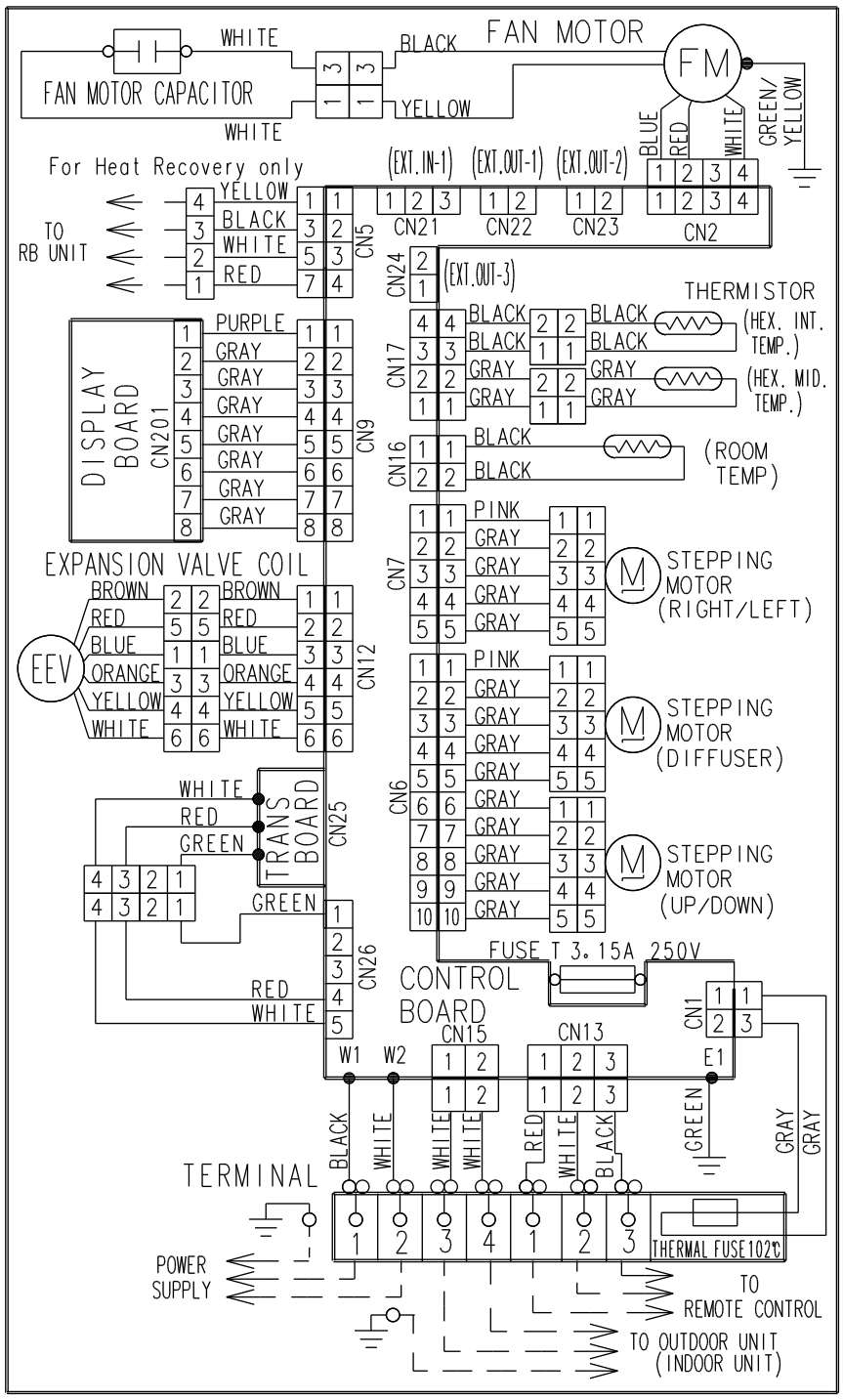
COMPACT WALL MOUNTED TYPE (Comfort model)

■MODELS : AS∗E07, AS∗E09, AS∗E12, AS∗E14



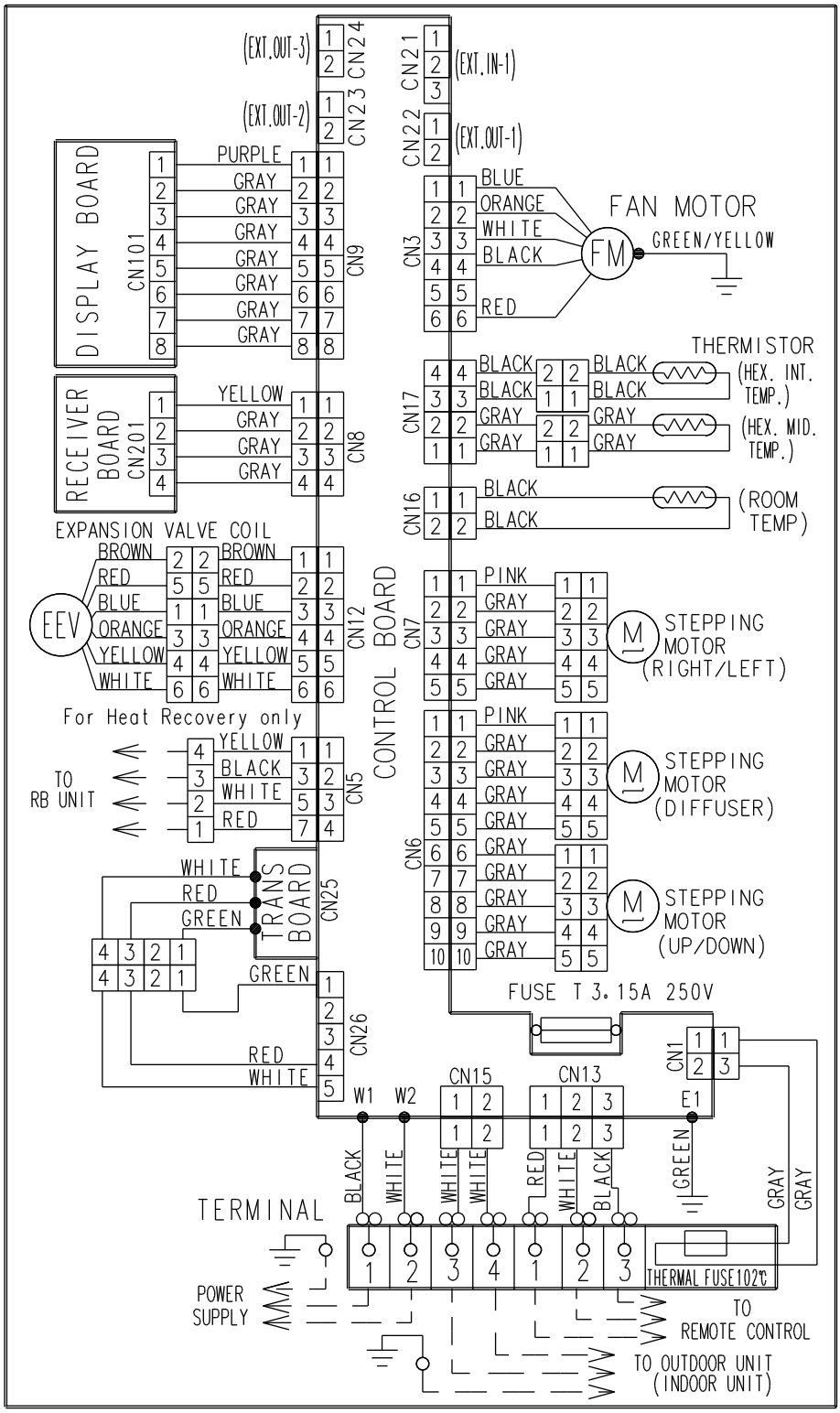
WALL MOUNTED TYPE

■MODELS : AS∗A18, AS∗A24, AS∗A30



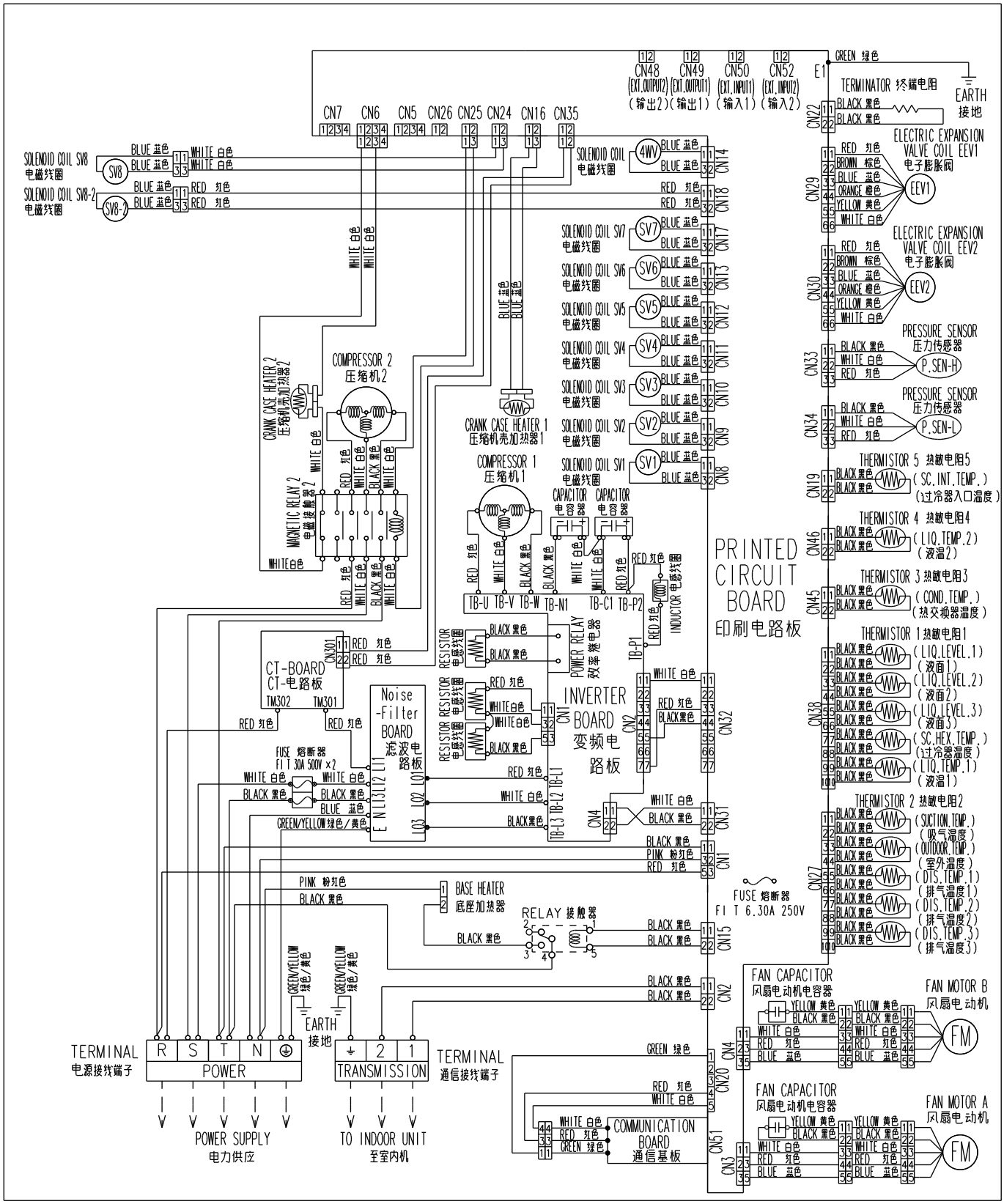
CEILING WALL TYPE

■ MODELS : AW∗A07, AW∗A09, AW∗A12, AW∗A14
AW∗A18, AW∗A24, AW∗A30

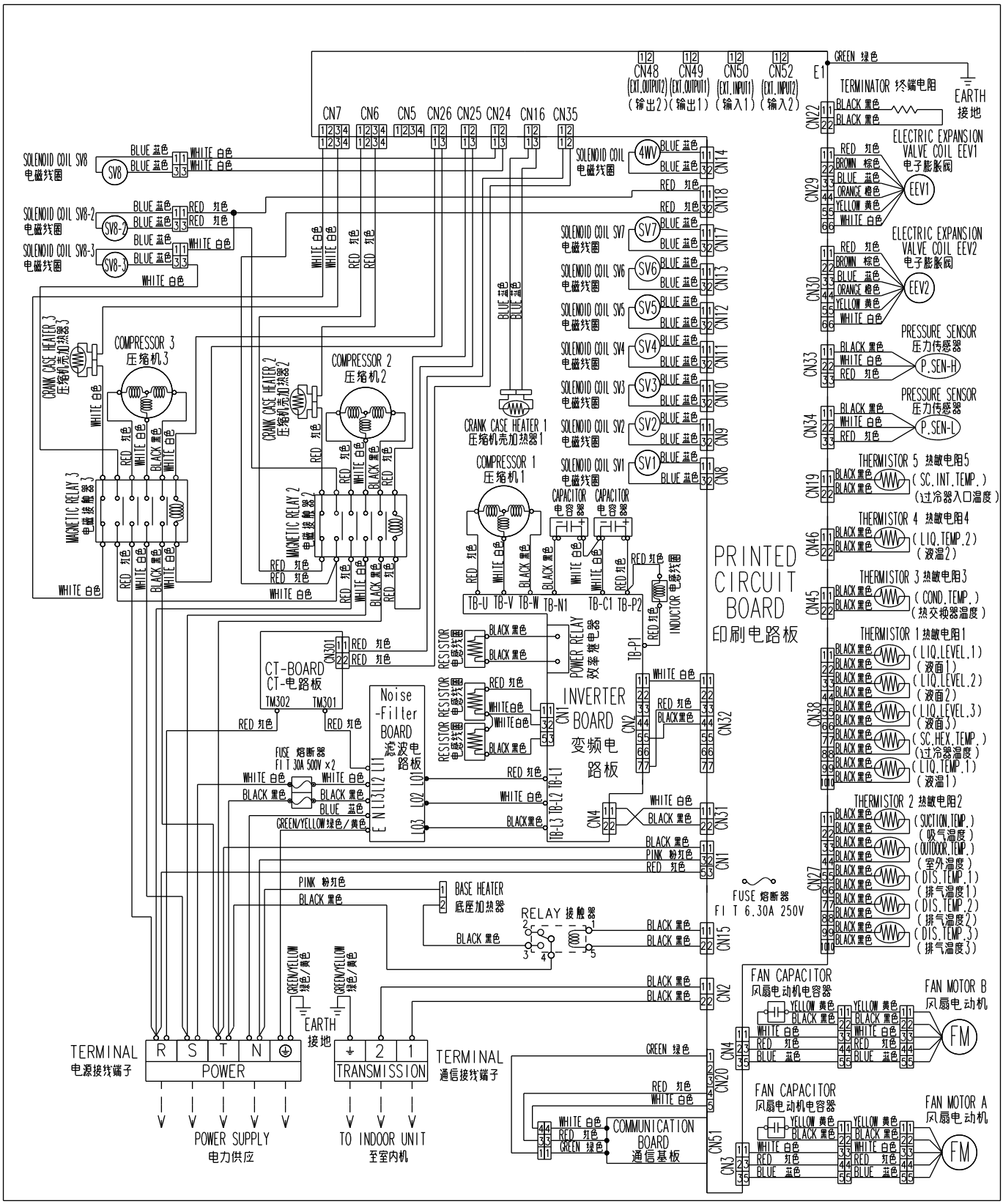


7-3-2 Outdoor Unit

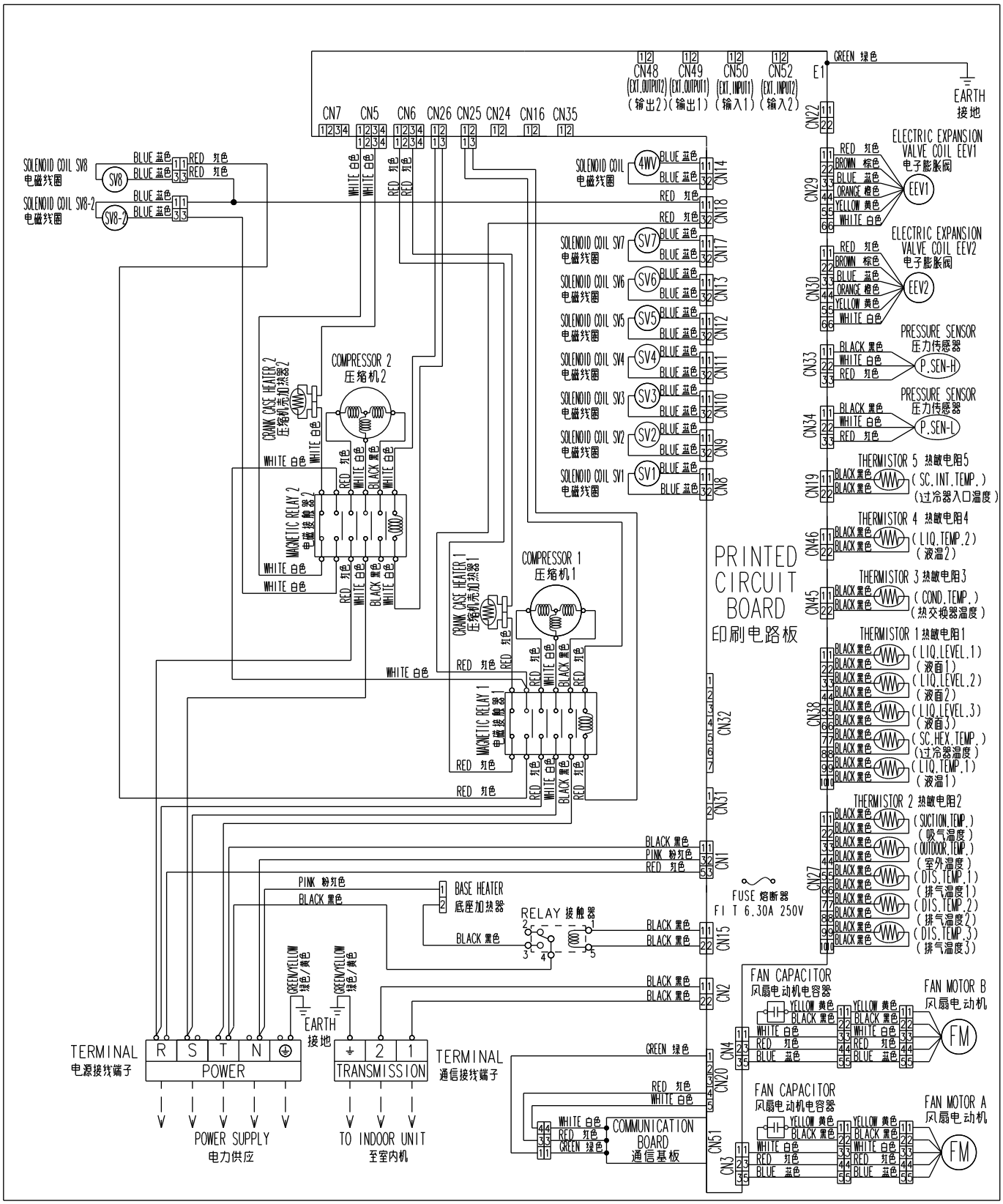
■ MODELS : AJ＊A72LATF, AJ＊A90LATF



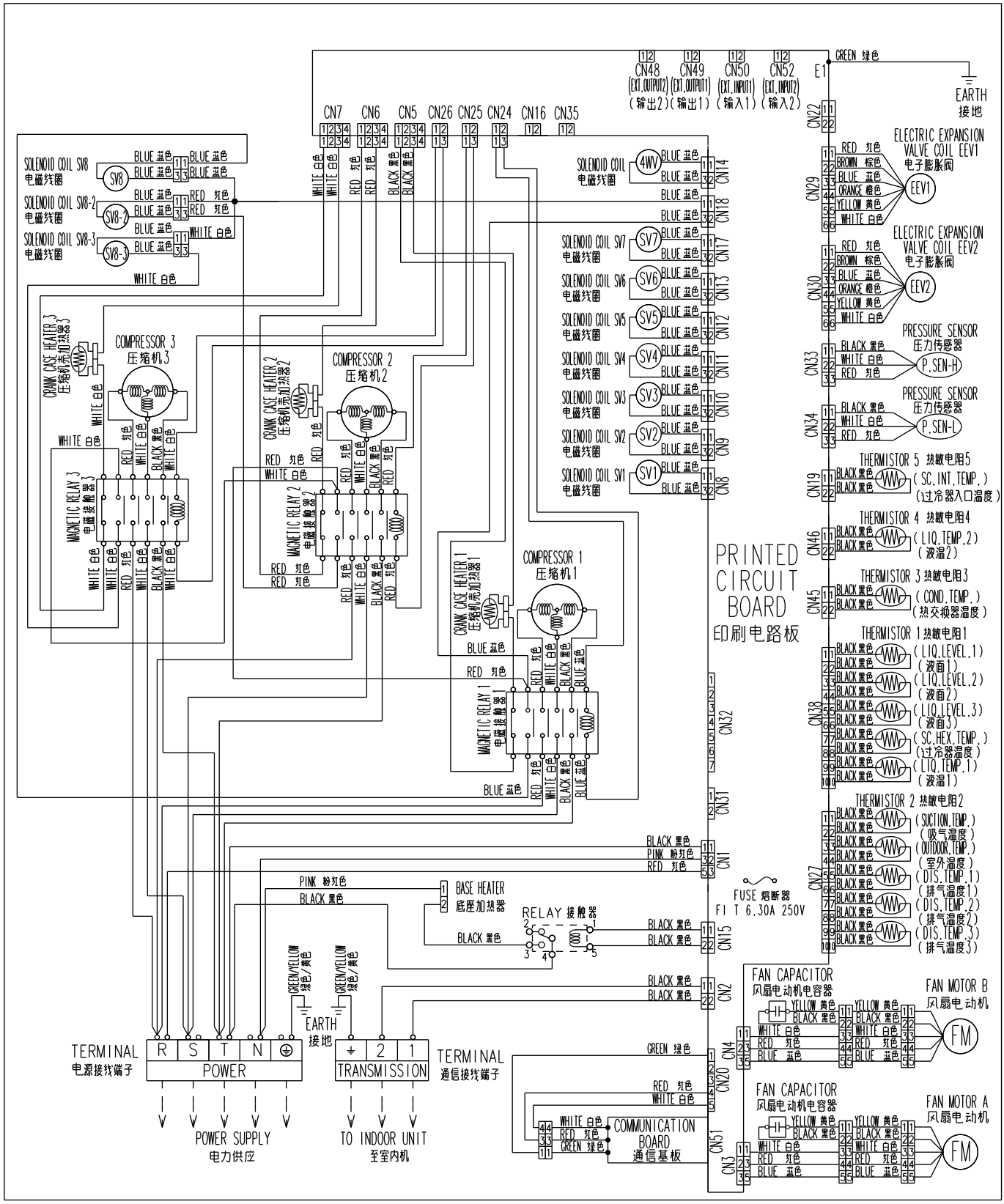
■ MODEL ： AJ＊126LATF



■ MODELS : AJ＊A72UATF , AJ＊A90UATF

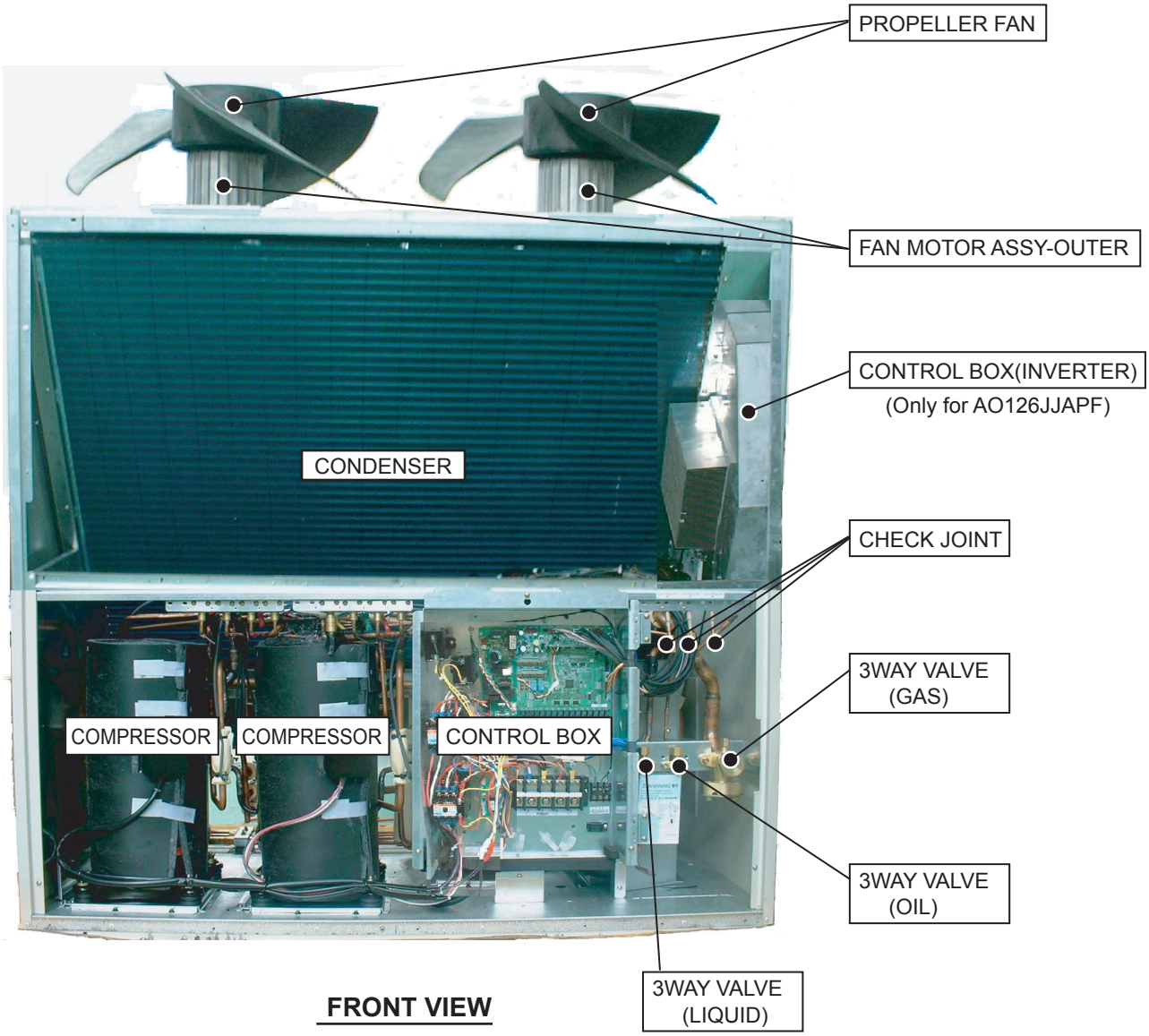


■ MODEL ： AJ＊126UATF



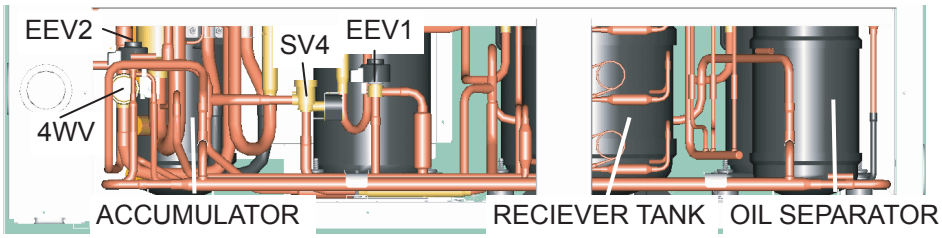
7-4 OUTDOOR INTERNAL LAYOUT

OUTDOOR UNIT INTERNAL LAYOUT

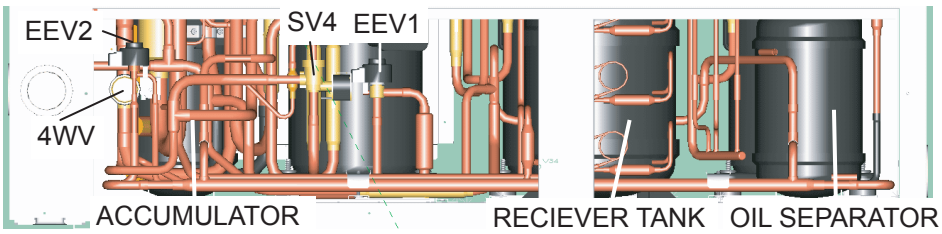


FRONT VIEW

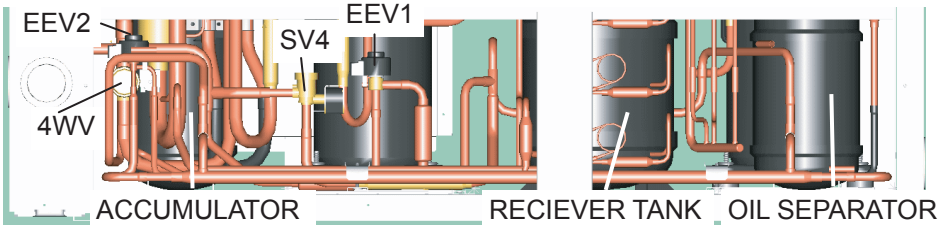
AJY126LATF



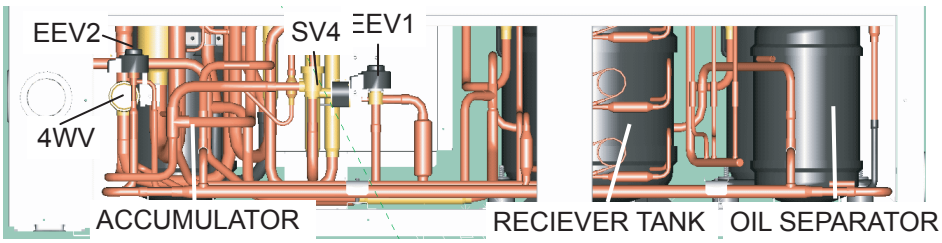
AJY126UATF



AJYA90LATF , AJYA72LATF

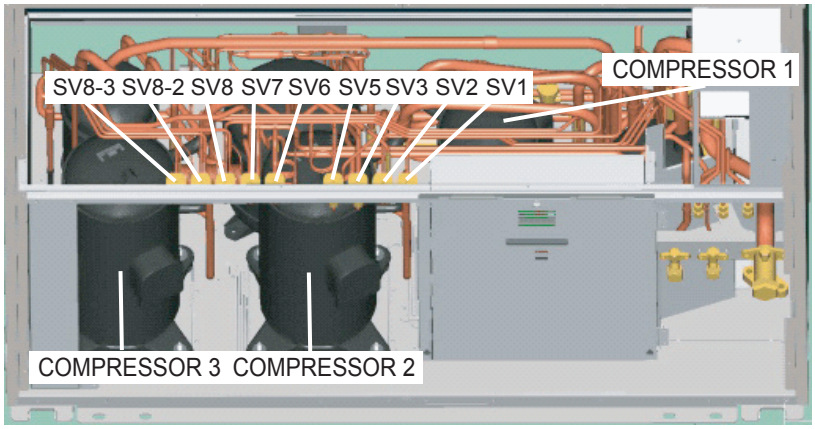


AJYA90UATF , AJYA72UATF

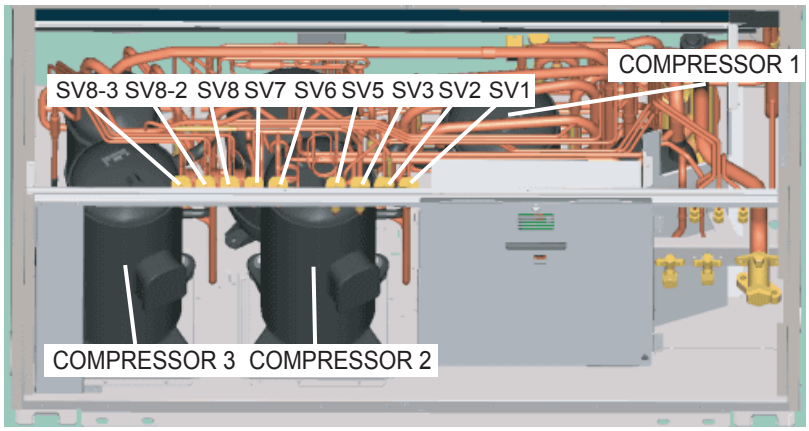


REAR VIEW

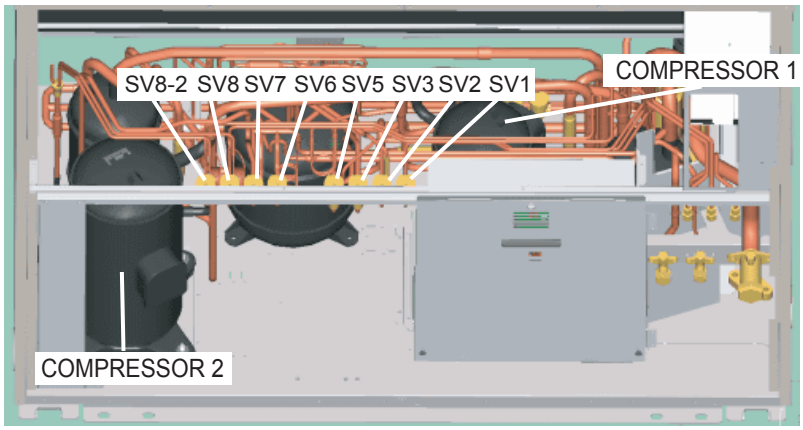
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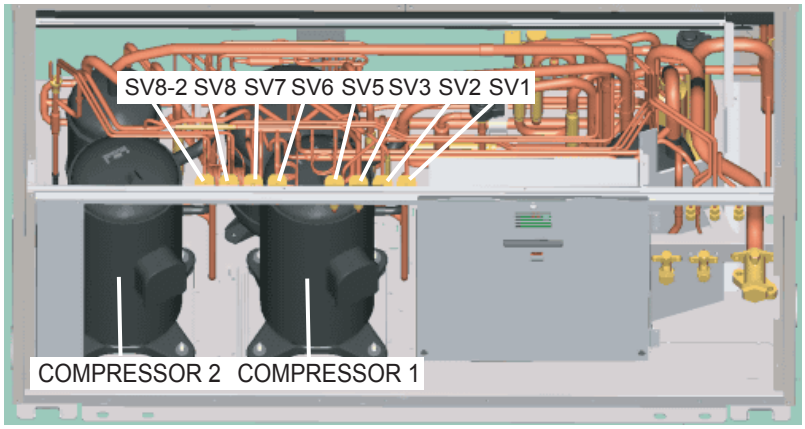
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AJYA90LATF , AJYA72LATF

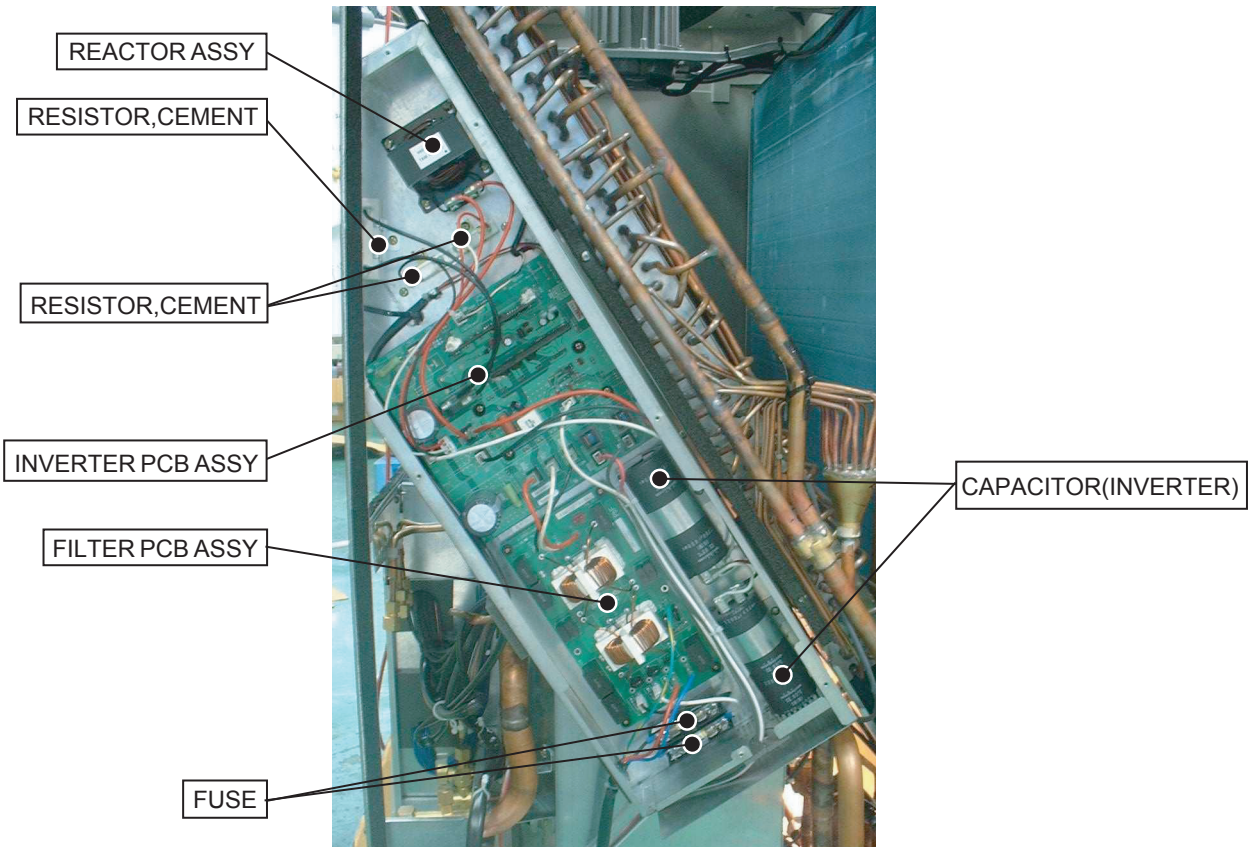


AJYA90UATF , AJYA72UATF

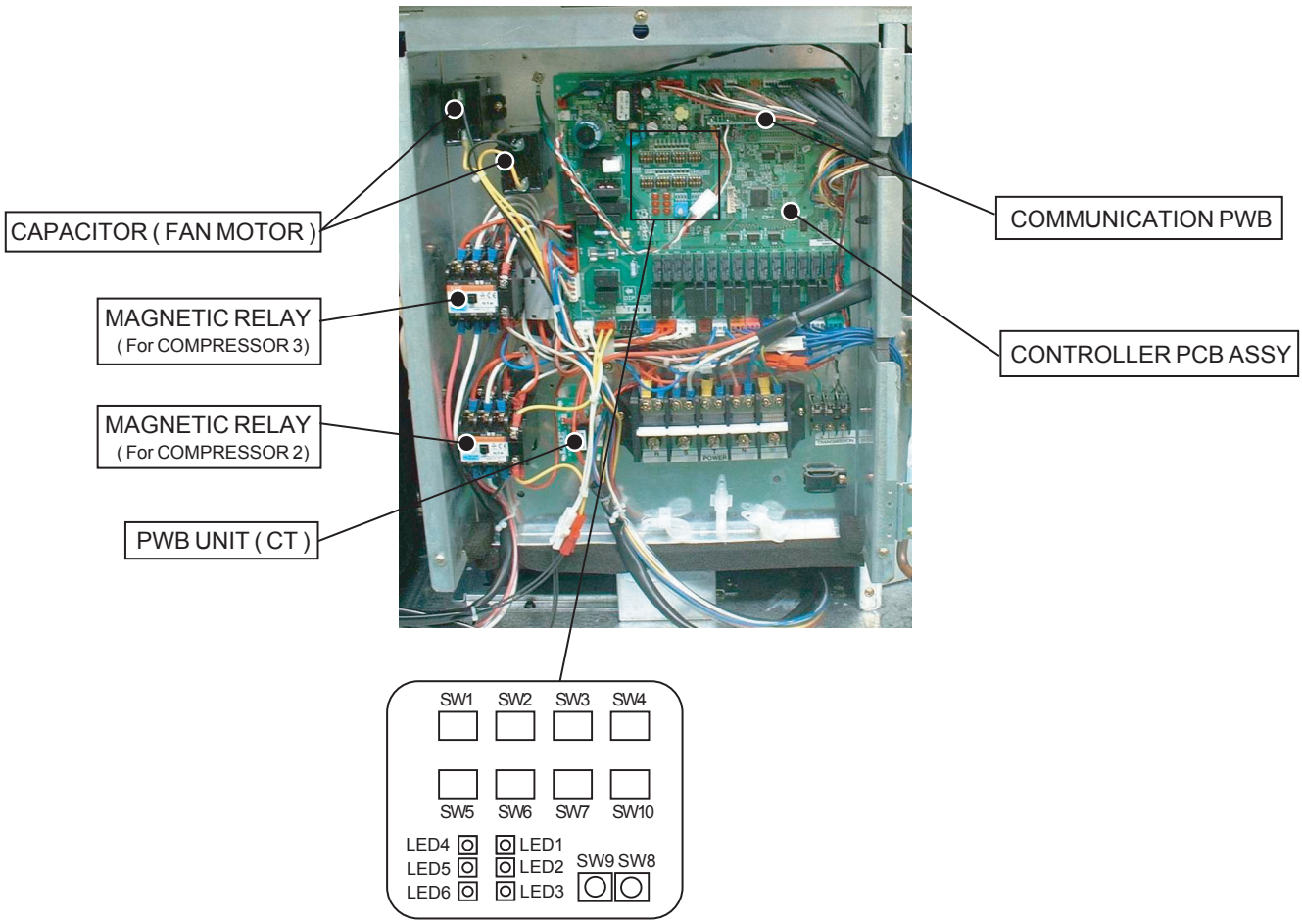


DIAGRAMMATIC PERSPECTIVE VIEW

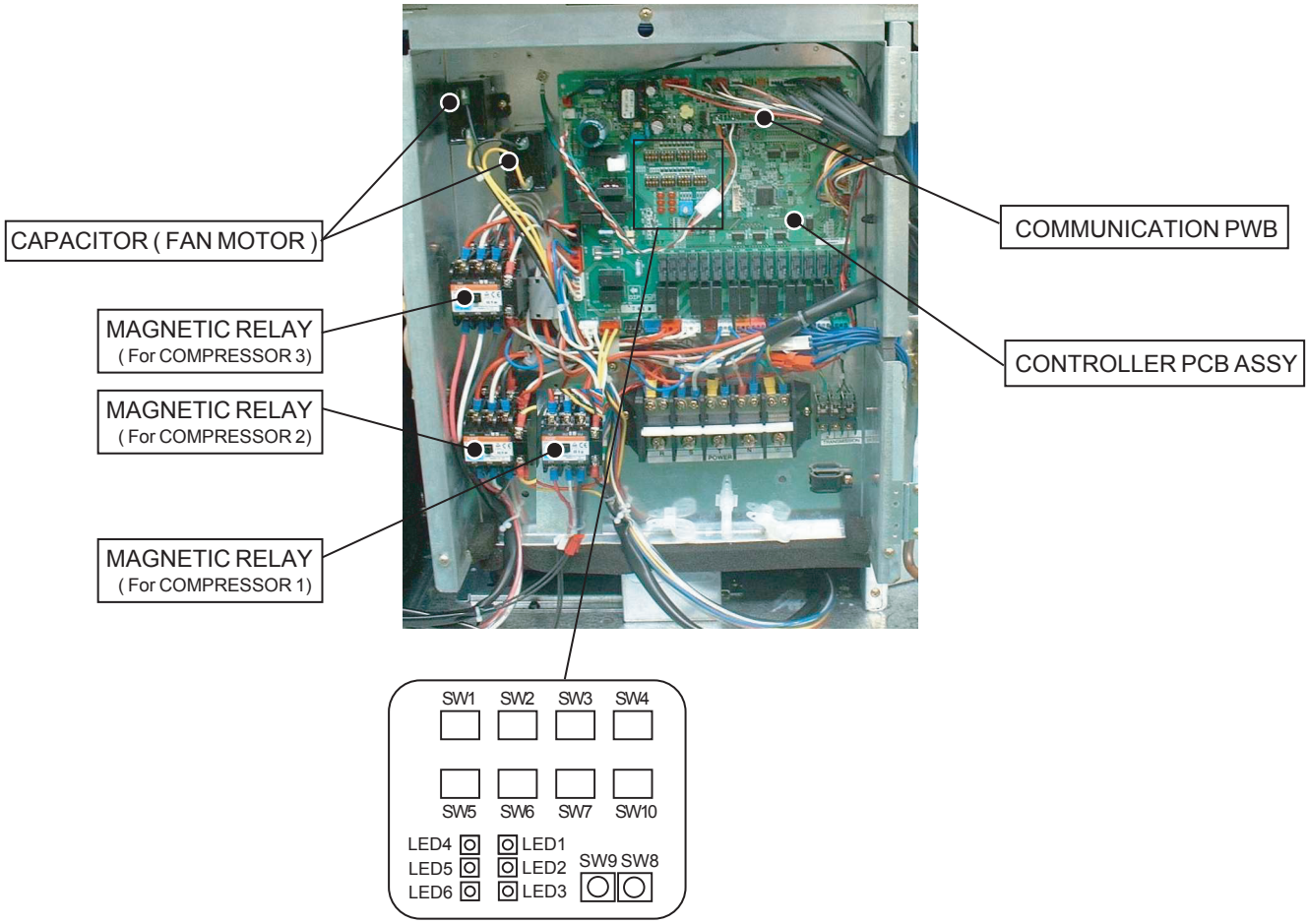
CONTROL BOX(INVERTER) LAYOUT (For AJY126LATF)



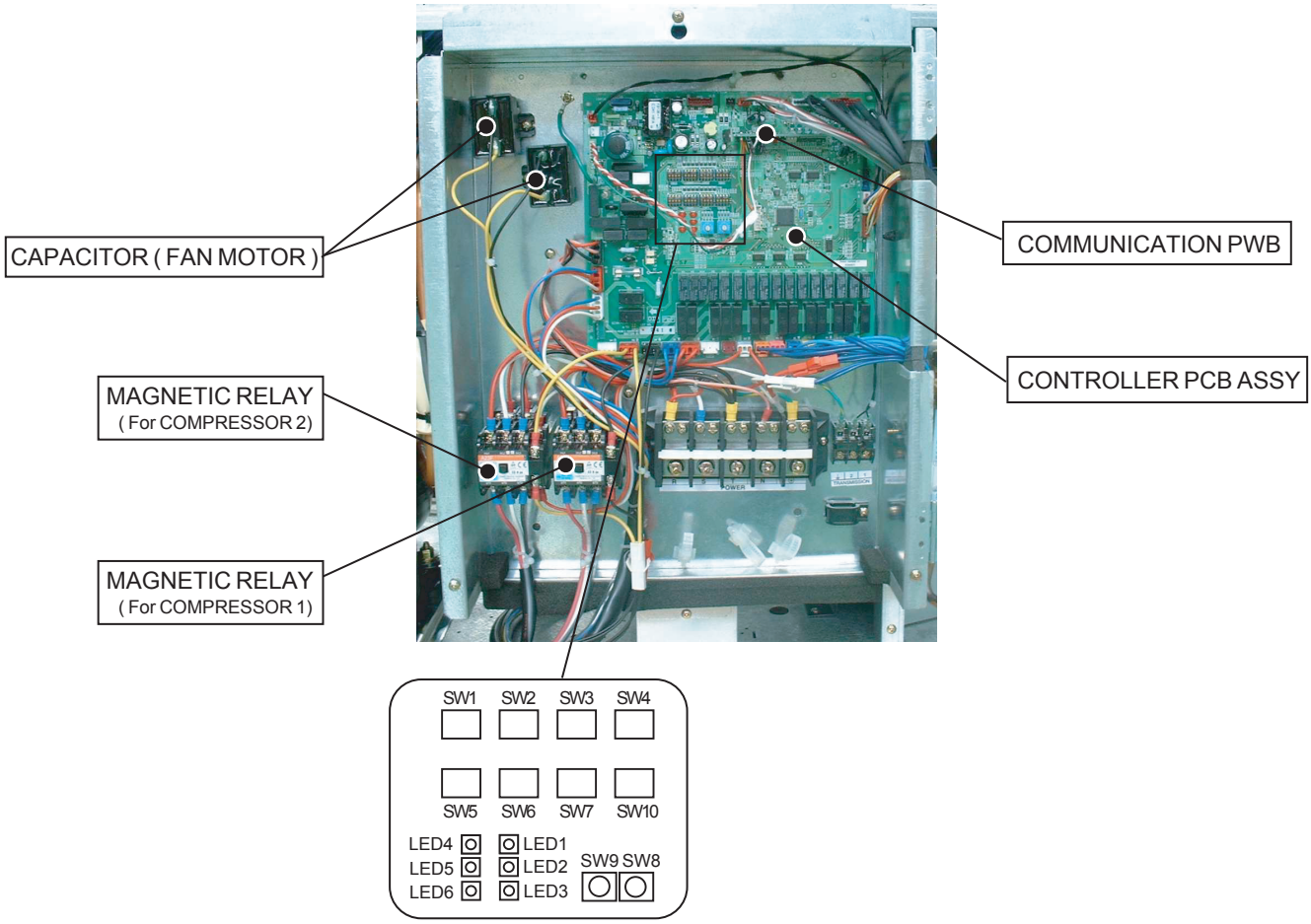
CONTROL BOX LAYOUT (For AJY126LATF)



CONTROL BOX LAYOUT (For AJY126UATF)

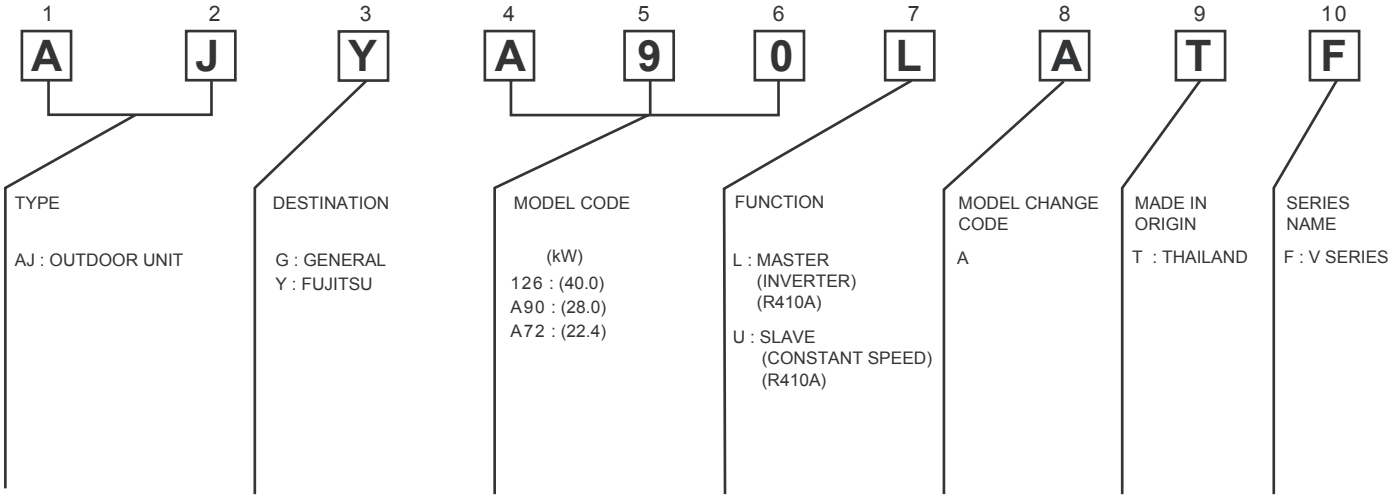


CONTROL BOX LAYOUT (For AJYA90UATF)

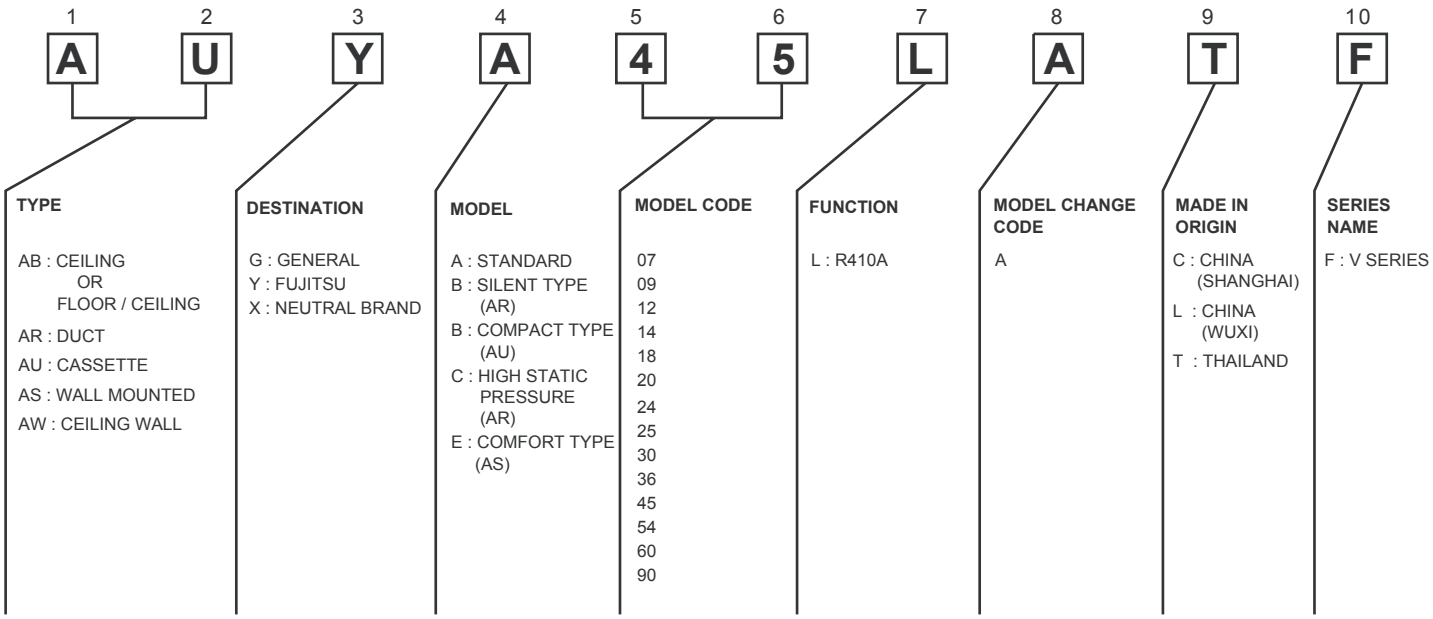


7-5 MODEL DESIGNATION

■ MODEL DESIGNATION (OUTDOOR UNIT)



■ MODEL DESIGNATION (INDOOR UNIT)



Refrigerant R410A
INVERTER

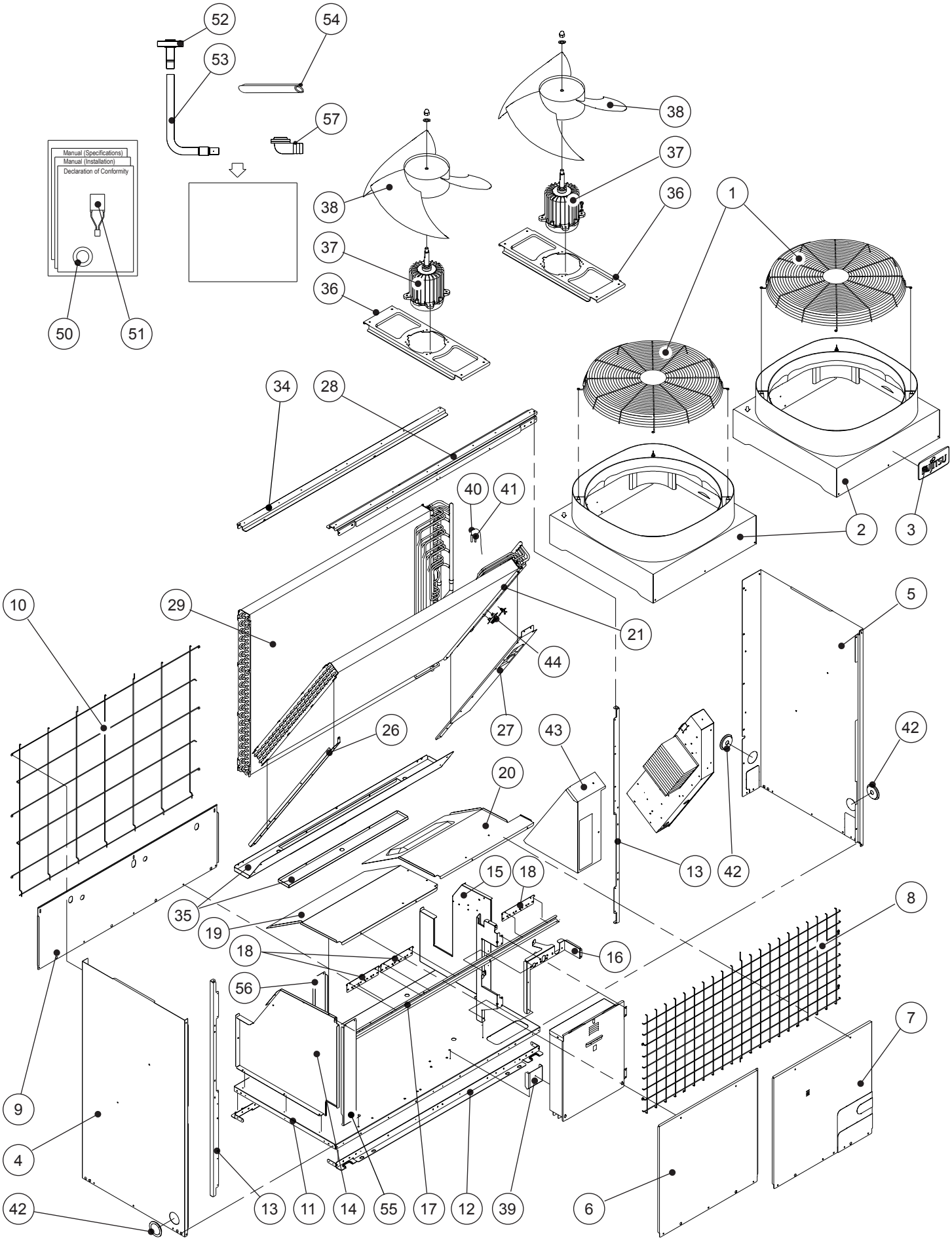
AIRSTAGE™
V SERIES

8. DISASSEMBLY ILLUSTRATION & PARTS LIST

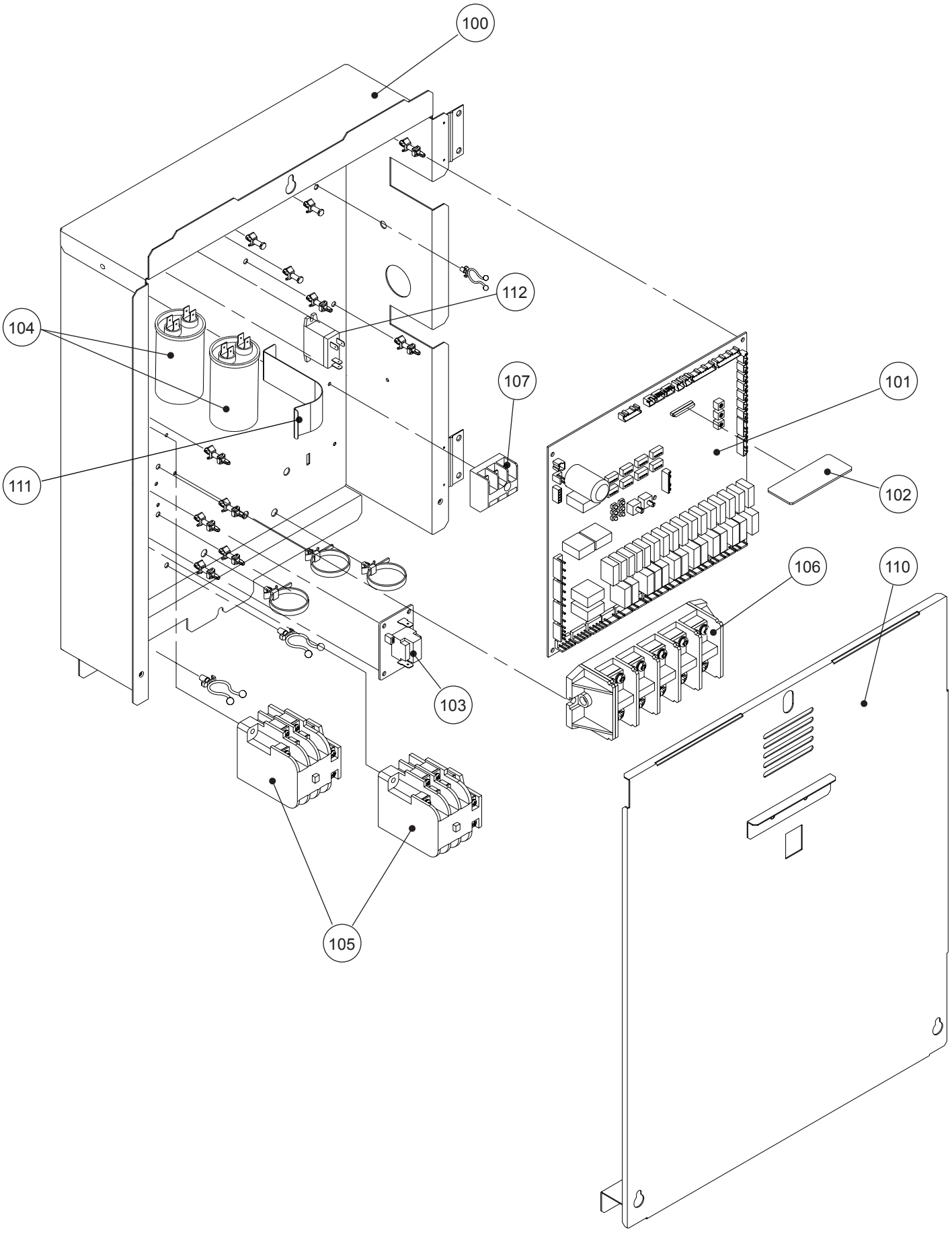
8. DISASSEMBLY ILLUSTRATION & PARTS LIST

8-1 OUTDOOR UNIT

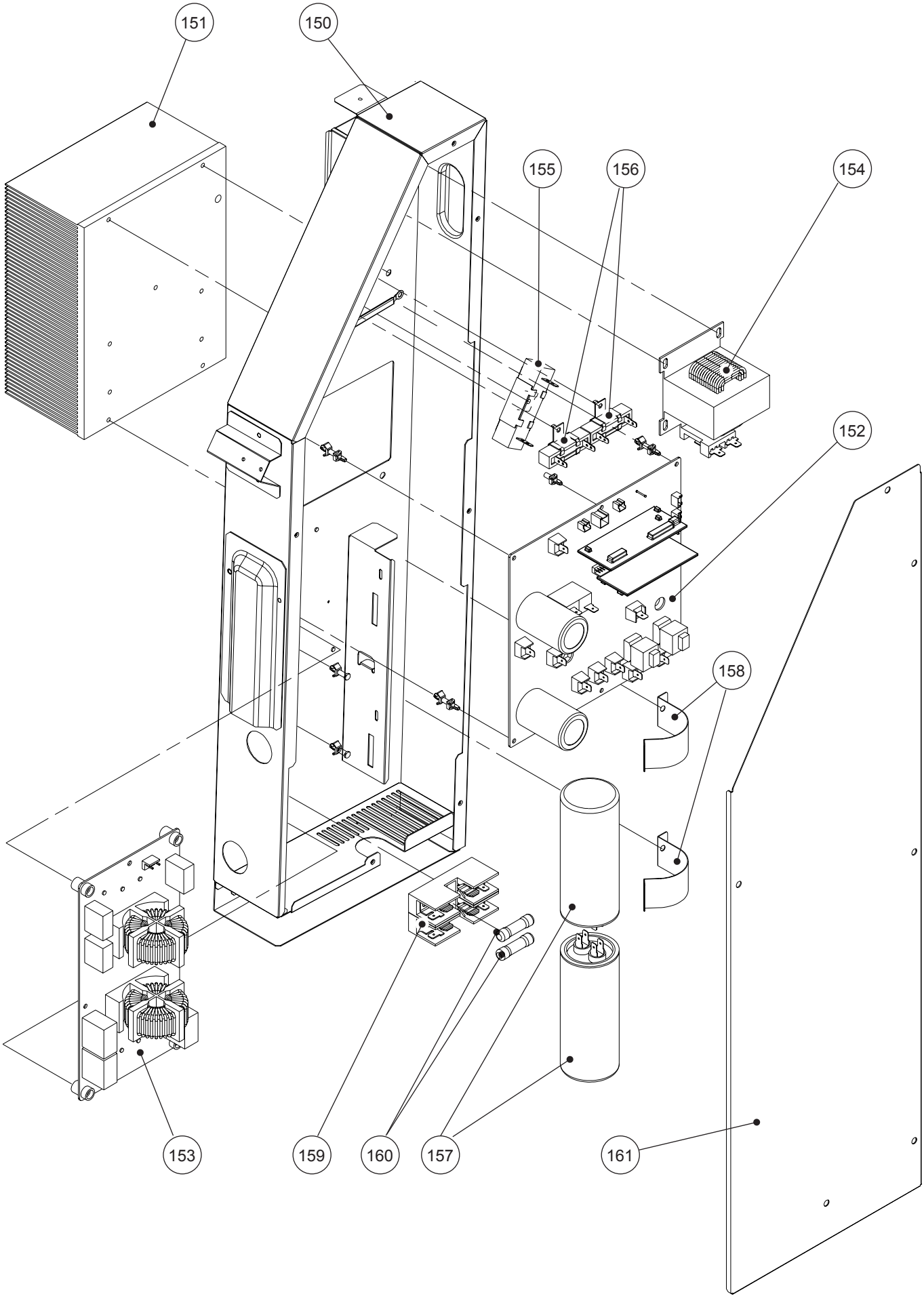
Model : AJ*126LATF



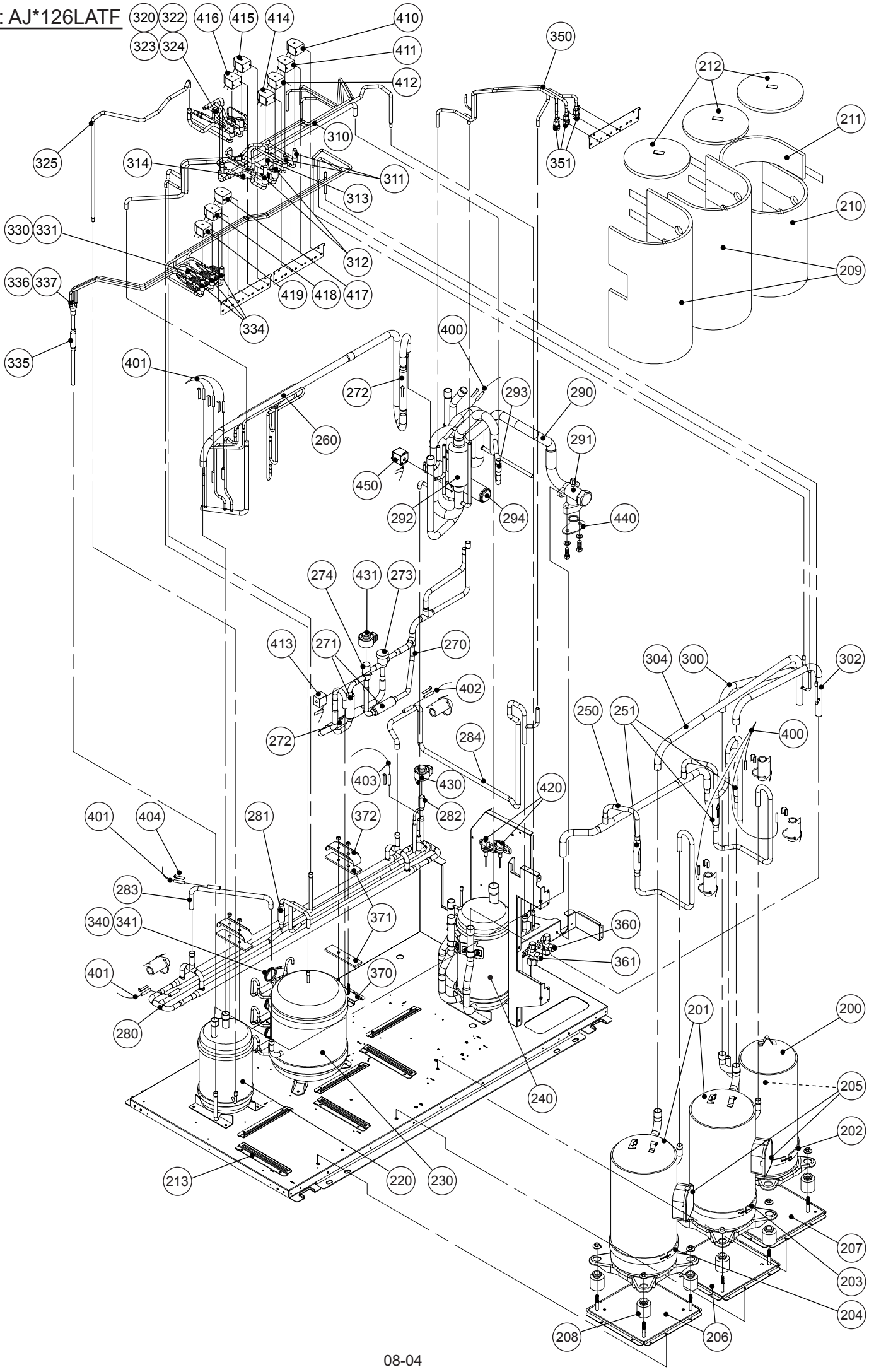
Model : AJ*126LATF



Model : AJ*126LATF



Model : AJ*126LATF



Model : AJ*126LATF

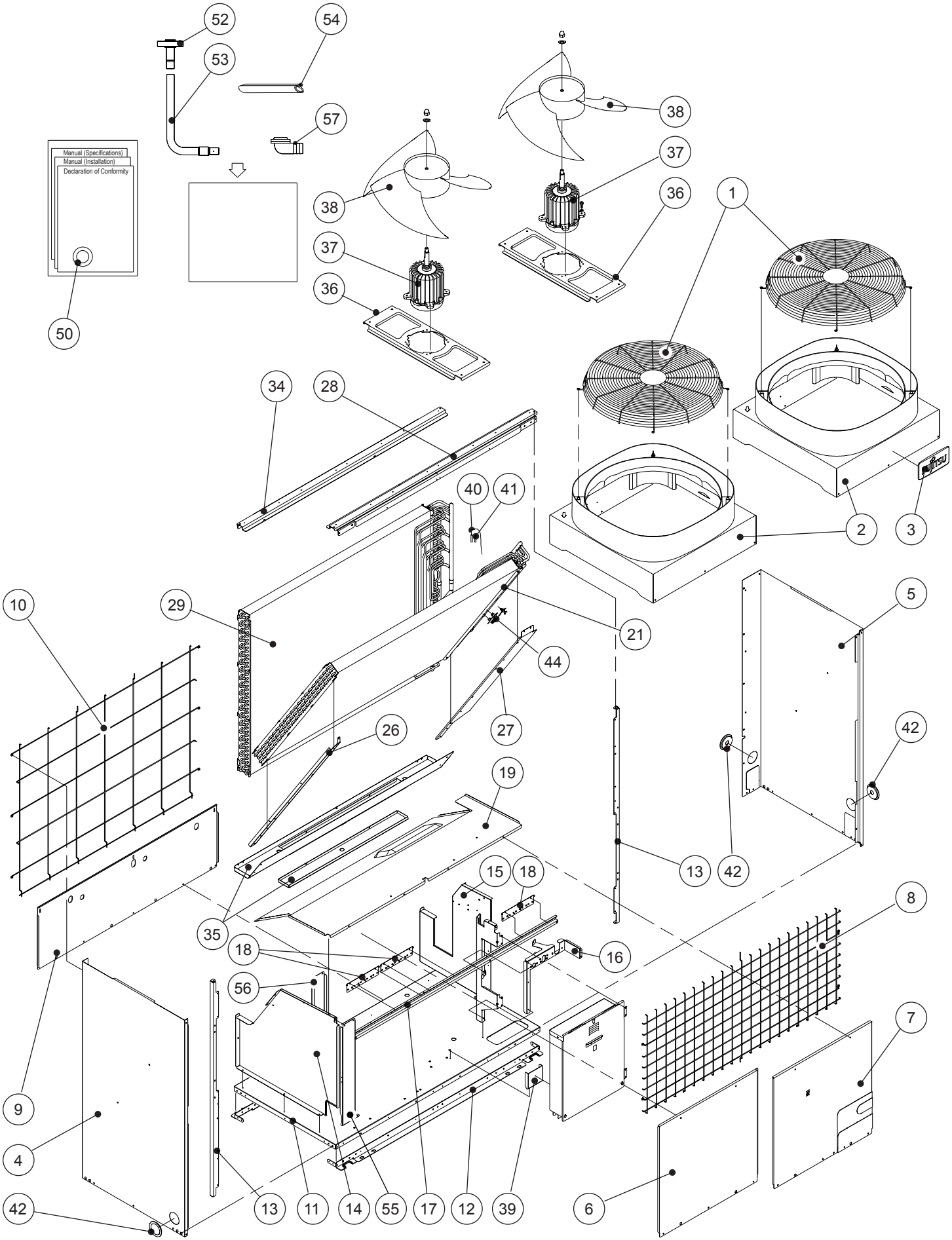
Ref No.	Description	Part No. AJ*126LATF	Ref No.	Description	Part No. AJ*126LATF
1	FAN COVER	9377941015	100	CONTROL BOX	9373932017
2	BELL MOUTH	9361721005	101	CONTROLLER PCB ASSY	9705653023
3	EMBLEM (FUJITSU)	9371388014	102	COMMUNICATION PCB	9704424044
4	SIDE PANEL- L ASSY	9362940023	103	PWB UNIT (CT)	9705702011
5	SIDE PANEL- R ASSY	9362941037	104	CAPACITOR (FAN MOTOR)	9900269180
6	FRONT PANEL- L	9361709027	105	MAGNETIC RELAY	9900116019
7	FRONT PANEL- R	9374339020	106	TERMINAL 5P	9900251017
8	FRONT PROTECTION NET	9377939012	107	TERMINAL 3P	9703345012
9	REAR PANEL ASSY	9362943031	110	CONTROL BOX COVER ASSY	9375204013
10	CONDENSER GUARD	9377940018	111	BAND (CAPACITOR)	9373942023
11	BASE ASSY	9372336021	112	RELAY	9900294014
12	BASE FOOT PAINTED	9361688025	150	CONTROL BOX (INVERTER)	9373935018
13	RFM (SIDE PANEL) ASSY	9362955027	151	HEAT SINK	9374245017
14	SEPARATE WALL- L	9373917014	152	INVERTER PCB ASSY	9705654013
15	SEPARATE WALL- R ASSY	9362948050	153	FILTER PCB ASSY	9705655010
16	BRACKET (VALVE)- A	9373926016	154	REACTOR ASSY	9900252014
17	RFM(SEPARATE WALL)	9361697003	155	RESISTOR,CEMENT	0200441016
18	BRKT PNL (S VLV)	9364230009	156	RESISTOR,CEMENT	0200444017
19	SEPARATE WALL TOP(LEFT) ASSY	9362942041	157	CAPACITOR (INVERTER)	9705387027
20	SEPARATE WALL TOP(RIGHT) ASSY	9362942034	158	BAND (CAPACITOR)	9373942016
21	CONDENSER A SUB ASSY	9362954150	159	FUSE HOLDER	9900260026
26	BRACKET (CONDENSER)-L ASSY	9362958028	160	FUSE	9900259013
27	BRACKET (CONDENSER)-R ASSY	9362959025	161	CONTROL BOX (INVERTER) COVER A	9375205010
28	BRACKET (MOTOR) A ASSY	9362960021			
29	CONDENSER B SUB ASSY	9362956062			
34	BRACKET (MOTOR) B ASSY	9362963022			
35	DRAIN PAN ASSY	9362961028			
36	BRACKET PANEL (MOTOR)	9361703001			
37	FAN MOTOR ASSY-OUTER	9602003013			
38	PROPELLER FAN	9361726000			
39	BRACKET (CONTROL BOX)	9361727007			
40	THERMISTOR (H.E)	9900099039			
41	THERMISTOR SPRING A	313728262708			
42	BUSHING	9361725003			
43	CONTROL BOX (INVERTER) COVER B	9373941019			
44	BRACKET (THERMISTOR)	9373154013			
50	GASKET	9375556013			
51	RESISTOR(WITH CONNECTOR)	9703926013			
52	FLANGE ASSY	9373983026			
54	INSULATION (PIPE) C	9363828009			
55	RFM CHASSIS A	9374790012			
56	RFM CHASSIS B	9374790029			

Model : AJ*126LATF

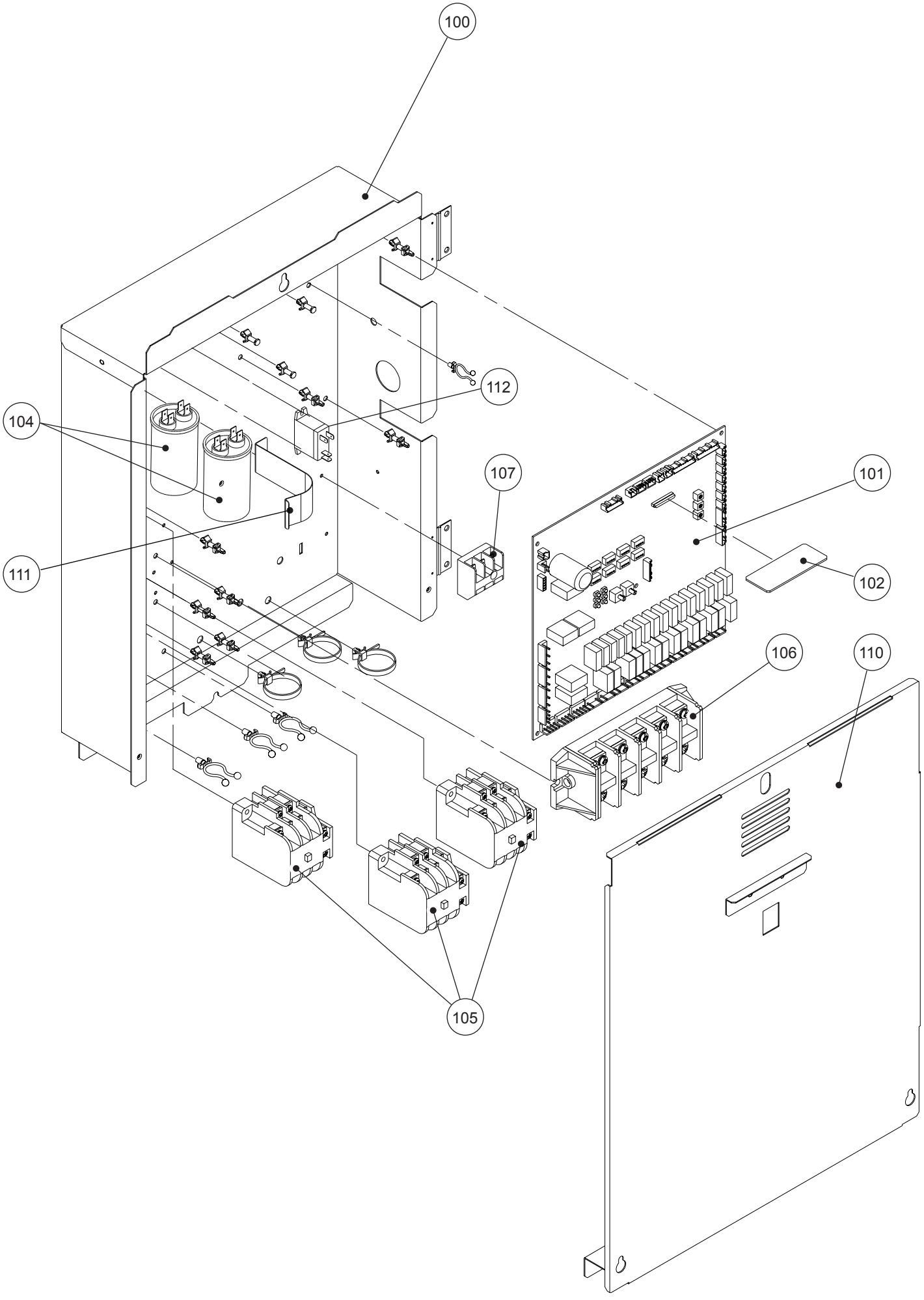
Ref No.	Description	Part No. AJ*126LATF
200	COMPRESSOR ASSY (INVERTER)	9374248018
201	COMPRESSOR ASSY	9374250011
202	BELT HEATER C 240V 25W	9361140073
203	BELT HEATER B 240V 35W	9361140196
204	BELT HEATER C 240V 35W	9361140202
205	TERMINAL COVER (COMP)	9372760017
206	BRKT PNL (COMP) ASSY	9373923015
207	BRKT PNL (COMP) ASSY	9373923022
208	RUBBER SEAT (COMP)	9372761021
209	COMPRESSOR COVER-A	9374243020
210	COMPRESSOR COVER-B (INVERTER)	9374243037
211	COMPRESSOR COVER-C (INVERTER)	9374243044
212	COMPRESSOR COVER-D	9374243013
213	BRACKET (COMPRESSOR)	9361694002
220	OIL SEPARATOR ASSY	9373991021
230	RECEIVER TANK ASSY	9373993025
240	ACCUMULATOR ASSY	9373995036
250	DISCHARGE PIPE ASSY	9375557010
251	CHECK VALVE	9372198056
260	JOINT PIPE E ASSY	9375018016
270	EXPANSION VALVE ASSY	9374811014
271	STRAINER	9371191010
272	CHECK VALVE	9372198063
273	SOLENOID VALVE SV4	9970041013
274	EXPANSION VALVE	9900170035
280	SUB COOL HEX ASSY	9374807017
281	STRAINER ASSY	9372524015
282	EXPANSION VALVE	9900056025
283	JOINT PIPE (SUB COOL HEX) A ASSY	9374381029
284	JOINT PIPE (SUB COOL HEX) B ASSY	9374809011
290	4WAY VALVE ASSY	9374806010
291	3WAY VALVE ASSY (GAS)	9373989035
292	STRAINER	9375130022
293	STRAINER F	9365441008
294	4WAY VALVE	9970042010
300	SUCTION PIPE A ASSY	9375559014
302	SUCTION PIPE B ASSY	9375559021
304	SUCTION PIPE C ASSY	9375559038

Ref No.	Description	Part No. AJ*126LATF
310	BYPASS A ASSY	9374957019
311	SOLENOID VALVE SV1,2	9970038013
312	SOLENOID VALVE SV3,5	9970040016
313	CHECK VALVE	9312268009
314	CAPILLARY ASSY (SV5)	9375636012
320	BYPASS B ASSY	9374959013
322	CAPILLARY TUBE	9374001101
323	CHECK VALVE	9312268009
324	SOLENOID VALVE SV6,7	9970046018
325	JOINT PIPE (BYPASS B)	9375657017
330	OIL RETURN VALVE ASSY	9375561017
331	CAPILLARY TUBE	9374001095
334	SOLENOID VALVE SV8-1,2,3	9970046018
335	STRAINER	9373588122
336	DISTRIBUTOR	9304394006
337	NOZZLE	9304395003
340	CAPILLARY ASSY	9373979029
341	STRAINER	9373588115
350	PRESSURE PORT ASSY	9373969020
351	CHECK JOINT ASSY	9372802038
360	3WAY VALVE ASSY (OIL)	9372205129
361	3WAY VALVE ASSY (LIQUID)	9372205136
370	BRACKET (PIPE BAND) ASSY	9374362011
371	CUSHION	9374366019
372	PIPE BAND	9374365012
400	THERMISTOR (TH1,2,3,11,12) ASSY	9900247010
401	THERMISTOR (TH5,6,7,8,9) ASSY	9900249014
402	THERMISTOR (TH10)	9900099046
403	THERMISTOR (TH13)	9900099053
404	THERMISTOR SPRING A	313728262708
410	SOLENOID SV1	9900189037
411	SOLENOID SV2	9900189044
412	SOLENOID SV3	9970044038
413	SOLENOID SV4	9970044014
414	SOLENOID SV5	9970044021
415	SOLENOID SV6	9900189105
416	SOLENOID SV7	9900189068
417	SOLENOID SV8-1	9900189075
418	SOLENOID SV8-2	9900189082
419	SOLENOID SV8-3	9900189099
420	PRESSURE SENSOR	9900253011
430	COIL (EXPANSION VALVE)	9900197025
431	COIL (EXPANSION VALVE)	9900190040
440	VALVE PLATE	9375555016
450	SOLENOID 4WV	9970045011
	BINDER CB	9374569021
	BINDER LB	9305335008
	PIPE COVER	9363470000
	EMI FILTER	0400056140

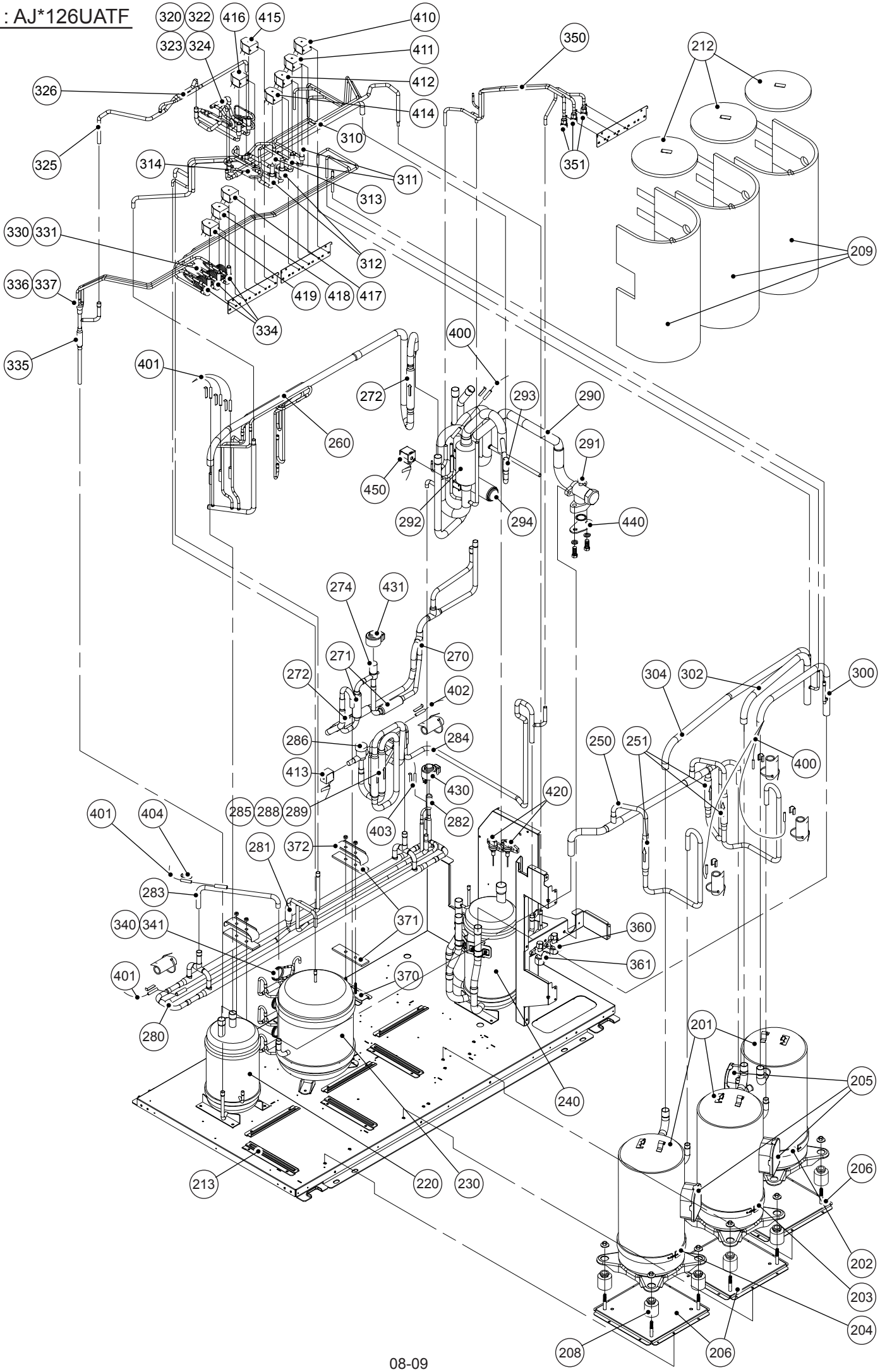
Model : AJ*126UATF



Model : AJ*126UATF



Model : AJ*126UATF



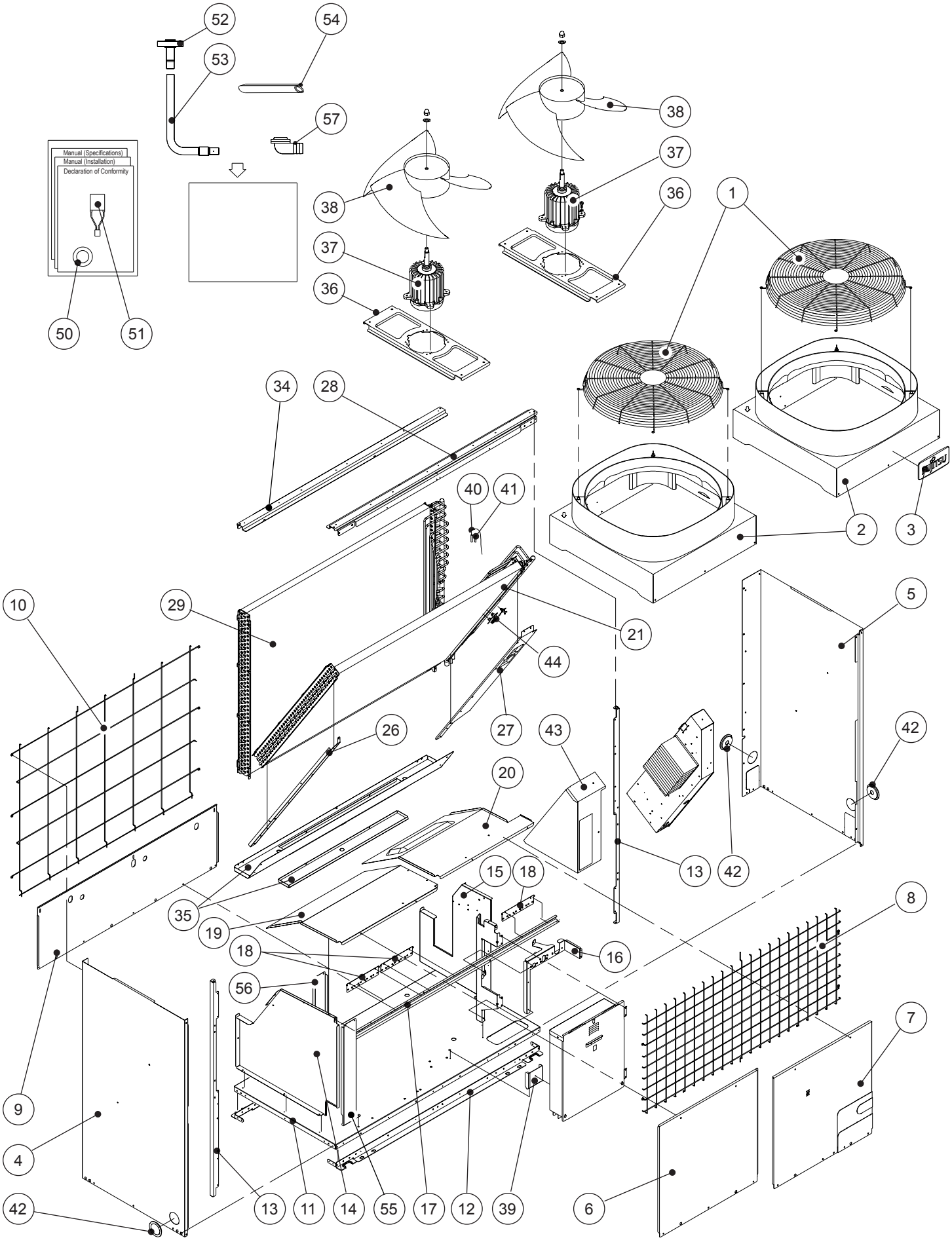
Model : AJ*126UATF

Ref No.	Description	Part No. AJ*126UATF	Ref No.	Description	Part No. AJ*126UATF
1	FAN COVER	9377941015	100	CONTROL BOX	9373932017
2	BELL MOUTH	9361721005	101	CONTROLLER PCB ASSY	9705653023
3	EMBLEM (FUJITSU)	9371388014	102	COMMUNICATION PCB	9704424044
4	SIDE PANEL- L ASSY	9362940023	104	CAPACITOR (FAN MOTOR)	9900269180
5	SIDE PANEL- R ASSY	9362941037	105	MAGNETIC RELAY	9900116019
6	FRONT PANEL- L	9361709027	106	TERMINAL 5P	9900251017
7	FRONT PANEL- R	9374339020	107	TERMINAL 3P	9703345012
8	FRONT PROTECTION NET	9377939012	110	CONTROL BOX COVER ASSY	9375204013
9	REAR PANEL ASSY	9362943031	111	BAND (CAPACITOR)	9373942023
10	CONDENSER GUARD	9377940018	112	RELAY	9900294014
11	BASE ASSY	9372336021			
12	BASE FOOT PAINTED	9361688025			
13	RFM (SIDE PANEL) ASSY	9362955027			
14	SEPARATE WALL- L	9373917014			
15	SEPARATE WALL- R ASSY	9362948050			
16	BRACKET (VALVE)- A	9373926016			
17	RFM(SEPARATE WALL)	9361697003			
18	BRKT PNL (S VLV)	9364230009			
19	SEPARATE WALL TOP ASSY	9362942058			
21	CONDENSER A SUB ASSY	9362954174			
26	BRACKET (CONDENSER)-L ASSY	9362958028			
27	BRACKET (CONDENSER)-R ASSY	9362959032			
28	BRACKET(MOTOR) A ASSY	9362960021			
29	CONDENSER B SUB ASSY	9362956062			
34	BRACKET(MOTOR) B ASSY	9362963022			
35	DRAIN PAN ASSY	9362961028			
36	BRACKET PANEL (MOTOR)	9361703001			
37	FAN MOTOR ASSY-OUTER	9602003013			
38	PROPELLER FAN	9361726000			
39	BRACKET (CONTROL BOX)	9361727007			
40	THERMISTOR (H.E)	9900099039			
41	THERMISTOR SPRING A	313728262708			
42	BUSHING	9361725003			
44	BRACKET (THERMISTOR)	9373154013			
50	GASKET	9375556013			
52	FLANGE ASSY	9373983026			
54	INSULATION (PIPE) C	9363828009			
55	RFM CHASSIS A	9374790012			
56	RFM CHASSIS B	9374790029			

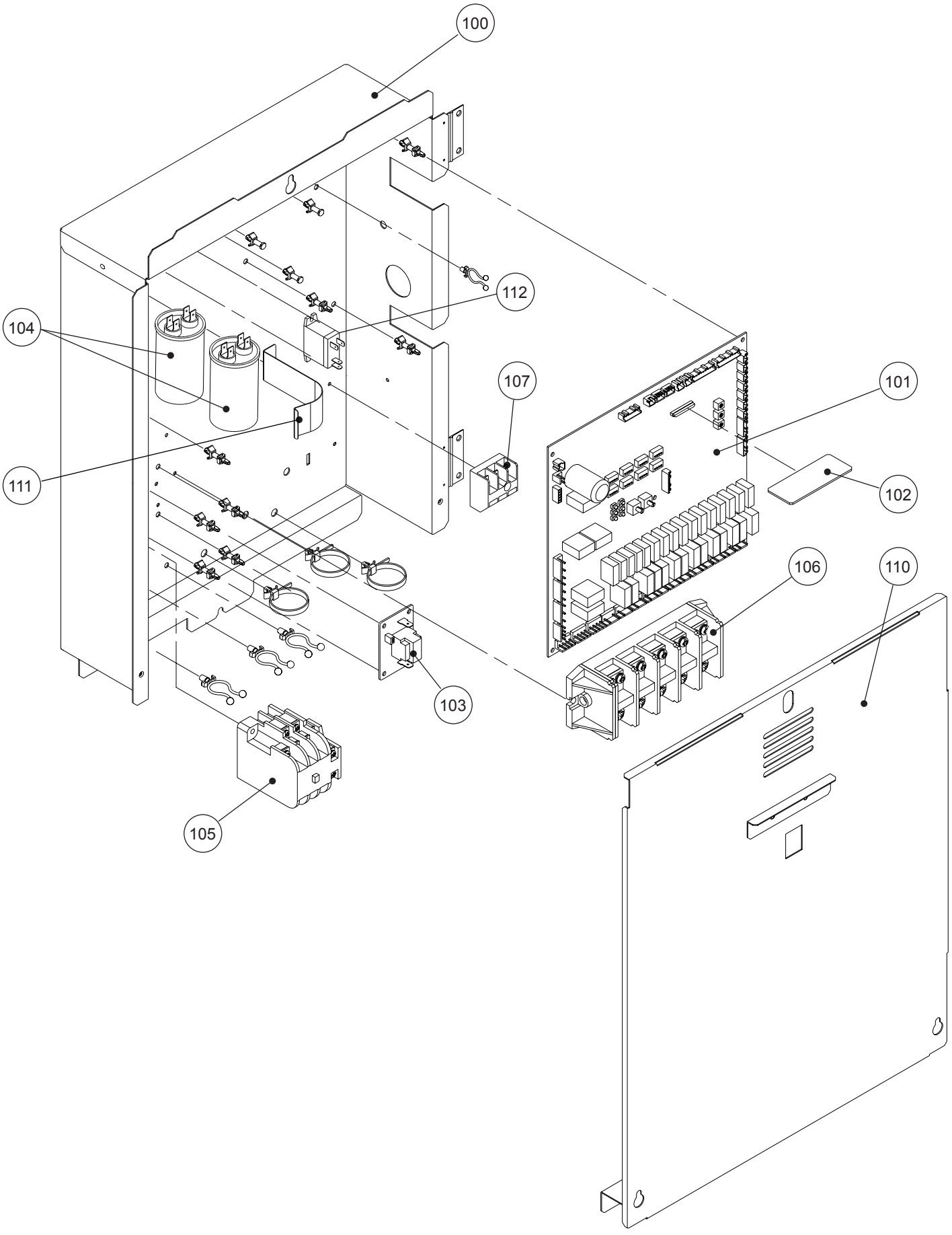
Model : AJ*126UATF

Ref No.	Description	Part No. AJ*126UATF	Ref No.	Description	Part No. AJ*126UATF
201	COMPRESSOR ASSY	9374250011	310	BYPASS A ASSY	9374957019
202	BELT HEATER A 240V 35W	9361140189	311	SOLENOID VALVE SV1,2	9970038013
203	BELT HEATER B 240V 35W	9361140196	312	SOLENOID VALVE SV3,5	9970040016
204	BELT HEATER C 240V 35W	9361140202	313	CHECK VALVE	9312268009
205	TERMINAL COVER (COMP)	9372760017	314	CAPILLARY ASSY (SV5)	9375636012
206	BRKT PNL (COMP) ASSY	9373923015	320	BYPASS B ASSY	9374959013
208	RUBBER SEAT (COMP)	9372761021	322	CAPILLARY TUBE	9374001101
209	COMPRESSOR COVER-A	9374243020	323	CHECK VALVE	9312268009
212	COMPRESSOR COVER-D	9374243013	324	SOLENOID VALVE SV6,7	9970046018
213	BRACKET (COMPRESSOR)	9361694002	325	JOINT PIPE (BYPASS) ASSY	9375657024
220	OIL SEPARATOR ASSY	9373991021	326	CHECK VALVE	9312268009
230	RECEIVER TANK ASSY	9373993025	330	OIL RETURN VALVE ASSY	9375561031
240	ACCUMULATOR ASSY	9373995036	331	CAPILLARY TUBE	9374001095
250	DISCHARGE PIPE ASSY	9375557034	334	SOLENOID VALVE SV8-1,2,3	9970046018
251	CHECK VALVE	9372198056	335	STRAINER	9373588122
260	JOINT PIPE E ASSY	9375018016	336	DISTRIBUTOR	9304394006
270	EXPANSION VALVE ASSY	9374811038	337	NOZZLE	9304395003
271	STRAINER	9371191010	340	CAPILLARY ASSY	9373979029
272	CHECK VALVE	9372198063	341	STRAINER	9373588115
274	EXPANSION VALVE	9900170035	350	PRESSURE PORT ASSY	9373969020
280	SUB COOL HEX ASSY	9374807017	351	CHECK JOINT ASSY	9372802038
281	STRAINER ASSY	9372524015	360	3WAY VALVE ASSY (OIL)	9372205129
282	EXPANSION VALVE	9900056025	361	3WAY VALVE ASSY (LIQUID)	9372205136
283	JOINT PIPE (SUB COOL HEX) A ASSY	9374381029	370	BRACKET (PIPE BAND) ASSY	9374362011
284	JOINT PIPE (SUB COOL HEX) B ASSY	9374809028	371	CUSHION	9374366019
285	CHECK VALVE	9372198063	372	PIPE BAND	9374365012
286	SOLENOID VALVE SV4	9970041013	400	THERMISTOR (TH1,2,3,11,12) ASSY	9900247010
288	STRAINER	9372951033	401	THERMISTOR (TH5,6,7,8,9) ASSY	9900249014
289	RELIEF VALVE	9375660017	402	THERMISTOR (TH10)	9900099046
290	4WAY VALVE ASSY	9374806010	403	THERMISTOR (TH13)	9900099053
291	3WAY VALVE ASSY (GAS)	9373989035	404	THERMISTOR SPRING A	313728262708
292	STRAINER	9375130022	410	SOLENOID SV1	9900189037
293	STRAINER F	9365441008	411	SOLENOID SV2	9900189044
294	4WAY VALVE	9970042010	412	SOLENOID SV3	9970044038
300	SUCTION PIPE A ASSY	9375559045	413	SOLENOID SV4	9970044014
302	SUCTION PIPE B ASSY	9375559052	414	SOLENOID SV5	9970044021
304	SUCTION PIPE C ASSY	9375559069	415	SOLENOID SV6	9900189105
			416	SOLENOID SV7	9900189068
			417	SOLENOID SV8-1	9900189075
			418	SOLENOID SV8-2	9900189082
			419	SOLENOID SV8-3	9900189099
			420	PRESSURE SENSOR	9900253011
			430	COIL (EXPANSION VALVE)	9900197025
			431	COIL (EXPANSION VALVE)	9900190040
			440	VALVE PLATE	9375555016
			450	SOLENOID 4WV	9970045011
				BINDER CB	9374569021
				BINDER LB	9305335008
				PIPE COVER	9363470000

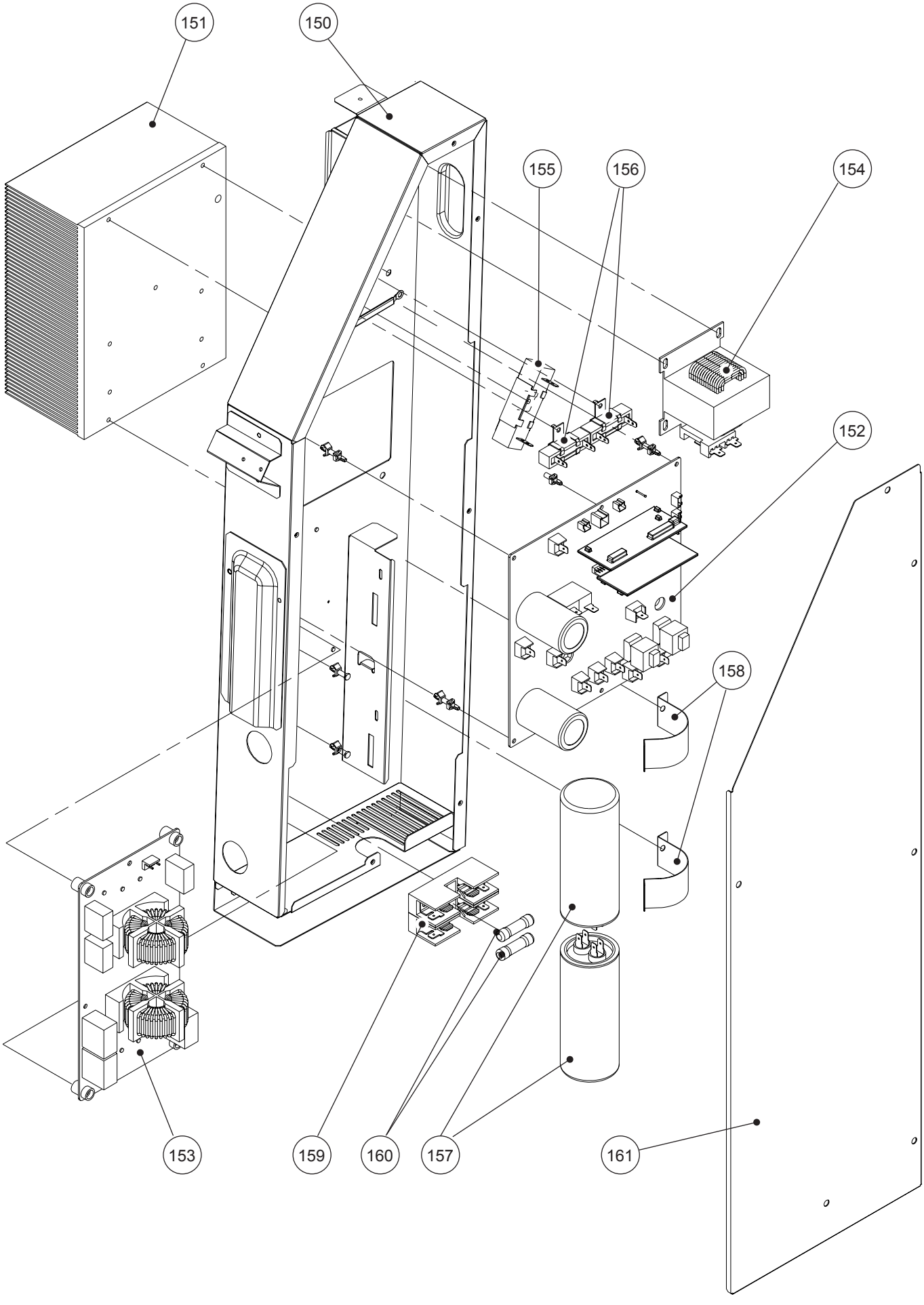
Model : AJ*A90LATF
AJ*A72LATF



Model : AJ*A90LATF
AJ*A72LATF

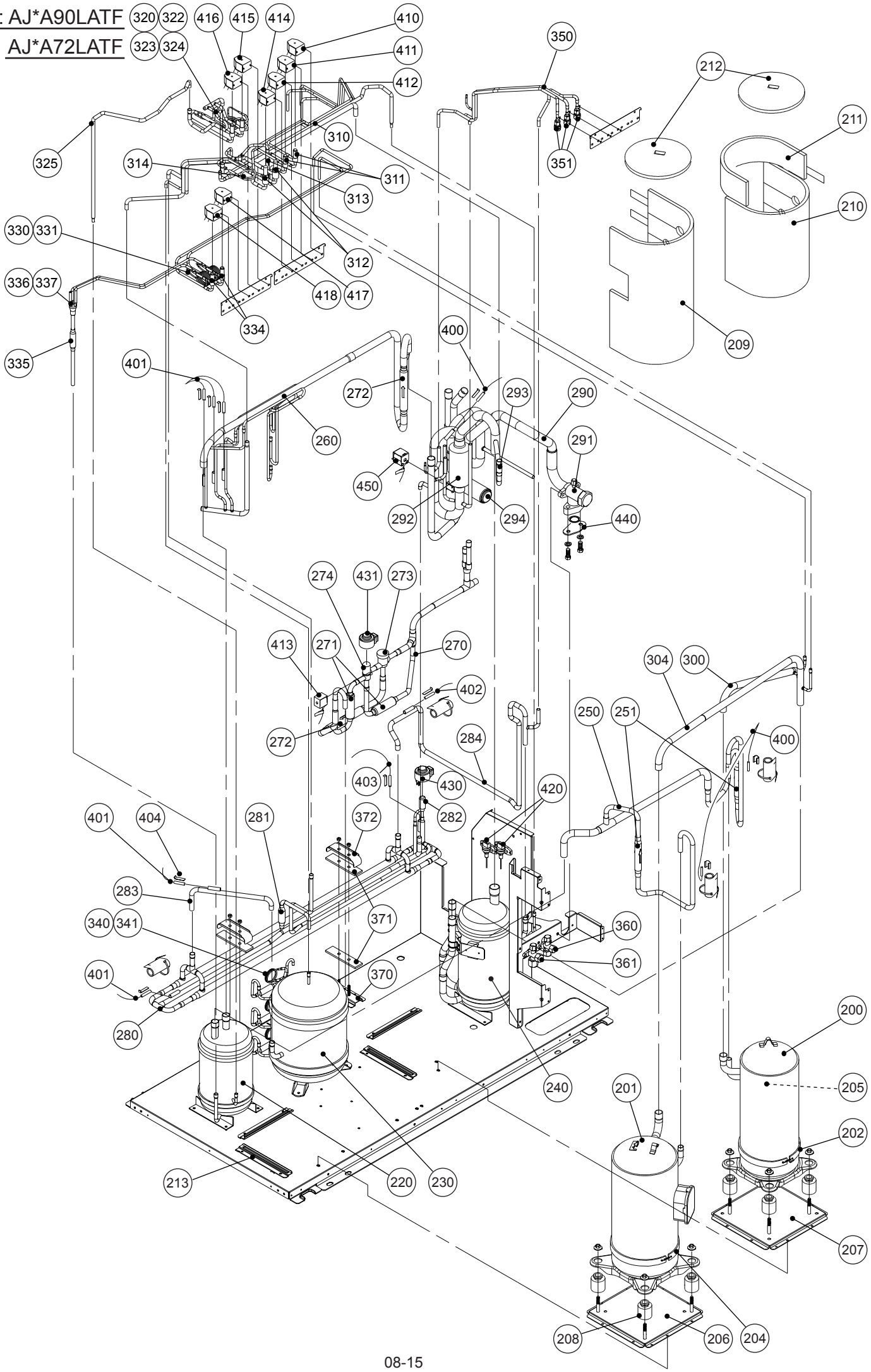


Model : AJ*A90LATF
AJ*A72LATF



Model : AJ*A90LATF

AJ*A72LATF



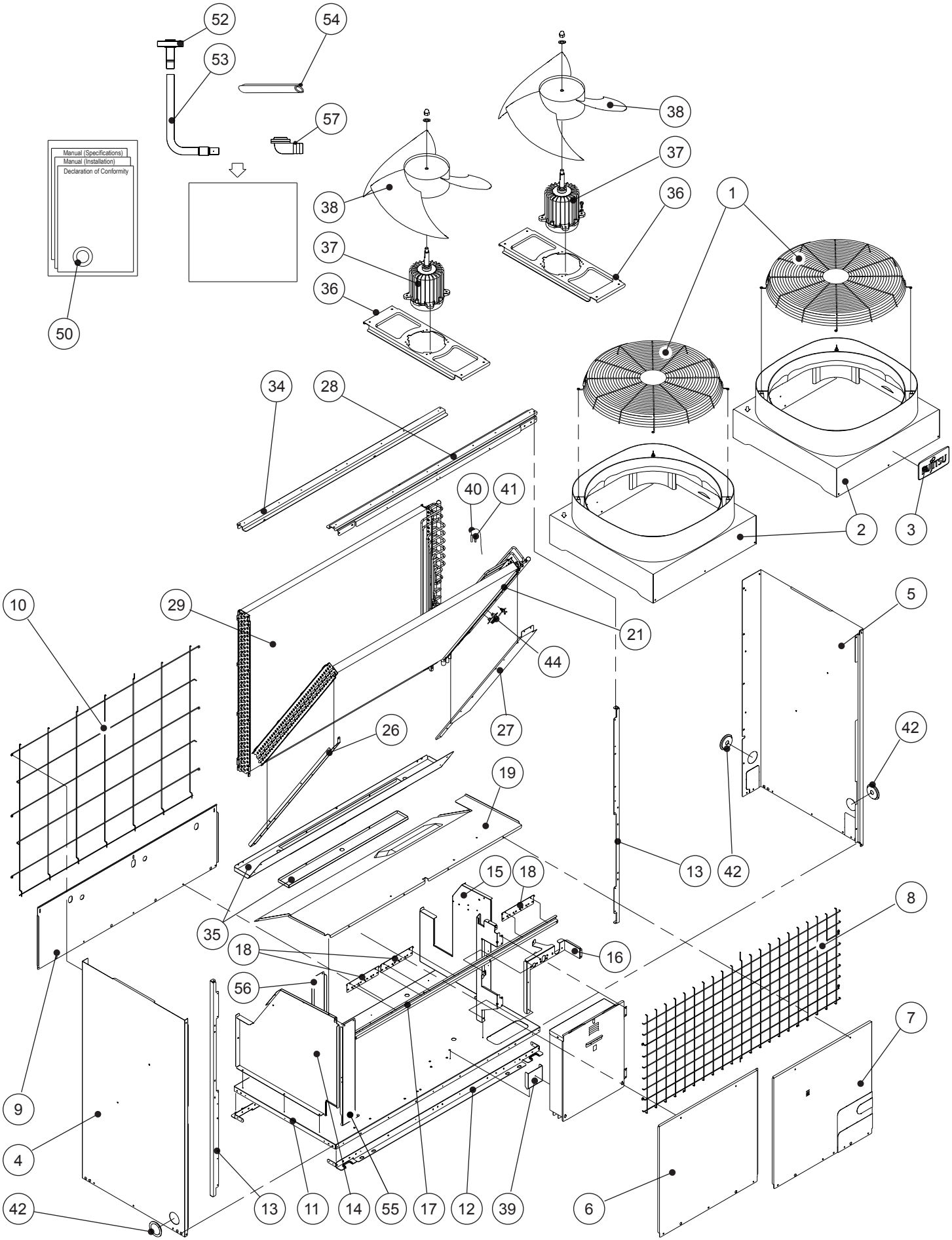
Model : AJ*A90LATF
AJ*A72LATF

Ref No.	Description	Part No. AJ*A90LATF AJ*A72LATF	Ref No.	Description	Part No. AJ*A90LATF AJ*A72LATF
1	FAN COVER	9377941015	100	CONTROL BOX	9373932017
2	BELL MOUTH	9361721005	101	CONTROLLER PCB ASSY	9705653023
3	EMBLEM (FUJITSU)	9371388014	102	COMMUNICATION PCB	9704424044
4	SIDE PANEL- L ASSY	9362940023	103	PWB UNIT (CT)	9705702011
5	SIDE PANEL- R ASSY	9362941037	104	CAPACITOR (FAN MOTOR)	9900269180
6	FRONT PANEL- L	9361709027	105	MAGNETIC RELAY	9900116019
7	FRONT PANEL- R	9374339020	106	TERMINAL 5P	9900251017
8	FRONT PROTECTION NET	9377939012	107	TERMINAL 3P	9703345012
9	REAR PANEL ASSY	9362943031	110	CONTROL BOX COVER ASSY	9375204013
10	CONDENSER GUARD	9377940018	111	BAND (CAPACITOR)	9373942023
11	BASE ASSY	9372336021	112	RELAY	9900294014
12	BASE FOOT PAINTED	9361688025	150	CONTROL BOX (INVERTER)	9373935018
13	RFM (SIDE PANEL) ASSY	9362955027	151	HEAT SINK	9374245017
14	SEPARATE WALL- L	9373917014	152	INVERTER PCB ASSY	9705654013
15	SEPARATE WALL- R ASSY	9362948050	153	FILTER PCB ASSY	9705655010
16	BRACKET (VALVE)- A	9373926016	154	REACTOR ASSY	9900252014
17	RFM(SEPARATE WALL)	9361697003	155	RESISTOR,CEMENT	0200441016
18	BRKT PNL (S VLV)	9364230009	156	RESISTOR,CEMENT	0200444017
19	SEPARATE WALL TOP(LEFT) ASSY	9362942041	157	CAPACITOR (INVERTER)	9705387027
20	SEPARATE WALL TOP(RIGHT) ASSY	9362942034	158	BAND (CAPACITOR)	9373942016
21	CONDENSER A SUB ASSY	9362954167	159	FUSE HOLDER	9900260026
26	BRACKET (CONDENSER)-L ASSY	9362958028	160	FUSE	9900259013
27	BRACKET (CONDENSER)-R ASSY	9362959025	161	CONTROL BOX (INVERTER) COVER A	9375205010
28	BRACKET (MOTOR) A ASSY	9362960021			
29	CONDENSER B SUB ASSY	9362956079			
34	BRACKET (MOTOR) B ASSY	9362963022			
35	DRAIN PAN ASSY	9362961028			
36	BRACKET PANEL (MOTOR)	9361703001			
37	FAN MOTOR ASSY-OUTER	9601698012			
38	PROPELLER FAN	9361726000			
39	BRACKET (CONTROL BOX)	9361727007			
40	THERMISTOR (H.E)	9900099039			
41	THERMISTOR SPRING A	313728262708			
42	BUSHING	9361725003			
43	CONTROL BOX (INVERTER) COVER B	9373941019			
44	BRACKET (THERMISTOR)	9373154013			
50	GASKET	9375556013			
51	RESISTOR(WITH CONNECTOR)	9703926013			
52	FLANGE ASSY	9373983026			
54	INSULATION (PIPE) C	9363828009			
55	RFM CHASSIS A	9374790012			
56	RFM CHASSIS B	9374790029			

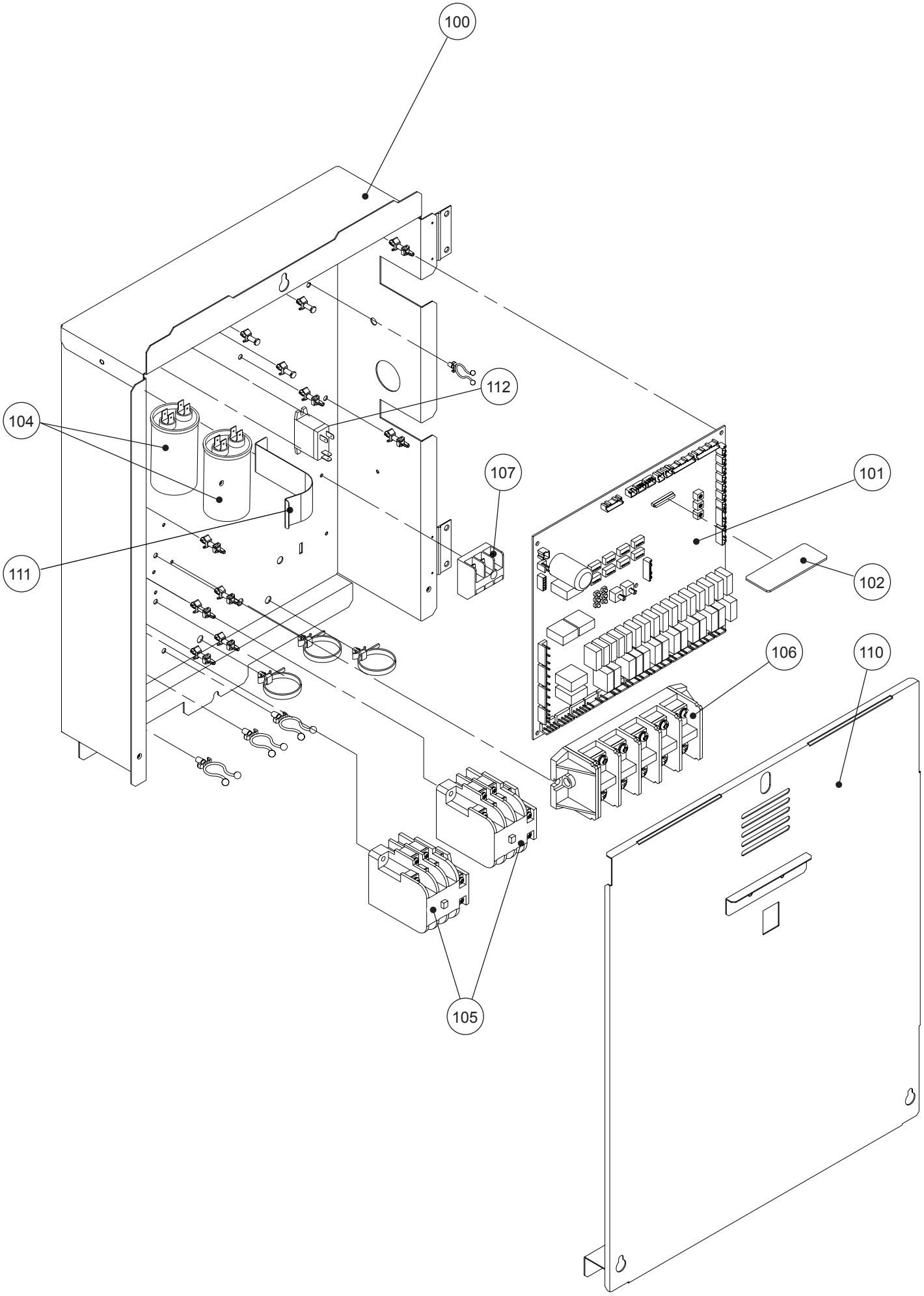
Model : AJ*A90LATF
AJ*A72LATF

Ref No.	Description	Part No. AJ*A90LATF AJ*A72LATF	Ref No.	Description	Part No. AJ*A90LATF AJ*A72LATF
200	COMPRESSOR ASSY (INVERTER)	9374248018	310	BYPASS A ASSY	9374957019
201	COMPRESSOR ASSY	9374250011	311	SOLENOID VALVE SV1,2	9970038013
202	BELT HEATER C 240V 25W	9361140073	312	SOLENOID VALVE SV3,5	9970040016
204	BELT HEATER C 240V 35W	9361140202	313	CHECK VALVE	9312268009
205	TERMINAL COVER (COMP)	9372760017	314	CAPILLARY ASSY (SV5)	9375636012
206	BRKT PNL (COMP) ASSY	9373923015	320	BYPASS B ASSY	9374959013
207	BRKT PNL (COMP) ASSY	9373923022	322	CAPILLARY TUBE	9374001101
208	RUBBER SEAT (COMP)	9372761021	323	CHECK VALVE	9312268009
209	COMPRESSOR COVER-A	9374243020	324	SOLENOID VALVE SV6,7	9970046018
210	COMPRESSOR COVER-B (INVERTER)	9374243037	325	JOINT PIPE (BYPASS B)	9375657017
211	COMPRESSOR COVER-C (INVERTER)	9374243044	330	OIL RETURN VALVE ASSY	9375561024
212	COMPRESSOR COVER-D	9374243013	331	CAPILLARY TUBE	9374001095
213	BRACKET (COMPRESSOR)	9361694002	334	SOLENOID VALVE SV8-1,2	9970046018
220	OIL SEPARATOR ASSY	9373991021	335	STRAINER	9373588122
230	RECEIVER TANK ASSY	9373993025	336	DISTRIBUTOR	9304394006
240	ACCUMULATOR ASSY	9373995043	337	NOZZLE	9304395003
250	DISCHARGE PIPE ASSY	9375557027	340	CAPILLARY ASSY	9373979029
251	CHECK VALVE	9372198056	341	STRAINER	9373588115
260	JOINT PIPE E ASSY	9375018016	350	PRESSURE PORT ASSY	9373969020
270	EXPANSION VALVE ASSY	9374811021	351	CHECK JOINT ASSY	9372802038
271	STRAINER	9371191010	360	3WAY VALVE ASSY (OIL)	9372205129
272	CHECK VALVE	9372198063	361	3WAY VALVE ASSY (LIQUID)	9372205136
273	SOLENOID VALVE SV4	9970041013	370	BRACKET (PIPE BAND) ASSY	9374362011
274	EXPANSION VALVE	9900170035	371	CUSHION	9374366019
280	SUB COOL HEX ASSY	9374807017	372	PIPE BAND	9374365012
281	STRAINER ASSY	9372524015	400	THERMISTOR (TH1,2,11,12) ASSY	9900248017
282	EXPANSION VALVE	9900056025	401	THERMISTOR (TH5,6,7,8,9) ASSY	9900249014
283	JOINT PIPE (SUB COOL HEX) A ASSY	9374381029	402	THERMISTOR (TH10)	9900099046
284	JOINT PIPE (SUB COOL HEX) B ASSY	9374809011	403	THERMISTOR (TH13)	9900099053
290	4WAY VALVE ASSY	9374806010	404	THERMISTOR SPRING A	313728262708
291	3WAY VALVE ASSY (GAS)	9373989035	410	SOLENOID SV1	9900189037
292	STRAINER	9375130022	411	SOLENOID SV2	9900189044
293	STRAINER F	9365441008	412	SOLENOID SV3	9970044038
294	4WAY VALVE	9970042010	413	SOLENOID SV4	9970044014
300	SUCTION PIPE A ASSY	9375559014	414	SOLENOID SV5	9970044021
304	SUCTION PIPE C ASSY	9375559038	415	SOLENOID SV6	9900189105
			416	SOLENOID SV7	9900189068
			417	SOLENOID SV8-1	9900189075
			418	SOLENOID SV8-2	9900189082
			420	PRESSURE SENSOR	9900253011
			430	COIL (EXPANSION VALVE)	9900197025
			431	COIL (EXPANSION VALVE)	9900190040
			440	VALVE PLATE	9375555016
			450	SOLENOID 4WV	9970045011
				BINDER CB	9374569021
				BINDER LB	9305335008
				PIPE COVER	9363470000
				EMI FILTER	0400056140

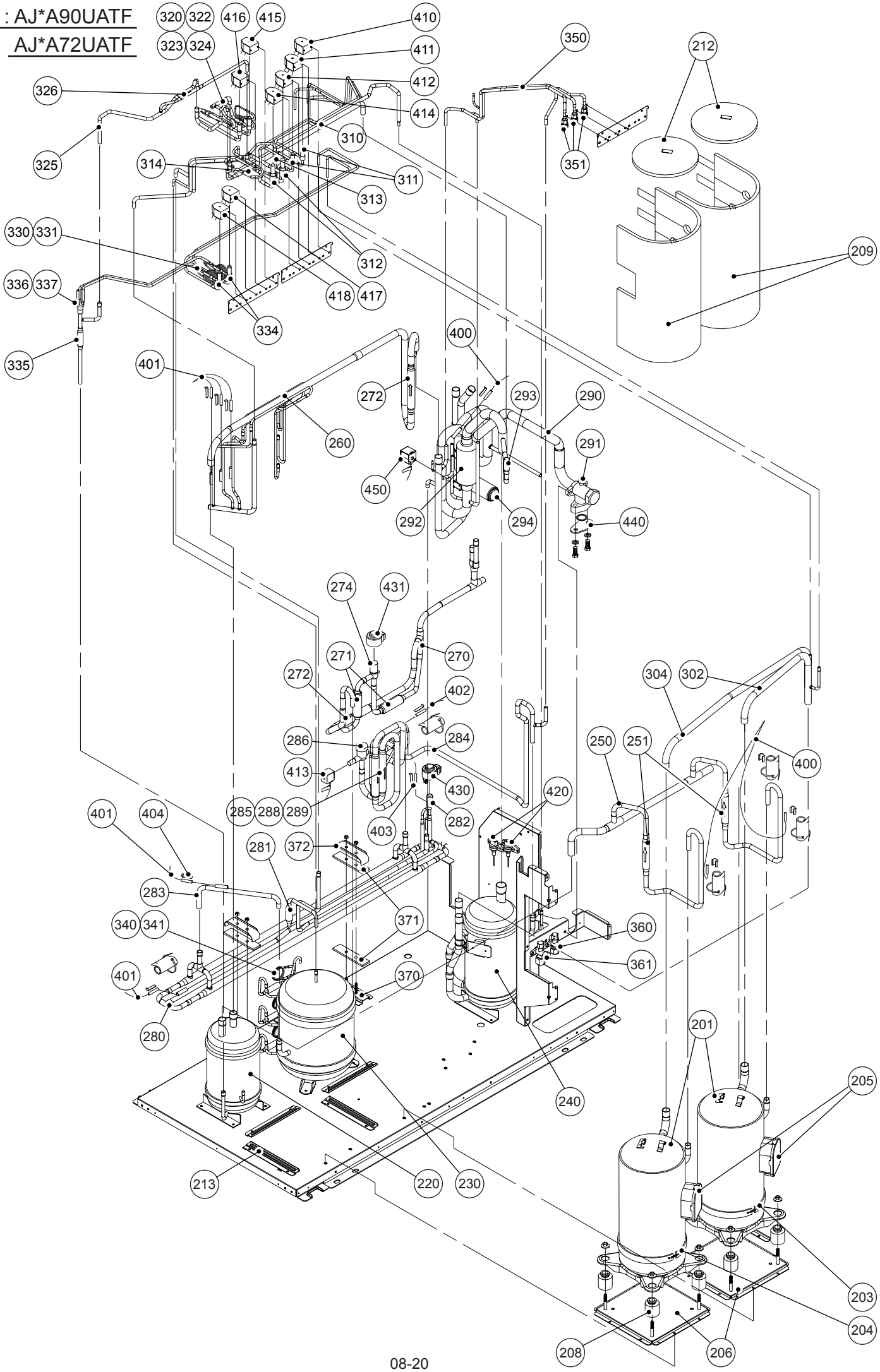
Model : AJ*A90UATF
AJ*A72UATF



Model : AJ*A90UATF
AJ*A72UATF



Model : AJ*A90UATF
AJ*A72UATF



Model : AJ*A90UATF
AJ*A72UATF

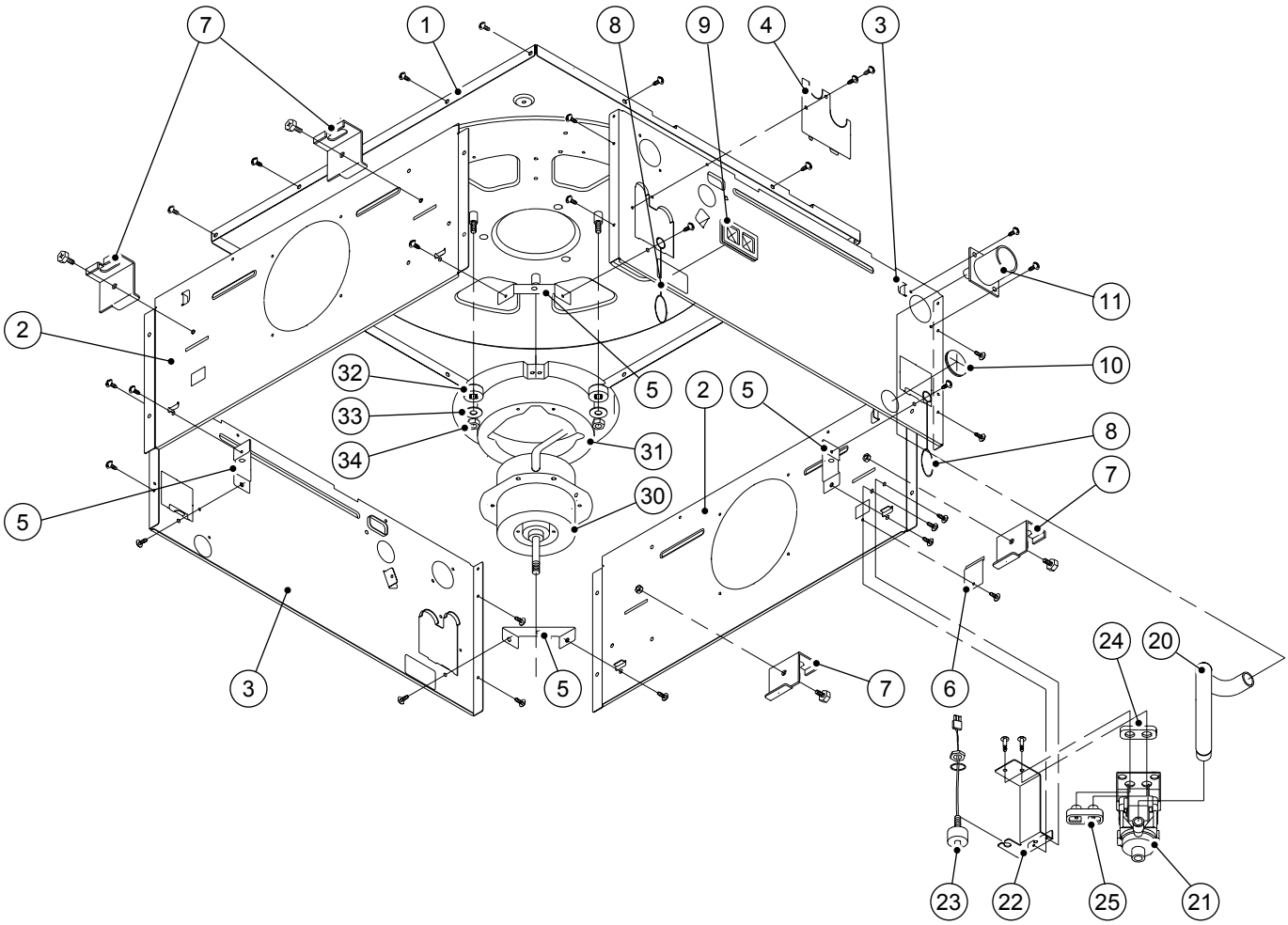
Ref No.	Description	Part No.		Ref No.	Description	Part No.	
		AJ*A90UATF	AJ*A72UATF			AJ*A90UATF	AJ*A72UATF
1	FAN COVER	9377941015	9377941015	100	CONTROL BOX	9373932017	9373932017
2	BELL MOUTH	9361721005	9361721005	101	CONTROLLER PCB ASSY	9705653023	9705653023
3	EMBLEM (FUJITSU)	9371388014	9371388014	102	COMMUNICATION PCB	9704424044	9704424044
4	SIDE PANEL- L ASSY	9362940023	9362940023	104	CAPACITOR (FAN MOTOR)	9900269180	9900269180
5	SIDE PANEL- R ASSY	9362941037	9362941037	105	MAGNETIC RELAY	9900116019	9900116019
6	FRONT PANEL- L	9361709027	9361709027	106	TERMINAL 5P	9900251017	9900251017
7	FRONT PANEL- R	9374339020	9374339020	107	TERMINAL 3P	9703345012	9703345012
8	FRONT PROTECTION NET	9377939012	9377939012	110	CONTROL BOX COVER ASSY	9375204013	9375204013
9	REAR PANEL ASSY	9362943031	9362943031	111	BAND (CAPACITOR)	9373942023	9373942023
10	CONDENSER GUARD	9377940018	9377940018	112	RELAY	9900294014	9900294014
11	BASE ASSY	9372336021	9372336021				
12	BASE FOOT PAINTED	9361688025	9361688025				
13	RFM (SIDE PANEL) ASSY	9362955027	9362955027				
14	SEPARATE WALL- L	9373917014	9373917014				
15	SEPARATE WALL- R ASSY	9362948050	9362948050				
16	BRACKET (VALVE)- A	9373926016	9373926016				
17	RFM(SEPARATE WALL)	9361697003	9361697003				
18	BRKT PNL (S VLV)	9364230009	9364230009				
19	SEPARATE WALL TOP ASSY	9362942058	9362942058				
21	CONDENSER A SUB ASSY	9362954181	9362954181				
26	BRACKET (CONDENSER)-L ASSY	9362958028	9362958028				
27	BRACKET (CONDENSER)-R ASSY	9362959032	9362959032				
28	BRACKET(MOTOR) A ASSY	9362960021	9362960021				
29	CONDENSER B SUB ASSY	9362956079	9362956079				
34	BRACKET(MOTOR) B ASSY	9362963022	9362963022				
35	DRAIN PAN ASSY	9362961028	9362961028				
36	BRACKET PANEL (MOTOR)	9361703001	9361703001				
37	FAN MOTOR ASSY-OUTER	9601698012	9601698012				
38	PROPELLER FAN	9361726000	9361726000				
39	BRACKET (CONTROL BOX)	9361727007	9361727007				
40	THERMISTOR (H.E)	9900099039	9900099039				
41	THERMISTOR SPRING A	313728262708	313728262708				
42	BUSHING	9361725003	9361725003				
44	BRACKET (THERMISTOR)	9373154013	9373154013				
50	GASKET	9375556013	9375556013				
52	FLANGE ASSY	9373983026	9373983026				
54	INSULATION (PIPE) C	9363828009	9363828009				
55	RFM CHASSIS A	9374790012	9374790012				
56	RFM CHASSIS B	9374790029	9374790029				

Model : AJ*A90UATF
AJ*A72UATF

Ref No.	Description	Part No.		Ref No.	Description	Part No.	
		AJ*A90UATF	AJ*A72UATF			AJ*A90UATF	AJ*A72UATF
201	COMPRESSOR ASSY	9374250011	9374251018	310	BYPASS A ASSY	9374957019	9374957019
203	BELT HEATER B 240V 35W	9361140196	9361140196	311	SOLENOID VALVE SV1,2	9970038013	9970038013
204	BELT HEATER C 240V 35W	9361140202	9361140202	312	SOLENOID VALVE SV3,5	9970040016	9970040016
205	TERMINAL COVER (COMP)	9372760017	9372760017	313	CHECK VALVE	9312268009	9312268009
206	BRKT PNL (COMP) ASSY	9373923015	9373923015	314	CAPILLARY ASSY (SV5)	9375636012	9375636029
208	RUBBER SEAT (COMP)	9372761021	9372761014	320	BYPASS B ASSY	9374959013	9374959013
209	COMPRESSOR COVER-A	9374243020	9374243020	322	CAPILLARY TUBE	9374001101	9374001101
212	COMPRESSOR COVER-D	9374243013	9374243013	323	CHECK VALVE	9312268009	9312268009
213	BRACKET (COMPRESSOR)	9361694002	9361694002	324	SOLENOID VALVE SV6,7	9970046018	9970046018
220	OIL SEPARATOR ASSY	9373991021	9373991021	325	JOINT PIPE (BYPASS) ASSY	9375657024	9375657024
230	RECEIVER TANK ASSY	9373993025	9373993025	326	CHECK VALVE	9312268009	9312268009
240	ACCUMULATOR ASSY	9373995043	9373995043	330	OIL RETURN VALVE ASSY	9375561048	9375561048
250	DISCHARGE PIPE ASSY	9375557041	9375557041	331	CAPILLARY TUBE	9374001095	9374001095
251	CHECK VALVE	9372198056	9372198056	334	SOLENOID VALVE SV8-1,2	9970046018	9970046018
260	JOINT PIPE E ASSY	9375018016	9375018016	335	STRAINER	9373588122	9373588122
270	EXPANSION VALVE ASSY	9374811045	9374811045	336	DISTRIBUTOR	9304394006	9304394006
271	STRAINER	9371191010	9371191010	337	NOZZLE	9304395003	9304395003
272	CHECK VALVE	9372198063	9372198063	340	CAPILLARY ASSY	9373979029	9373979029
274	EXPANSION VALVE	9900170035	9900170035	341	STRAINER	9373588115	9373588115
280	SUB COOL HEX ASSY	9374807017	9374807017	350	PRESSURE PORT ASSY	9373969020	9373969020
281	STRAINER ASSY	9372524015	9372524015	351	CHECK JOINT ASSY	9372802038	9372802038
282	EXPANSION VALVE	9900056025	9900056025	360	3WAY VALVE ASSY (OIL)	9372205129	9372205129
283	JOINT PIPE (SUB COOL HEX) A ASSY	9374381029	9374381029	361	3WAY VALVE ASSY (LIQUID)	9372205136	9372205136
284	JOINT PIPE (SUB COOL HEX) B ASSY	9374809028	9374809028	370	BRACKET (PIPE BAND) ASSY	9374362011	9374362011
285	CHECK VALVE	9372198063	9372198063	371	CUSHION	9374366019	9374366019
286	SOLENOID VALVE SV4	9970041013	9970041013	372	PIPE BAND	9374365012	9374365012
288	STRAINER	9372951033	9372951033	400	THERMISTOR (TH1,2,11,12) ASSY	9900248017	9900248017
289	RELIEF VALVE	9375660017	9375660017	401	THERMISTOR (TH5,6,7,8,9) ASSY	9900249014	9900249014
290	4WAY VALVE ASSY	9374806010	9374806010	402	THERMISTOR (TH10)	9900099046	9900099046
291	3WAY VALVE ASSY (GAS)	9373989035	9373989035	403	THERMISTOR (TH13)	9900099053	9900099053
292	STRAINER	9375130022	9375130022	404	THERMISTOR SPRING A	313728262708	313728262708
293	STRAINER F	9365441008	9365441008	410	SOLENOID SV1	9900189037	9900189037
294	4WAY VALVE	9970042010	9970042010	411	SOLENOID SV2	9900189044	9900189044
302	SUCTION PIPE B ASSY	9375559052	9375559052	412	SOLENOID SV3	9970044038	9970044038
304	SUCTION PIPE C ASSY	9375559069	9375559069	413	SOLENOID SV4	9970044014	9970044014
				414	SOLENOID SV5	9970044021	9970044021
				415	SOLENOID SV6	9900189105	9900189105
				416	SOLENOID SV7	9900189068	9900189068
				417	SOLENOID SV8-1	9900189075	9900189075
				418	SOLENOID SV8-2	9900189082	9900189082
				420	PRESSURE SENSOR	9900253011	9900253011
				430	COIL (EXPANSION VALVE)	9900197025	9900197025
				431	COIL (EXPANSION VALVE)	9900190040	9900190040
				440	VALVE PLATE	9375555016	9375555016
				450	SOLENOID 4WV	9970045011	9970045011
					BINDER CB	9374569021	9374569021
					BINDER LB	9305335008	9305335008
					PIPE COVER	9363470000	9363470000

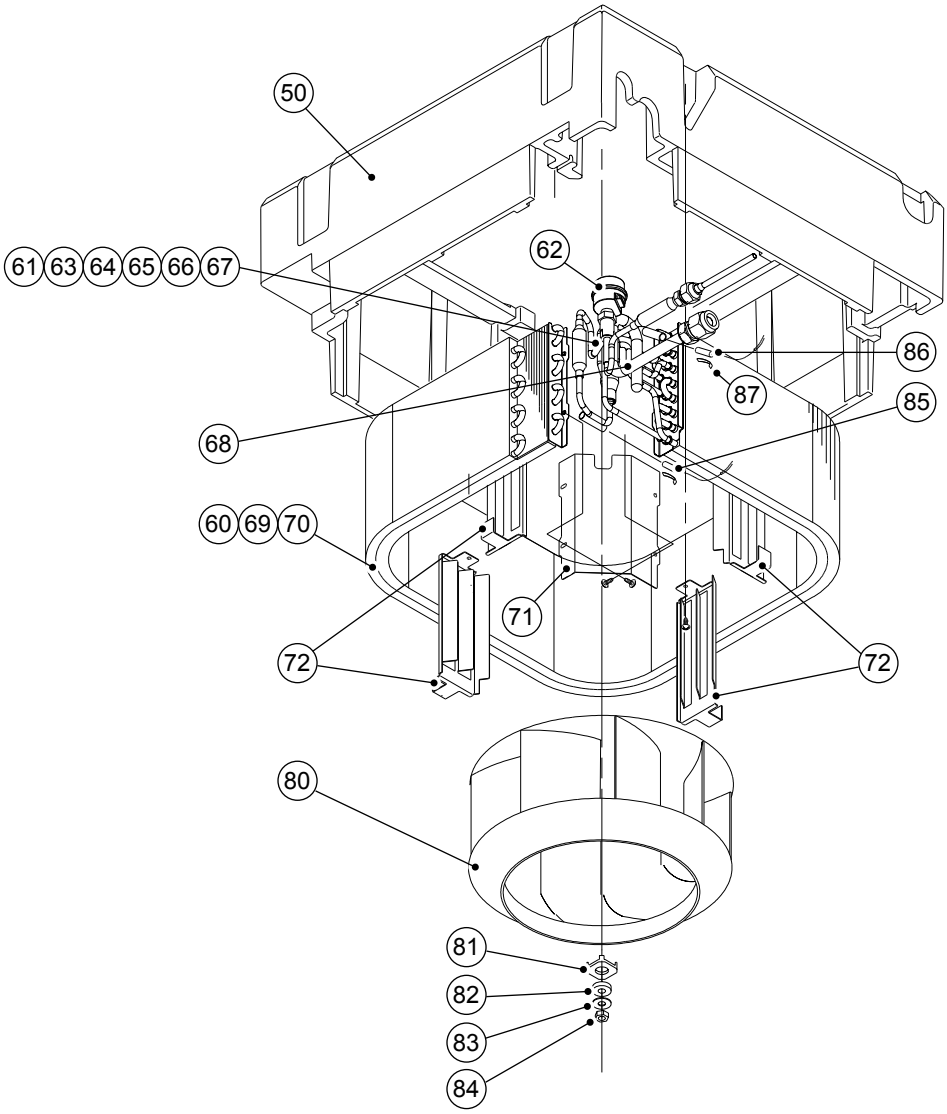
8-2 INDOOR UNIT

MODELS : AUXB07, AUXB09, AUXB12
AUXB14, AUXB18



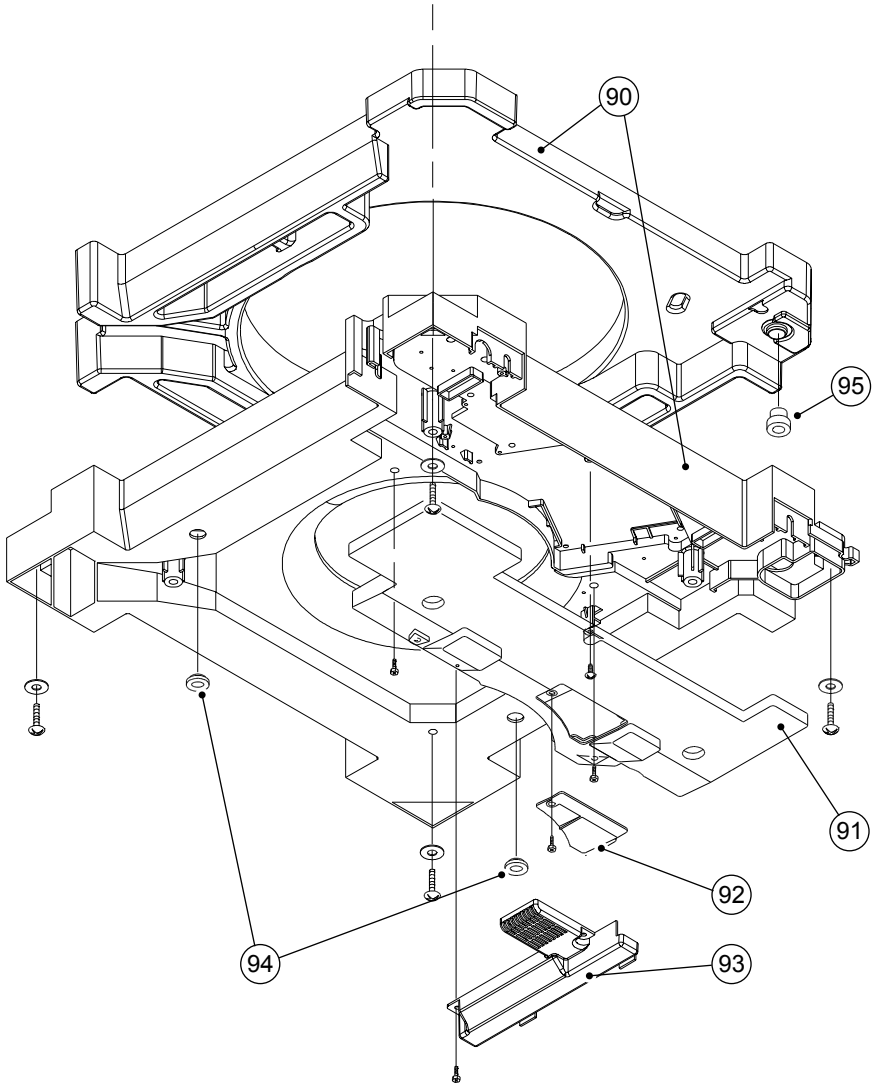
Ref No.	Description	Parts No.					Q'ty
		AUXB07	AUXB09	AUXB12	AUXB14	AUXB18	
1	TOP COVER PLATE	9359642015	9359642015	9359642015	9359642015	9359642015	
2	CABINET A ASSY	9359643005	9359643005	9359643005	9359643005	9359643005	
3	CABINET B	9359645009	9359645009	9359645009	9359645009	9359645009	
4	PIPE COVER ASSY	9372658017	9372658017	9372658017	9372658017	9372658017	
5	SUPPORTER A	9359655008	9359655008	9359655008	9359655008	9359655008	
6	CABINET E SUB ASSY	9370114010	9370114010	9370114010	9370114010	9370114010	
7	HANGER METAL	9359644002	9359644002	9359644002	9359644002	9359644002	
8	HOOKING WIRE	9357224008	9357224008	9357224008	9357224008	9357224008	
9	RUBBER BUSHING	9357376004	9357376004	9357376004	9357376004	9357376004	
10	CAP (POWER)	9352173011	9352173011	9352173011	9352173011	9352173011	
11	DRAINPORT	313005415658	313005415658	313005415658	313005415658	313005415658	
20	DRAIN HOSE	9370452006	9370452006	9370452006	9370452006	9370452006	
21	PUMP UNIT	9900360016	9900360016	9900360016	9900360016	9900360016	
22	DRAIN PUMP HOLDER	9375368012	9375368012	9375368012	9375368012	9375368012	
23	FLOAT SWITCH	9900361013	9900361013	9900361013	9900361013	9900361013	
24	CUSHION(PUMP) A	9352211003	9352211003	9352211003	9352211003	9352211003	
25	CUSHION(PUMP) B ASSY	9356084016	9356084016	9356084016	9356084016	9356084016	
30	FAN MOTOR ASSY-IN	9601040040	9601040040	9601040019	9601040019	9601040026	
31	MOTOR FIXTURE	9359656005	9359656005	9359656005	9359656005	9359656005	
32	RUBBER	9361279001	9361279001	9361279001	9361279001	9361279001	
33	WASHER	0700132247	0700132247	0700132247	0700132247	0700132247	
34	FLANGE NUT-SERRATED	9385194014	9385194014	9385194014	9385194014	9385194014	

MODELS : AUXB07, AUXB09, AUXB12
AUXB14, AUXB18



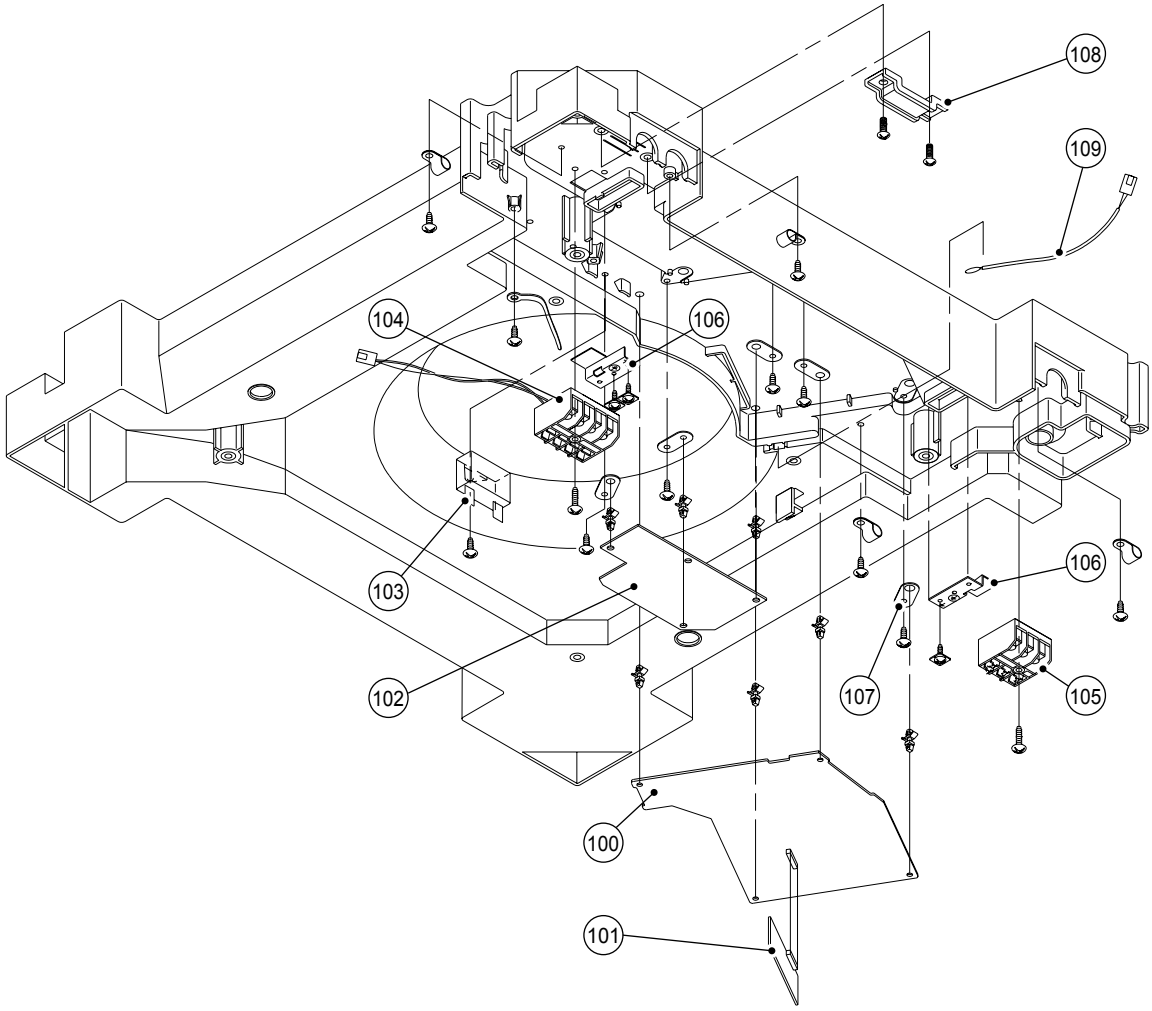
Ref No.	Description	Parts No.					Q'ty
		AUXB07	AUXB09	AUXB12	AUXB14	AUXB18	
50	INSULATION (INSIDE BOX) SUB ASSY	9370761016	9370761016	9370761016	9370761016	9370761016	
60	EVAPORATOR ASSY	9375640019	9375640019	9375640019	9375640019	9375640019	
61	DISTRIBUTOR ASSY	9370116120	9370116120	9370116113	9370116113	9370116106	
62	EXPANSION VALVE	9970014031	9970014031	9966302025	9966302025	9366302025	
63	STRAINER K	9373588016	9373588016	9373588016	9373588016	————	
64	STRAINER T	————	————	————	————	9373588108	
65	STRAINER M	9373588030	9373588030	9373588030	9373588030	9373588030	
66	DISTRIBUTOR	9304394006	9304394006	9304394006	9304394006	9304394006	
67	NOZZLE	9368874001	9368874001	9368874001	9368874001	9368874001	
68	COUPLING PIPE ASSY	9370117127	9370117127	9370117110	9370117110	9370117103	
69	U PIPE A ASSY	9303428016	9303428016	9303428016	9303428016	9303428016	
70	U PIPE B ASSY	9303430019	9303430019	9303430019	9303430019	9303430019	
71	SEPARATE WALL A	9370071009	9370071009	9370071009	9370071009	9370071009	
72	EVA HOLDER	9370077001	9370077001	9370077001	9370077001	9370077001	
80	TURBO FAN	9370074000	9370074000	9370074000	9370074000	9370074000	
81	SPECIAL WASHER	9359954002	9359954002	9359954002	9359954002	9359954002	
82	TURBO FAN RUBBER	9366013006	9366013006	9366013006	9366013006	9366013006	
83	WASHER	0700132223	0700132223	0700132223	0700132223	0700132223	
84	M8 NUT	0700005534	0700005534	0700005534	0700005534	0700005534	
85	THERMISTOR (PIPE)	9900220037	9900220037	9900220037	9900220037	9900220037	
86	THERMISTOR (PIPE)	9703297090	9703297090	9703297090	9703297090	9703297090	
87	THERMO.SPRING-A	313728262708	313728262708	313728262708	313728262708	313728262708	

MODELS : AUXB07, AUXB09, AUXB12
AUXB14, AUXB18



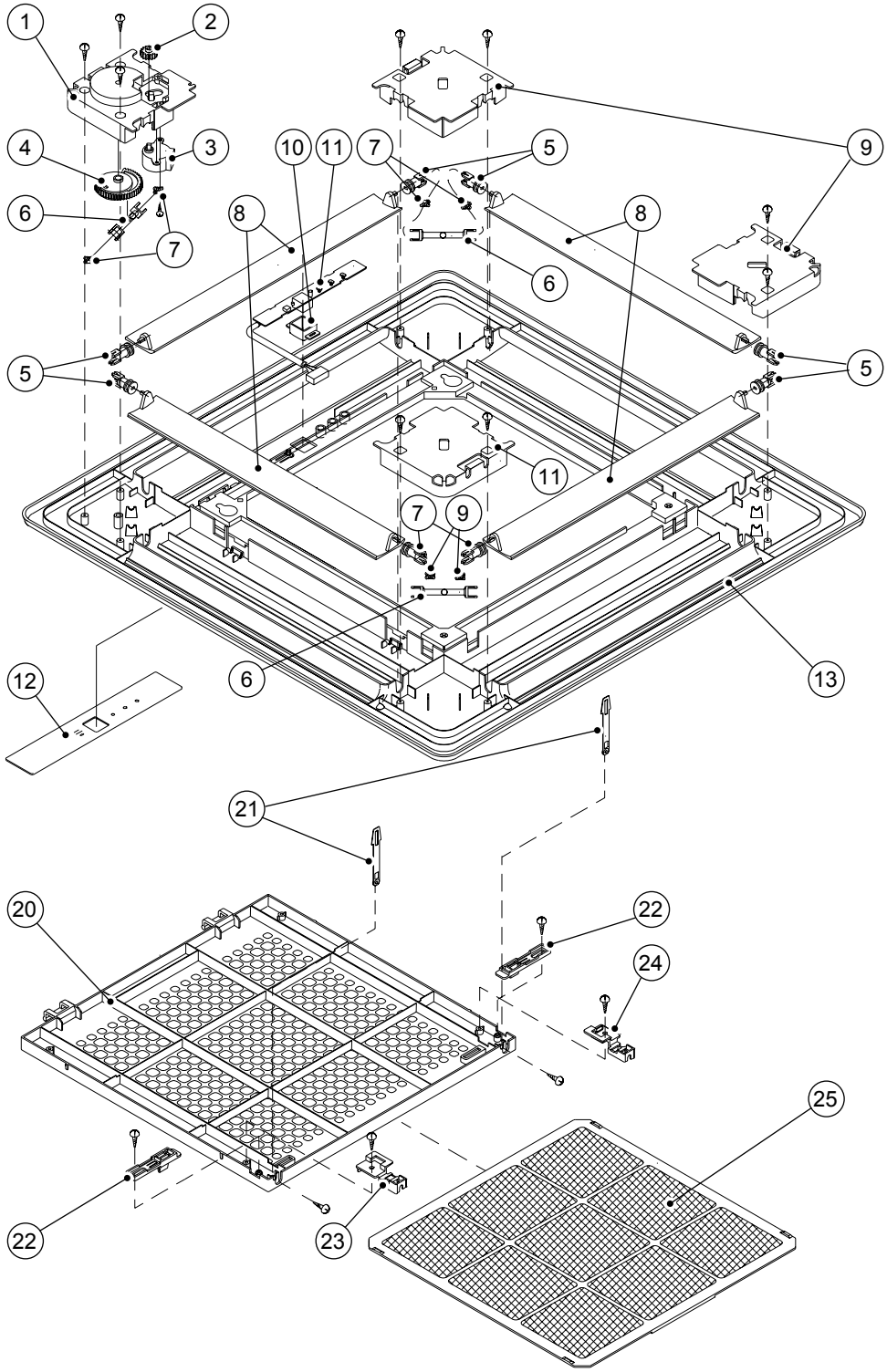
Ref No.	Description	Parts No.					Q'ty
		AUXB07	AUXB09	AUXB12	AUXB14	AUXB18	
90	DRAIN PAN SUB ASSY	9370122015	9370122015	9370122015	9370122015	9370122015	
91	CONTROL BOX COVER	9370084009	9370084009	9370084009	9370084009	9370084009	
92	COVER	9370085006	9370085006	9370085006	9370085006	9370085006	
93	WIRE COVER	9377818010	9377818010	9377818010	9377818010	9377818010	
94	DRAIN PAN PLUG	9359653004	9359653004	9359653004	9359653004	9359653004	
95	DRAIN PAN PLUG	313005174654	313005174654	313005174654	313005174654	313005174654	

MODELS : AUXB07, AUXB09, AUXB12
AUXB14, AUXB18



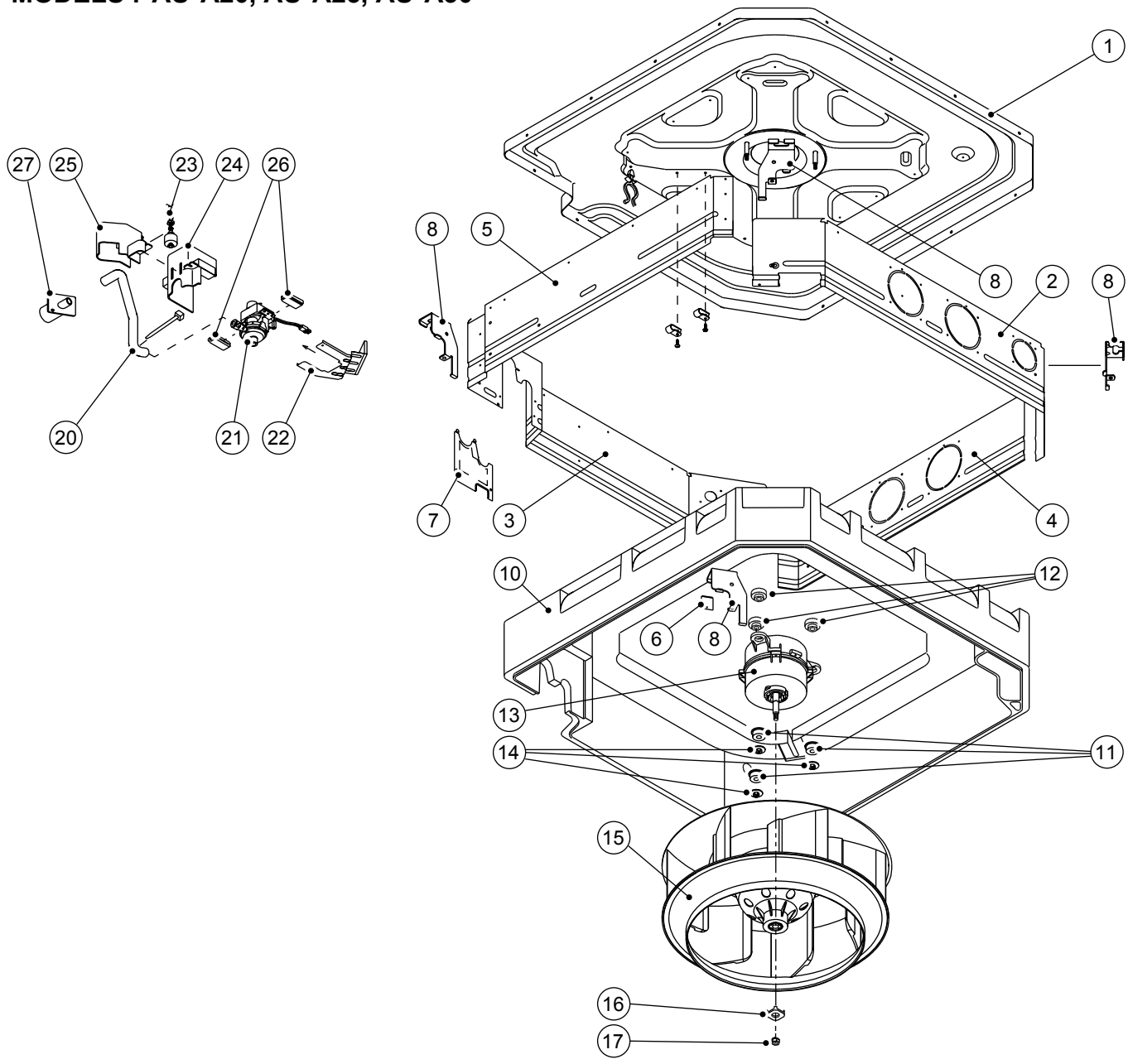
Ref No.	Description	Parts No.					Q'ty
		AUXB07	AUXB09	AUXB12	AUXB14	AUXB18	
100	CONTROLLER PCB ASSY	9707514018	9707514018	9707514018	9707514018	9707514018	
101	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044	9704424044	
102	FILTER PCB ASSY	9704799074	9704799074	9704799074	9704799074	9704799074	
103	CAPACITOR	9900284022	9900284022	9900284022	9900284022	9900284022	
104	TERMINAL 4P	9306488109	9306488109	9306488109	9306488109	9306488109	
105	TERMINAL 3P	9703345012	9703345012	9703345012	9703345012	9703345012	
106	EARTH PLATE	9357957005	9357957005	9357957005	9357957005	9357957005	
107	RFM(PWB)	9370451009	9370451009	9370451009	9370451009	9370451009	
108	CORD CLAMP A	9359820017	9359820017	9359820017	9359820017	9359820017	
109	THERMISTOR (ROOM)	9703299186	9703299186	9703299186	9703299186	9703299186	
	FUSE	0600222512	0600222512	0600222512	0600222512	0600222512	
	FUSE HOLDER	0500158072	0500158072	0500158072	0500158072	0500158072	
	VARISTOR(ARRESTER)	0600168032	0600168032	0600168032	0600168032	0600168032	
	PCB ASSY-F (C+P)	9704793270	9704793270	9704793270	9704793270	9704793270	

MODELS : UTG-UD*D-W



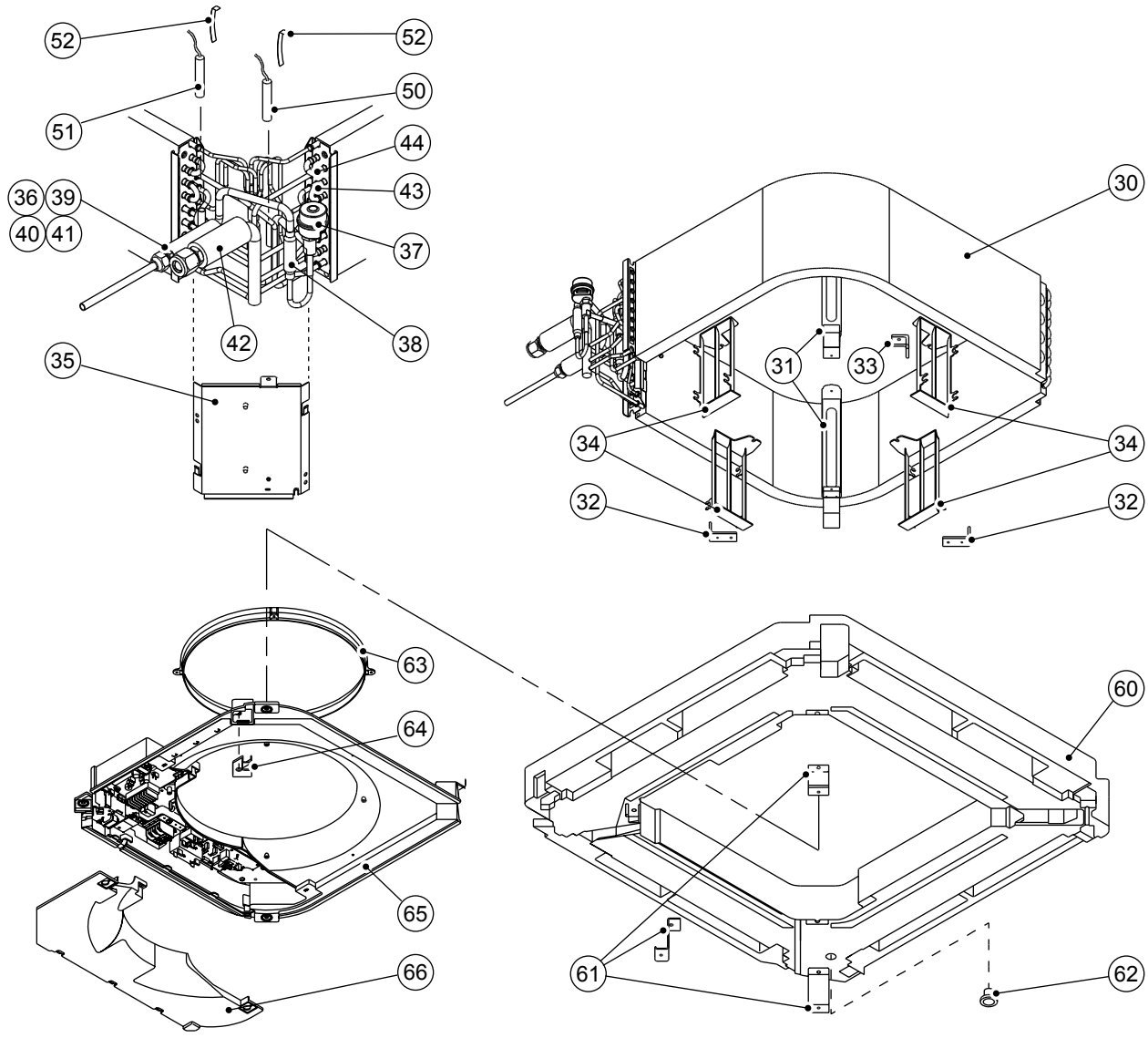
Ref No.	Description	Parts No. UTG-UD*D-W	Q'ty	Ref No.	Description	Parts No. UTG-UD*D-W	Q'ty
1	MOTOR COVER	9359623014		11	INDICATOR PCB ASSY	9705891012	
2	MOTOR GEAR	9359629009		12	DECORATION PLATE-A	9360039019	
3	STEP MOTOR	9900362027		13	PANEL	9359619017	
4	CAM GEAR	9359628002		20	INTAKE GRILLE	9370126006	
5	JOINT-A	9359626008		21	GRILLE HOOK	9359761006	
6	JOINT-B	9359627005		22	GRILLE STOPPER	9359633013	
7	JOINT SHAFT	9359625001		23	FILTER HOLDER-A	9359634003	
8	LOUVER	9374951017		24	FILTER HOLDER-B	9359635000	
9	COVER-A (FOR JOINT)	9359622017		25	FILTER	9359632009	
10	RECEIVER COVER	9359630005					

MODELS : AU*A20, AU*A25, AU*A30



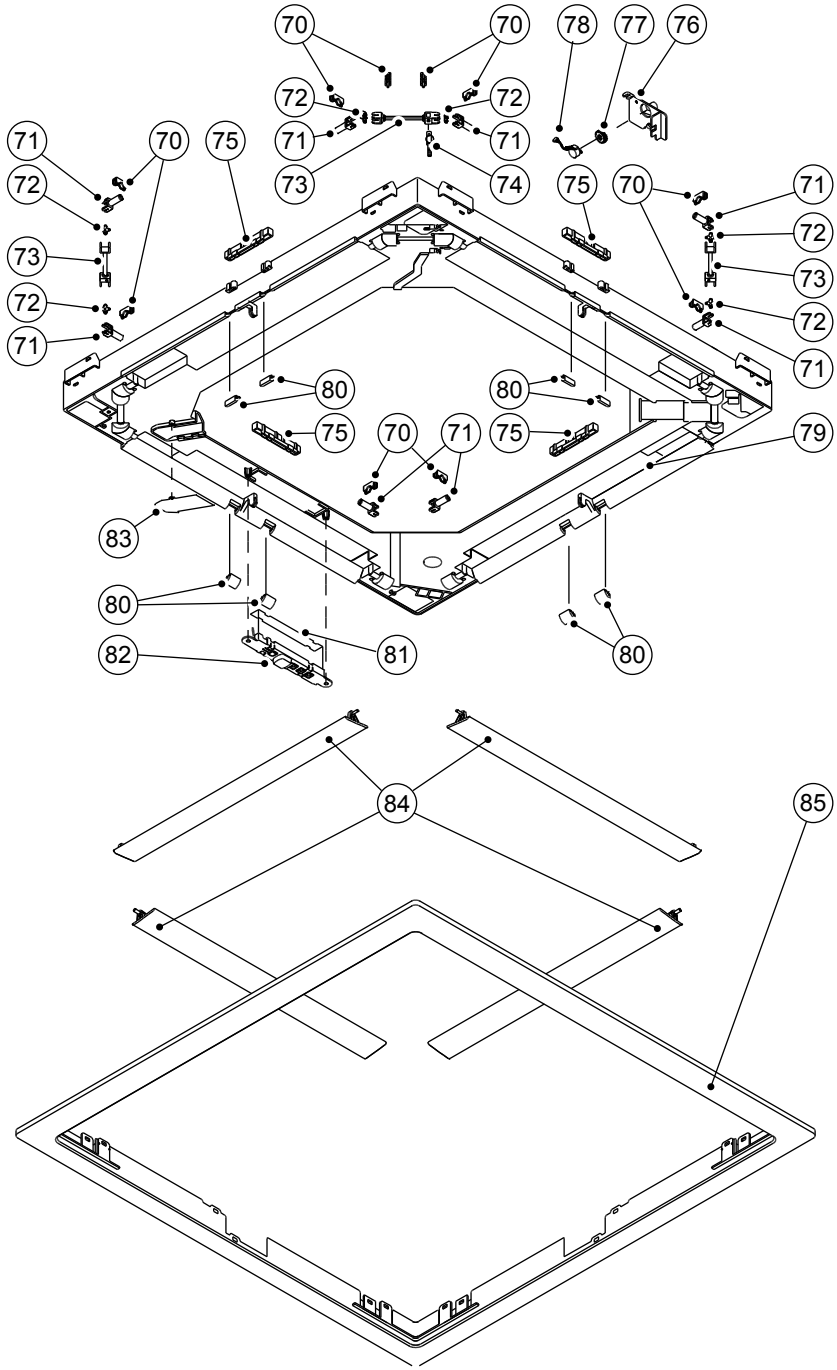
Ref No.	Description	Parts No.					Q'ty
		AU*A20	AU*A25	AU*A30			
1	TOP COVER PLATE ASSY	9362806022	9362806022	9362806022			
2	CABINET A ASSY	9362807012	9362807012	9362807012			
3	CABINET B ASSY	9362808019	9362808019	9362808019			
4	CABINET C	9362791007	9362791007	9362791007			
5	CABINET D	9362792004	9362792004	9362792004			
6	CABINET E	9362735001	9362735001	9362735001			
7	PIPE COVER	9362748001	9362748001	9362748001			
8	HOOK	9362736008	9362736008	9362736008			
10	INSULATION (INNER BOX)	9362797009	9362797009	9362797009			
11	RUBBER (VIB PROOF)A	9364891002	9364891002	9364891002			
12	RUBBER (VIB PROOF)B	9364892009	9364892009	9364892009			
13	FAN MOTOR ASSY-IN	9601558019	9601558019	9601558019			
14	SPECIAL NUT	9307615016	9307615016	9307615016			
15	TURBO FAN ASSY	9362810012	9362810012	9362810012			
16	WASHER (TURBO FAN)	9362756006	9362756006	9362756006			
17	HEX NUT (SPG LCK WAS)	9375072018	9375072018	9375072018			
20	DRAIN HOSE	9365074008	9365074008	9365074008			
21	PUMP UNIT	9900360030	9900360030	9900360030			
22	PUMP HOOK BRACKET	9362753005	9362753005	9362753005			
23	FLOAT SWITCH	9900361020	9900361020	9900361020			
24	PUMP COVER-A	9362775007	9362775007	9362775007			
25	PUMP COVER-B	9362776004	9362776004	9362776004			
26	CUSHION RUBBER (PUMP)	9362777001	9362777001	9362777001			
27	DRAINPORT	9362786003	9362786003	9362786003			

MODELS : AU*A20, AU*A25, AU*A30



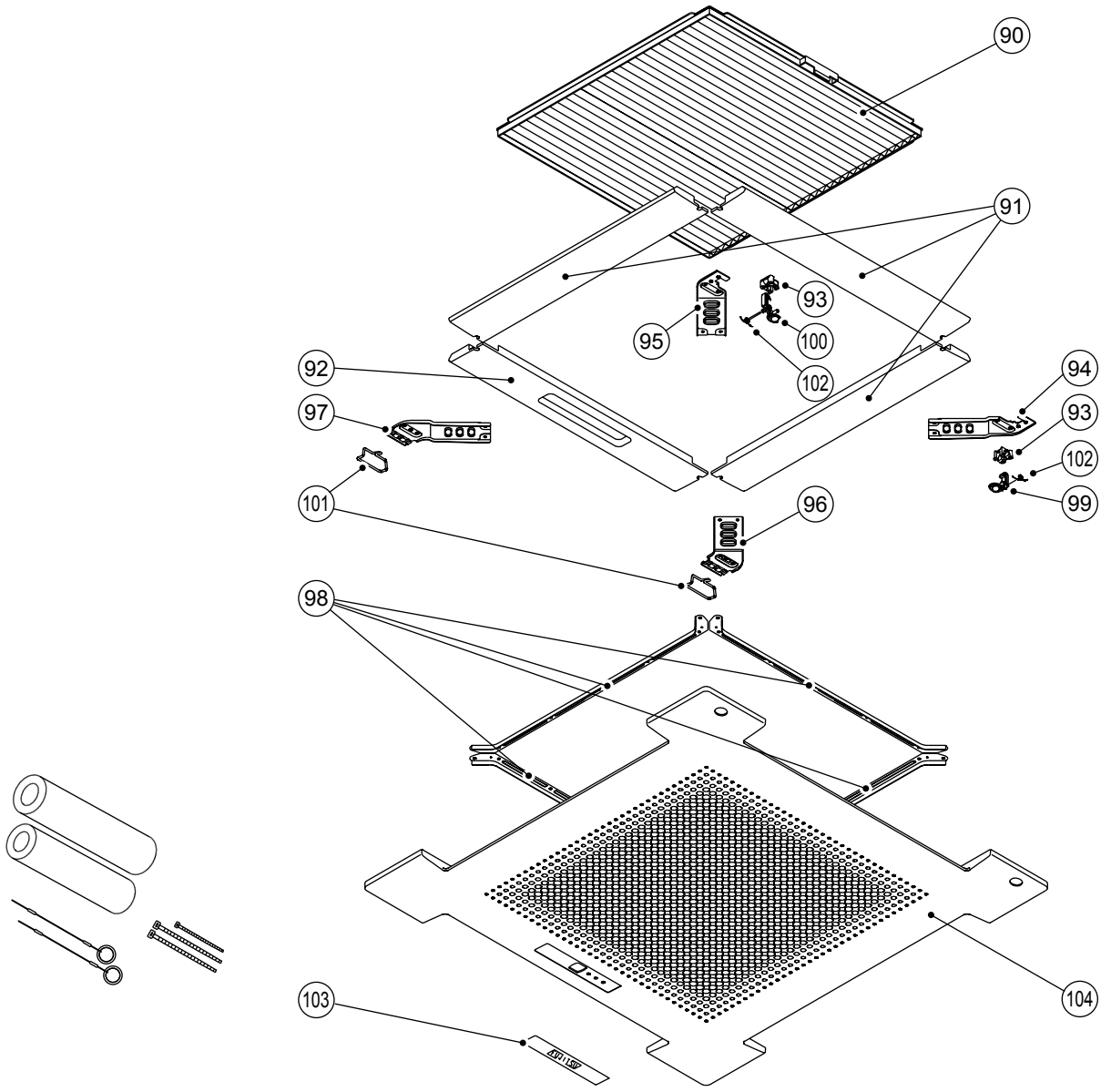
Ref No.	Description	Parts No.					Q'ty
		AU*A20	AU*A25	AU*A30			
30	EVAPORATOR SUB ASSY	9362817295	9362817295	9362817295			
31	EVA HOLDER ASSY	9362802024	9362802024	9362802024			
32	REINFORCEMENT (EVA)-A	9362749008	9362749008	9362749008			
33	REINFORCEMENT (EVA)-B	9362750004	9362750004	9362750004			
34	WIND GUIDE BOARD	9373444015	9373444015	9373444015			
35	SEPARATE WALL	9362793001	9362793001	9362793001			
36	DISTRIBUTOR ASSY	9371325194	9371325194	9371325194			
37	EXPANSION VALVE	9366302025	9366302025	9366302025			
38	STRAINER Q	9373588078	9373588078	9373588078			
39	STRAINER N	9373588047	9373588047	9373588047			
40	DISTRIBUTOR	9369128004	9369128004	9369128004			
41	NOZZLE	9368874001	9368874001	9368874001			
42	COUPLING PIPE ASSY	9371333106	9371333106	9371333106			
43	U PIPE A ASSY	9303428016	9303428016	9303428016			
44	U PIPE B ASSY	9303430019	9303430019	9303430019			
50	THERMISTOR (PIPE)	9900220020	9900220020	9900220020			
51	THERMISTOR (PIPE)	9703297014	9703297014	9703297014			
52	THERMO.SPRING-A	313728262708	313728262708	313728262708			
60	DRAIN PAN ASSY	9370934014	9370934014	9370934014			
61	REINFORCEMENT	9362757003	9362757003	9362757003			
62	DRAIN PAN PLUG	313005174654	313005174654	313005174654			
63	BELL-MOUTH (B)	9362774000	9362774000	9362774000			
64	WIRE COVER-A	9362789004	9362789004	9362789004			
65	CONTROL BOX	9362762007	9362762007	9362762007			
66	CONTROL BOX COVER	9362763004	9362763004	9362763004			

MODELS : AU*A20, AU*A25, AU*A30



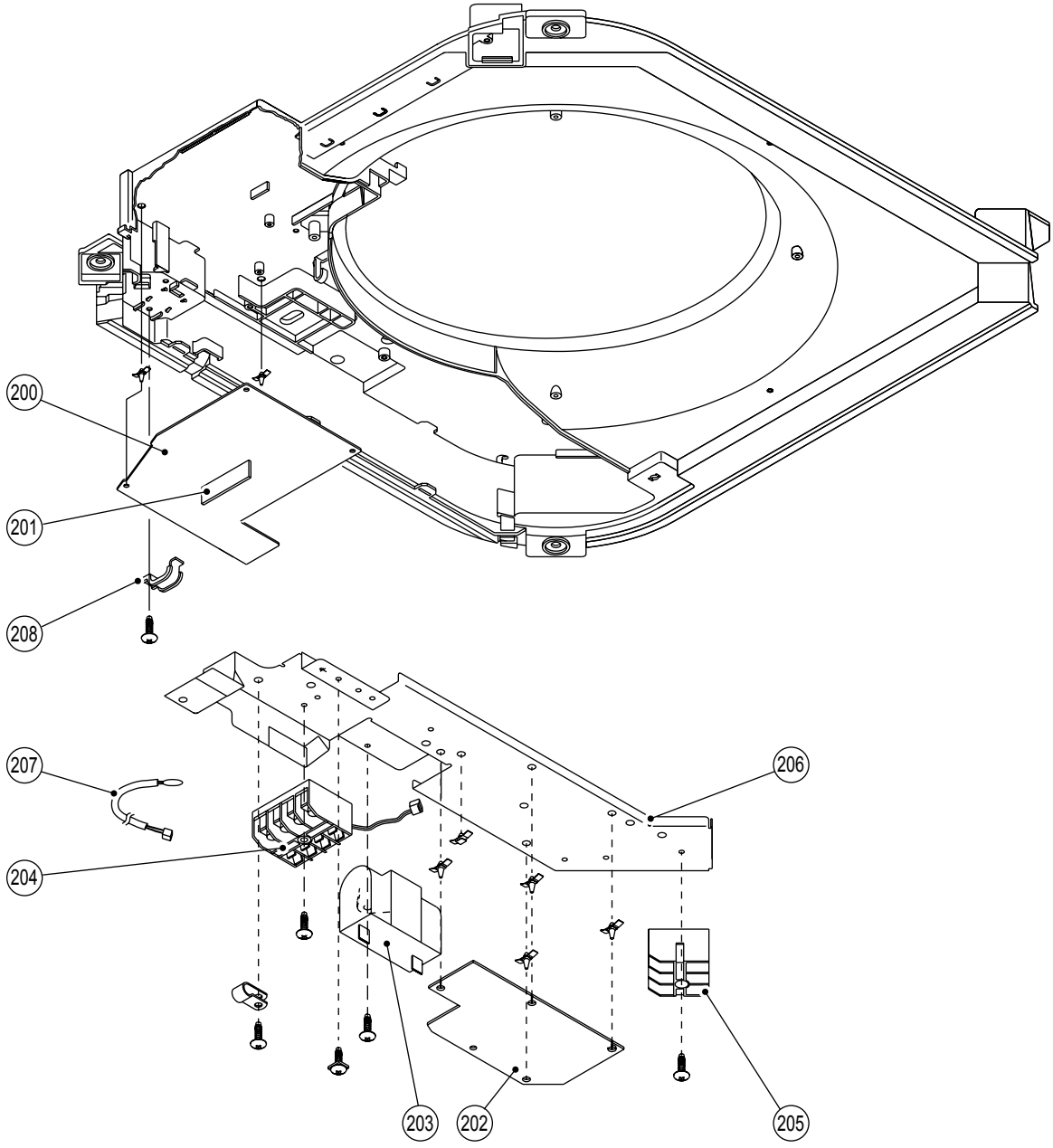
Ref No.	Description	Parts No.					Q'ty
		AU*A20	AU*A25	AU*A30			
70	LOUVER SUPPORT HOLDER	9362799003	9362799003	9362799003			
71	LOUVER SUPPORTER	9362770019	9362770019	9362770019			
72	JOINT SHAFT	9362771009	9362771009	9362771009			
73	JOINT-A	9362773003	9362773003	9362773003			
74	JOINT GEAR	9362772006	9362772006	9362772006			
75	PANEL FRAME HOLDER	9362761017	9362761017	9362761017			
76	MOTOR HOLDER	9362765008	9362765008	9362765008			
77	MOTOR GEAR	9362764001	9362764001	9362764001			
78	STEP MOTOR	9900362027	9900362027	9900362027			
79	PANEL BASE	9362759014	9362759014	9362759014			
80	PANEL BASE HOLDER	9362760010	9362760010	9362760010			
81	INDICATOR PCB ASSY	9705891036	9705891036	9705891036			
82	HOLDER (PCB)	9364855004	9364855004	9364855004			
83	WIRE COVER-B	9362788007	9362788007	9362788007			
84	LOUVER	9362769013	9362769013	9362769013			
85	PANEL FRAME	9362758017	9362758017	9362758017			

MODELS : AU*A20, AU*A25, AU*A30



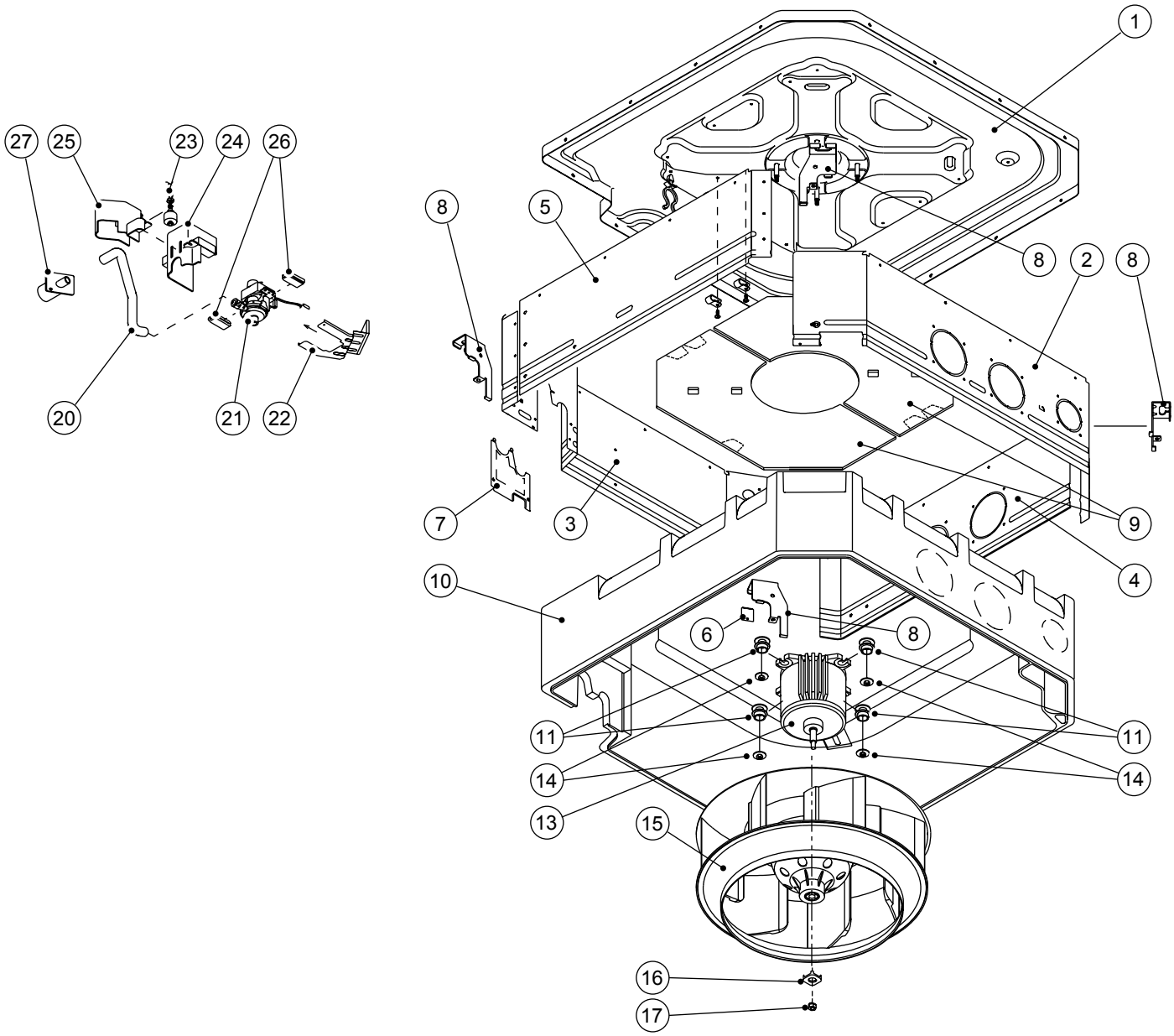
Ref No.	Description	Parts No.					Q'ty
		AU*A20	AU*A25	AU*A30			
90	FILTER	9362766005	9362766005	9362766005			
91	INSULATION (GRILLE)A	9362780001	9362780001	9362780001			
92	INSULATION (GRILLE)B	9362781008	9362781008	9362781008			
93	GRILLE HOOK HOLDER	9362782005	9362782005	9362782005			
94	RFM (GRILLE)A	9362738002	9362738002	9362738002			
95	RFM (GRILLE)B	9362739009	9362739009	9362739009			
96	RFM (GRILLE)C	9362740005	9362740005	9362740005			
97	RFM (GRILLE)D	9362741002	9362741002	9362741002			
98	RFM (GRILLE)E	9362742009	9362742009	9362742009			
99	GRILLE HOOK-A	9362779012	9362779012	9362779012			
100	GRILLE HOOK-B	9362778015	9362778015	9362778015			
101	GRILLE HINGE WIRE	9362754002	9362754002	9362754002			
102	GRILLE SPRING	9362755009	9362755009	9362755009			
103	DECORATION PLATE	9365652008	9365652008	9365652008			
104	INTAKE GRILLE	9362767019	9362767019	9362767019			

MODELS : AU*A20, AU*A25, AU*A30



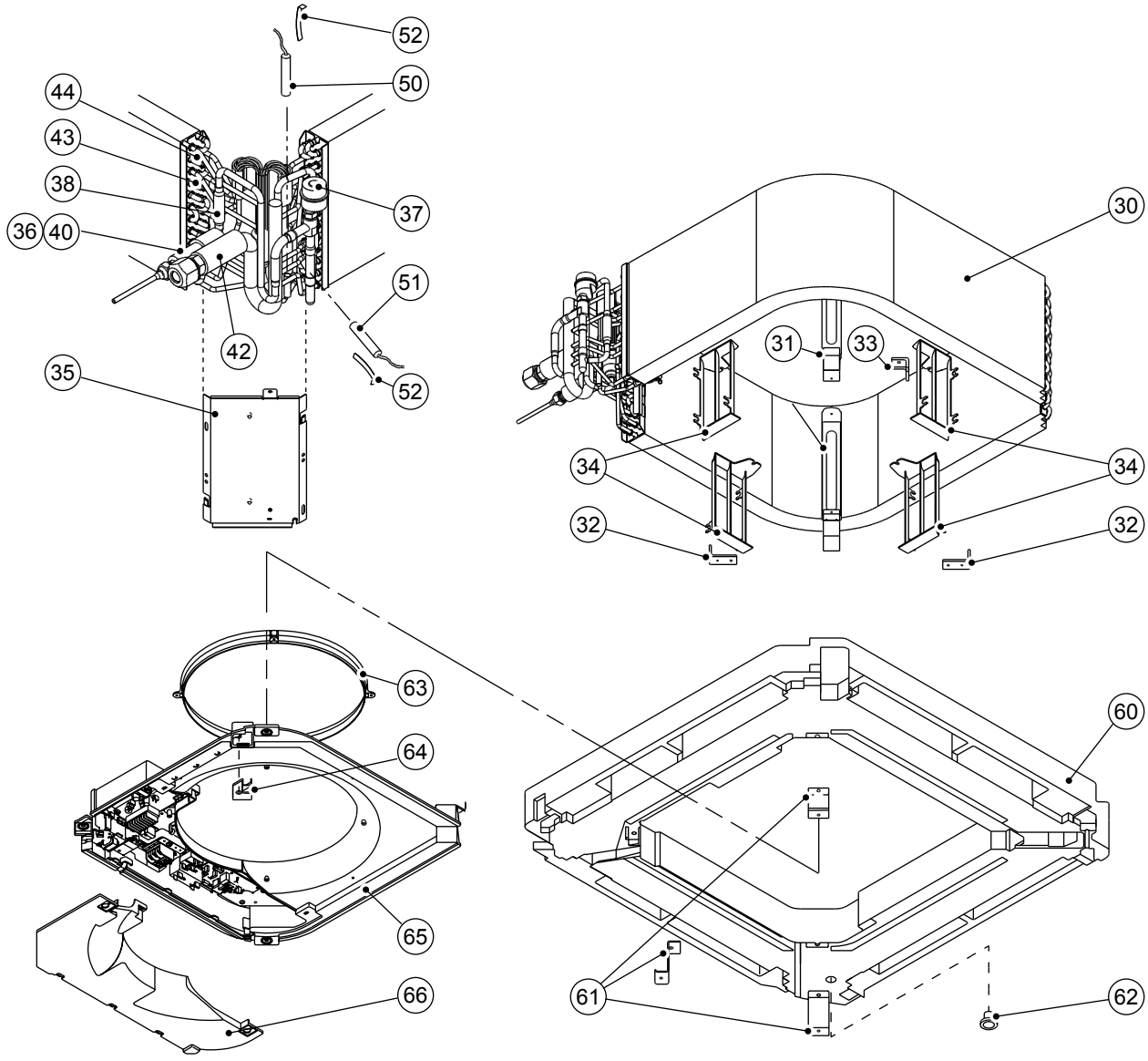
Ref No.	Description	Parts No.					Q'ty
		AU*A20	AU*A25	AU*A30			
200	CONTROLLER PCB ASSY	9707514025	9707514025	9707514025			
201	COMMUNICATION PCB	9704424044	9704424044	9704424044			
202	FILTER PCB ASSY	9704799081	9704799081	9704799081			
203	CAPACITOR	9900270216	9900270216	9900270216			
204	TERMINAL 4P	9306488093	9306488093	9306488093			
205	TERMINAL 3P	9703345012	9703345012	9703345012			
206	TERMINAL PLATE	9363642001	9363642001	9363642001			
207	THERMISTOR (ROOM)	9703299025	9703299025	9703299025			
208	CORD CLAMP	9356857009	9356857009	9356857009			
	FUSE	0600222512	0600222512	0600222512			
	FUSE HOLDER	0500158072	0500158072	0500158072			
	VARISTOR(ARRESTER)	0600168032	0600168032	0600168032			
	PCB ASSY-F (C+P)	9704793287	9704793287	9704793287			

MODELS : AU*A36, AU*A45, AU*A54



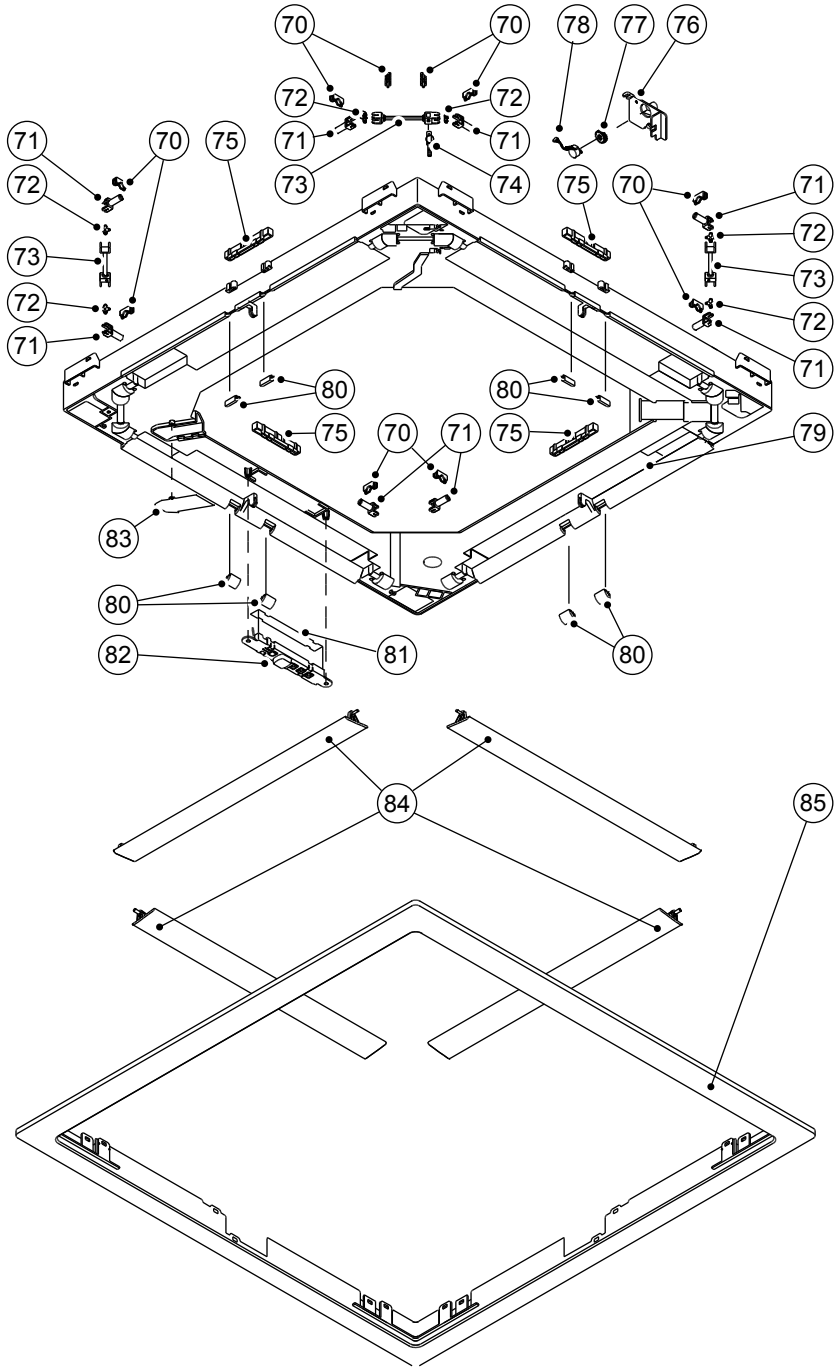
Ref No.	Description	Parts No.					Q'ty
		AU*A36	AU*A45	AU*A54			
1	TOP COVER PLATE ASSY	9362806015	9362806015	9362806015			
2	CABINET A ASSY	9362800013	9362800013	9362800013			
3	CABINET B ASSY	9362801010	9362801010	9362801010			
4	CABINET C	9362733007	9362733007	9362733007			
5	CABINET D	9362734004	9362734004	9362734004			
6	CABINET E	9362735001	9362735001	9362735001			
7	PIPE COVER	9362748001	9362748001	9362748001			
8	HOOK	9362736008	9362736008	9362736008			
9	NOISE INSULATION	9363143003	9363143003	9363143003			
10	INSULATION (INNER BOX)	9362768009	9362768009	9362768009			
11	RUBBER (VIB PROOF)	9362783002	9362783002	9362783002			
13	FAN MOTOR ASSY-IN	9601915010	9601915010	9601915010			
14	SPECIAL NUT	9307615016	9307615016	9307615016			
15	TURBO FAN ASSY	9362803014	9362803014	9362803014			
16	WASHER (TURBO FAN)	9362756006	9362756006	9362756006			
17	HEX NUT (SPG LCK WAS)	9375072018	9375072018	9375072018			
20	DRAIN HOSE	9362784009	9362784009	9362784009			
21	PUMP UNIT	9900360030	9900360030	9900360030			
22	PUMP HOOK BRACKET	9362753005	9362753005	9362753005			
23	FLOAT SWITCH	9900361020	9900361020	9900361020			
24	PUMP COVER-A	9362775007	9362775007	9362775007			
25	PUMP COVER-B	9362776004	9362776004	9362776004			
26	CUSHION RUBBER (PUMP)	9362777001	9362777001	9362777001			
27	DRAINPORT	9362786003	9362786003	9362786003			

MODELS : AU*A36, AU*A45, AU*A54



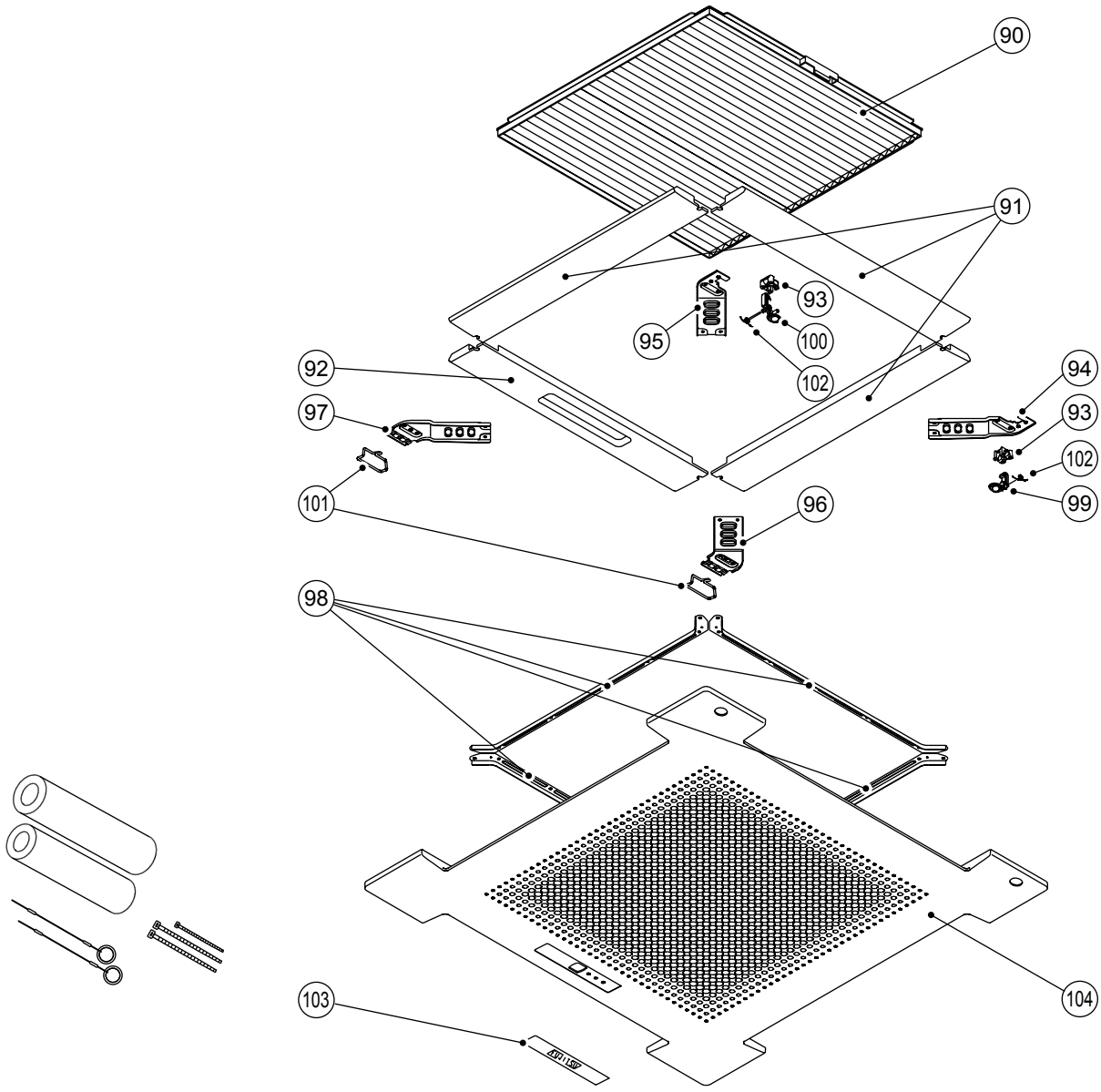
Ref No.	Description	Parts No.					Q'ty
		AU*A36	AU*A45	AU*A54			
30	EVAPORATOR SUB ASSY	9362817301	9362817325	9362817325			
31	EVA HOLDER ASSY	9362802017	9362802017	9362802017			
32	REINFORCEMENT (EVA)-A	9362749008	9362749008	9362749008			
33	REINFORCEMENT (EVA)-B	9362750004	9362750004	9362750004			
34	WIND GUIDE BOARD	9373444015	9373444015	9373444015			
35	SEPARATE WALL	9362737005	9362737005	9362737005			
36	DISTRIBUTOR ASSY	9371325200	9371325224	9371325224			
37	EXPANSION VALVE	9900242046	9900242046	9900242046			
38	STRAINER Q	9373588078	9373588078	9373588078			
40	DISTRIBUTOR	9373000037	9373000037	9373000037			
42	COUPLING PIPE ASSY	9373038276	9373038306	9373038306			
43	U PIPE A ASSY	9303428016	9303428016	9303428016			
44	U PIPE B ASSY	9303430019	9303430019	9303430019			
50	THERMISTOR (PIPE)	9900220020	9900220020	9900220020			
51	THERMISTOR (PIPE)	9703297014	9703297014	9703297014			
52	THERMO.SPRING-A	313728262708	313728262708	313728262708			
60	DRAIN PAN ASSY	9370934014	9370934014	9370934014			
61	REINFORCEMENT	9362757003	9362757003	9362757003			
62	DRAIN PAN PLUG	313005174654	313005174654	313005174654			
63	BELL-MOUTH (B)	9362774000	9362774000	9362774000			
64	WIRE COVER-A	9362789004	9362789004	9362789004			
65	CONTROL BOX	9362762007	9362762007	9362762007			
66	CONTROL BOX COVER	9362763004	9362763004	9362763004			

MODELS : AU*A36, AU*A45, AU*A54



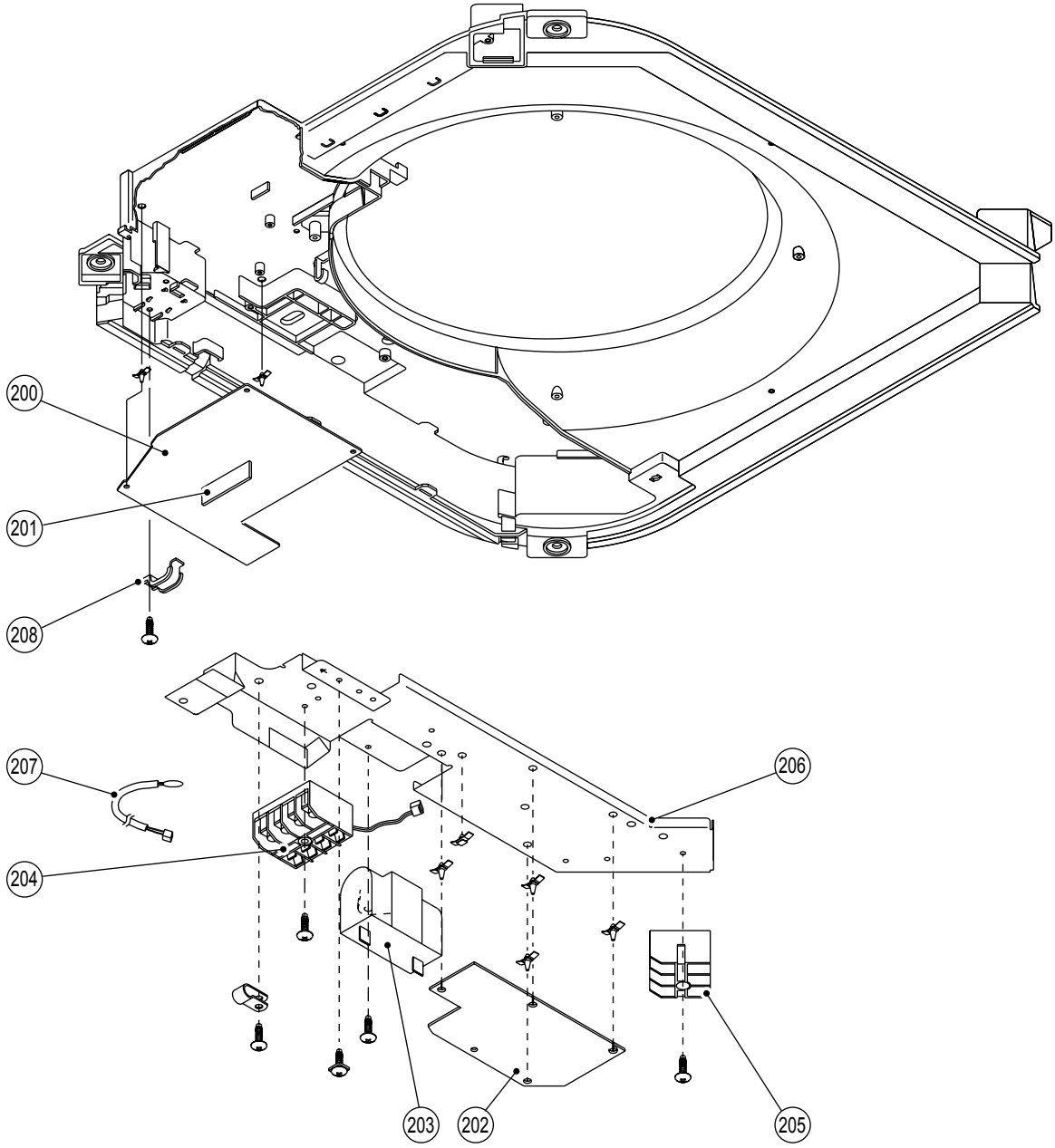
Ref No.	Description	Parts No.					Q'ty
		AU*A36	AU*A45	AU*A54			
70	LOUVER SUPPORT HOLDER	9362799003	9362799003	9362799003			
71	LOUVER SUPPORTER	9362770019	9362770019	9362770019			
72	JOINT SHAFT	9362771009	9362771009	9362771009			
73	JOINT-A	9362773003	9362773003	9362773003			
74	JOINT GEAR	9362772006	9362772006	9362772006			
75	PANEL FRAME HOLDER	9362761017	9362761017	9362761017			
76	MOTOR HOLDER	9362765008	9362765008	9362765008			
77	MOTOR GEAR	9362764001	9362764001	9362764001			
78	STEP MOTOR	9900362027	9900362027	9900362027			
79	PANEL BASE	9362759014	9362759014	9362759014			
80	PANEL BASE HOLDER	9362760010	9362760010	9362760010			
81	INDICATOR PCB ASSY	9705891036	9705891036	9705891036			
82	HOLDER (PCB)	9364855004	9364855004	9364855004			
83	WIRE COVER-B	9362788007	9362788007	9362788007			
84	LOUVER	9362769013	9362769013	9362769013			
85	PANEL FRAME	9362758017	9362758017	9362758017			

MODELS : AU*A36, AU*A45, AU*A54



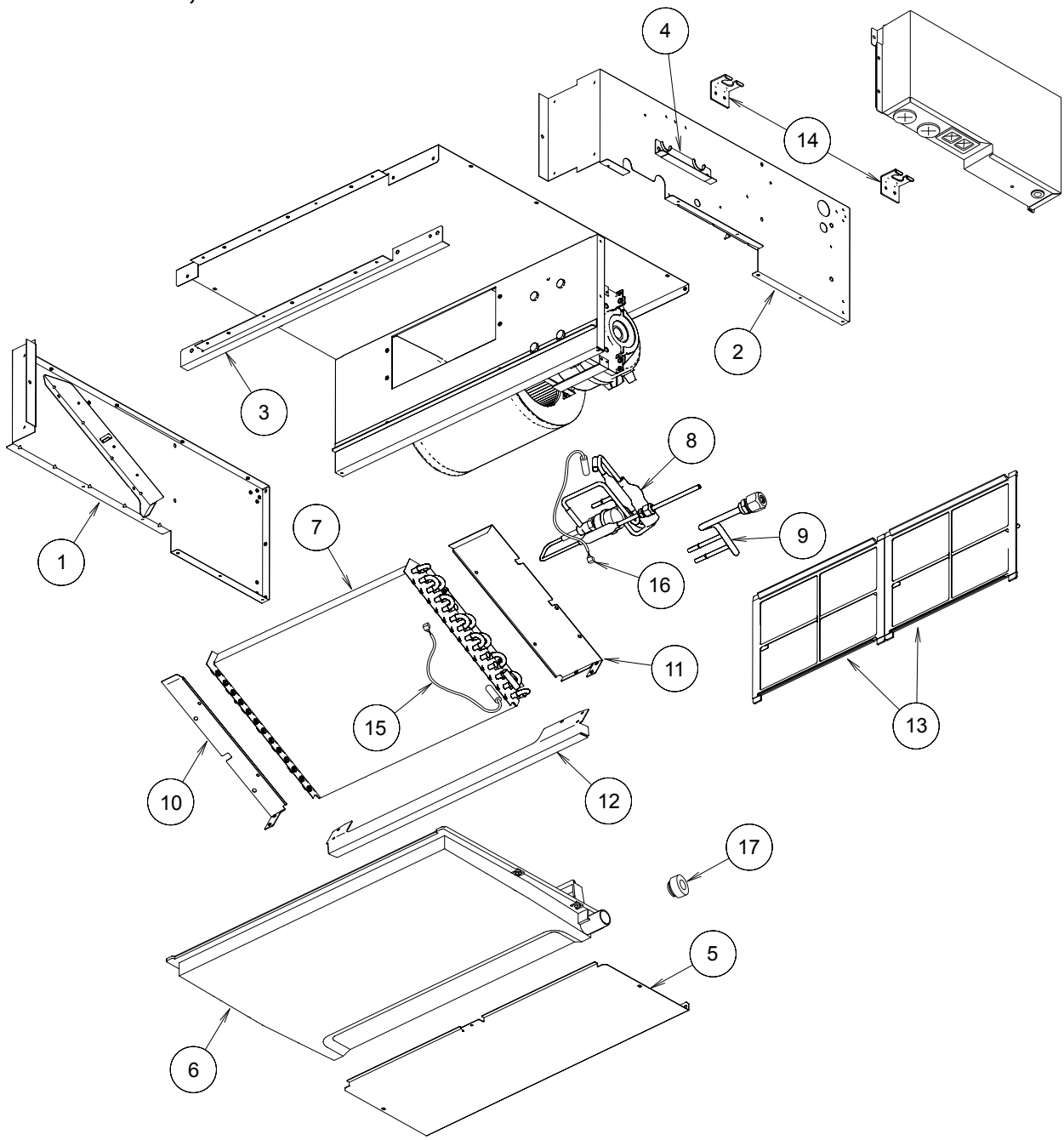
Ref No.	Description	Parts No.					Q'ty
		AU*A36	AU*A45	AU*A54			
90	FILTER	9362766005	9362766005	9362766005			
91	INSULATION (GRILLE)A	9362780001	9362780001	9362780001			
92	INSULATION (GRILLE)B	9362781008	9362781008	9362781008			
93	GRILLE HOOK HOLDER	9362782005	9362782005	9362782005			
94	RFM (GRILLE)A	9362738002	9362738002	9362738002			
95	RFM (GRILLE)B	9362739009	9362739009	9362739009			
96	RFM (GRILLE)C	9362740005	9362740005	9362740005			
97	RFM (GRILLE)D	9362741002	9362741002	9362741002			
98	RFM (GRILLE)E	9362742009	9362742009	9362742009			
99	GRILLE HOOK-A	9362779012	9362779012	9362779012			
100	GRILLE HOOK-B	9362778015	9362778015	9362778015			
101	GRILLE HINGE WIRE	9362754002	9362754002	9362754002			
102	GRILLE SPRING	9362755009	9362755009	9362755009			
103	DECORATION PLATE	9365652008	9365652008	9365652008			
104	INTAKE GRILLE	9362767019	9362767019	9362767019			

MODELS : AU*A36, AU*A45, AU*A54



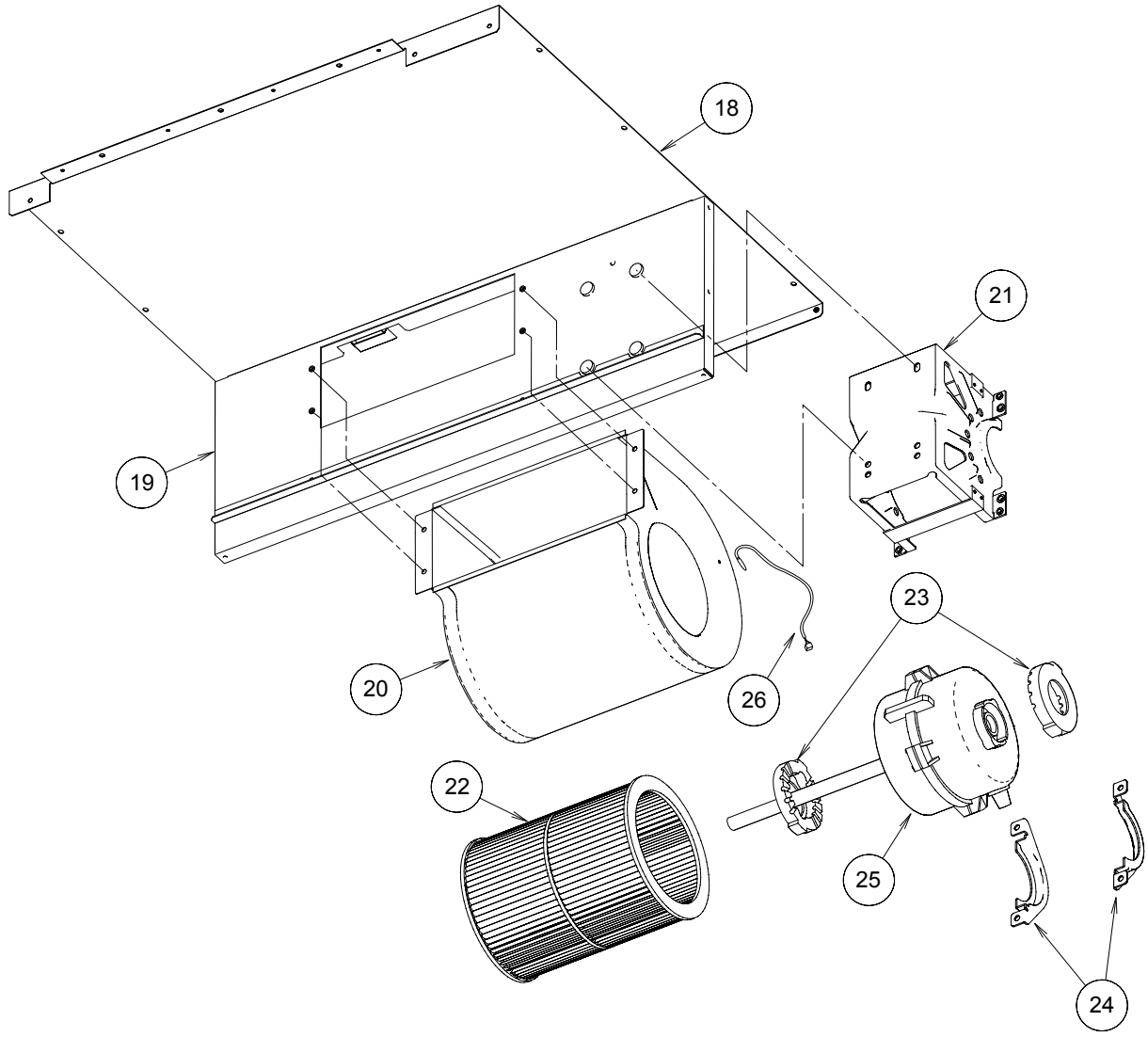
Ref No.	Description	Parts No.					Q'ty
		AU*A36	AU*A45	AU*A54			
200	CONTROLLER PCB ASSY	9707514032	9707514032	9707514032			
201	COMMUNICATION PCB	9704424044	9704424044	9704424044			
202	FILTER PCB ASSY	9704799081	9704799081	9704799081			
203	CAPACITOR	9900270162	9900270162	9900270162			
204	TERMINAL 4P	9306488093	9306488093	9306488093			
205	TERMINAL 3P	9703345012	9703345012	9703345012			
206	TERMINAL PLATE	9363642001	9363642001	9363642001			
207	THERMISTOR (ROOM)	9703299025	9703299025	9703299025			
208	CORD CLAMP	9356857009	9356857009	9356857009			
	FUSE	0600222512	0600222512	0600222512			
	FUSE HOLDER	0500158072	0500158072	0500158072			
	VARISTOR(ARRESTER)	0600168032	0600168032	0600168032			
	PCB ASSY-F (C+P)	9704793294	9704793294	9704793294			

MODELS : ARXB07, ARXB09



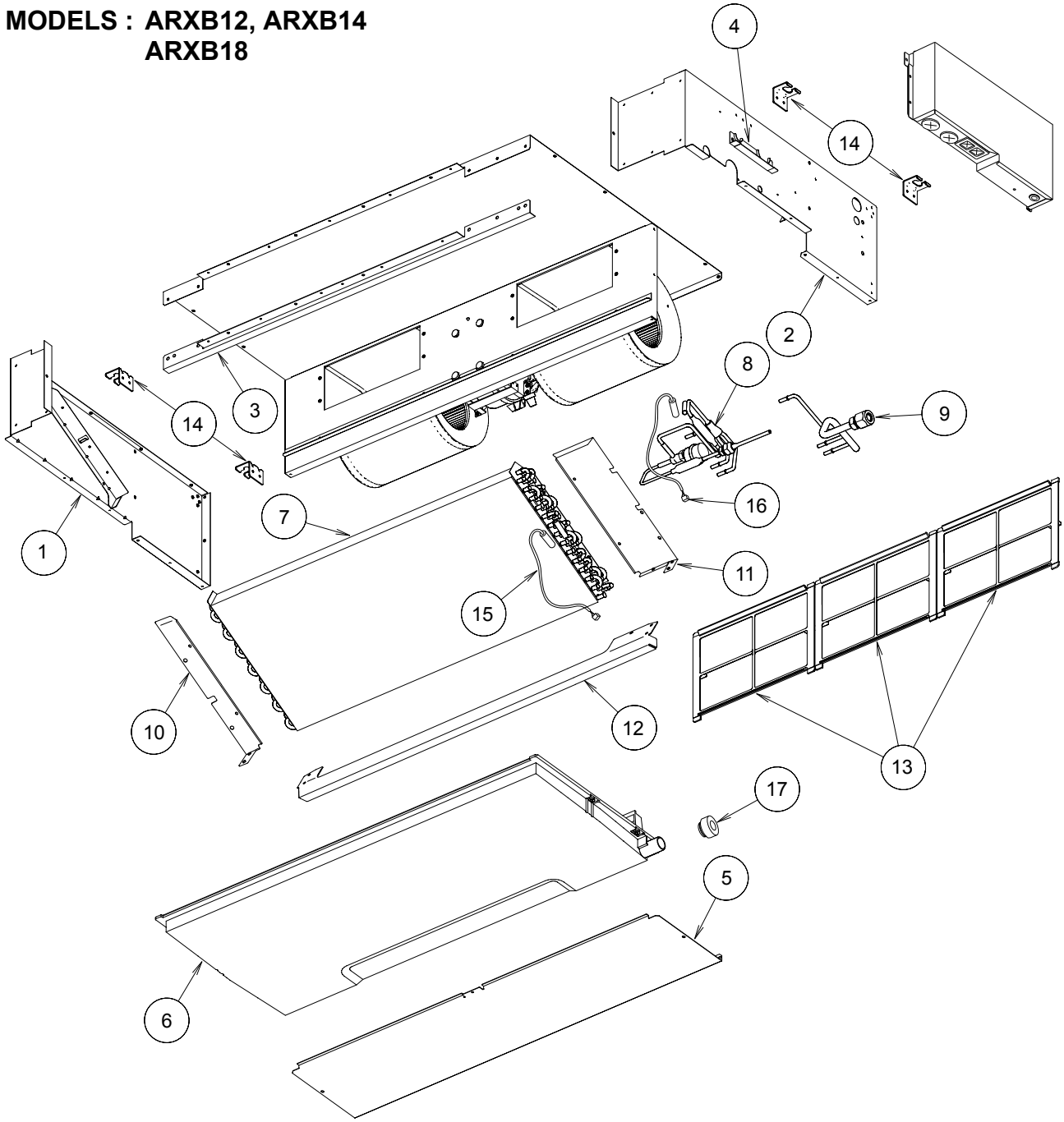
Ref No.	Description	Parts No.					Q'ty
		ARXB07	ARXB09	-	-	-	
1	SIDE PANEL RIGHT SUB ASSY	9364505015	9364505015	-	-	-	
2	SIDE PANEL LEFT SUB ASSY	9364506012	9364506012	-	-	-	
3	FRONT PANEL SUB ASSY	9364508016	9364508016	-	-	-	
4	PIPING COVER SUB ASSY	9364501031	9364501031	-	-	-	
5	CABINET COVER SUB ASSY	9364503011	9364503011	-	-	-	
6	DRAIN PAN SUB ASSY	9364502052	9364502052	-	-	-	
7	EVAPORATOR TOTAL ASSY	9364499352	9364499352	-	-	-	
	EVAPORATOR ASSY	9373255031	9373255031	-	-	-	
8	DISTRIBUTOR ASSY	9373034162	9373034162	-	-	-	
9	COUPLING PIPE ASSY	9373038238	9373038238	-	-	-	
10	BRACKET EVA RIGHT	9363199000	9363199000	-	-	-	
11	BRACKET EVA LEFT	9363198003	9363198003	-	-	-	
12	SUPPORT PLATE (EVA)	9363323009	9363323009	-	-	-	
13	AIR FILTER	9366833017	9366833017	-	-	-	
14	HOOK METAL	9363195002	9363195002	-	-	-	
15	THERMISTOR (PIPE-MID)	9703297052	9703297052	-	-	-	
16	THERMISTOR (PIPE-IN)	9900220037	9900220037	-	-	-	
17	DRAIN CAP ASSY	9377878014	9377878014	-	-	-	

MODELS : ARXB07, ARXB09



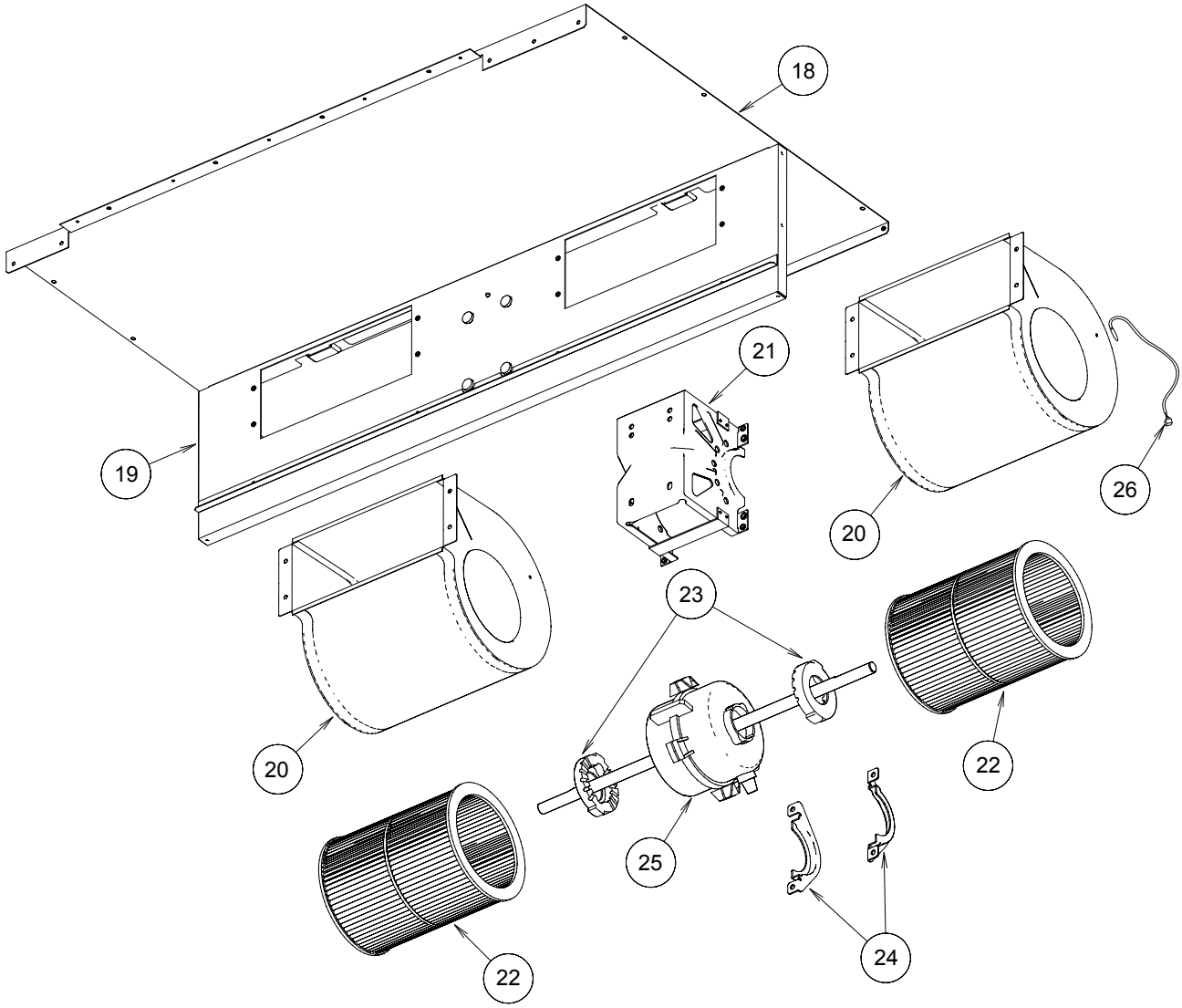
Ref No.	Description	Parts No.					Q'ty
		ARXB07	ARXB09	-	-	-	
18	TOP PANEL SUB ASSY	9364507019	9364507019	-	-	-	
19	PANEL ASSY (MOTOR)	9363193008	9363193008	-	-	-	
20	CASING ASSY	9363322002	9363322002	-	-	-	
21	BRACKET (MOTOR) ASSY	9358591000	9358591000	-	-	-	
22	SIROCCO FAN ASSY	9385258006	9385258006	-	-	-	
23	RUBBER (VIBRATION PROOF)	9385102002	9385102002	-	-	-	
24	BRACKET (MOTOR)	9358594001	9358594001	-	-	-	
25	MOTOR INDUCTION	9602463015	9602463015	-	-	-	
26	THERMISTOR (ROOM)	9703299063	9703299063	-	-	-	

MODELS : ARXB12, ARXB14
ARXB18



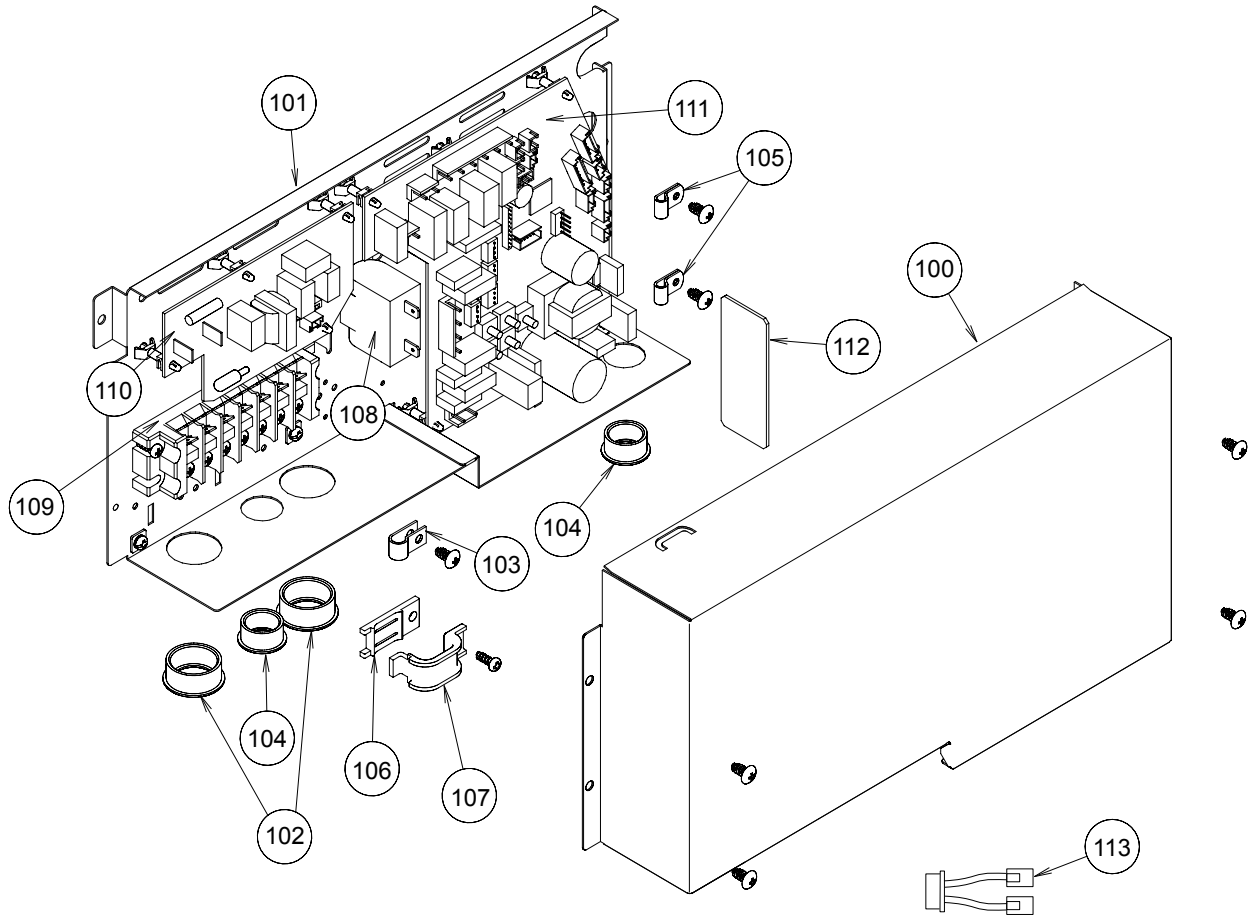
Ref No.	Description	Parts No.					Q'ty
		ARXB12	ARXB14	ARXB18	-	-	
1	SIDE PANEL RIGHT SUB ASSY	9364505022	9364505022	9364505022	-	-	
2	SIDE PANEL LEFT SUB ASSY	9364506029	9364506029	9364506029	-	-	
3	FRONT PANEL SUB ASSY	9364508023	9364508023	9364508023	-	-	
4	PIPING COVER SUB ASSY	9364501031	9364501031	9364501031	-	-	
5	CABINET COVER SUB ASSY	9364503028	9364503028	9364503028	-	-	
6	DRAIN PAN SUB ASSY	9364502069	9364502069	9364502069	-	-	
7	EVAPORATOR TOTAL ASSY	9364499369	9364499369	9364499376	-	-	
	EVAPORATOR ASSY	9373255017	9373255017	9373255017	-	-	
8	DISTRIBUTOR ASSY	9373034179	9373034179	9373034186	-	-	
9	COUPLING PIPE ASSY	9373038085	9373038085	9373038047	-	-	
10	BRACKET EVA RIGHT	9363199000	9363199000	9363199000	-	-	
11	BRACKET EVA LEFT	9363198003	9363198003	9363198003	-	-	
12	SUPPORT PLATE (EVA)	9363404005	9363404005	9363404005	-	-	
13	AIR FILTER	9366833017	9366833017	9366833017	-	-	
14	HOOK METAL	9363195002	9363195002	9363195002	-	-	
15	THERMISTOR (PIPE-MID)	9703297052	9703297052	9703297052	-	-	
16	THERMISTOR (PIPE-IN)	9900220037	9900220037	9900220037	-	-	
17	DRAIN CAP ASSY	9377878014	9377878014	9377878014	-	-	

MODELS : ARXB12, ARXB14
ARXB18



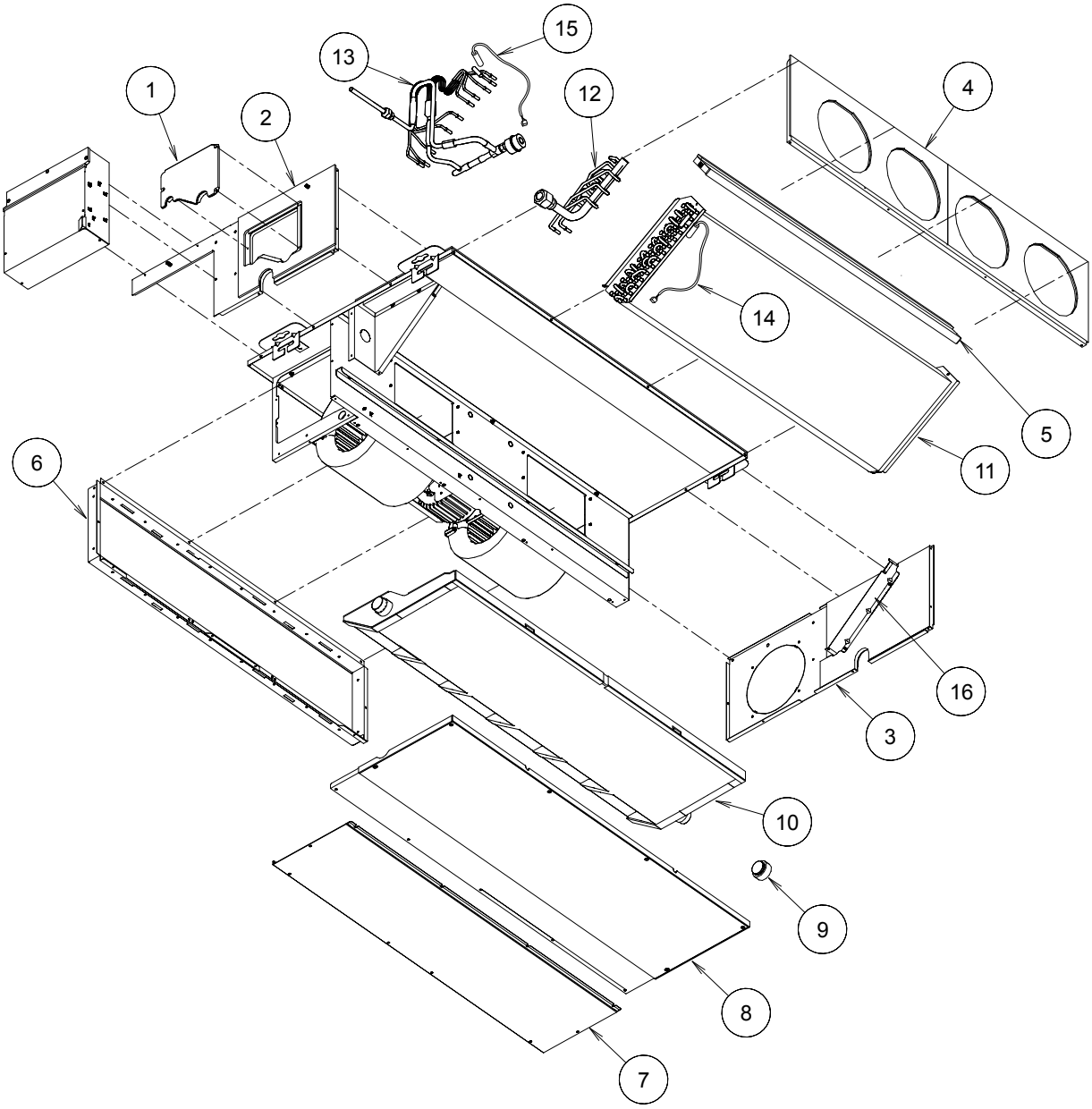
Ref No.	Description	Parts No.					Q'ty
		ARXB12	ARXB14	ARXB18	-	-	
18	TOP PANEL SUB ASSY	9364507026	9364507026	9364507026	-	-	
19	PANEL ASSY (MOTOR)	9363401004	9363401004	9363401004	-	-	
20	CASING ASSY	9363322002	9363322002	9363322002	-	-	
21	BRACKET (MOTOR) ASSY	9358591000	9358591000	9358591000	-	-	
22	SIROCCO FAN ASSY	9385258006	9385258006	9385258006	-	-	
23	RUBBER (VIBRATION PROOF)	9385102002	9385102002	9385102002	-	-	
24	BRACKET (MOTOR)	9358594001	9358594001	9358594001	-	-	
25	MOTOR INDUCTION	9602464012	9602464012	9602465019	-	-	
26	THERMISTOR (ROOM)	9703299018	9703299018	9703299018	-	-	

MODELS : ARXB07, ARXB09, ARXB12
ARXB14, ARXB18



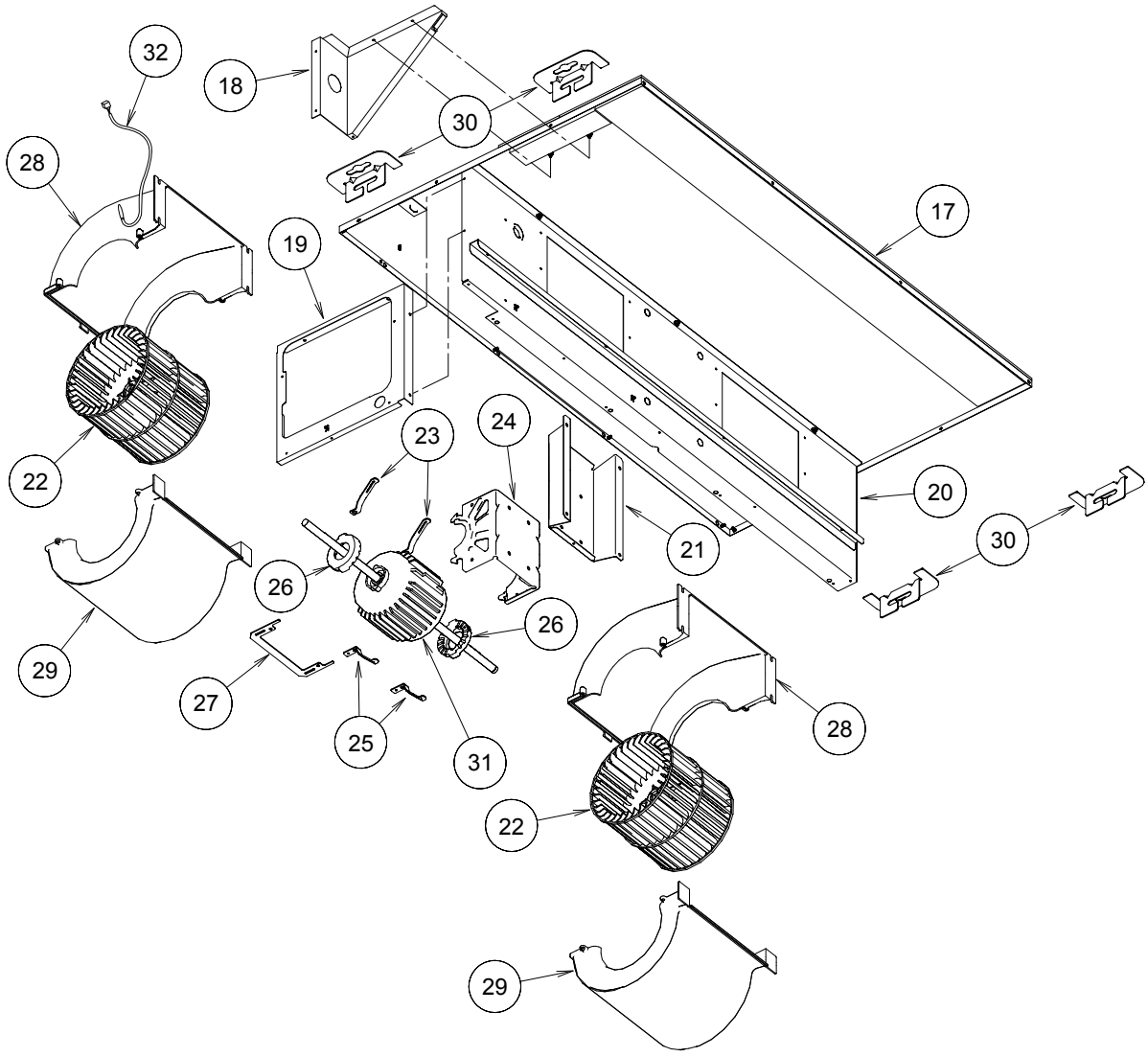
Ref No.	Description	Parts No.					Q'ty
		ARXB07	ARXB09	ARXB12	ARXB14	ARXB18	
100	CONTROL BOX COVER	9363201000	9363201000	9363201000	9363201000	9363201000	
101	CONTROL BOX	9375240028	9375240028	9375240028	9375240028	9375240028	
102	ONE-TOUCH BUSH	9374407019	9374407019	9374407019	9374407019	9374407019	
103	CLAMP NK-4N	313714328805	313714328805	313714328805	313714328805	313714328805	
104	ONE-TOUCH BUSH	9364788005	9364788005	9364788005	9364788005	9364788005	
105	CLAMP NK-3N	313361274700	313361274700	313361274700	313361274700	313361274700	
106	CLAMP (CORD)	9356857009	9356857009	9356857009	9356857009	9356857009	
107	CLAMP (CORD) B	9356858006	9356858006	9356858006	9356858006	9356858006	
108	CAPACITOR (FAN MOTOR)	9900411015	9900089023	9900411022	9900089139	9900089160	
109	TERMINAL 7P	9703403040	9703403040	9703403040	9703403040	9703403040	
110	FILTER PCB	9704799043	9704799043	9704799043	9704799043	9704799043	
111	CONTROLLER PCB	9707514063	9707514063	9707514063	9707514063	9707514063	
112	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044	9704424044	
113	THERMISTOR CONNECTION WIRE	9705465015	9705465015	9705465015	9705465015	9705465015	
-	FUSE 250V 3.15A (FILTER PCB F101)	0600222512	0600222512	0600222512	0600222512	0600222512	
-	FUSE HOLDER	0500158072	0500158072	0500158072	0500158072	0500158072	

MODELS : ARXB25, ARXB30, ARXB36, ARXB45
ARXA25, ARXA30, ARXA36, ARXA45



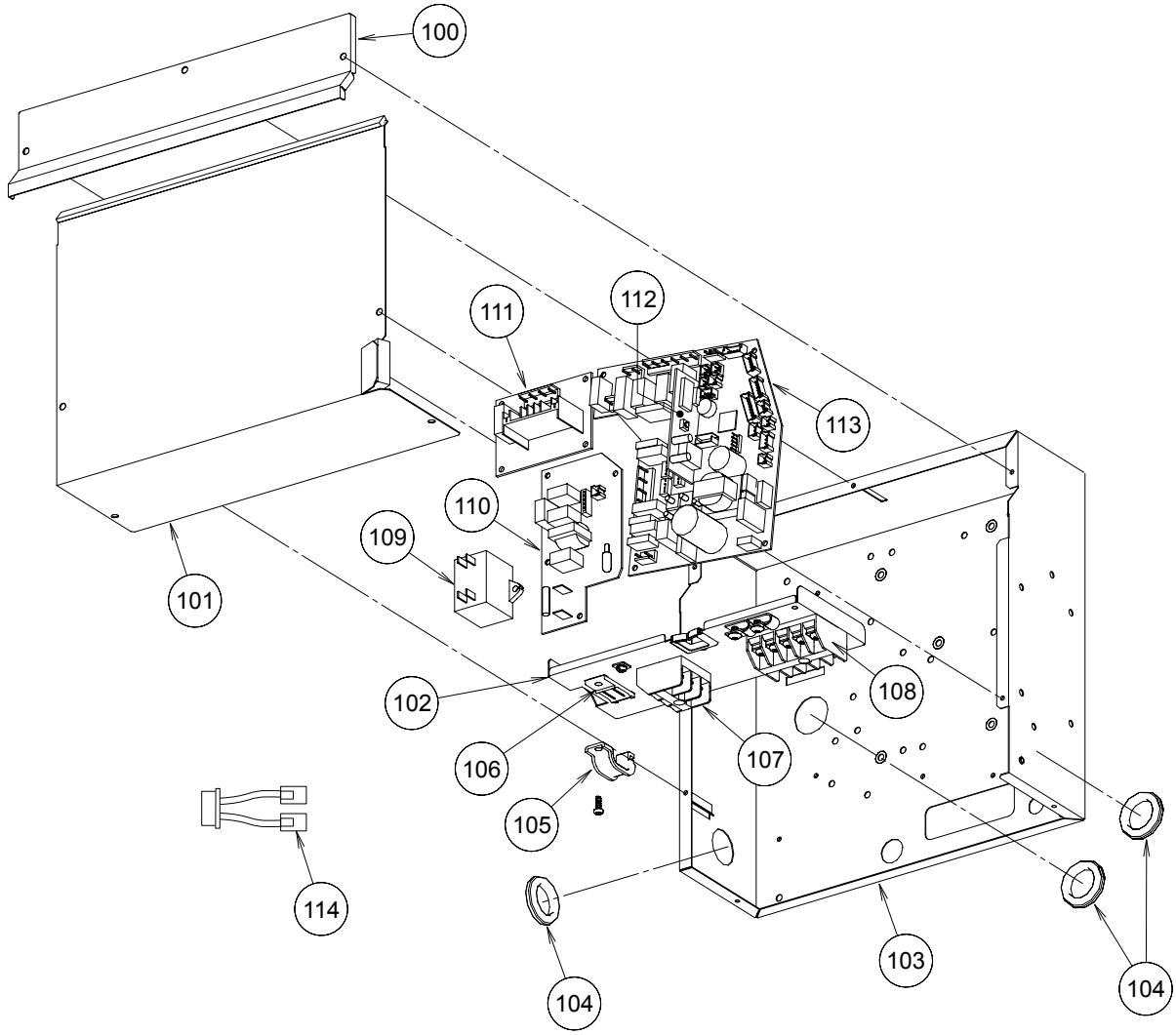
Ref No.	Description	Parts No.								Q'ty
		ARXB25	ARXB30	ARXB36	ARXB45	ARXA25	ARXA30	ARXA36	ARXA45	
1	BRACKET (PIPE) SUB ASSY	9374514014	9374514014	9374514014	9374514014	9374514014	9374514014	9374514014	9374514014	
2	CABINET R SUB ASSY	9374508013	9374508013	9374508013	9374508013	9374508013	9374508013	9374508013	9374508013	
3	CABINET L SUB ASSY	9374509010	9374509010	9374509010	9374509010	9374509010	9374509010	9374509010	9374509010	
4	OUTLET PANEL SUB ASSY	9374510016	9374510016	9374510016	9374510016	9374510016	9374510016	9374510016	9374510016	
5	SEAL PANEL (EVA) SUB ASSY	9374515011	9374515011	9374515011	9374515011	9374515011	9374515011	9374515011	9374515011	
6	INTAKE FRAME ASSY	9374216017	9374216017	9374216017	9374216017	9374216017	9374216017	9374216017	9374216017	
7	INTAKE COVER SUB ASSY	9374512010	9374512010	9374512010	9374512010	9374512010	9374512010	9374512010	9374512010	
8	MAIN PANEL SUB ASSY	9374511013	9374511013	9374511013	9374511013	9374511013	9374511013	9374511013	9374511013	
9	CAP(DRAIN)	9356541007	9356541007	9356541007	9356541007	9356541007	9356541007	9356541007	9356541007	
10	DRAIN PAN SUB ASSY	9374513017	9374513017	9374513017	9374513017	9374513017	9374513017	9374513017	9374513017	
11	EVAPORATER TOTAL ASSY	9374517039	9374517039	9374517046	9374517053	9374517039	9374517039	9374517046	9374517053	
	EVAPORATER ASSY	9374518012	9374518012	9374518012	9372585047	9374518012	9374518012	9374518012	9372585047	
12	COUPLING PIPE ASSY	9371333083	9371333083	9371333090	9373038269	9371333083	9371333083	9371333090	9373038269	
13	DISTRIBUTOR ASSY	9371325156	9371325156	9371325163	9371325170	9371325156	9371325156	9371325163	9371325170	
14	THERMISTOR (PIPE-MID)	9703297090	9703297090	9703297090	9703297021	9703297090	9703297090	9703297090	9703297021	
15	THERMISTOR (PIPE-IN)	9900220013	9900220013	9900220013	9900220037	9900220013	9900220013	9900220013	9900220037	
16	BRACKET (EVA) L	9374208012	9374208012	9374208012	9374208012	9374208012	9374208012	9374208012	9374208012	

MODELS : ARXB25, ARXB30, ARXB36, ARXB45
ARXA25, ARXA30, ARXA36, ARXA45



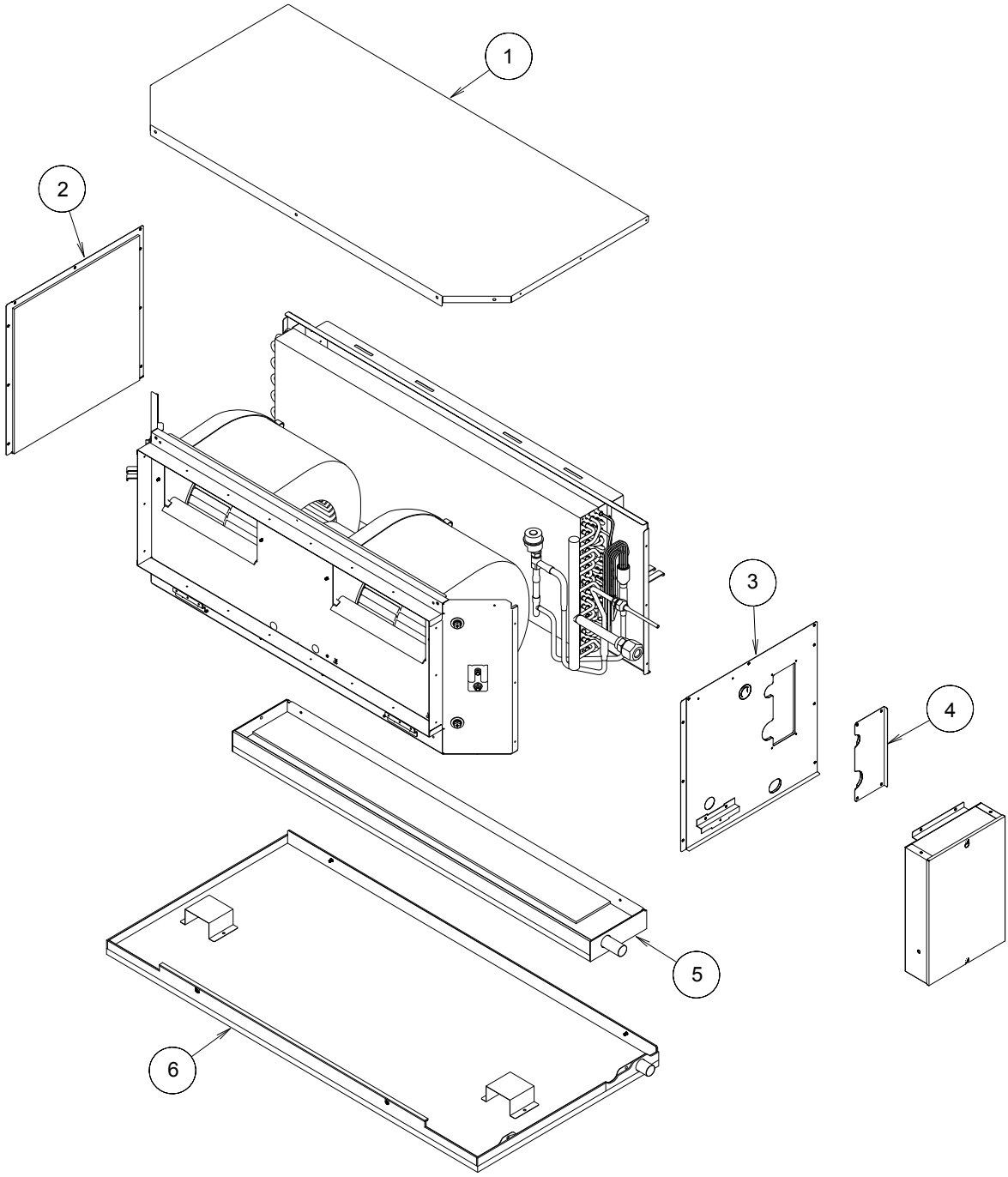
Ref No.	Description	Parts No.								Q'ty
		ARXB25	ARXB30	ARXB36	ARXB45	ARXA25	ARXA30	ARXA36	ARXA45	
17	BASE SUB ASSY	9374504015	9374504015	9374504015	9374504015	9374504015	9374504015	9374504015	9374504015	
18	BRACKET (EVA) R	9374207015	9374207015	9374207015	9374207015	9374207015	9374207015	9374207015	9374207015	
19	PANEL (COTROL BOX)	9374210015	9374210015	9374210015	9374210015	9374210015	9374210015	9374210015	9374210015	
20	SEPARATE WALL ASSY	9374228010	9374228010	9374228010	9374228010	9374228010	9374228010	9374228010	9374228010	
21	BRACKET MOTOR ASSY	9374230013	9374230013	9374230013	9374230013	9374230013	9374230013	9374230013	9374230013	
22	SIRROCO FAN ASSY	9356531022	9356531022	9356531022	9356531022	9356531022	9356531022	9356531022	9356531022	
23	MOTOR BAND A	9374647019	9374647019	9374647019	9374647019	9374647019	9374647019	9374647019	9374647019	
24	MOTOR MOUNT	9374281015	9374281015	9374281015	9374281015	9374281015	9374281015	9374281015	9374281015	
25	MOTOR BAND B	9374648023	9374648023	9374648023	9374648023	9374648023	9374648023	9374648023	9374648023	
26	RUBBER (VIBRATION PROOF)	313659068604	313659068604	313659068604	313659068604	313659068604	313659068604	313659068604	313659068604	
27	RFM (MOTOR BAND)	9374646012	9374646012	9374646012	9374646012	9374646012	9374646012	9374646012	9374646012	
28	CASING A	9374233014	9374233014	9374233014	9374233014	9374233014	9374233014	9374233014	9374233014	
29	CASING B	9374234011	9374234011	9374234011	9374234011	9374234011	9374234011	9374234011	9374234011	
30	HOOK METAL	9356563009	9356563009	9356563009	9356563009	9356563009	9356563009	9356563009	9356563009	
31	MOTOR INDUCTION	9600830116	9600830116	9600830086	9600830123	9600830086	9600830086	9600830093	9600830093	
32	THERMISTOR (ROOM)	9703299018	9703299018	9703299018	9703299018	9703299018	9703299018	9703299018	9703299018	

MODELS : ARXB25, ARXB30, ARXB36, ARXB45
ARXA25, ARXA30, ARXA36, ARXA45



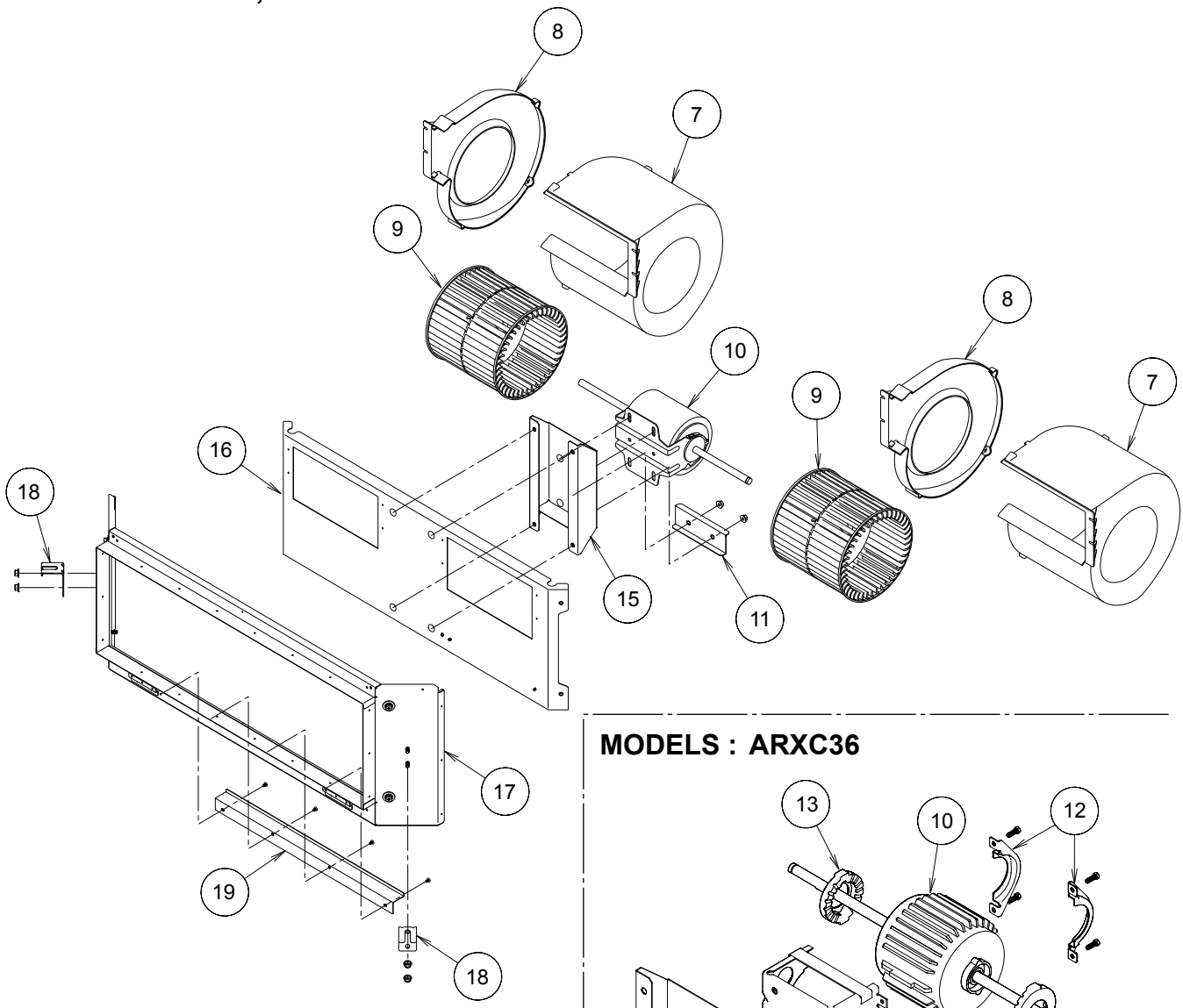
Ref No.	Description	Parts No.								Q'ty
		ARXB25	ARXB30	ARXB36	ARXB45	ARXA25	ARXA30	ARXA36	ARXA45	
100	CONTROL COVER B	9374222018	9374222018	9374222018	9374222018	9374222018	9374222018	9374222018	9374222018	
101	CONTROL COVER A SUB ASSY	9374516018	9374516018	9374516018	9374516018	9374516018	9374516018	9374516018	9374516018	
102	CONTROL BOX B	9374220014	9374220014	9374220014	9374220014	9374220014	9374220014	9374220014	9374220014	
103	CONTROL BOX A	9374219018	9374219018	9374219018	9374219018	9374219018	9374219018	9374219018	9374219018	
104	CAP (POWER)	9352173011	9352173011	9352173011	9352173011	9352173011	9352173011	9352173011	9352173011	
105	CLAMP (CORD)	9356857009	9356857009	9356857009	9356857009	9356857009	9356857009	9356857009	9356857009	
106	CLAMP (CORD) C	9359677000	9359677000	9359677000	9359677000	9359677000	9359677000	9359677000	9359677000	
107	TERMINAL 2P	9703873027	9703873027	9703873027	9703873027	9703873027	9703873027	9703873027	9703873027	
108	TERMINAL 5P	9703874017	9703874017	9703874017	9703874017	9703874017	9703874017	9703874017	9703874017	
109	CAPACITOR (FAN MOTOR)	9900270063	9900270209	9900270056	9704305053	9900270209	9704305053	9700468042	9700468042	
110	FILTER PCB	9704799197	9704799159	9704799159	9704799159	9704799197	9704799159	9704799159	9704799159	
111	RELAY PCB	-	9701594030	9701594030	9701594030	-	9701594030	9701594030	9701594030	
112	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044	9704424044	9704424044	9704424044	9704424044	
113	CONTROLLER PCB	9707514070	9707514087	9707514087	9707514087	9707514070	9707514087	9707514087	9707514087	
114	THERMISTOR CONNECTION WIRE	9705465015	9705465015	9705465015	9705465015	9705465015	9705465015	9705465015	9705465015	
-	FUSE 250V 3.15A (FILTER PCB F101)	0600222512	0600222512	0600222512	0600222512	0600222512	0600222512	0600222512	0600222512	
-	FUSE HOLDER	0500158072	0500158072	0500158072	0500158072	0500158072	0500158072	0500158072	0500158072	

MODELS : ARXC36, ARXC45
ARXC60

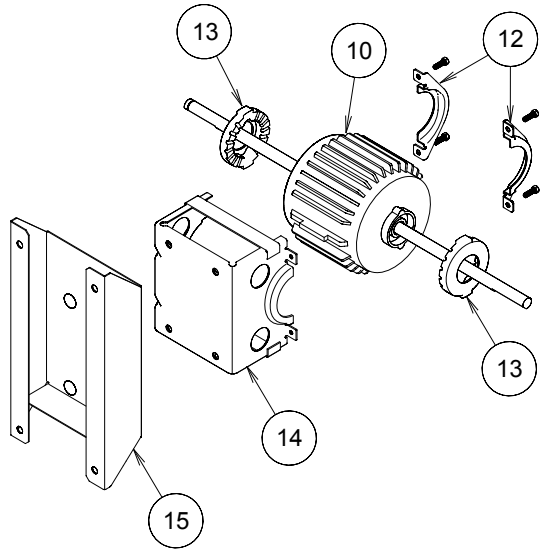


Ref No.	Description	Parts No.					Q'ty
		ARXC36	ARXC45	ARXC60			
1	PLATE TOP SA	9372576014	9372576014	9372576014			
2	KIT(PANEL LEFT SA)	9372581018	9372581018	9372581018			
3	PANEL RUGHT SA	9372580011	9372580011	9372580011			
4	KIT(PANEL MAINTE SA)	9372583012	9372583012	9372583012			
5	DRAIN PAN SA	9372579015	9372579015	9372579015			
6	DRAIN PAN S SA	9372582015	9372582015	9372582015			

MODELS : ARXC45, ARXC60

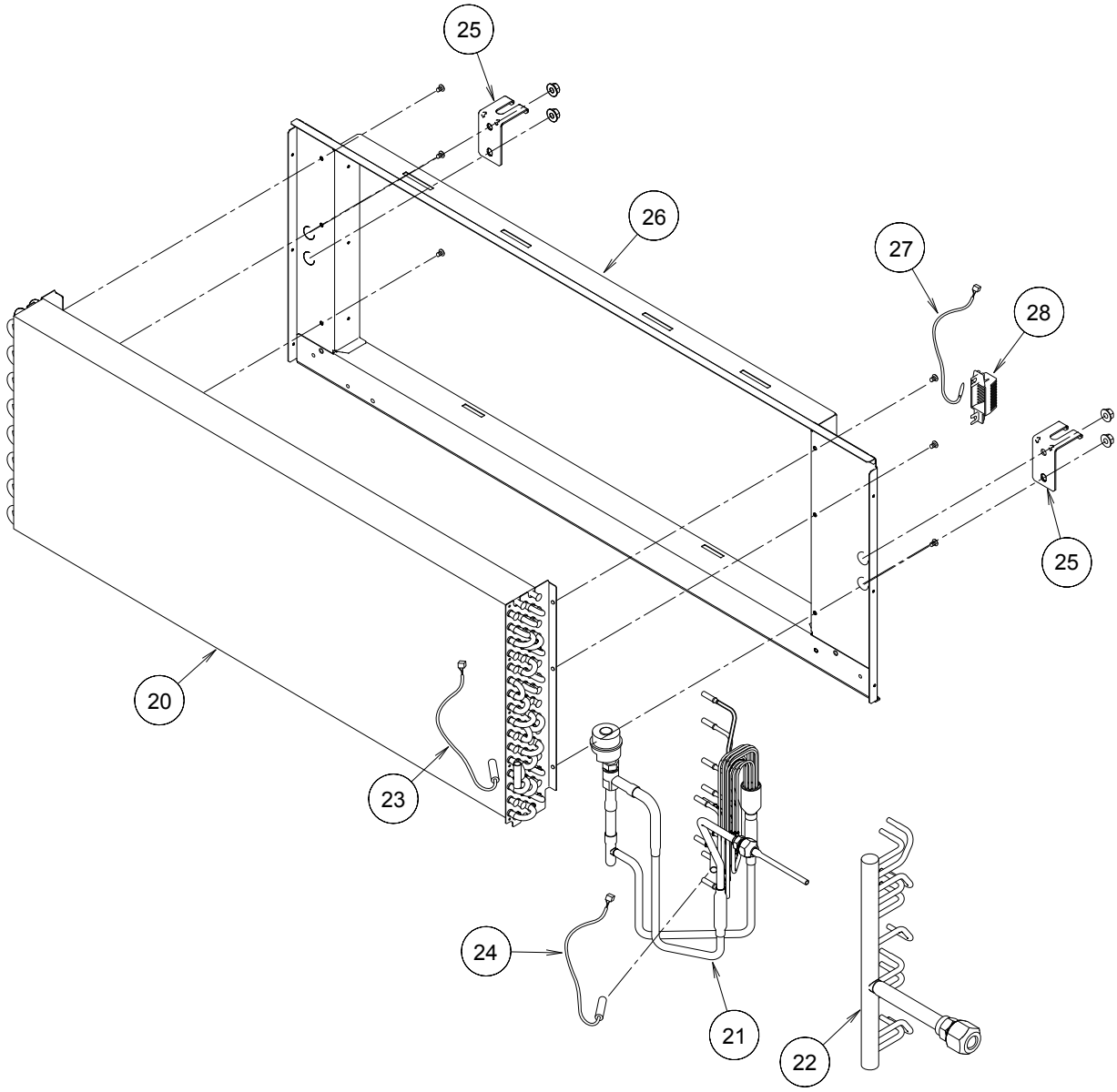


MODELS : ARXC36



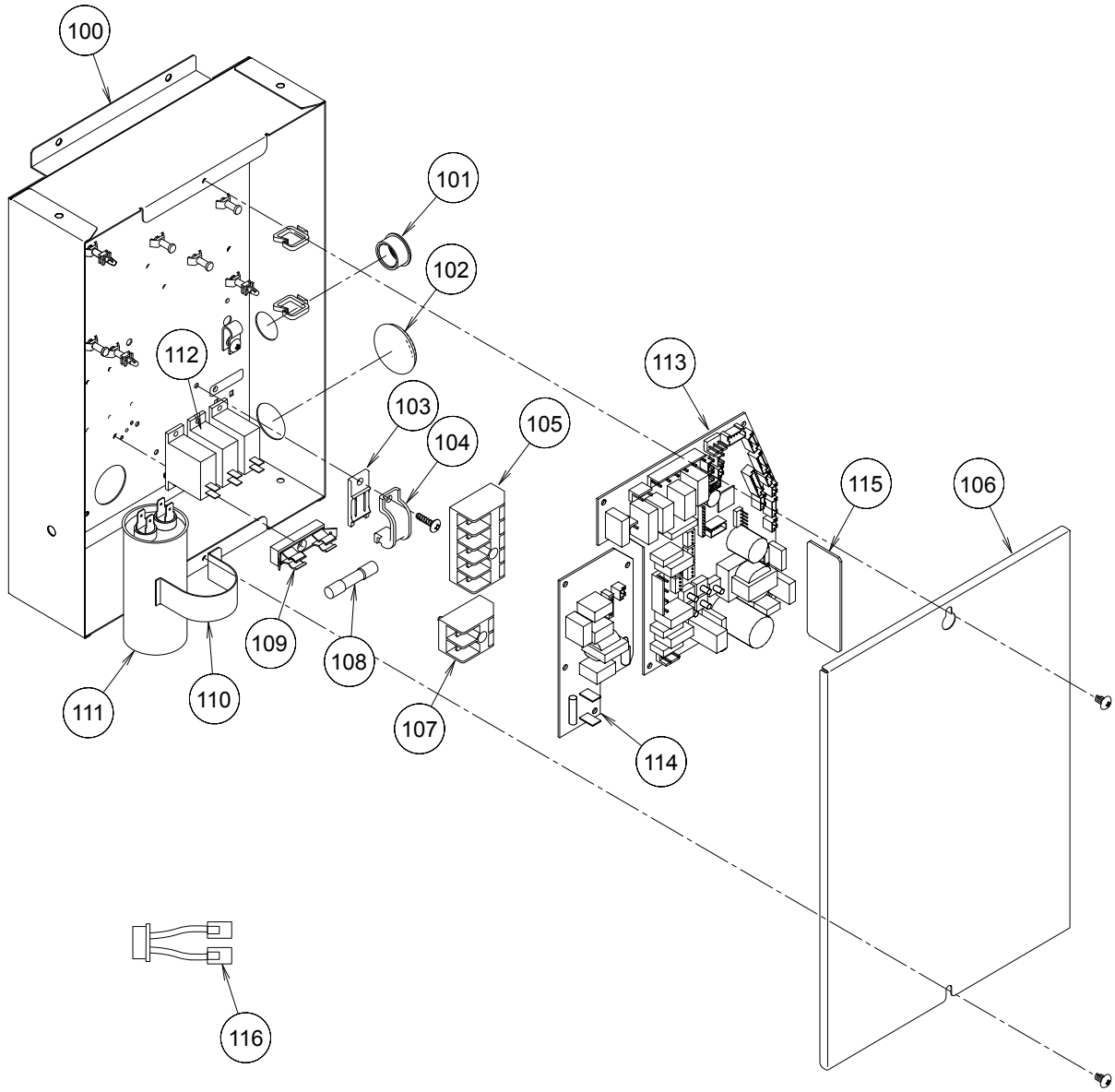
Ref No.	Description	Parts No.					Q'ty
		ARXC36	ARXC45	ARXC60			
7	CASING A	9372057018	9372057018	9372057018			
8	CASING B	9372058015	9372058015	9372058015			
9	SIROCCO FAN	9372059012	9372059012	9372059012			
10	MOTOR INDUCTION	9601689027	9601688013	9601688013			
11	BRACKET MTR B	-	9372039007	9372039007			
12	BRACKET(MOTOR)	9356536003	-	-			
13	RUBBER (VIBRATION PROOF)	313659068604	-	-			
14	MOTOR MOUNT AS	9372052006	-	-			
15	BRACKET MTR ASSY	9372037003	9372582015	9372582015			
16	PANEL FAN ASSY	9372035009	9372035009	9372035009			
17	KIT(PANEL FRONT SA)	9372637029	9372637029	9372637029			
18	HOOK METAL	9372055007	9372055007	9372055007			
19	PANEL FRONT E	9372034002	9372034002	9372034002			

MODELS : ARXC36, ARXC45
ARXC60



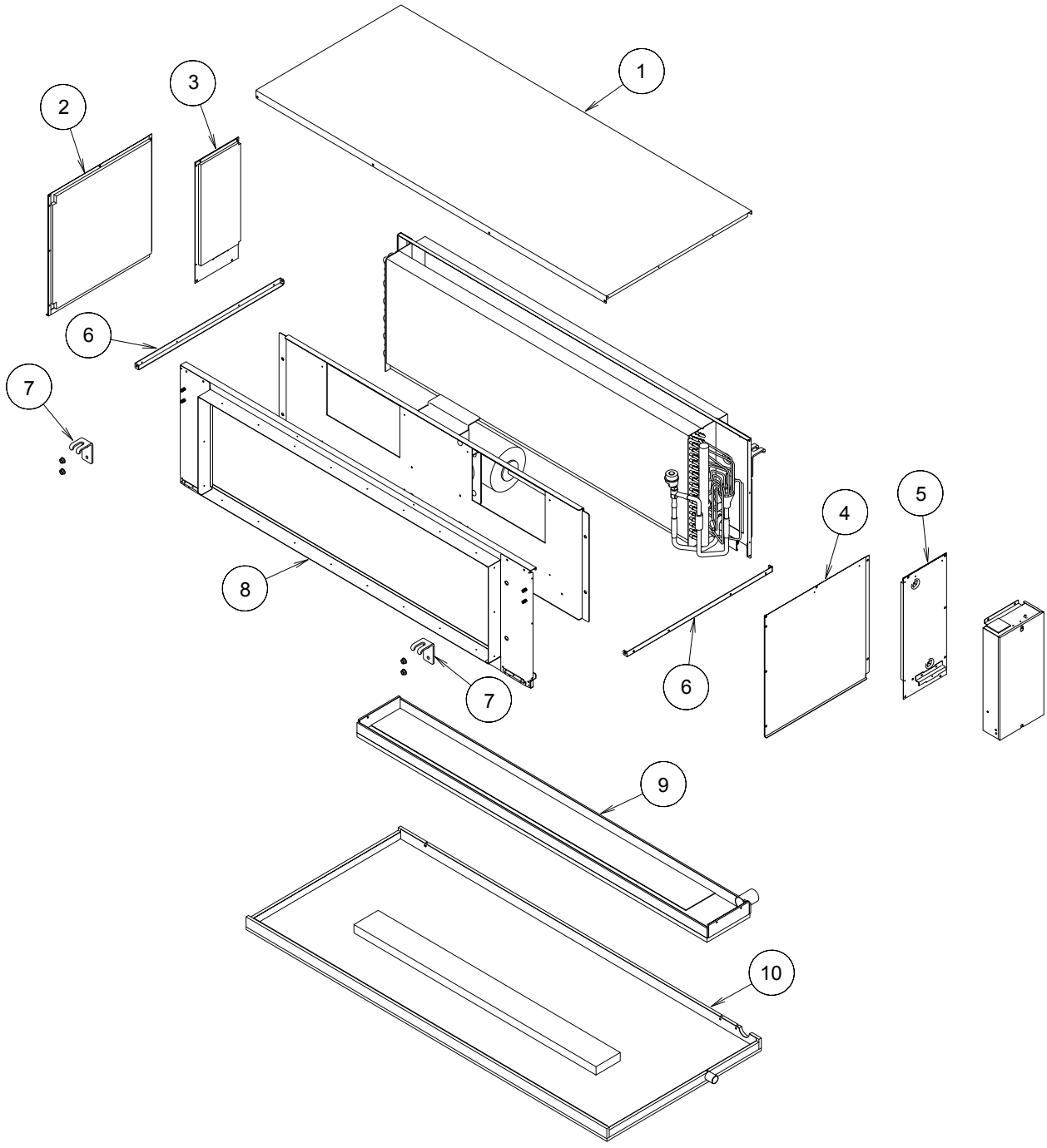
Ref No.	Description	Parts No.					Q'ty
		ARXC36	ARXC45	ARXC60			
20	EVAPORATOR TOTAL ASSY	9372584088	9372584088	9372584095			
-	EVAPORATOR ASSY	9373875017	9373875017	9372585030			
21	DISTRIBUTOR ASSY	9373873167	9373873167	9371325286			
22	COUPLING PIPE ASSY	9373873174	9373873174	9373038337			
23	THERMISTOR (PIPE-MID)	9703297014	9703297014	9703297014			
24	THERMISTOR (PIPE-IN)	9900220020	9900220020	9900220020			
25	HOOK METAL	9372055007	9372055007	9372055007			
26	KIT (PNL REAR SA)	9372636039	9372636039	9372636039			
27	THERMISTOR (ROOM)	9703299216	9703299216	9703299216			
28	BRACKET (THERMOSTAT)	9367369010	9367369010	9367369010			

MODELS : ARXC36, ARXC45
ARXC60



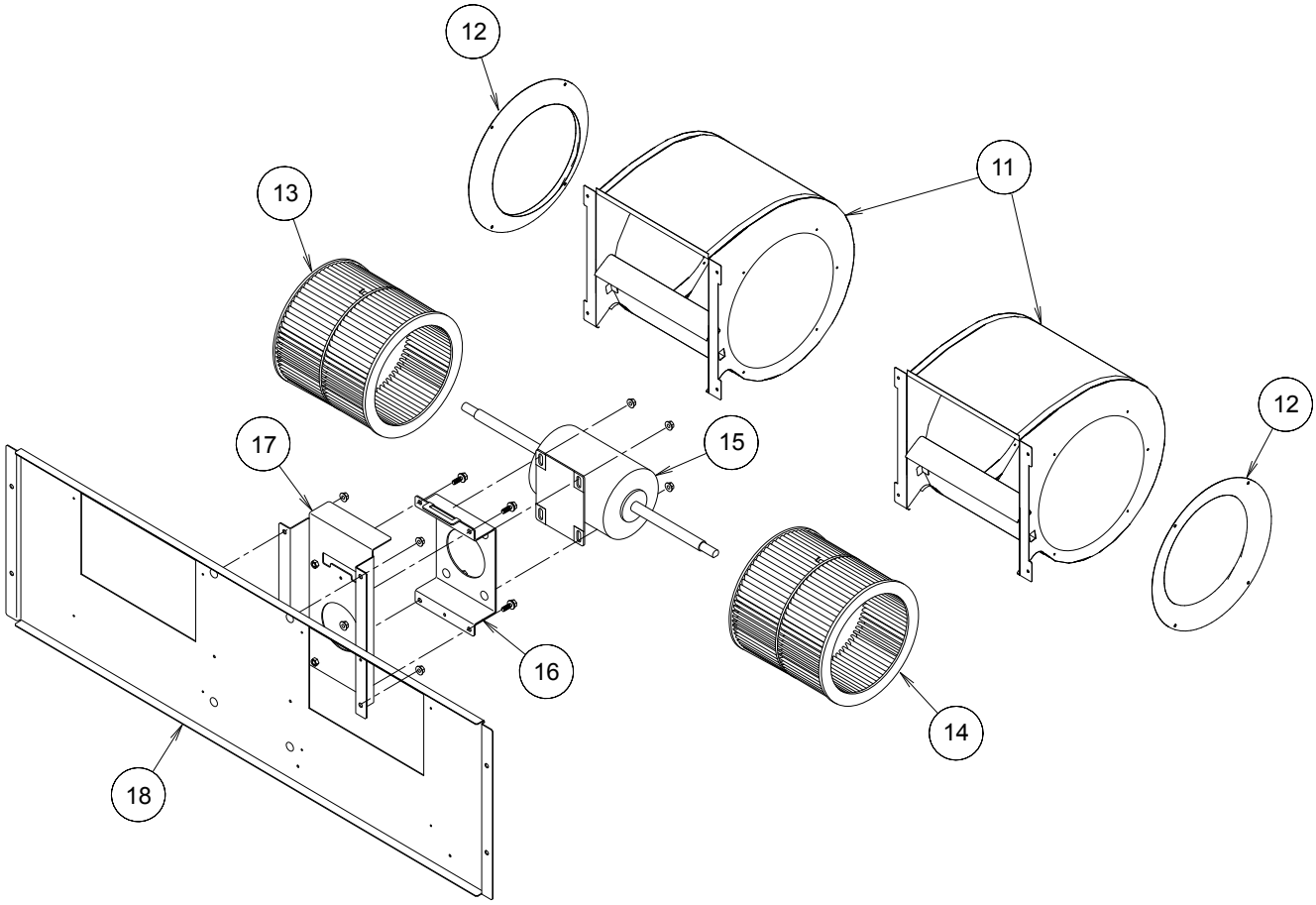
Ref No.	Description	Parts No.					Q'ty
		ARXC36	ARXC45	ARXC60			
100	CONTROL BOX AS	9374854028	9374854028	9374854028			
101	ONE-TOUCH BUSH	9364788005	9364788005	9364788005			
102	ONE-TOUCH BUSH	9374407019	9374407019	9374407019			
103	CLAMP(CORD) C	9359677000	9359677000	9359677000			
104	CLAMP(CORD)	9356857009	9356857009	9356857009			
105	TERMINAL 5P	9703874017	9703874017	9703874017			
106	COVER BOX	9372061008	9372061008	9372061008			
107	TERMINAL 2P	9703873027	9703873027	9703873027			
108	FUSE 250V 10A	0600376116	0600376116	0600376116			
109	FUSE HOLDER	0501456016	0501456016	0501456016			
110	CLAMP METAL(CAPACITOR)	9308114006	9308114006	9308114006			
111	CAPACITOR(FAN MOTOR)	9900269173	9900269111	9900269111			
112	RELAY	9900294014	9900294014	9900294014			
113	CONTROLLER PCB	9707514094	9707514094	9707514094			
114	FILTER PCBL	9704799067	9704799067	9704799067			
115	COMMUNICATION PCB	9704424044	9704424044	9704424044			
116	THERMISTOR CONNECTION WIRE	9705465015	9705465015	9705465015			
-	FUSE 250V 3.15A(FILTER PCB F101)	0600222512	0600222512	0600222512			
-	FUSE HOLDER	0500158072	0500158072	0500158072			

MODELS : ARXC90



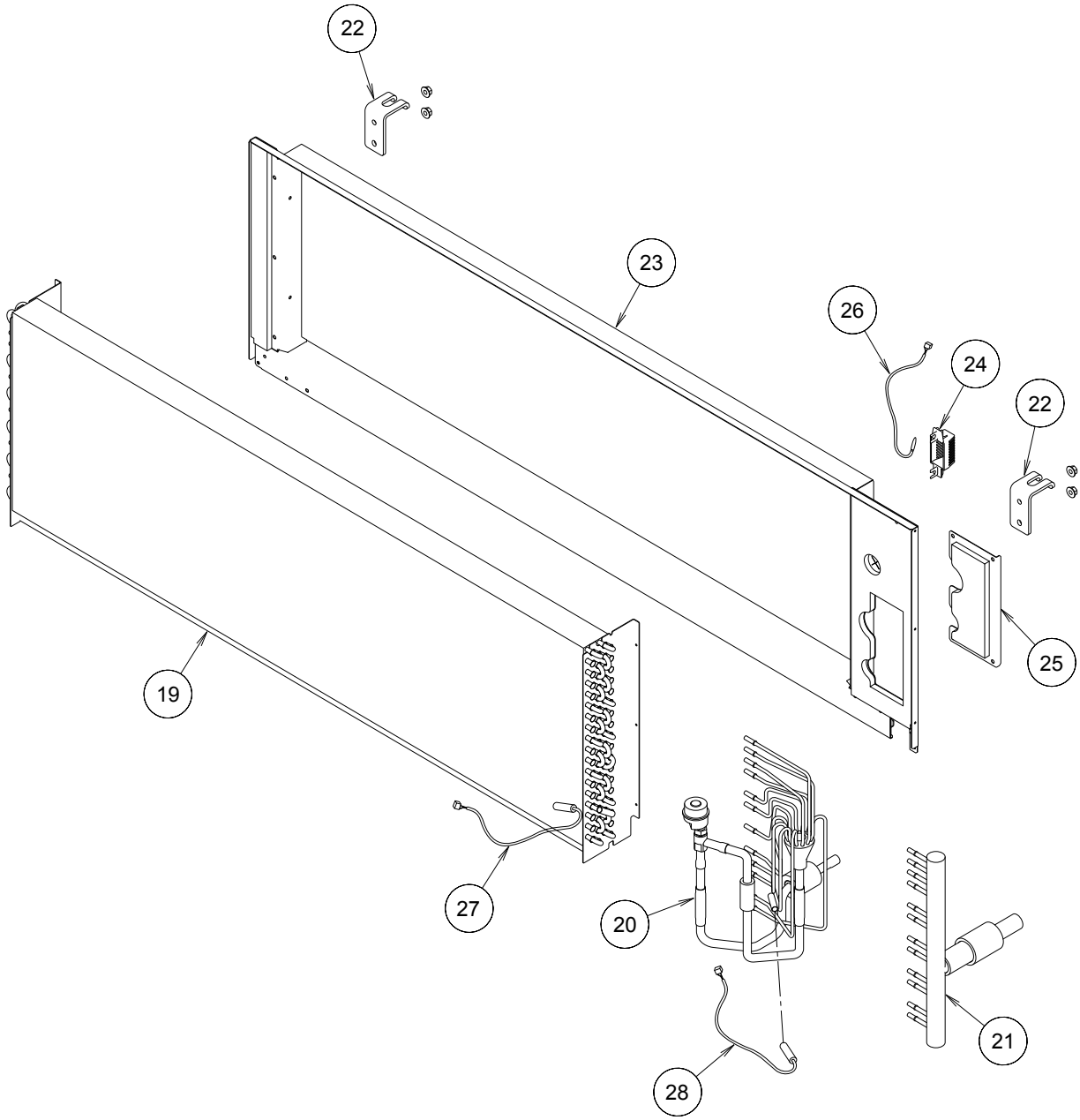
Ref No.	Description	Parts No.					Q'ty
		ARXC90					
1	TOP PLATE SA	9364679013					
2	LEFT PANEL SA	9364687018					
3	SIDE PANEL L SA	9364685014					
4	RIGHT PANEL SA	9364686011					
5	SIDE PANEL R SA	9364684017					
6	BEAM SA	9364683010					
7	HOOK METAL	9364669007					
8	KIT(PANEL FRONT SA)	9371359014					
9	DRAIN PAN SA	9364682013					
10	S DRAIN PAN SA	9364688015					

MODELS : ARXC90



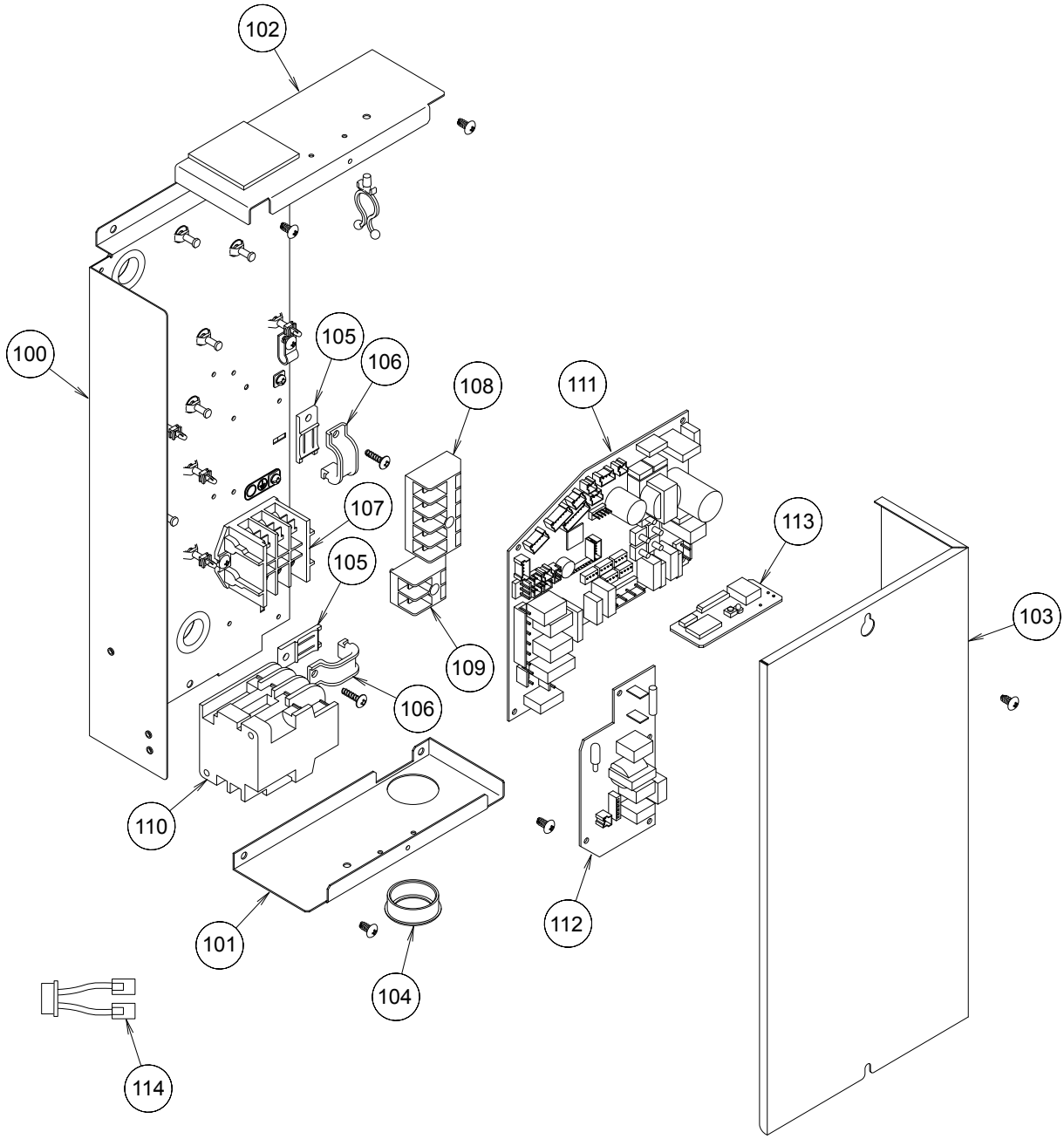
Ref No.	Description	Parts No.					Q'ty
		ARXC90					
11	KIT(CASING AS)	9371381015					
12	KIT(BELL MOUTH SA)	9371382012					
13	SIROCCO FAN L	9364665047					
14	SIROCCO FAN R	9364665030					
15	MOTOR INDUCTION	9601004004					
16	PLATE MOTOR ASSY	9364632001					
17	BRACKET(MOTOR) ASSY	9364630007					
18	PANEL FAN ASSY	9364628004					

MODELS : ARXC90



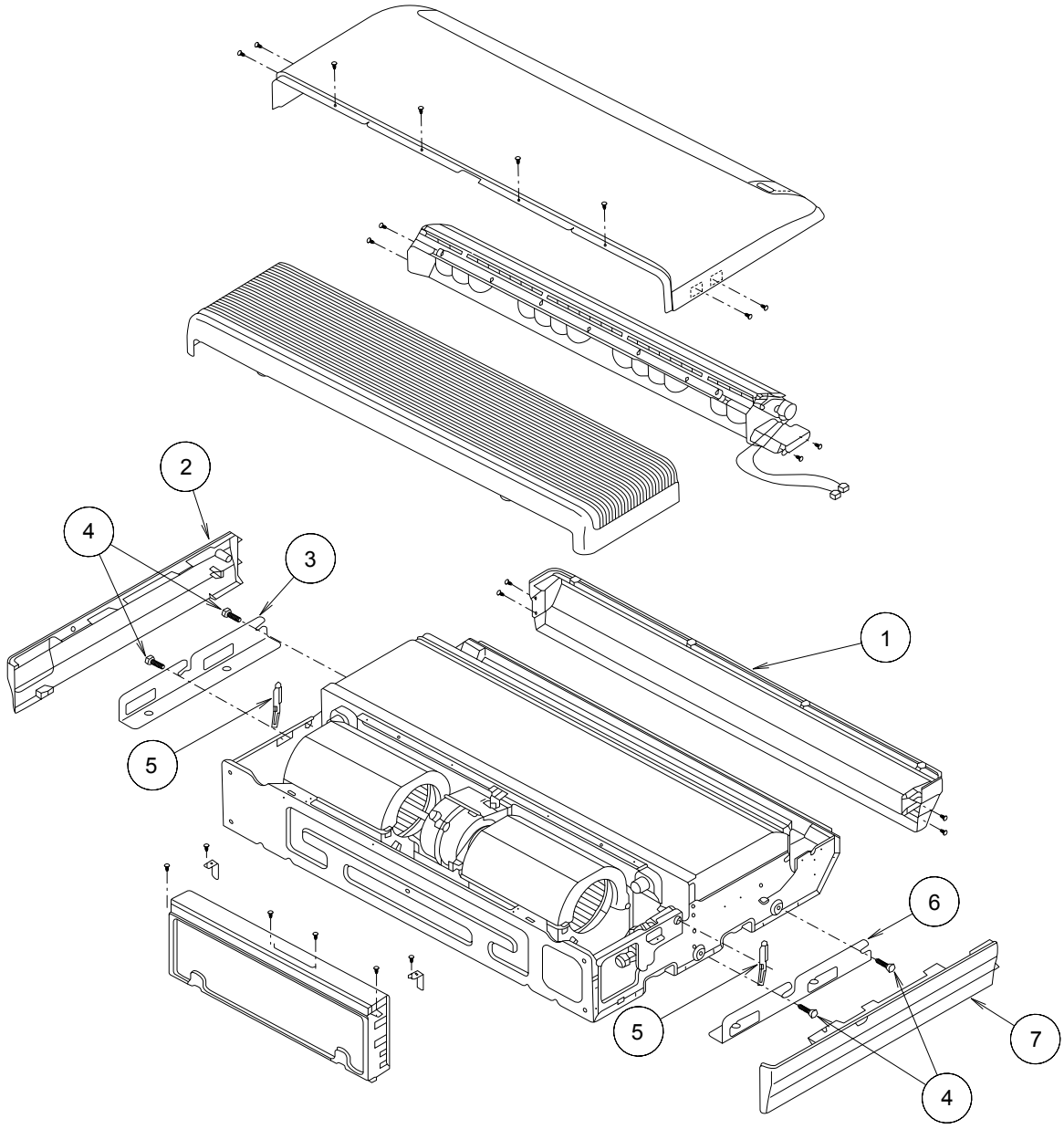
Ref No.	Description	Parts No.					Q'ty
		ARXC90					
19	EVAPORATOR TOTAL ASSY	9365149058					
-	EVAPORATOR ASSY	9370825022					
20	DISTRIBUTOR ASSY	9371325293					
21	COUPLING PIPE ASSY	9373038344					
22	HOOK METAL	9364669007					
23	KIT (REAR PANEL SA)	9371383026					
24	BRACKET (THERMOSTAT)	9367369010					
25	MENTE PANEL SA	9364691015					
26	THERMISTOR(ROOM)	9703299056					
27	THERMISTOR(PIPE-MID)	9703297014					
28	THERMISTOR(PIPE-IN)	9900220020					

MODELS : ARXC90



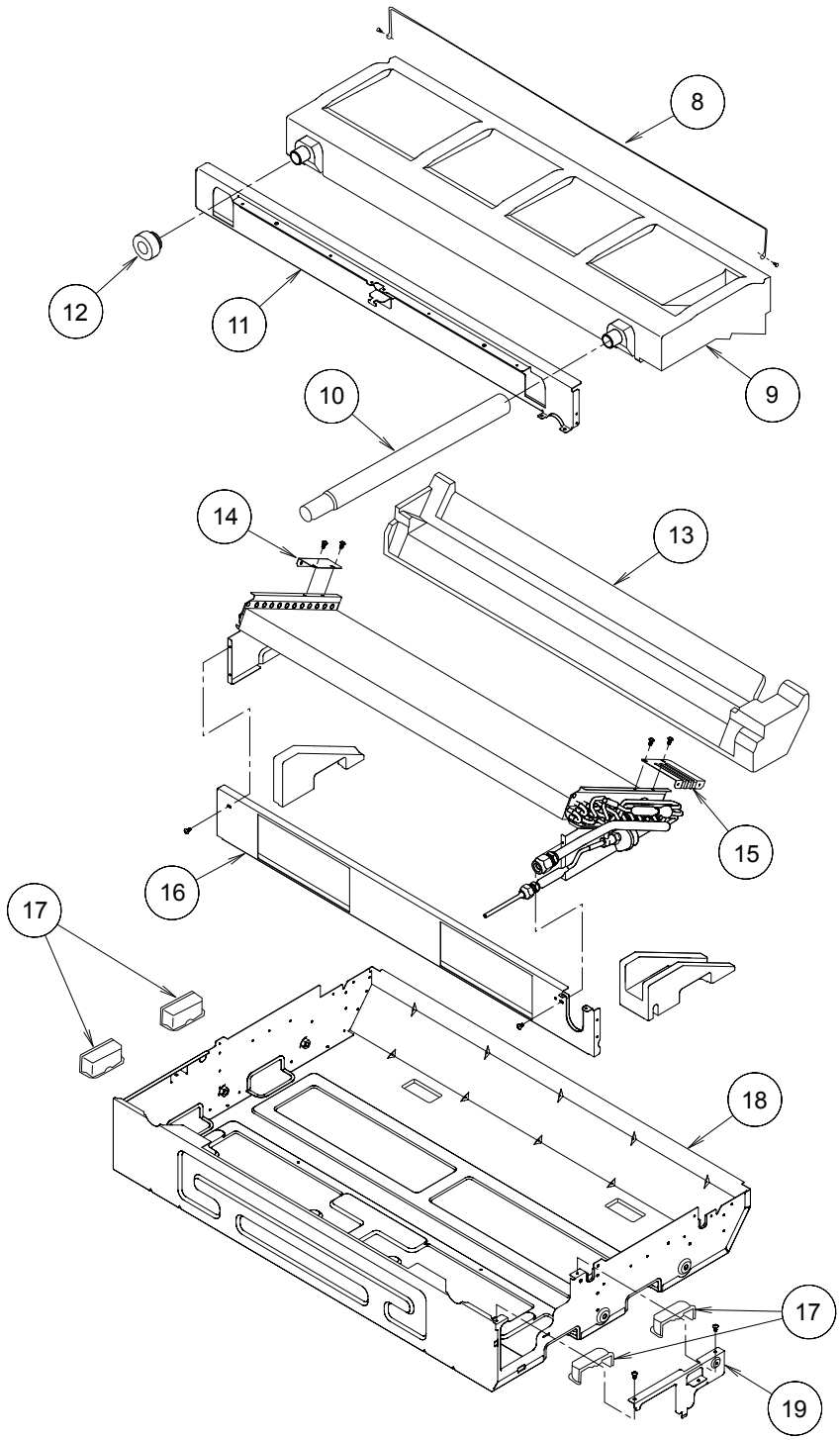
Ref No.	Description	Parts No.					Q'ty
		ARXC90					
100	CONTROL BOX	9375022013					
101	PLATE(BOX) A	9375023027					
102	PLATE(BOX) B	9375023034					
103	CONTROL BOX COVER	9365186008					
104	ONE-TOUCH BUSH	9374407019					
105	CLAMP(CORD) B	9356858006					
106	CLAMP(CORD)	9356857009					
107	TERMINAL 3P	9363276046					
108	TERMINAL 5P	9703874017					
109	TERMINAL 2P	9703873027					
110	MAGNETIC RELAY	9900331016					
111	CONTROLLER PCB	9707514100					
112	FILTER PCB	9704799142					
113	COMMUNICATION PCB	9704424044					
114	THERMISTOR CONNECTION WIRE	9705465015					
-	FUSE 250V 3.15A(FILTER PCB F101)	0600222512					
-	FUSE HOLDER	0500158072					

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



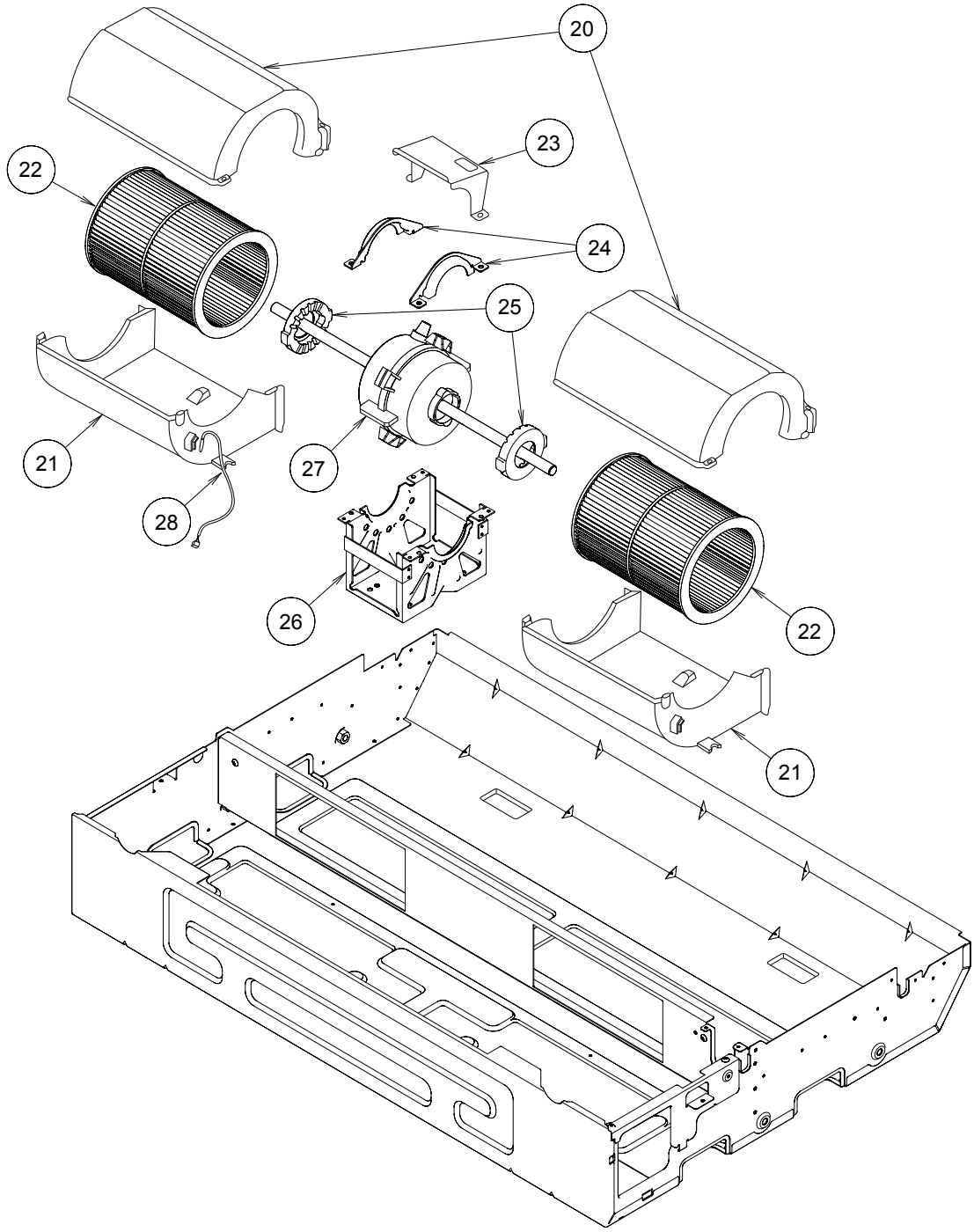
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
1	TOP COVER	9358534014	9358534014	9358534014	9358534014		
2	COSMETIC PANEL L	9358536018	9358536018	9358536018	9358536018		
3	HANGER L	9358596005	9358596005	9358596005	9358596005		
4	BOLT	0700190018	0700190018	0700190018	0700190018		
5	ARM	9358565001	9358565001	9358565001	9358565001		
6	HANGER R	9358595008	9358595008	9358595008	9358595008		
7	COSMETIC PANEL R	9358535011□	9358535011	9358535011	9358535011		

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



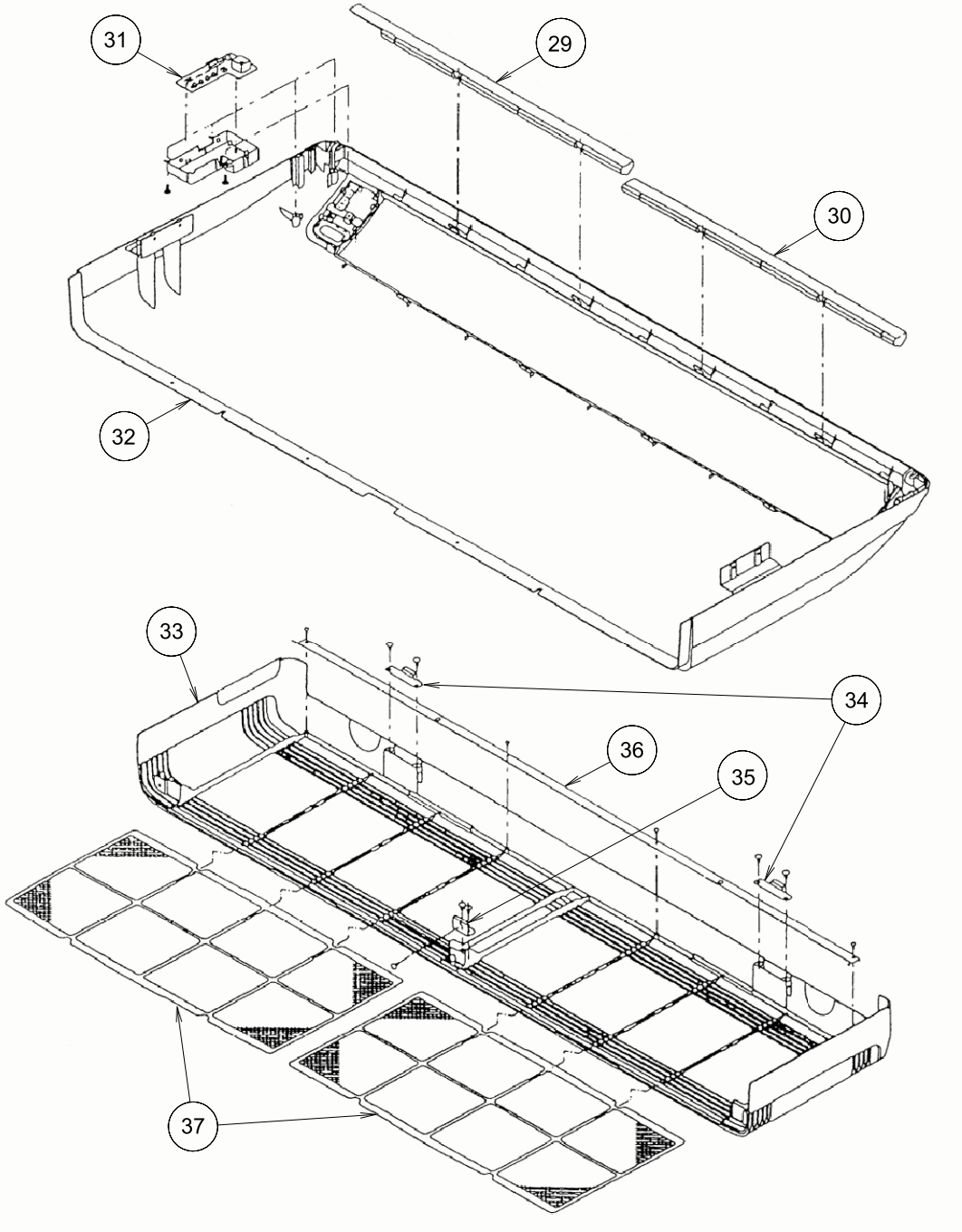
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
8	WIRE (DRAIN PAN)	9358598009	9358598009	9358598009	9358598009		
9	DRAIN PAN SUB ASSY	9359052029	9359052029	9359052029	9359052029		
10	DRAIN HOSE ASSY	9359242000	9359242000	9359242000	9359242000		
11	KIT (SEPARATE WALL B SUB ASSY	9373448013	9373448013	9373448013	9373448013		
12	DRAIN CAP	9358746004	9358746004	9358746004	9358746004		
13	INSULATION FLAP BASE	9372672013	9372672013	9372672013	9372672013		
14	BRACKET (EVA) L SUB ASSY	9372675014	9372675014	9372675014	9372675014		
15	BRACKET (EVA) R SUB ASSY	9372674017	9372674017	9372674017	9372674017		
16	KIT (SEPARATE WALL A)	9372666012	9372666012	9372666012	9372666012		
17	CAP	9358563007	9358563007	9358563007	9358563007		
18	BASE ASSY	9359061014	9359061014	9359061014	9359061014		
19	RFM (BASE BRACKET)	9358586006	9358586006	9358586006	9358586006		

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



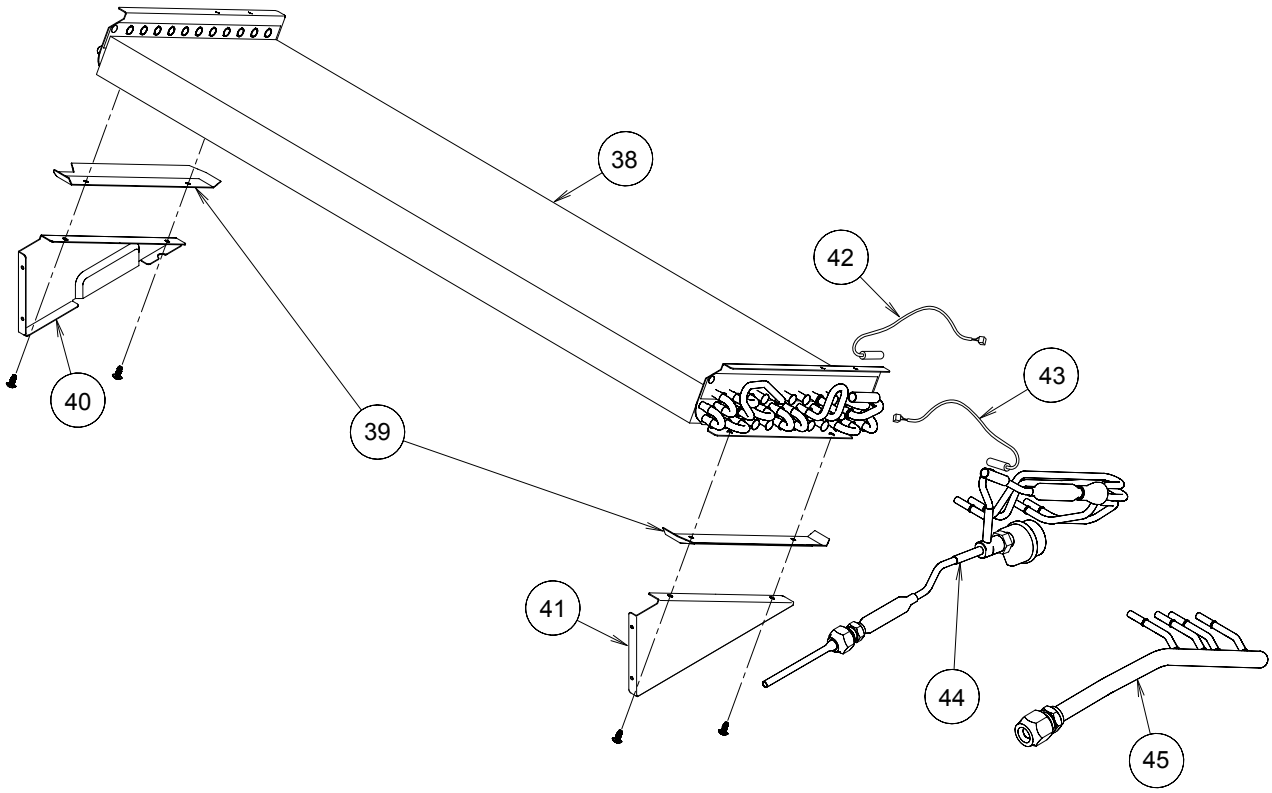
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
20	CASING COVER	9358544006	9358544006	9358544006	9358544006		
21	CASING	9358543009	9358543009	9358543009	9358543009		
22	SIROCCO FAN ASSY	9358621004	9358621004	9358621004	9358621004		
23	PROTECTOR	9359282006	9359282006	9359282006	9359282006		
24	BRACKET (MOTOR)	9358594001	9358594001	9358594001	9358594001		
25	RUBBER (VIBRATION PROOF)	313659068604	313659068604	313659068604	313659068604		
26	BRACKET (MOTOR) ASSY	9358591000	9358591000	9358591000	9358591000		
27	MOTOR, INDUCTION	9600778012	9600778012	9600778029	9600778043		
28	THERMISTOR (ROOM)	9703299087	9703299087	9703299087	9703299087		

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



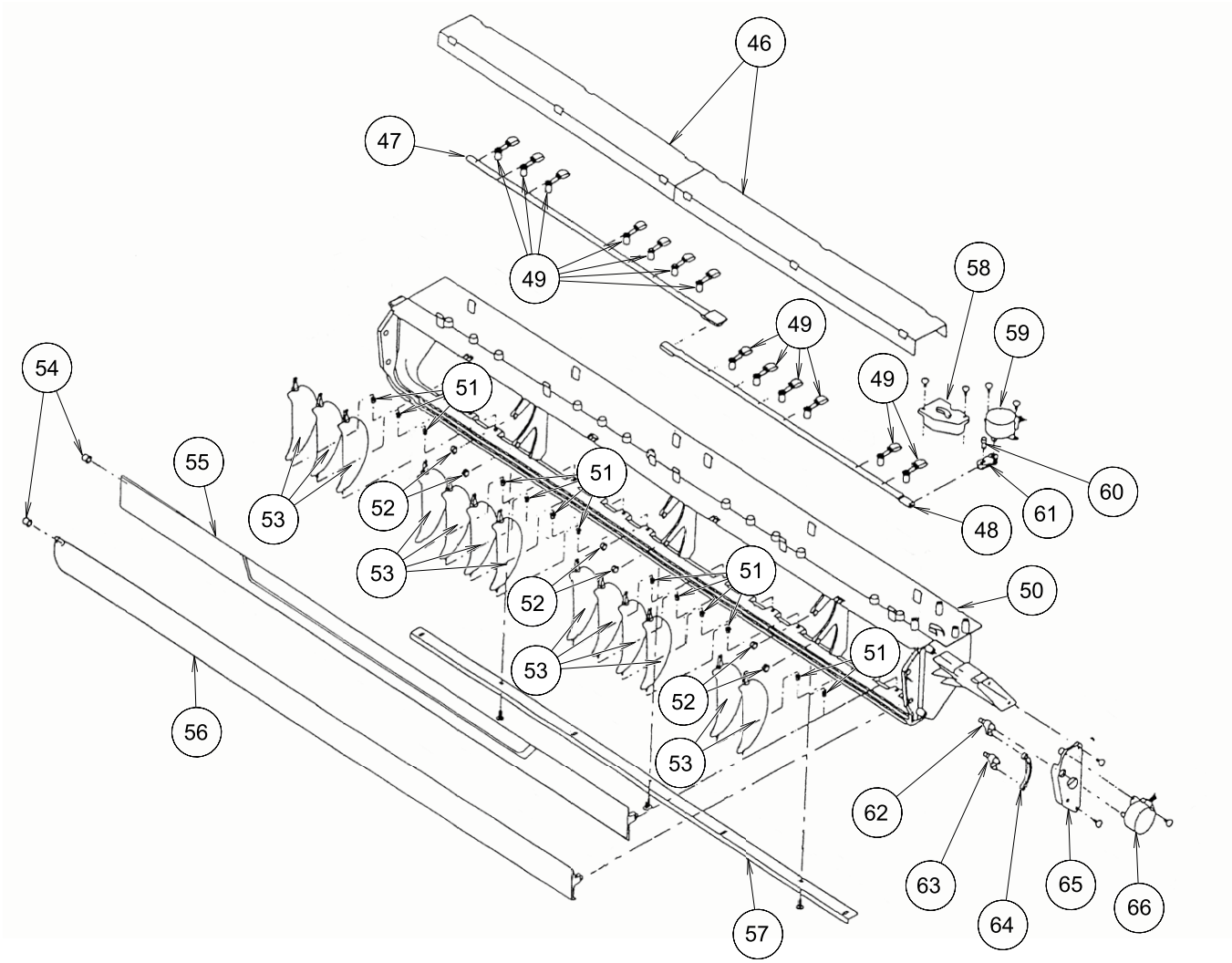
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
29	FORM (PANEL) A	9358574003	9358574003	9358574003	9358574003		
30	FORM (PANEL) B	9358914007	9358914007	9358914007	9358914007		
31	INDICATION PCB	9705798014	9705798014	9705798014	9705798014		
32	PANEL ASSY	9359076018	9359076018	9359076018	9359076018		
33	GRILLE F	9358532010	9358532010	9358532010	9358532010		
34	SUPPORT GRILLE	9358602003	9358602003	9358602003	9358602003		
35	BRACKET (ARM)	9359281009	9359281009	9359281009	9359281009		
36	FILTER BRACKET	9358607008	9358607008	9358607008	9358607008		
37	AIR FILTER	9358567029	9358567029	9358567029	9358567029		

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



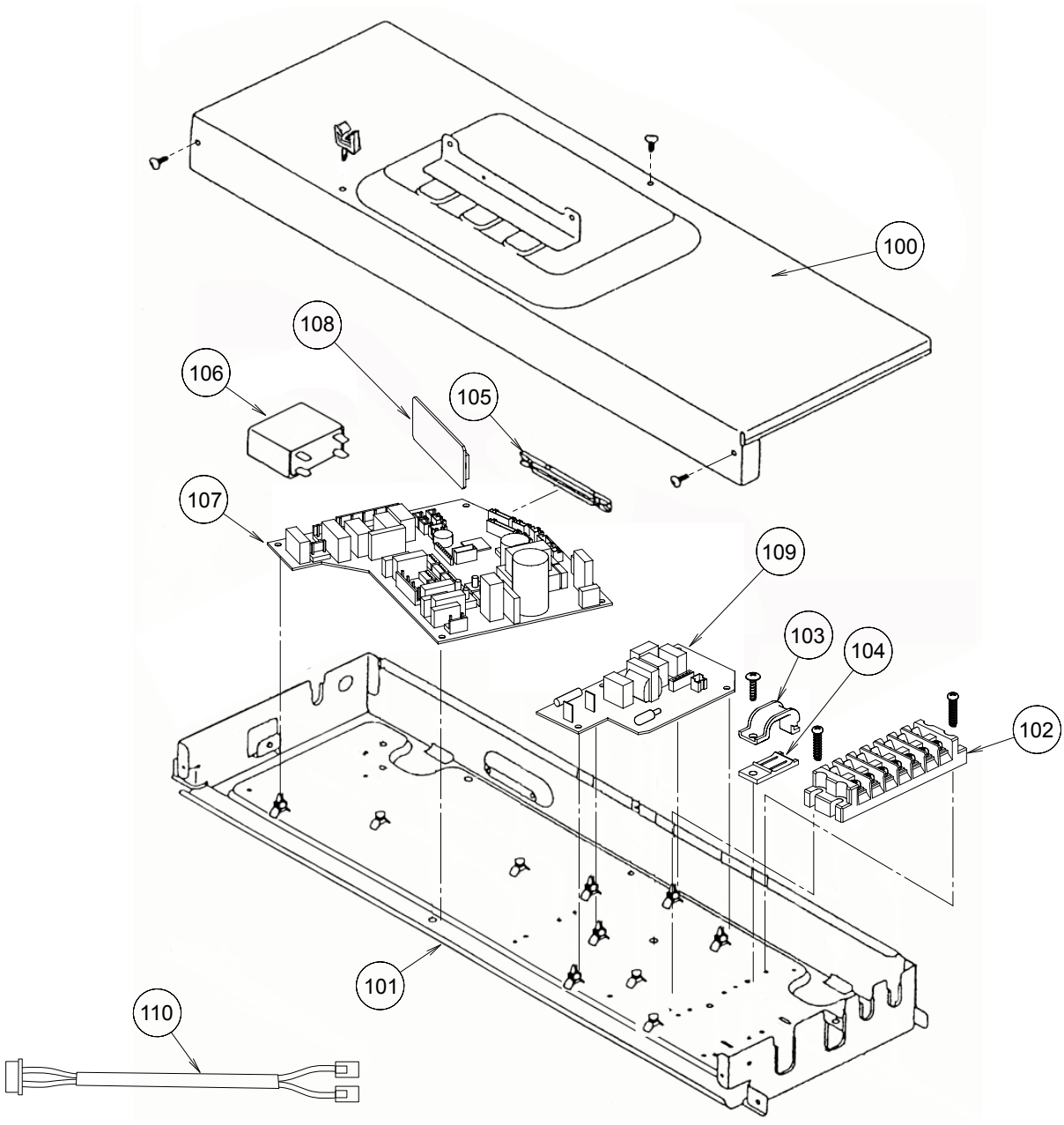
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
38	EVAPORATOR TOTAL ASSY	9359051220	9359051220	9359051237	9359051237		
-	EVAPORATOR ASSY	9362513029	9362513029	9362513036	9362513036		
39	DEW PROOF PLATE	9372673010	9372673010	9372673010	9372673010		
40	BRACKET A (EVA) L	9372668016	9372668016	9372668016	9372668016		
41	BRACKET A (EVA) R	9372667019	9372667019	9372667019	9372667019		
42	THERMISTOR (PIPE-MID)	9703297090	9703297090	9703297090	9703297090		
43	THERMISTOR (PIPE-IN)	9900220013	9900220013	9900220013	9900220013		
44	DISTRIBUTOR ASSY	9373034094	9373034094	9373034100	9373034100		
45	COUPLING PIPE ASSY	9373038139	9373038139	9373038146	9373038146		

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



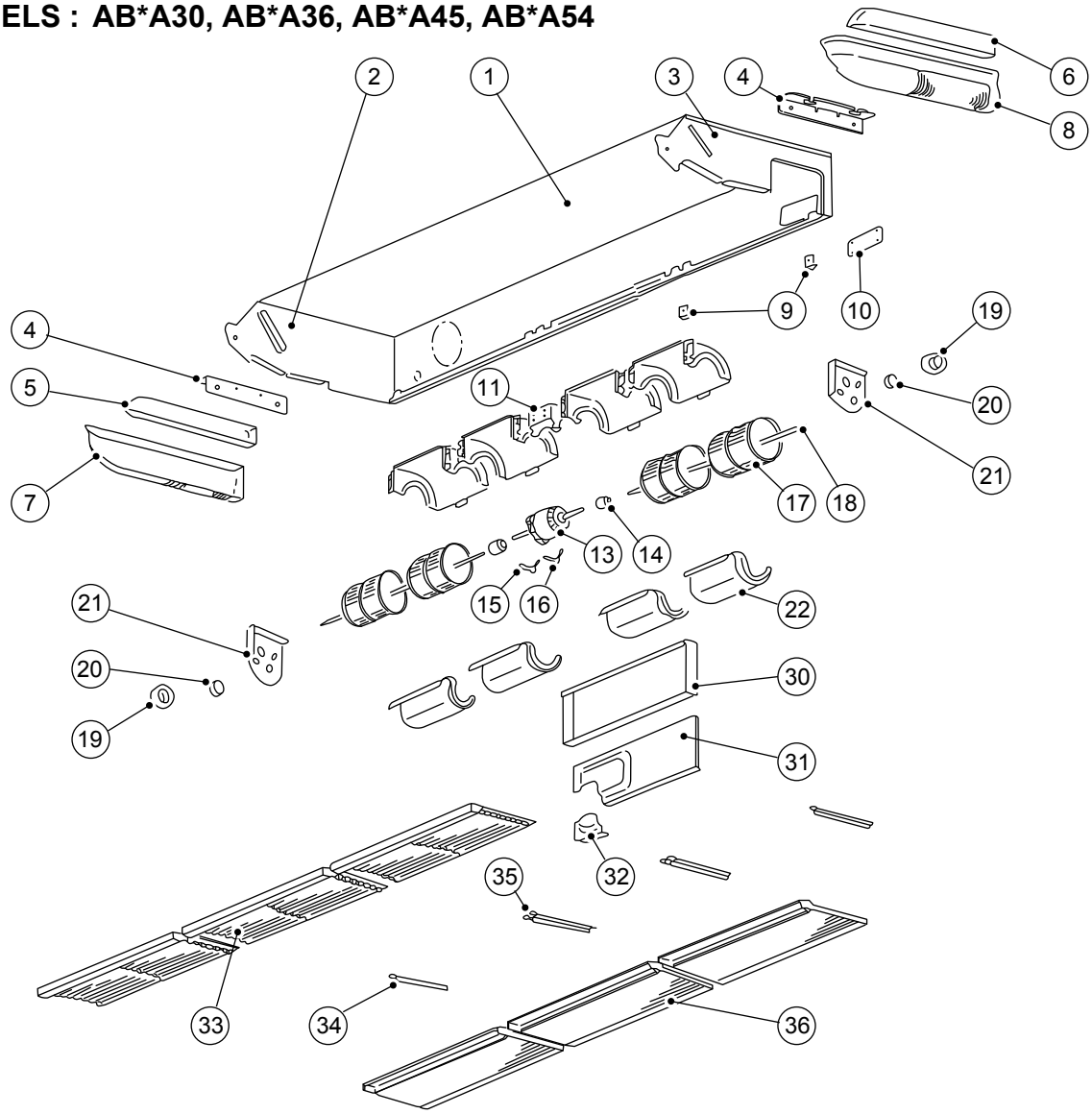
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
46	PROTECT COVER	9358564004	9358564004	9358564004	9358564004		
47	ROD (LOUVER)	9358559000	9358559000	9358559000	9358559000		
48	ROD (MOTOR)	9358560006	9358560006	9358560006	9358560006		
49	STOPPER (LOUVER)	9358555002	9358555002	9358555002	9358555002		
50	FLAP BASE	9358537015	9358537015	9358537015	9358537015		
51	BUSHING B	9358554005	9358554005	9358554005	9358554005		
52	BUSHING C	9358553008	9358553008	9358553008	9358553008		
53	LOUVER	9358561010	9358561010	9358561010	9358561010		
54	BUSHING	9357942001	9357942001	9357942001	9357942001		
55	FLAP (UPPER) F	9358538012	9358538012	9358538012	9358538012		
56	FLAP (LOWER)	9358541012	9358541012	9358541012	9358541012		
57	SUPPORT STAY	9358599006	9358599006	9358599006	9358599006		
58	LINK COVER (LOUVER)	9358558003	9358558003	9358558003	9358558003		
59	MOTOR, STEP	9900297015	9900297015	9900297015	9900297015		
60	SHAFT (LOUVER)	9358557006	9358557006	9358557006	9358557006		
61	LINK (LOUVER)	9358556009	9358556009	9358556009	9358556009		
62	FLAP LINK (UPPER)	9358551004	9358551004	9358551004	9358551004		
63	FLAP LINK (LOWER)	9358552001	9358552001	9358552001	9358552001		
64	ROD A	9358550007	9358550007	9358550007	9358550007		
65	MOTOR BASE	9358562000	9358562000	9358562000	9358562000		
66	MOTOR, STEP	9900362010	9900362010	9900362010	9900362010		

MODELS : AB*A12, AB*A14
AB*A18, AB*A24



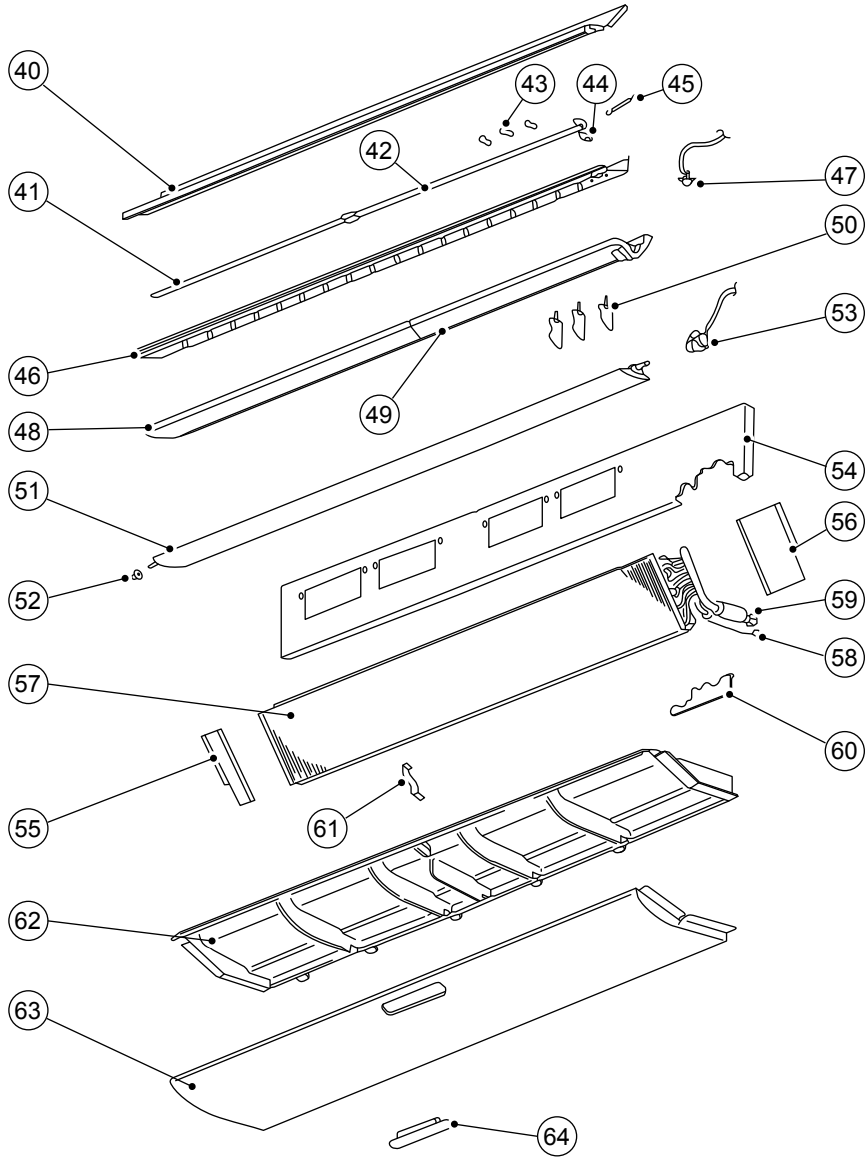
Ref No.	Description	Parts No.					Q'ty
		AB*A12	AB*A14	AB*A18	AB*A24		
100	CONTROL BOX COVER	9359097006	9359097006	9359097006	9359097006		
101	CONTROL BOX	9358600016	9358600016	9358600016	9358600016		
102	TERMINAL 7P	9703403040	9703403040	9703403040	9703403040		
103	CLAMP (CORD) C	9359677000	9359677000	9359677000	9359677000		
104	CLAMP (CORD)	9356857009	9356857009	9356857009	9356857009		
105	HOKDER (GUIDE RAIL)	0600241018	0600241018	0600241018	0600241018		
106	CAPACITOR (FAN MOTOR)	9900270018	9900270018	9900270087	9900270179		
107	CONTROLLER PCB	9707514049	9707514049	9707514049	9707514049		
108	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044		
109	FILTER PCB	9704799012	9704799012	9704799012	9704799012		
110	THERMISTOR CONNECTION WIRE	9705465022	9705465022	9705465022	9705465022		
-	FUSE 250V 3.15A (FILTER PCB F101)	0600222512	0600222512	0600222512	0600222512		
-	FUSE HOLDER	0500158072	0500158072	0500158072	0500158072		

MODELS : AB*A30, AB*A36, AB*A45, AB*A54



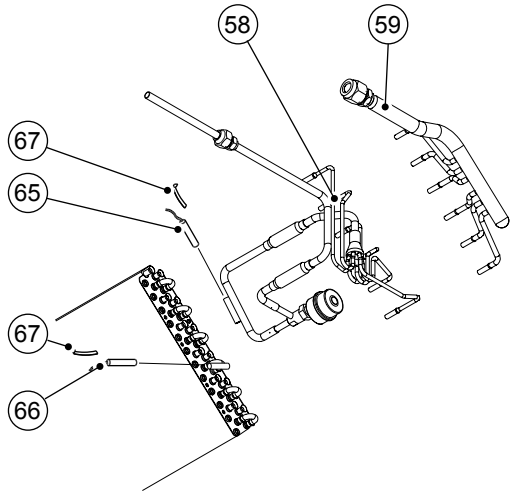
Ref No.	Description	Parts No.					Q'ty
		AB*A30	AB*A36	AB*A45	AB*A54		
1	BASE ASSY	9359680000	9359680000	9359680000	9359680000		
2	PANEL -L	9359685005	9359685005	9359685005	9359685005		
3	PANEL -R	9359683001	9359683001	9359683001	9359683001		
4	HANGER BRACKET	9359742005	9359742005	9359742005	9359742005		
5	DECORATION COVER -L	9359745006	9359745006	9359745006	9359745006		
6	DECORATION COVER -R	9359744009	9359744009	9359744009	9359744009		
7	SIDE COVER -L ASSY	9371365015	9371365015	9371365015	9371365015		
8	SIDE COVER -R ASSY	9371364018	9371364018	9371364018	9371364018		
9	HINGE GRILLE PLATE	9359694007	9359694007	9359694007	9359694007		
10	HOLE COVER	9359691006	9359691006	9359691006	9359691006		
11	MOTOR FIXING TABLE	9359681007	9359681007	9359681007	9359681007		
12	CASING	9359704003	9359704003	9359704003	9359704003		
13	MOTOR, INDUCTION	9360457004	9360457004	9360457004	9360457004		
14	JOINT ASSY	9359706007	9359706007	9359706007	9359706007		
15	MOTOR FIXTURE	9359702009	9359702009	9359702009	9359702009		
16	MOTOR FIXTURE -B	9359703006	9359703006	9359703006	9359703006		
17	SIROCCO FAN ASSY	9359701002	9359701002	9359701002	9359701002		
18	SHAFT, (SIROCCO FAN)	9359707004	9359707004	9359707004	9359707004		
19	SHAFT HOLDER FIXTURE	9359687009	9359687009	9359687009	9359687009		
20	SHAFT HOLDER -B	9357921006	9357921006	9357921006	9357921006		
21	SHAFT HOLDER BRACKET	9359686002	9359686002	9359686002	9359686002		
22	CASING COVER ASSY	9371367019	9371367019	9371367019	9371367019		
30	CONTROL BOX ASSY	9377912015	9377912015	9377912015	9377912015		
31	CONTROL BOX METAL -A	9359712008	9359712008	9359712008	9359712008		
32	CONTROL BOX METAL -B	9359713005	9359713005	9359713005	9359713005		
33	AIR FILTER	9359739005	9359739005	9359739005	9359739005		
34	FILTER GUIDE -L	9359693000	9359693000	9359693000	9359693000		
35	FILTER GUIDE -R	9359692003	9359692003	9359692003	9359692003		
36	INTAKE GRILLE	9359738008	9359738008	9359738008	9359738008		

MODELS : AB*A30, AB*A36, AB*A45, AB*A54

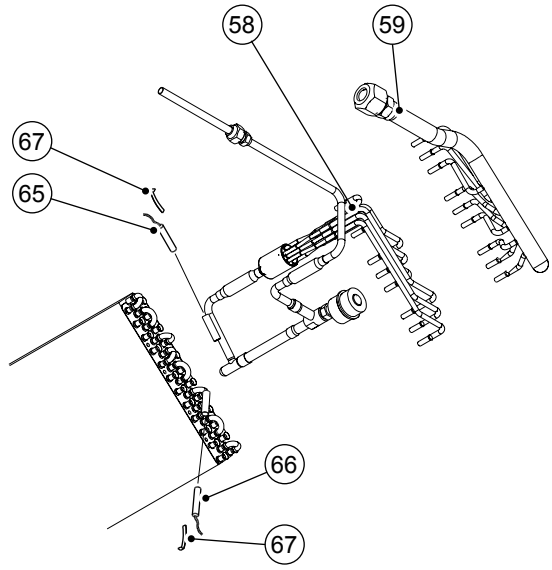


Ref No.	Description	Parts No.					Q'ty
		AB*A30	AB*A36	AB*A45	AB*A54		
40	TOP COVER	9359737001	9359737001	9359737001	9359737001		
41	LOUVER ROD	9359725008	9359725008	9359725008	9359725008		
42	MOTOR ROD	9359723004	9359723004	9359723004	9359723004		
43	LOUVER STOPPER	9359724001	9359724001	9359724001	9359724001		
44	LOUVER LINK	9359726005	9359726005	9359726005	9359726005		
45	LOUVER SPRING	9359720003	9359720003	9359720003	9359720003		
46	LOUVER BASE ASSY	9371369013	9371369013	9371369013	9371369013		
47	STEP MOTOR -H	9900297015	9900297015	9900297015	9900297015		
48	INSULATION (LOUVER) -L	9359722007	9359722007	9359722007	9359722007		
49	INSULATION (LOUVER) -R	9359721000	9359721000	9359721000	9359721000		
50	LOUVER	9359719007	9359719007	9359719007	9359719007		
51	FLAP ASSY	9359731009	9359731009	9359731009	9359731009		
52	BUSHING	9359733003	9359733003	9359733003	9359733003		
53	MOTOR BASE	9359727002	9359727002	9359727002	9359727002		
54	SEPARATE WALL ASSY	9371366012	9371366012	9371366012	9371366012		
55	PIPE COVER -L	9359690009	9359690009	9359690009	9359690009		
56	PIPE COVER -R	9359689003	9359689003	9359689003	9359689003		
57	EVAPORATOR ASSY	9371073057	9371073064	9371073064	9371073064		
58	DISTRIBUTOR ASSY	9373764038	9373764021	9373764021	9373764021		
59	COUPLING PIPE ASSY	9373038351	9371661025	9371661025	9371661025		
60	PIPE FIXTURE ASSY	9375621018	9375621018	9375621018	9375621018		
61	REINFORCEMENT METAL	9359697008	9359697008	9359697008	9359697008		
62	DRAIN PAN ASSY	9371368016	9371368016	9371368016	9371368016		
63	FRONT PANEL	9359734000	9359734000	9359734000	9359734000		
64	PCB HOLDER	9359736004	9359736004	9359736004	9359736004		

MODEL : AB*A30

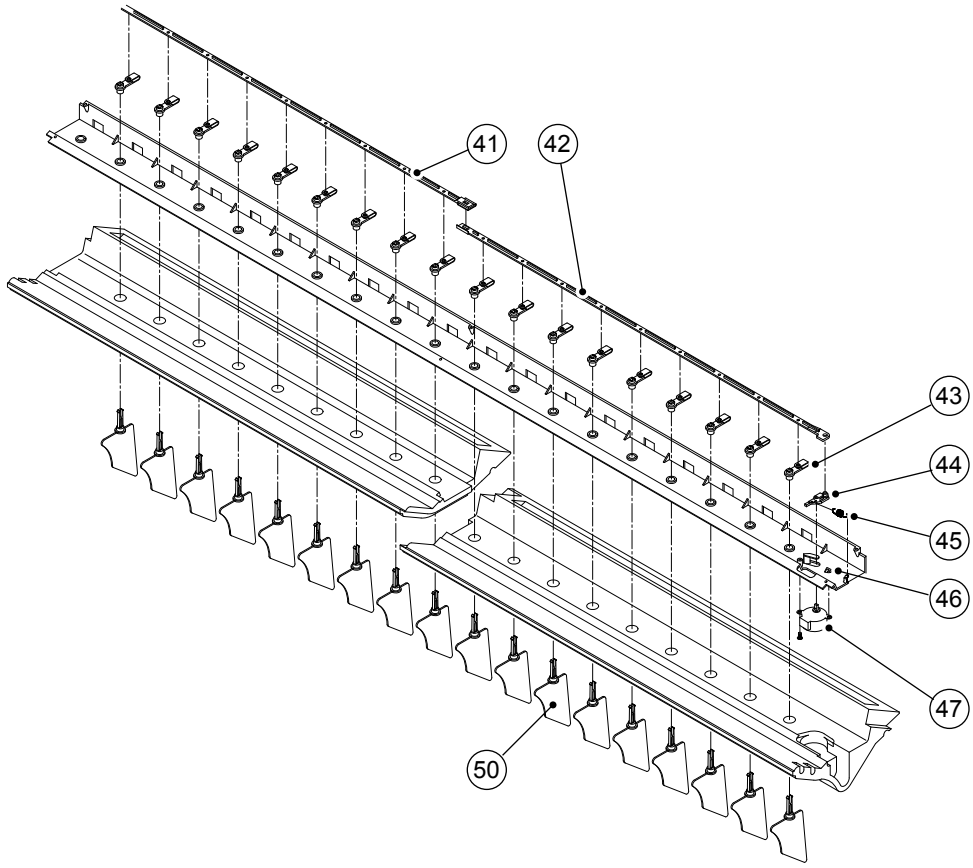


MODELS : AB*A36, AB*A45, AB*A54



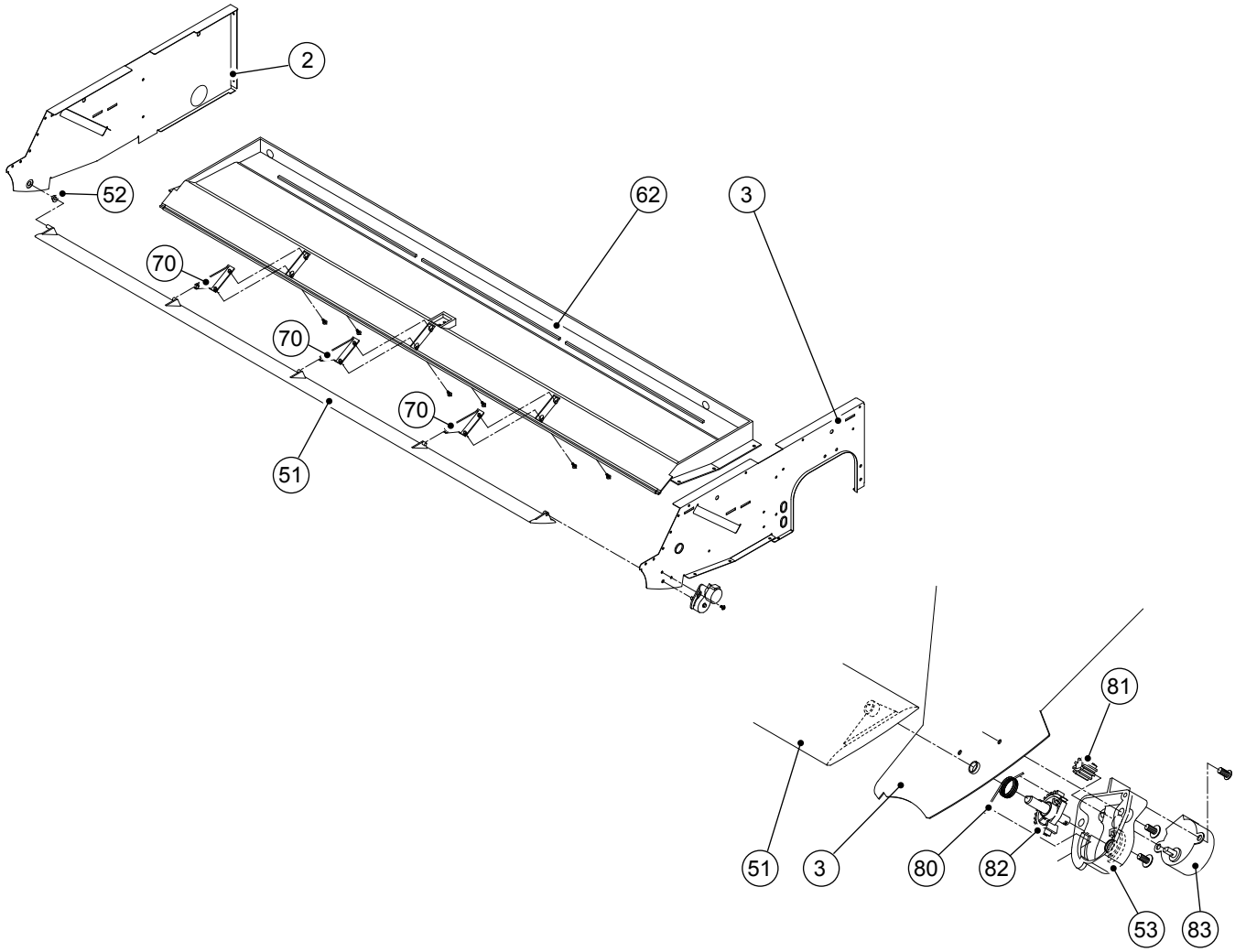
Ref No.	Description	Parts No.					Q'ty
		AB*A30	AB*A36	AB*A45	AB*A54		
58	DISTRIBUTOR ASSY	9373764038	9373764021	9373764021	9373764021		
59	COUPLING PIPE ASSY	9373038351	9371661025	9371661025	9371661025		
65	THERMISTOR (PIPE)	9900220020	9900220020	9900220020	9900220020		
66	THERMISTOR (PIPE)	9703297106	9703297106	9703297106	9703297106		
67	THERMO.SPRING-A	313728262708	313728262708	313728262708	313728262708		

MODELS : AB*A30, AB*A36, AB*A45, AB*A54



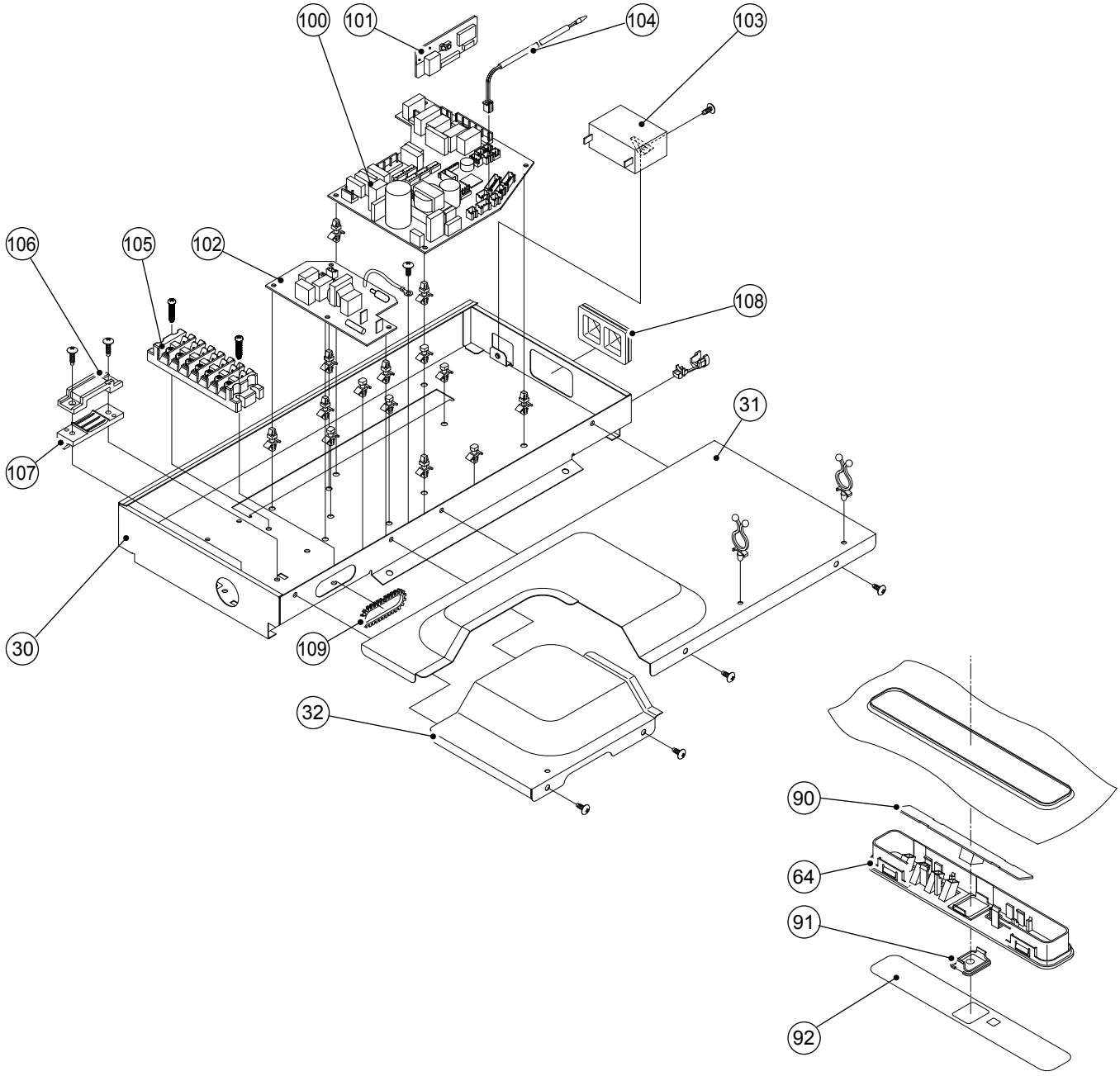
Ref No.	Description	Parts No.					Q'ty
		AB*A30	AB*A36	AB*A45	AB*A54		
41	LOUVER ROD	9359725008	9359725008	9359725008	9359725008		
42	MOTOR ROD	9359723004	9359723004	9359723004	9359723004		
43	LOUVER STOPPER	9359724001	9359724001	9359724001	9359724001		
44	LOUVER LINK	9359726005	9359726005	9359726005	9359726005		
45	LOUVER SPRING	9359720003	9359720003	9359720003	9359720003		
46	LOUVER BASE	9359718000	9359718000	9359718000	9359718000		
47	STEP MOTOR -H	9900297015	9900297015	9900297015	9900297015		
50	LOUVER	9359719007	9359719007	9359719007	9359719007		

MODELS : AB*A30, AB*A36, AB*A45, AB*A54



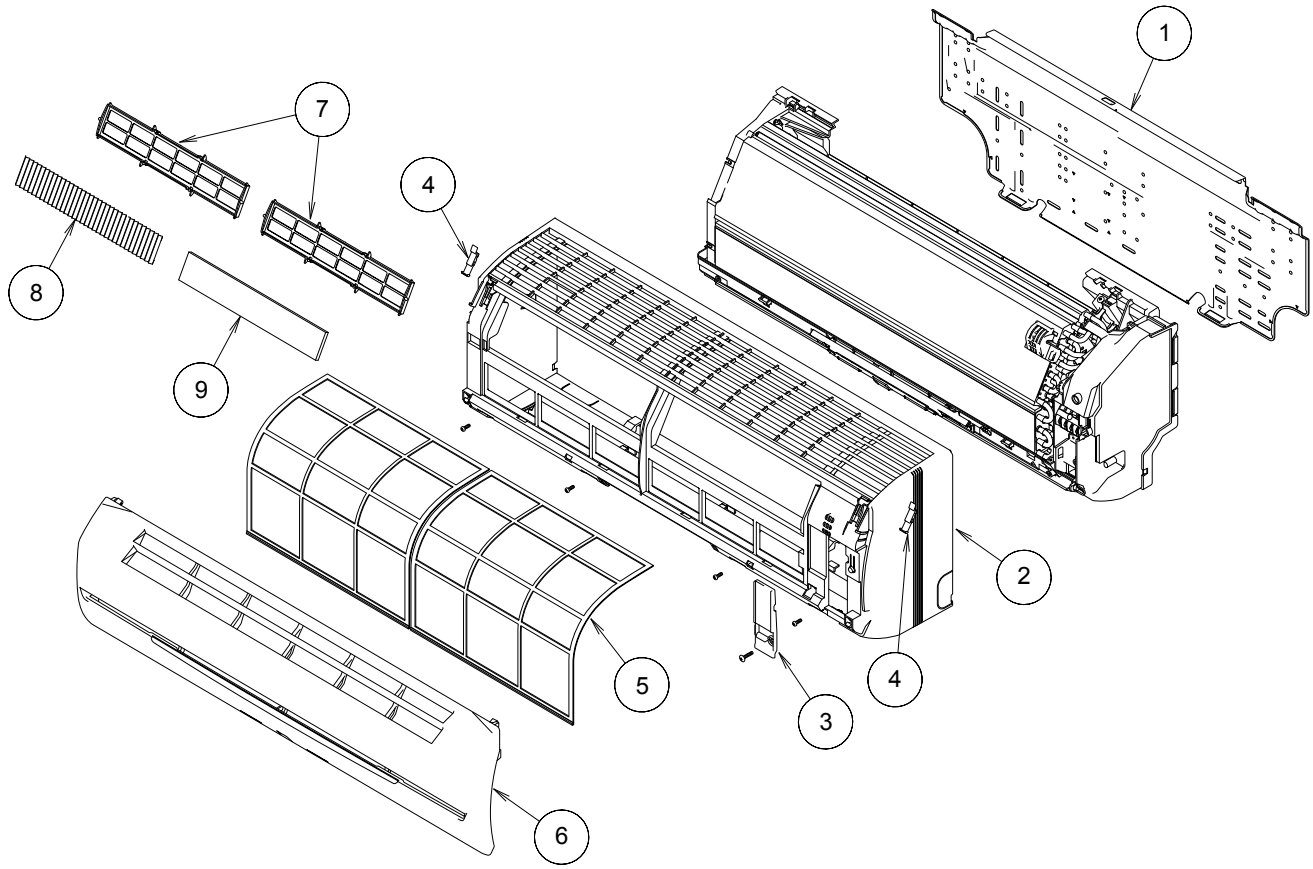
Ref No.	Description	Parts No.					Q'ty
		AB*A30	AB*A36	AB*A45	AB*A54		
2	PANEL -L	9359685005	9359685005	9359685005	9359685005		
3	PANEL -R	9359683001	9359683001	9359683001	9359683001		
51	FLAP ASSY	9359731009	9359731009	9359731009	9359731009		
52	BUSHING	9359733003	9359733003	9359733003	9359733003		
53	MOTOR BASE	9359727002	9359727002	9359727002	9359727002		
62	DRAIN PAN ASSY	9359698005	9359698005	9359698005	9359698005		
70	HINGE	9359699002	9359699002	9359699002	9359699002		
80	FLAP SPRING	9359730002	9359730002	9359730002	9359730002		
81	PINION GEAR	9359728009	9359728009	9359728009	9359728009		
82	SECTOR GEAR	9359729006	9359729006	9359729006	9359729006		
83	STEP MOTOR -V	9900362010	9900362010	9900362010	9900362010		

MODELS : AB*A30, AB*A36, AB*A45, AB*A54



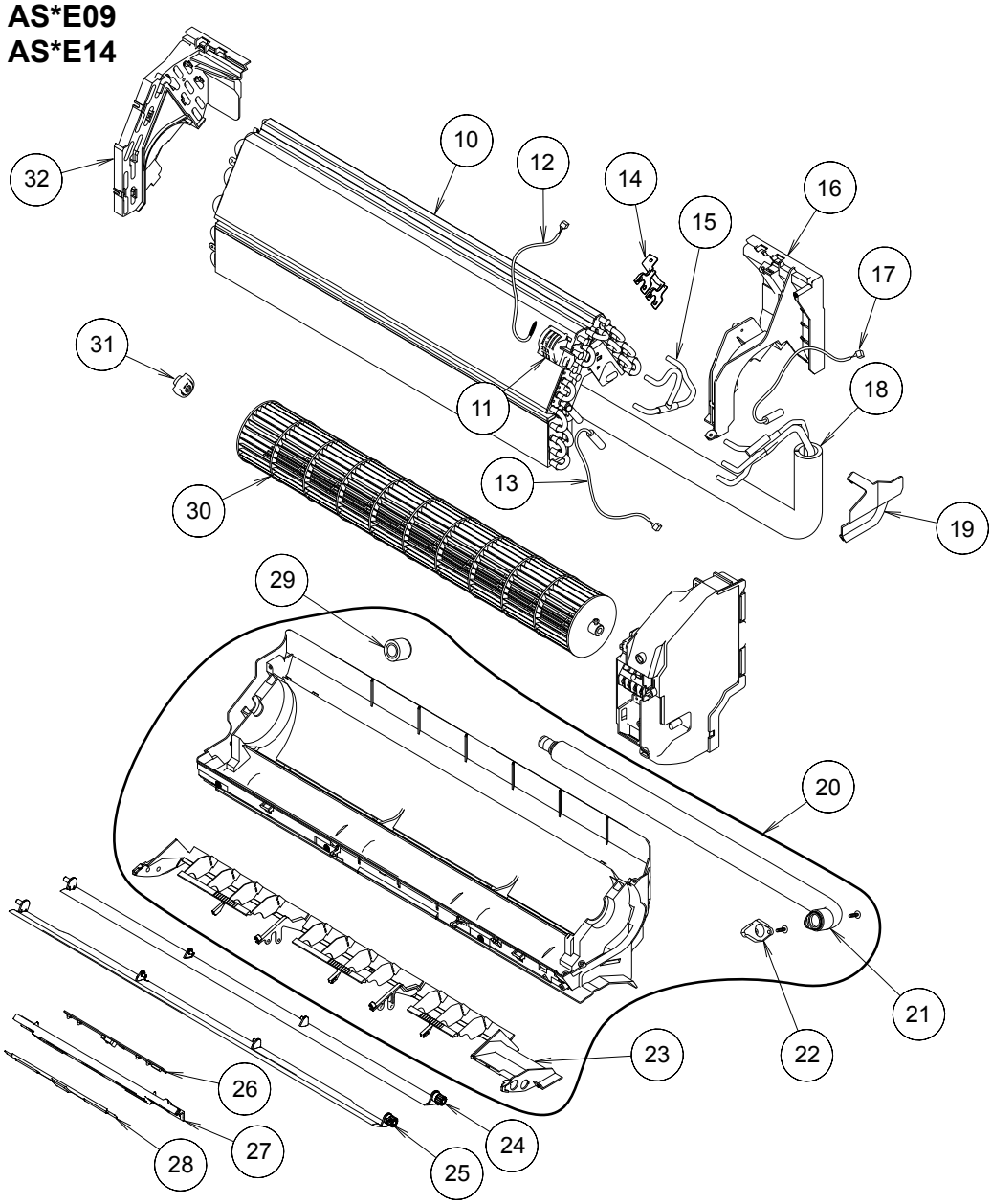
Ref No.	Description	Parts No.					Q'ty
		AB*A30	AB*A36	AB*A45	AB*A54		
31	CONTROL BOX METAL -A	9359712008	9359712008	9359712008	9359712008		
32	CONTROL BOX METAL -B	9359713005	9359713005	9359713005	9359713005		
64	PCB HOLDER	9359736004	9359736004	9359736004	9359736004		
90	INDICATOR PCB ASSY	9705891029	9705891029	9705891029	9705891029		
91	RECEIVER COVER	9359714002	9359714002	9359714002	9359714002		
92	BADGE "FUJITSU"	9359735014	9359735014	9359735014	9359735014		
	BADGE "GENERAL"	9359735021	9359735021	9359735021	9359735021		
100	CONTROLLER PCB ASSY	9707514056	9707514056	9707514056	9707514056		
101	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044		
102	FILTER PCB ASSY	9704799029	9704799029	9704799029	9704799029		
103	CAPACITOR (FAN MOTOR)	9900270216	9900270216	9900270216	9900270216		
104	THERMISTOR ASSY -ROOM	9703299025	9703299025	9703299025	9703299025		
105	TERMINAL -7P	9703403040	9703403040	9703403040	9703403040		
106	CORD CLAMP -A	9359820017	9359820017	9359820017	9359820017		
107	CORD CLAMP -B	9359821014	9359821014	9359821014	9359821014		
108	RUBBER BUSHING	9357376004	9357376004	9357376004	9357376004		
109	EDGE COVER	9361049024	9361049024	9361049024	9361049024		
	PCB ASSY -F (C+P)	9704793317	9704793317	9704793317	9704793317		

MODELS : AS*E07, AS*E09
AS*E12, AS*E14



Ref No.	Description	Parts No.					Q'ty
		AS*E07	AS*E09	AS*E12	AS*E14		
1	BRACKET PANEL ASSY	9312752027	9312752027	9312752027	9312752027		
2	PANEL (FRONT)	9309999053	9309999053	9309999053	9309999053		
3	WIRE CLAMPER	9311946014	9311946014	9311946014	9311946014		
4	CLAMPER (GRILLE)	9306755010	9306755010	9306755010	9306755010		
5	AIR FILTER	9309997011	9309997011	9309997011	9309997011		
6	INTAKE GRILLE ASSY	9313131203	9313131203	9313131203	9313131203		
7	HOLDER (ELECTRIC FILTER)	9306602017	9306602017	9306602017	9306602017		
8	ELECTRIC FILTER	9312153015	9312153015	9312153015	9312153015		
9	ION DEODRANT FILTER	9311925033	9311925033	9311925033	9311925033		

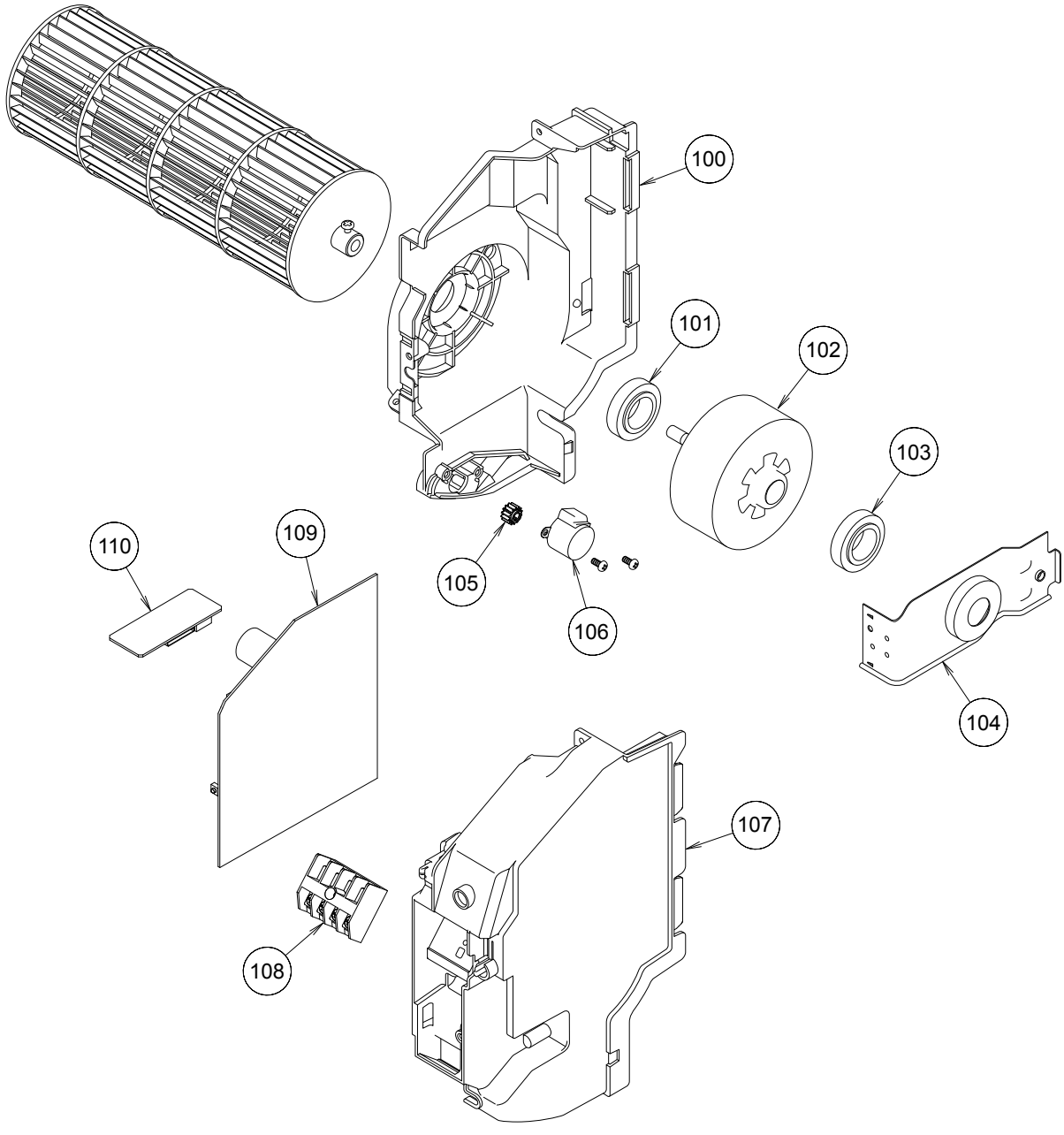
MODELS : AS*E07, AS*E09
AS*E12, AS*E14



Note: Since the thermistors of 12, 13, and 17 are directly mounted to controller PCB, please place order by the controller PCB. Soldering is required when the order of thermistor is placed individually.

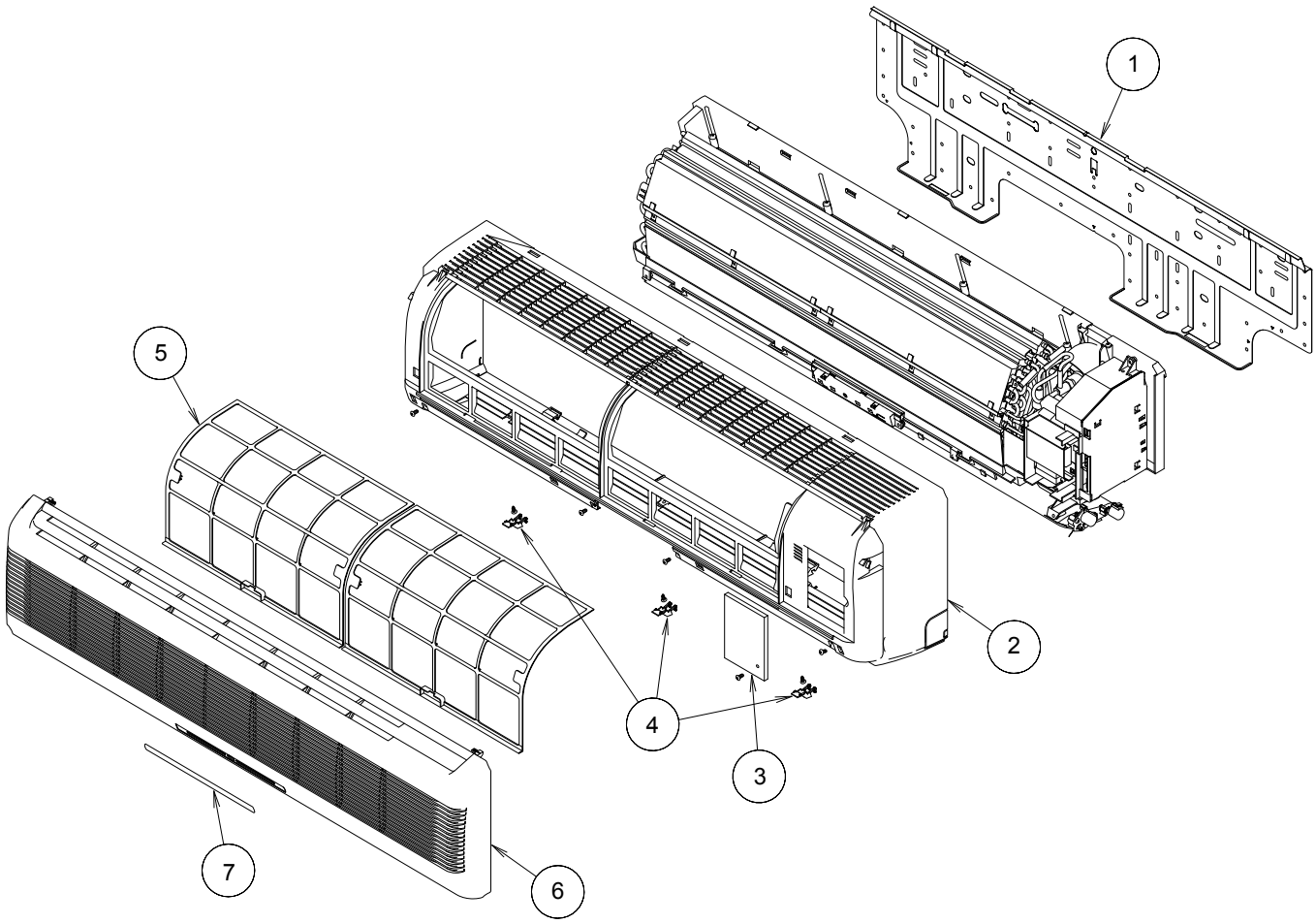
Ref No.	Description	Parts No.					Q'ty
		AS*E07	AS*E09	AS*E12	AS*E14		
10	EVAPORATOR TOTAL ASSY	9366633044	9366633044	9366633044	9366633044		
11	HOLDER (ROOM THERMISTOR)	9311948018	9311948018	9311948018	9311948018		
12	THERMISTOR (ROOM)	9700801160	9700801160	9700801160	9700801160		
13	THERMISTOR (PIPE-MID)	9702039035	9702039035	9702039035	9702039035		
14	BRACKET (EVA)	9310464007	9310464007	9310464007	9310464007		
15	SEPARATE PIPE ASSY A	9313100018	9313100018	9313100018	9313100018		
16	HOLDER (EVA) R	9309983014	9309983014	9309983014	9309983014		
17	THERMISTOR (PIPE-IN)	9702039080	9702039080	9702039080	9702039080		
18	JOINT PIPE ASSY	9313750022	9313750022	9313750022	9313750022		
19	WATER SEAL	9312912018	9312912018	9312912018	9312912018		
20	CASING ASSY	9312112111	9312112111	9312112111	9312112111		
21	HOSE (DRAIN) ASSY	9314147012	9314147012	9314147012	9314147012		
22	BRACKET DRAIN	9314161018	9314161018	9314161018	9314161018		
23	LOUVER HOLDER	9309993013	9309993013	9309993013	9309993013		
24	LOUVER Z ASSY	9312369034	9312369034	9312369034	9312369034		
25	LOUVER U ASSY	9312368020	9312368020	9312368020	9312368020		
26	DISPLAY PCB	9705039032	9705039032	9705039032	9705039032		
27	CASE DISPLAY	9311858010	9311858010	9311858010	9311858010		
28	RECEIVER WINDOW	9312911011	9312911011	9312911011	9312911011		
29	CAP (DRAIN) ASSY	9314493010	9314493010	9314493010	9314493010		
30	CROSS FLOW FAN ASSY	9307836015	9307836015	9307836015	9307836015		
31	BEARING C ASSY	9306628017	9306628017	9306628017	9306628017		
32	EVAPORATOR HOLDER L ASSY	9312360024	9312360024	9312360024	9312360024		

MODELS : AS*E07, AS*E09
AS*E12, AS*E14



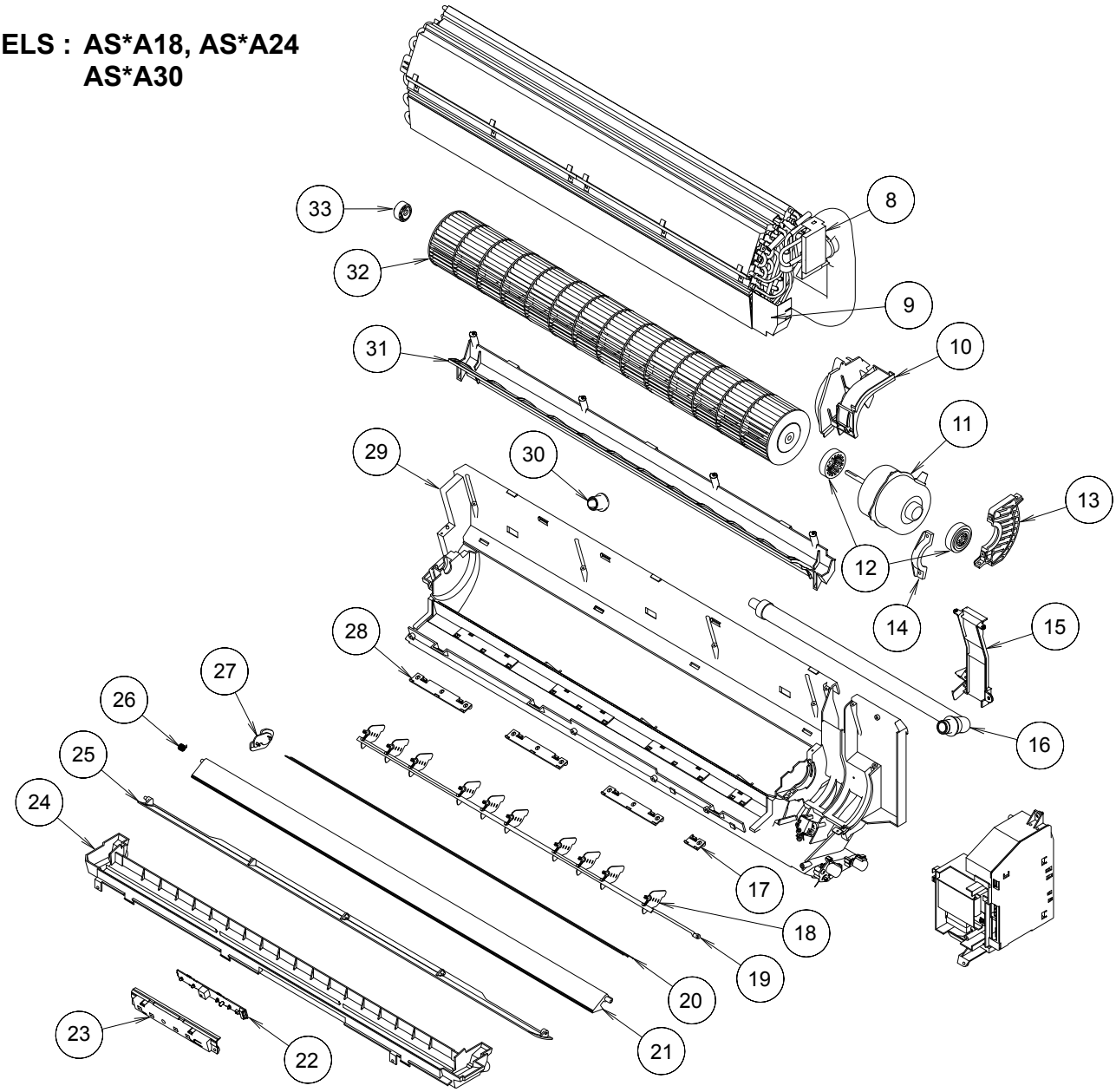
Ref No.	Description	Parts No.					Q'ty
		AS*E07	AS*E09	AS*E12	AS*E14		
100	BOX (SWITCH) SUB ASSY	9312374021	9312374021	9312374021	9312374021		
101	MOTOR CUSHION N	9312979011	9312979011	9312979011	9312979011		
102	MOTOR DC BRUSHLESS	9602109012	9602109012	9602109012	9602109012		
103	MOTOR CUSHION NR	9313168018	9313168018	9313168018	9313168018		
104	CLAMPER (MOTOR)	9310102008	9310102008	9310102008	9310102008		
105	GEAR A	9309994003	9309994003	9309994003	9309994003		
106	MOTOR STEP	9900139025	9900139025	9900139025	9900139025		
107	COVER SWITCH	9312909018	9312909018	9312909018	9312909018		
108	TERMINAL 4P	9701955121	9701955121	9701955121	9701955121		
109	CONTROLLER PCB	9707356021	9707356021	9707356021	9707356021		
110	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044		
-	FUSE 250V 3.15A	0600376062	0600376062	0600376062	0600376062		
-	FUSE HOLDER	0500158072	0500158072	0500158072	0500158072		

MODELS : AS*A18, AS*A24
AS*A30



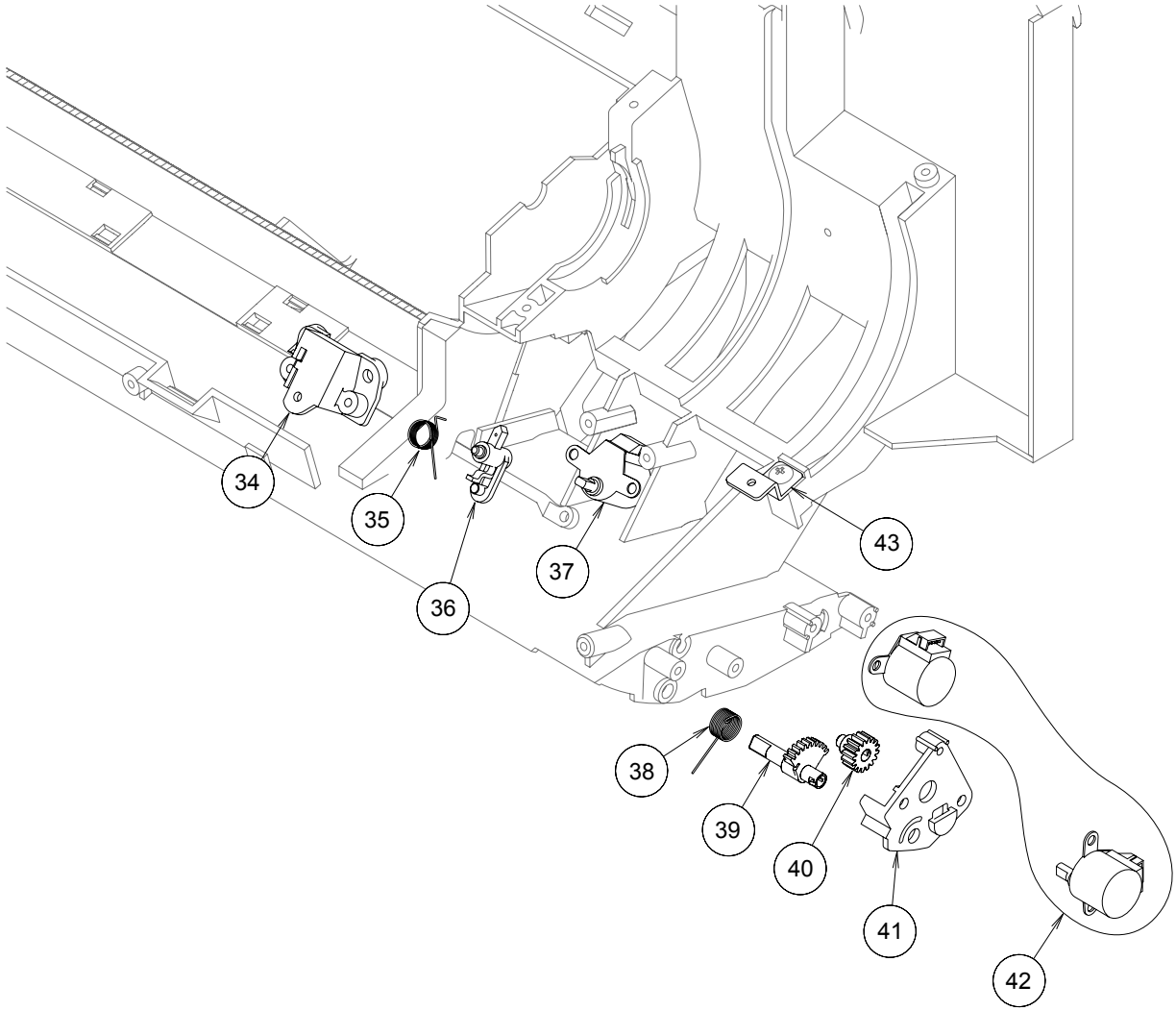
Ref No.	Description	Parts No.					Q'ty
		AS*A18	AS*A24	AS*A30			
1	FIXING PLATE	9368579005	9368579005	9368579005			
2	FRONT PANEL	9368540012	9368540012	9368540012			
3	CONTROL BOX COVER	9368611002	9368611002	9368611002			
4	SCREW COVER	9368576011	9368576011	9368576011			
5	AIR FILTER	9373613015	9373613015	9373613015			
6	INTAKE GRILLE F	9368541019	9368541019	9368541019			
7	DISPLAY F	9368757014	9368757014	9368757014			

MODELS : AS*A18, AS*A24
AS*A30



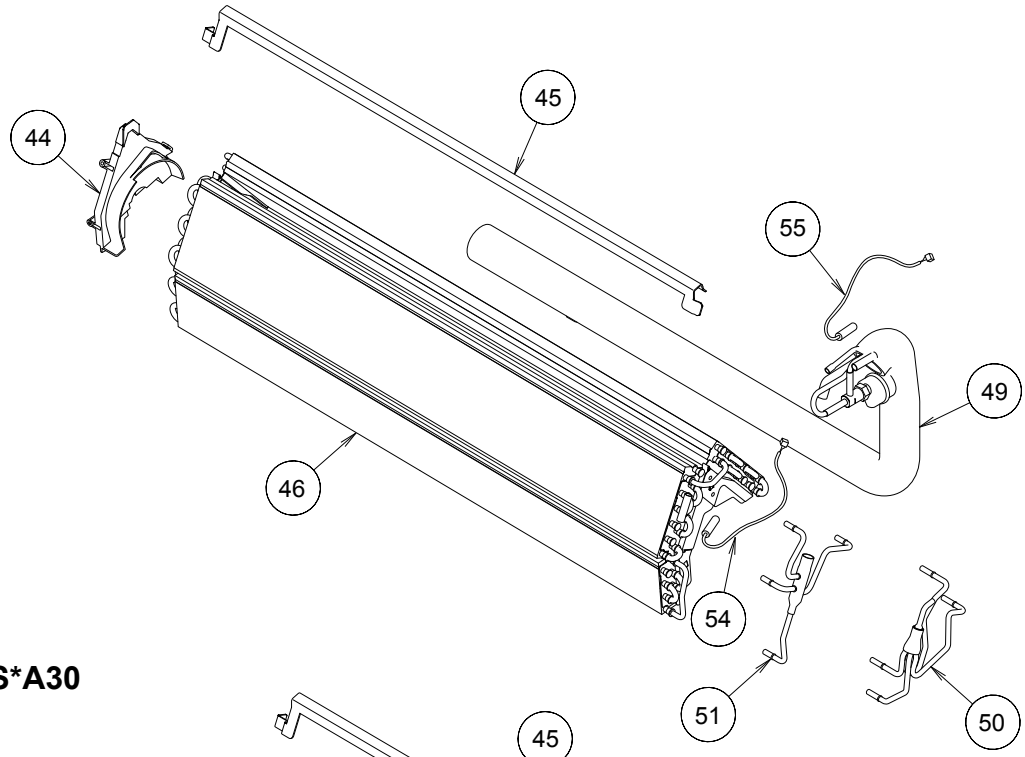
Ref No.	Description	Parts No.					Q'ty
		AS*A18	AS*A24	AS*A30			
8	WATER SEAL PLATE SA	9378055018	9378055018	9378055018			
9	WATER SEAL PLATE	9369684005	9369684005	9369684005			
10	KIT(EVA SUP R SA)	9371167015	9371167015	9371167015			
11	MOTOR INDUCTION	9601388012	9601388012	9601388012			
12	RUBBER (MOTOR)	9368575007	9368575007	9368575007			
13	MOTOR HOLDER A	9368550004	9368550004	9368550004			
14	MOTOR HOLDER B	9368551001	9368551001	9368551001			
15	KIT (PIPE HLD SA)	9371168012	9371168012	9371168012			
16	KIT (DRAIN HOSE)	9370933017	9370933017	9370933017			
17	LOUVER BASE B	9368559014	9368559014	9368559014			
18	LOUVER	9368560010	9368560010	9368560010			
19	LOUVER ROD	9368561017	9368561017	9368561017			
20	FAN GUARD	9368588007	9368588007	9368588007			
21	DIFFUSER SUB ASSY	9369346019	9369346019	9369346019			
22	DISPLAY PCB	9705801028	9705801028	9705801028			
23	DISPLAY COVER	9368564001	9368564001	9368564001			
24	KIT (FRONT DRAIN PAN)	9370932010	9370932010	9370932010			
25	KIT (FLAP SA)	9371169019	9371169019	9371169019			
26	DIFFUSER SPRING	9368587000	9368587000	9368587000			
27	KIT (FAN GRD HLD SA)	9371164014	9371164014	9371164014			
28	LOUVER BASE A	9368558017	9368558017	9368558017			
29	BASE ASSY	9369209017	9369209017	9369209017			
30	DRAIN CAP	9367677009	9367677009	9367677009			
31	REAR DRAIN PAN SA	9369201011	9369201011	9369201011			
32	CROSS FLOW FAN ASSY	9368586003	9368586003	9368586003			
33	BEARING ASSY	9368574000	9368574000	9368574000			

MODELS : AS*A18, AS*A24
AS*A30

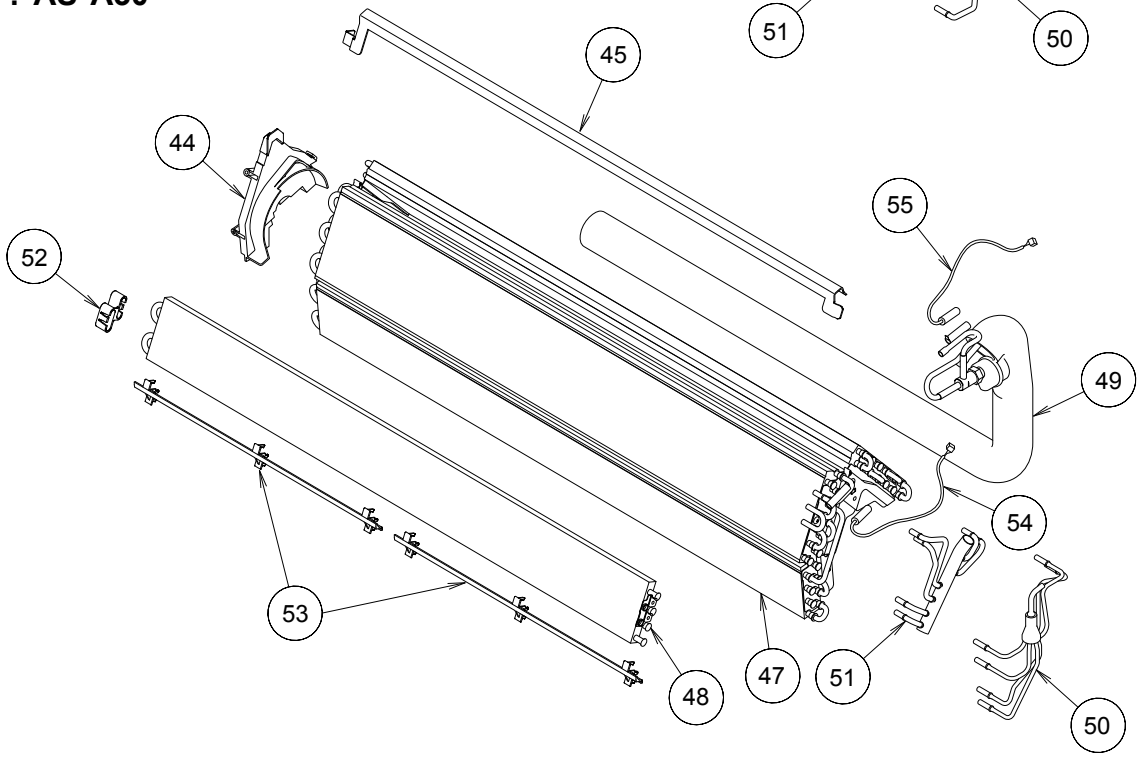


Ref No.	Description	Parts No.					Q'ty
		AS*A18	AS*A24	AS*A30			
34	LINK HOLDER	9368563004	9368563004	9368563004			
35	LOUVER SPRING	9368613006	9368613006	9368613006			
36	LOUVER LINK	9368562007	9368562007	9368562007			
37	MOTOR STEP	9900139032	9900139032	9900139032			
38	FLAP SPRING	9368612009	9368612009	9368612009			
39	SECTOR GEAR	9368556006	9368556006	9368556006			
40	PINION GEAR	9368557003	9368557003	9368557003			
41	MOTOR BASE	9368555009	9368555009	9368555009			
42	MOTOR STEP	9900139049	9900139049	9900139049			
43	MOTOR HOLDER C	9368769000	9368769000	9368769000			

MODELS : AS*A18, AS*A24

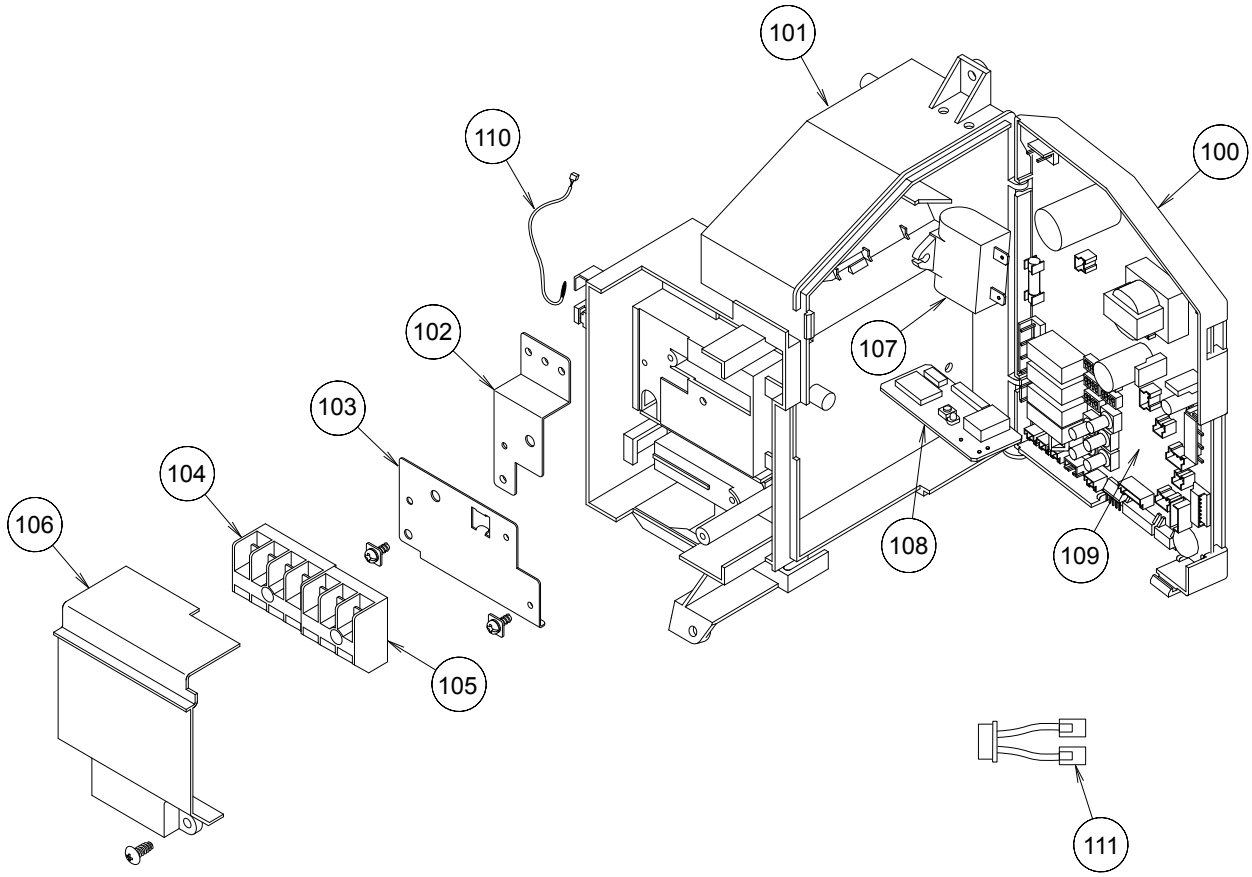


MODELS : AS*A30



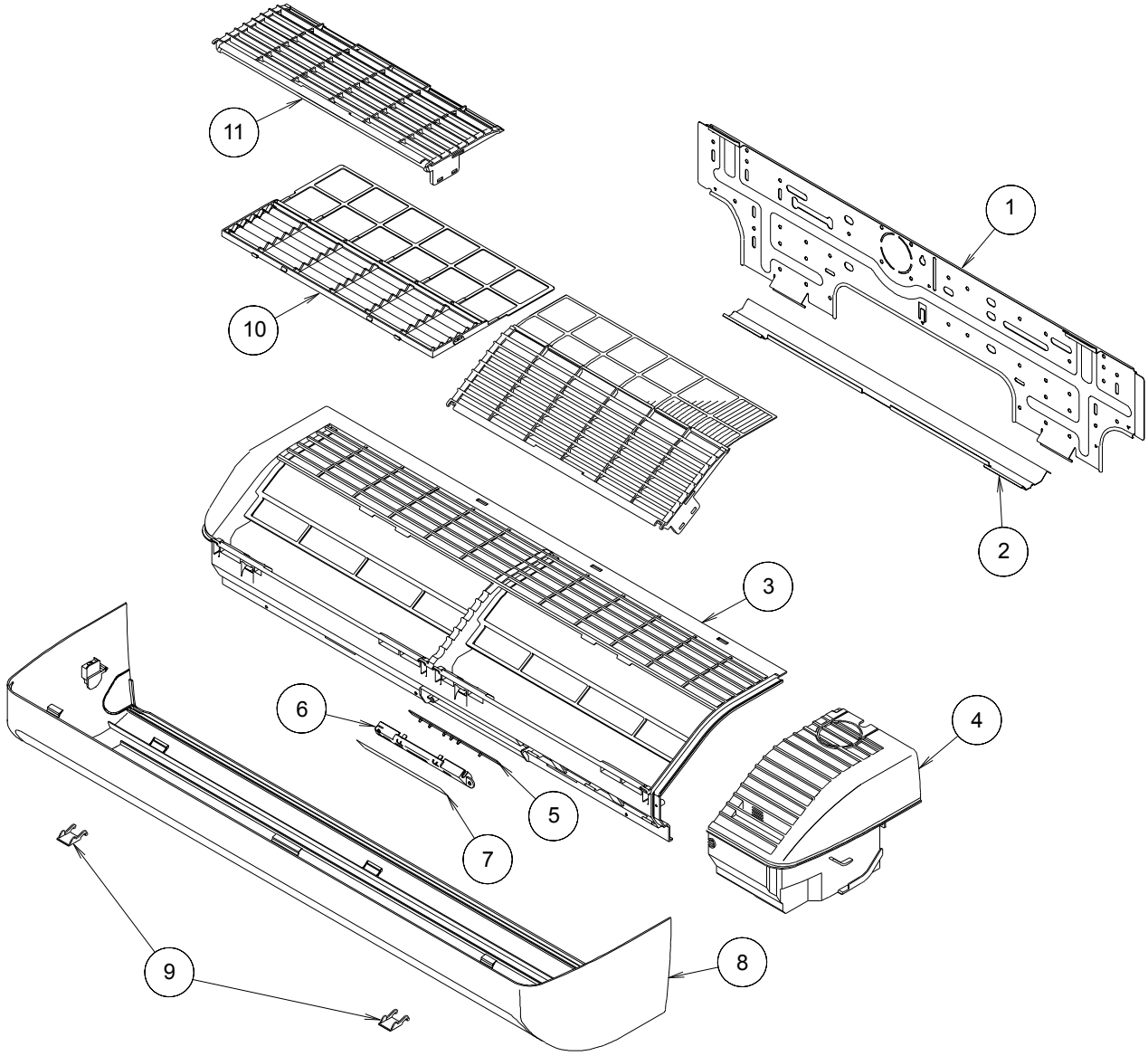
Ref No.	Description	Parts No.					Q'ty
		AS*A18	AS*A24	AS*A30			
44	KIT (EVA SUP L SA)	9371165011	9371165011	9371165011			
45	KIT(EVA BRKT SA)	9371166018	9371166018	9371166018			
46	EVAPORATOR TOTAL ASSY	9369202223	9369202223	-			
-	EVAPORATOR ASSY	9372102015	9368576011	-			
47	EVAPORATOR TOTAL ASSY	-	-	9369202230			
-	EVAPORATOR A ASSY	-	-	9369366000			
48	EVAPORATOR B ASSY	-	-	9369373008			
49	JOINT PIPE ASSY	9373768067	9373768067	9373768074			
50	DISTRIBUTOR ASSY	9371041001	9371041001	9371091006			
51	COUPLING PIPE ASSY	9369241000	9369241000	9369370007			
52	EVA HOLDER	-	-	9368775001			
53	WATER PLATE	-	-	9368569006			
54	THERMISTOR (PIPE-MID)	9900367015	9900367015	9900367015			
55	THERMISTOR (PIPE-IN)	9900220037	9900220037	9900220037			

MODELS : AS*A18, AS*A24
AS*A30



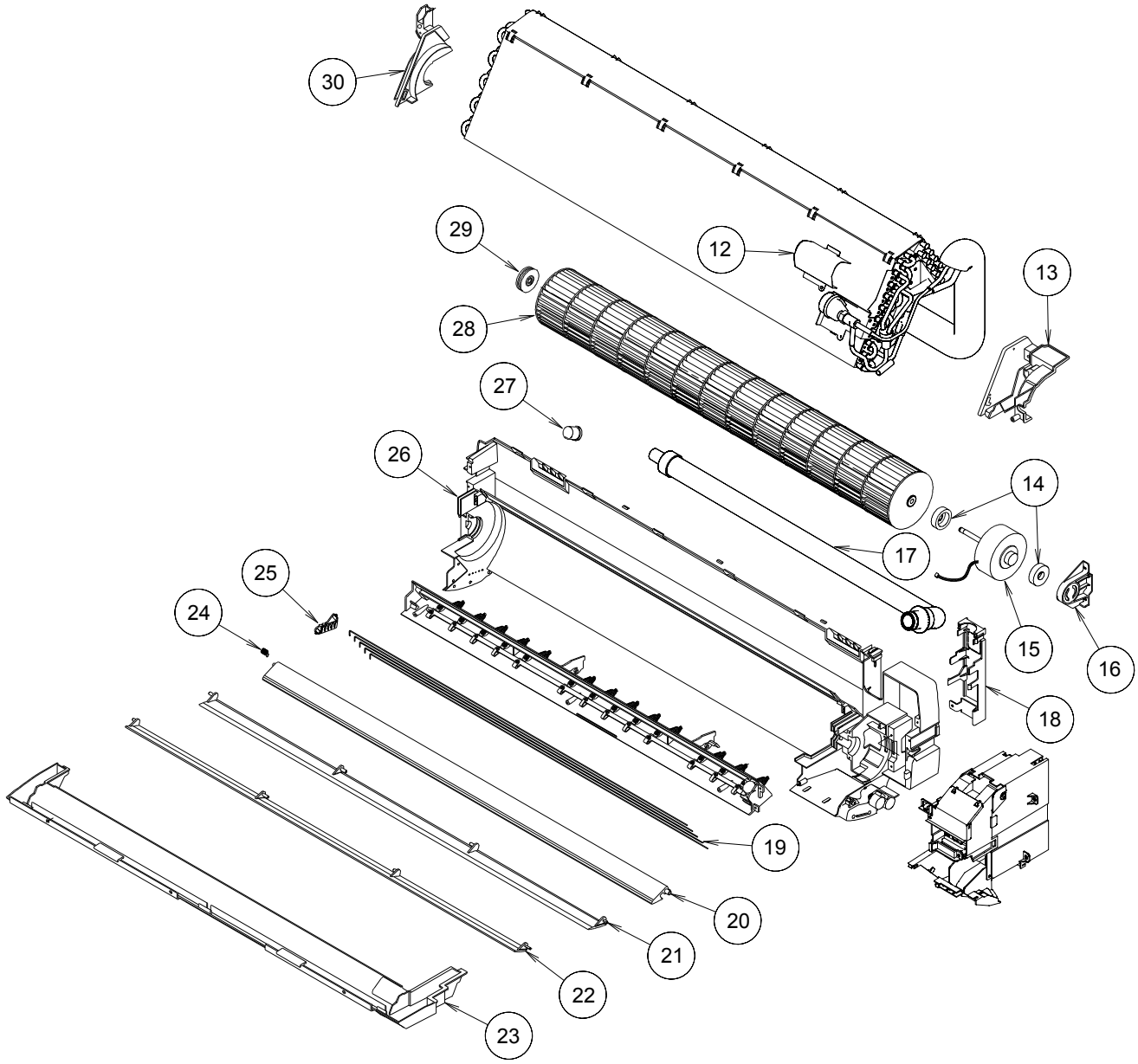
Ref No.	Description	Parts No.					Q'ty
		AS*A18	AS*A24	AS*A30			
100	CONTROL BOX COVER R	9369631009	9369631009	9369631009			
101	CONTROL BOX	9368543006	9368543006	9368543006			
102	EARTH PLATE	9368580001	9368580001	9368580001			
103	TERMINAL PLATE	9374875016	9374875016	9374875016			
104	TERMINAL 4P	9306488086	9306488086	9306488086			
105	TERMINAL 3P	9703345029	9703345029	9703345029			
106	CORD HOLDER	9368566005	9368566005	9368566005			
107	CAPACITOR (FAN MOTOR)	9704305060	9704305060	9704305060			
108	COMMUNICATION PCB	9704424044	9704424044	9704424044			
109	CONTROLLER PCB	9704815033	9704815033	9704815033			
110	THERMISTOR (ROOM)	9900368012	9900368012	9900368012			
111	THERMISTOR CONNECTION WIRE	9705465015	9705465015	9705465015			
-	FUSE 250V 3.15A	0600222512	0600222512	0600222512			
-	FUSE HOLDER	0500158072	0500158072	0500158072			

MODELS : AW*A07, AW*A09, AW*A12, AW*A14
AW*A18, AW*A24, AW*A30



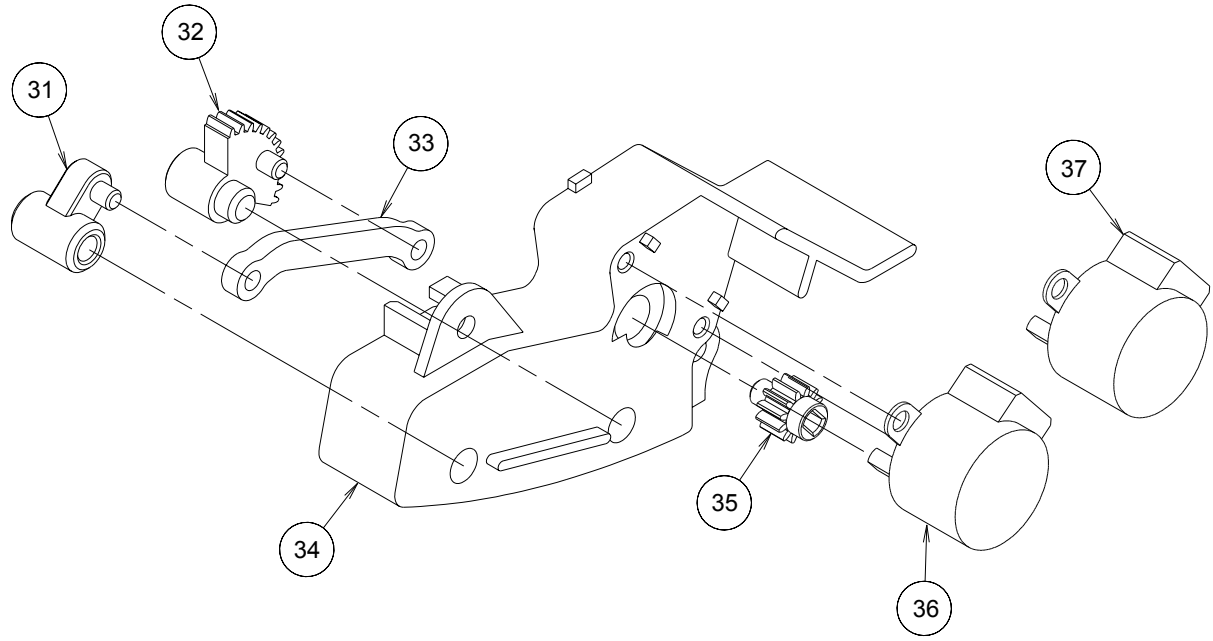
Ref No.	Description	Parts No.							Q'ty
		AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30	
1	FIXING PLATE	9367987009	9367987009	9367987009	9367987009	9367987009	9367987009	9367987009	
2	PIPE BRACKET	9367844005	9367844005	9367844005	9367844005	9367844005	9367844005	9367844005	
3	KIT (INTAKE CVR SUB ASSY)	9371163017	9371163017	9371163017	9371163017	9371163017	9371163017	9371163017	
4	SERVICE CVR SUB ASSY	9368837013	9368837013	9368837013	9368837013	9368837013	9368837013	9368837013	
5	DISPLAY PCB	9704368010	9704368010	9704368010	9704368010	9704368010	9704368010	9704368010	
6	PWB (DISP) HOLDER	9367679003	9367679003	9367679003	9367679003	9367679003	9367679003	9367679003	
7	DIFFUSION SHEET	9368006013	9368006013	9368006013	9368006013	9368006013	9368006013	9368006013	
8	KIT (FRONT CVR SA)	9371132013	9371132013	9371132013	9371132013	9371132013	9371132013	9371132013	
9	SCREW COVER	9367717019	9367717019	9367717019	9367717019	9367717019	9367717019	9367717019	
10	FILTER	9367680016	9367680016	9367680016	9367680016	9367680016	9367680016	9367680016	
11	FILTER FRAME	9367681013	9367681013	9367681013	9367681013	9367681013	9367681013	9367681013	

MODELS : AW*A07, AW*A09, AW*A12, AW*A14
AW*A18, AW*A24, AW*A30



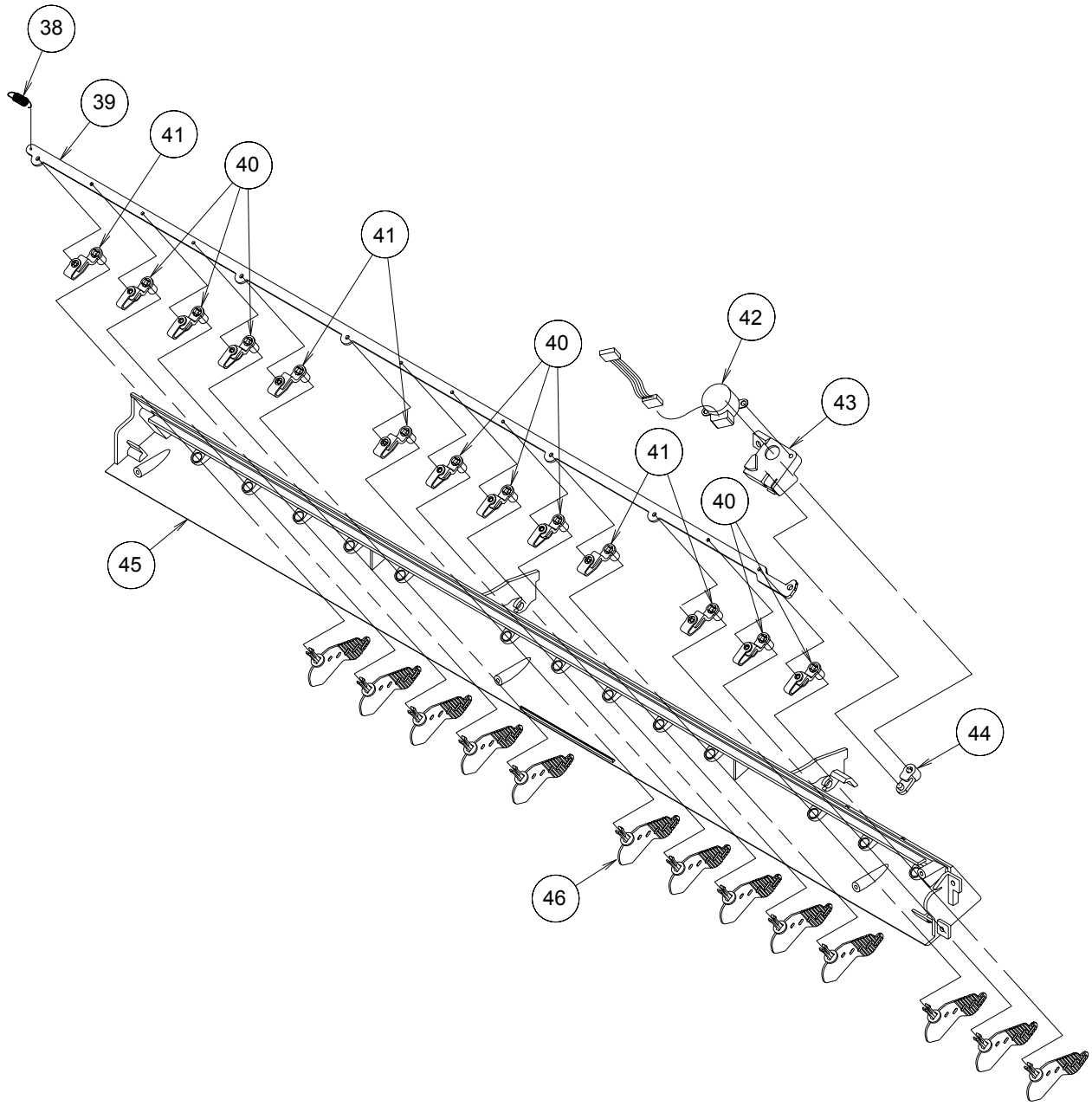
Ref No.	Description	Parts No.							Q'ty
		AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30	
12	WIRE COVER	9377817013	9377817013	9377817013	9377817013	9377817013	9377817013	9377817013	
13	EVA SUPPORT R	9367684007	9367684007	9367684007	9367684007	9367684007	9367684007	9367684007	
14	RUBBER (MOTOR)	9367676002	9367676002	9367676002	9367676002	9367676002	9367676002	9367676002	
15	MOTOR DC BRUSHLESS	9601385011	9601385011	9601385011	9601385011	9601385011	9601385011	9601385011	
16	MOTOR HOLDER	9367798001	9367798001	9367798001	9367798001	9367798001	9367798001	9367798001	
17	DRAIN HOSE	9367695003	9367695003	9367695003	9367695003	9367695003	9367695003	9367695003	
18	KIT (PIPE HOLDER)	9371135045	9371135045	9371135045	9371135045	9371135045	9371135045	9371135045	
19	FAN GUARD	9368015008	9368015008	9368015008	9368015008	9368015008	9368015008	9368015008	
20	DIFFUSER SUB ASSY	9368840013	9368840013	9368840013	9368840013	9368840013	9368840013	9368840013	
21	KIT (LOWER FLAP)	9371134024	9371134024	9371134024	9371134024	9371134024	9371134024	9371134024	
22	KIT (UPPER FLAP)	9371133027	9371133027	9371133027	9371133027	9371133027	9371133027	9371133027	
23	DRAIN PAN SUB ASSY	9368835026	9368835026	9368835026	9368835026	9368835026	9368835026	9368835026	
24	DIFFUSER SPRING	9368824006	9368824006	9368824006	9368824006	9368824006	9368824006	9368824006	
25	FAN GUARD HOLDER	9367707003	9367707003	9367707003	9367707003	9367707003	9367707003	9367707003	
26	KIT (BASE SA)	9371162027	9371162027	9371162027	9371162027	9371162027	9371162027	9371162027	
27	DRAIN CAP	9367677009	9367677009	9367677009	9367677009	9367677009	9367677009	9367677009	
28	CROSS FAN ASSY	9367708000	9367708000	9367708000	9367708000	9367708000	9367708000	9367708000	
29	RUBBER (BEARING) ASSY	9368998004	9368998004	9368998004	9368998004	9368998004	9368998004	9368998004	
30	KIT (EVA SUPPORT L SA)	9371129020	9371129020	9371129020	9371129020	9371129020	9371129020	9371129020	

MODELS : AW*A07, AW*A09, AW*A12, AW*A14
AW*A18, AW*A24, AW*A30



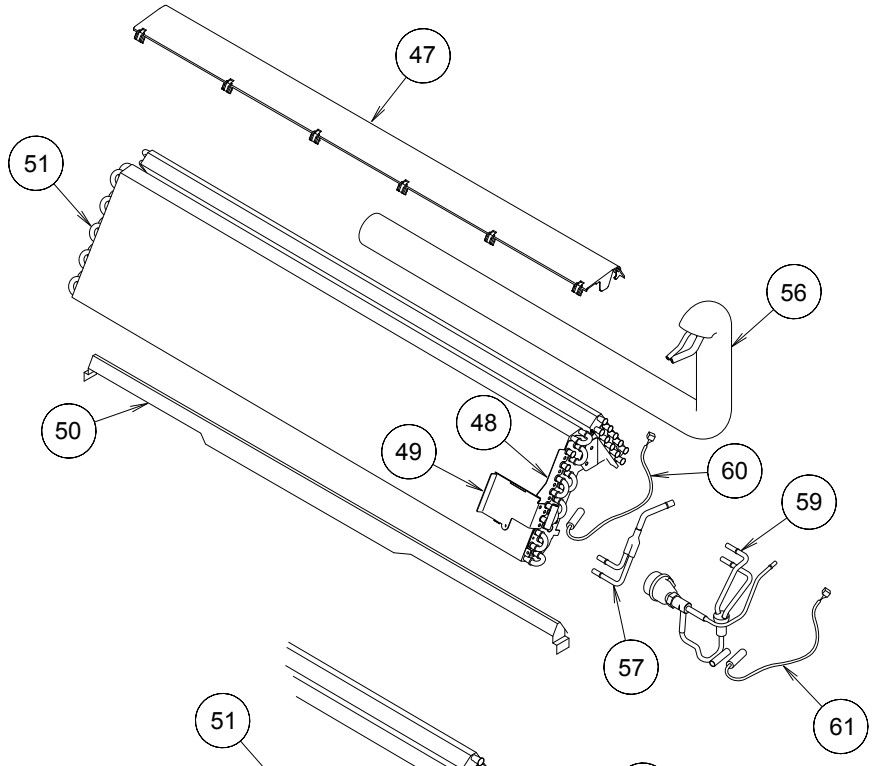
Ref No.	Description	Parts No.							Q'ty
		AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30	
31	LINK ARM	9367694006	9367694006	9367694006	9367694006	9367694006	9367694006	9367694006	
32	GEAR B	9367692002	9367692002	9367692002	9367692002	9367692002	9367692002	9367692002	
33	LINK	9367693009	9367693009	9367693009	9367693009	9367693009	9367693009	9367693009	
34	GEAR BOX	9367690008	9367690008	9367690008	9367690008	9367690008	9367690008	9367690008	
35	GEAR A	9367691005	9367691005	9367691005	9367691005	9367691005	9367691005	9367691005	
36	MOTOR STEP (UP/DOWN)	9900020019	9900020019	9900020019	9900020019	9900020019	9900020019	9900020019	
37	MOTOR STEO (DIFFUSER)	9900020019	9900020019	9900020019	9900020019	9900020019	9900020019	9900020019	

MODELS : AW*A07, AW*A09, AW*A12, AW*A14
AW*A18, AW*A24, AW*A30

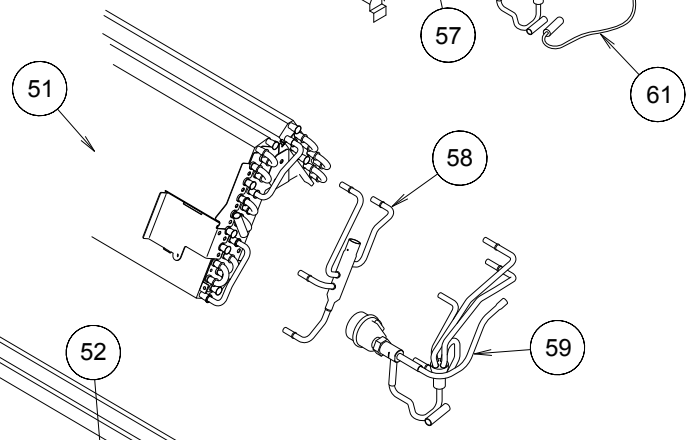


Ref No.	Description	Parts No.							Q'ty
		AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30	
38	LOUVER SPRING	9369030000	9369030000	9369030000	9369030000	9369030000	9369030000	9369030000	
39	LOUVER ROD	9367698004	9367698004	9367698004	9367698004	9367698004	9367698004	9367698004	
40	LOUVER LINK	9367697007	9367697007	9367697007	9367697007	9367697007	9367697007	9367697007	
41	LOUVER LINK B	9368789008	9368789008	9368789008	9368789008	9368789008	9368789008	9368789008	
42	MOTOR STEP	9900020019	9900020019	9900020019	9900020019	9900020019	9900020019	9900020019	
43	MOTOR BOX	9367718009	9367718009	9367718009	9367718009	9367718009	9367718009	9367718009	
44	MOTOR LINK	9367696000	9367696000	9367696000	9367696000	9367696000	9367696000	9367696000	
45	KIT (BASE B SUB ASSY)	9371161013	9371161013	9371161013	9371161013	9371161013	9371161013	9371161013	
46	LOUVER	9367706013	9367706013	9367706013	9367706013	9367706013	9367706013	9367706013	

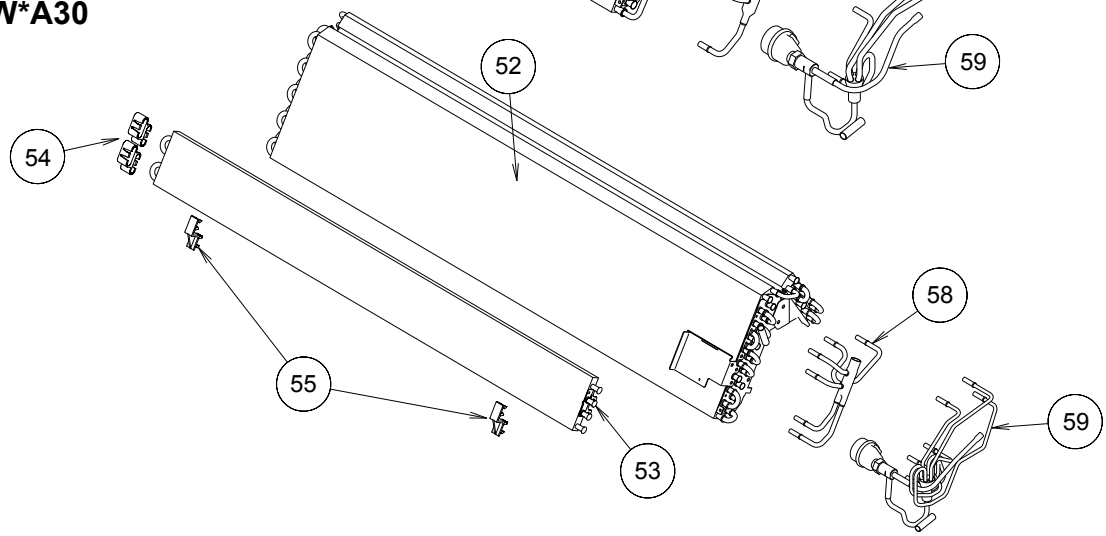
MODELS : AW*A07, AW*A09



MODELS : AW*A12, AW*A14
AW*A18, AW*A24

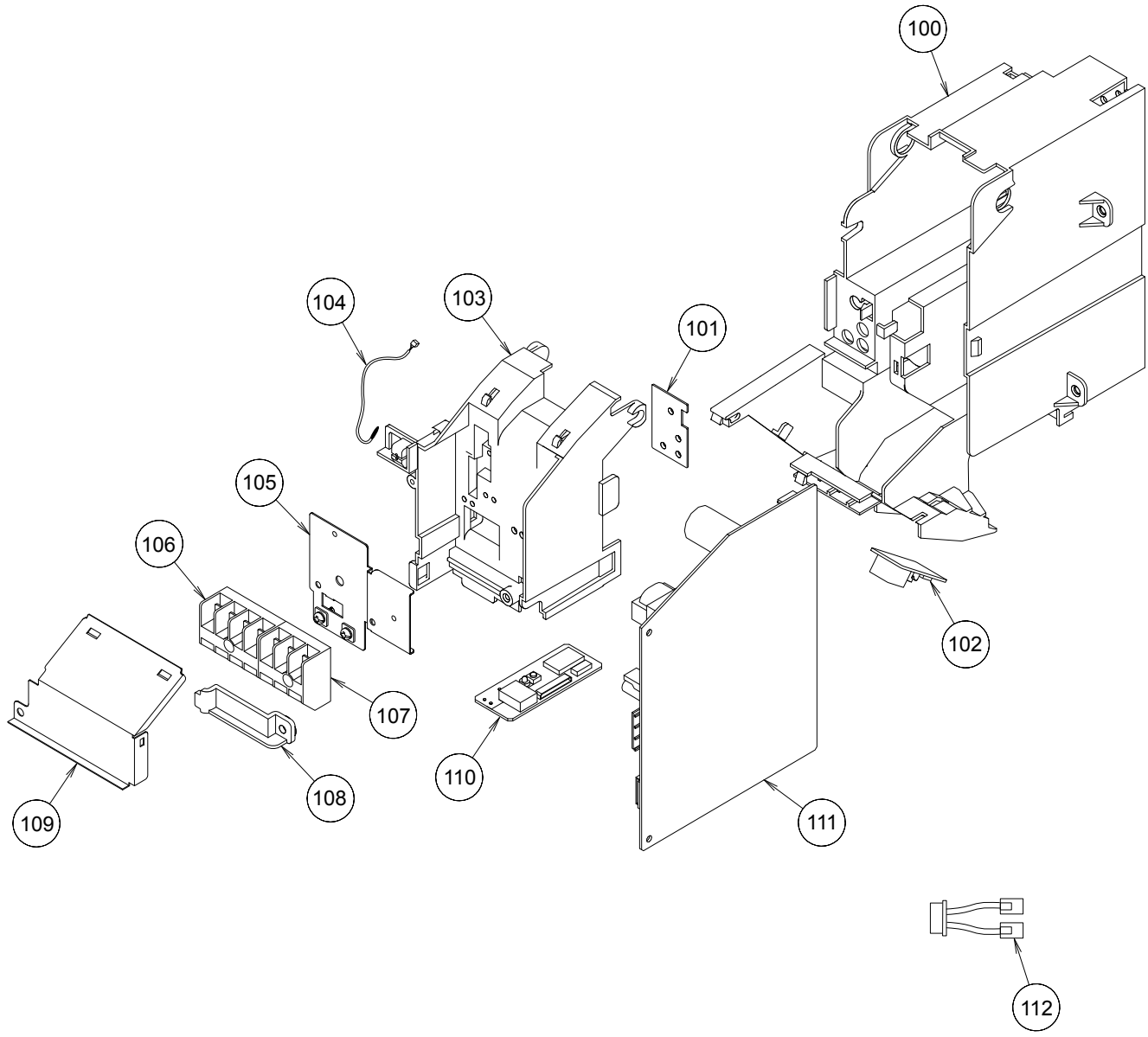


MODELS : AW*A30



Ref No.	Description	Parts No.							Q'ty
		AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30	
47	KIT (FILTER GUIDE)	9371130019	9371130019	9371130019	9371130019	9371130019	9371130019	9371130019	
48	THERMISTOR GUARD	9377815019	9377815019	9377815019	9377815019	9377815019	9377815019	-	
49	BRACKET (COVER)	9377816016	9377816016	9377816016	9377816016	9377816016	9377816016	9377816016	
50	BRACKET (EVA) SA	9369317019	9369317019	9369317019	9369317019	9369317019	9369317019	9369317019	
51	EVAPORATOR TOTAL ASSY	9368832261	9368832261	9368832254	9368832254	9368832247	9368832247	9368832230	
-	EVAPORATOR ASSY	9371355009	9371355009	9369223006	9369223006	9368853006	9368853006	-	
52	EVAPORATOR A ASSY	-	-	-	-	-	-	9369123009	
53	EVAPORATOR B ASSY	-	-	-	-	-	-	9369124006	
54	EVA HOLDER	-	-	-	-	-	-	9367711000	
55	EVA HOLDER B	-	-	-	-	-	-	9368783006	
56	JOINT PIPE ASSY	9373586098	9373586098	9373586104	9373586104	9373586111	9373586111	9373586128	
57	EXIT PIPE (EVA) ASSY	9371622026	9371622026	-	-	-	-	-	
58	COUPLING PIPE ASSY	-	-	9368865009	9368865009	9368865009	9368865009	9369136009	
59	DISTRIBUTOR ASSY	9373585084	9373585084	9373585077	9373585077	9373585060	9373585060	9373585053	
60	THERMISTOR (PIPE-MID)	9703297038	9703297038	9703297038	9703297038	9703297038	9703297038	9703297038	
61	THERMISTOR (PIPE-IN)	9900220020	9900220020	9900220020	9900220020	9900220020	9900220020	9900220020	

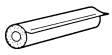
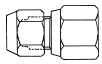
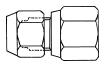
MODELS : AW*A07, AW*A09, AW*A12, AW*A14
AW*A18, AW*A24, AW*A30



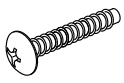
Ref No.	Description	Parts No.							Q'ty
		AW*A07	AW*A09	AW*A12	AW*A14	AW*A18	AW*A24	AW*A30	
100	CONTROL BOX	9367663002	9367663002	9367663002	9367663002	9367663002	9367663002	9367663002	
101	EARTH PLATE	9368017002	9368017002	9368017002	9368017002	9368017002	9368017002	9368017002	
102	RECEIVER PCB	9705907010	9705907010	9705907010	9705907010	9705907010	9705907010	9705907010	
103	CONTROL BOX CVR	9367664009	9367664009	9367664009	9367664009	9367664009	9367664009	9367664009	
104	THERMISTOR (ROOM)	9703299148	9703299148	9703299148	9703299148	9703299148	9703299148	9703299148	
105	TERMINAL PLATE	9375020019	9375020019	9375020019	9375020019	9375020019	9375020019	9375020019	
106	TERMINAL 4P	9306488086	9306488086	9306488086	9306488086	9306488086	9306488086	9306488086	
107	TERMINAL 3P	9703345012	9703345012	9703345012	9703345012	9703345012	9703345012	9703345012	
108	WIRE HOLDER	9368016005	9368016005	9368016005	9368016005	9368016005	9368016005	9368016005	
109	TERMINAL CVR	9368022006	9368022006	9368022006	9368022006	9368022006	9368022006	9368022006	
110	COMMUNICATION PCB	9704424044	9704424044	9704424044	9704424044	9704424044	9704424044	9704424044	
111	CONTROLLER PCB	9704989024	9704989024	9704989024	9704989024	9704989024	9704989024	9704989024	
112	THERMISTOR CONNECTION WIRE	9705465015	9705465015	9705465015	9705465015	9705465015	9705465015	9705465015	
-	FUSE 250V 3.15A	0600222512	0600222512	0600222512	0600222512	0600222512	0600222512	0600222512	
-	FUSE HOLDER	0500158072	0500158072	0500158072	0500158072	0500158072	0500158072	0500158072	

8-3 STANDARD ACCESSORIES

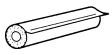
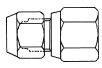
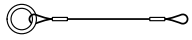
MODELS : AUXB07, AUXB09, AUXB12, AUXB14, AUXB18

Name and Shape	Q'ty	Application	Parts No.		
			AUXB07 AUXB09	AUXB12 AUXB14	AUXB18
Manual (Operation) 	1		9369313028	9369313028	9369313028
Manual (Installation) 	1		9371022031	9371022031	9371022031
Coupler heat Insulation (Large) 	1	For indoor unit installation	9350716029	9350716029	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9352766015	9352766015	9352766015
Adapter D 	1	Use as needed ø12.7-ø9.52 (AU07/09)	9370244007	-	-
Adapter B 	1	Use as needed ø9.52-ø6.35 (AU18)	-	-	9370242003
Special nut A (Large flange) 	4	For indoor unit installation	313005446653	313005446653	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759	313005446759	313005446759

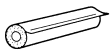
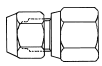
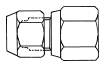
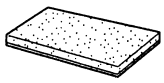
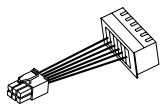
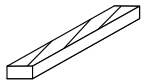
MODELS : UTG-UD*D-W

Name and Shape	Q'ty	Parts No.
Bolt 	4	0700139116
Washer 	4	0700132216
Blower cover Insulation 	2	9360047007

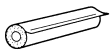
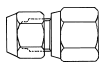
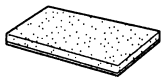
MODELS : AU*A20, AU*A25, AU*A30, AU*A36, AU*A45, AU*A54

Name and Shape	Q'ty	Application	Parts No.		
			AU*A20 AU*A25	AU*A30 AU*A36	AU*A45 AU*A54
Manual (Operation) 	1		9369313028	9369313028	9369313028
Manual (Installation) 	1		9371022024	9371022024	9371022024
Coupler heat Insulation (Large) 	1	For indoor unit installation	9350716029	9350716029	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9352766015	9352766015	9352766015
Adapter B 	1	Use as needed ø9.52-ø6.35 (AU*A20 /25)	9370242003	-	-
Special nut A (Large flange) 	4	For indoor unit installation	313005446653	313005446653	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759	313005446759	313005446759
Blower cover Insulation 	2	Use for static pressure more than 40 Pa	9363265002	9363265002	9363265002
Hook wire 	2	For Installing intake grille	9363168006	9363168006	9363168006

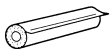
MODELS : ARXB07, ARXB09, ARXB12, ARXB14, ARXB18

Name and Shape	Q'ty	Application	Parts No.		
			ARXB07 ARXB09	ARXB12 ARXB14	ARXB18
Manual (Operation) 	1		9374343027	9374343027	9374343027
Manual (Installation) 	1		9374342020	9374342020	9374342020
Coupler heat Insulation (Large) 	1	For indoor unit installation	9350716029	9350716029	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9352766015	9352766015	9352766015
Adapter D 	1	Use as needed ø12.7-ø9.52 (AR07 /09)	9370244007	-	-
Adapter B 	1	Use as needed ø9.52-ø6.35 (AR18)	-	-	9370242003
Special nut A (Large flange) 	4	For indoor unit installation	313005446653	313005446653	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759	313005446759	313005446759
Drain pipe insulation 	1	Insulation the drain hose and vinyl hose connection	313806217708	313806217708	313806217708
Wire 	1	Use for static pressure more than 25 Pa	9707503012	9707503012	9707503012
Insulation (outlet) 	2	For outlet flange H16 × W410 mm	9374341030	-	-
	2	For outlet flange H16 × W610 mm	-	9374341047	9374341047
	2	For outlet flange H16 × W150 mm	9374340026	9374340026	9374340026

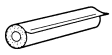
MODELS : ARXB25, ARXB30, ARXB36, ARXB45
ARXA25, ARXA30, ARXA36, ARXA45

Name and Shape	Q'ty	Application	Parts No.			
			ARXB25 ARXA25	ARXB30 ARXA30	ARXB36 ARXA36	ARXB45 ARXA45
Manual (Operation) 	1		9373384021	9373384021	9373384021	9373384021
Manual (Installation) 	1		9373385035	9373385035	9373385035	9373385035
Coupler heat Insulation (Large) 	1	For indoor unit installation	9350716029	9350716029	9350716029	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9352766015	9352766015	9352766015	9352766015
Adapter B 	1	Use as needed ø9.52-ø6.35 (ARXA25 /ARXB25)	9370242003	-	-	-
Special nut A (Large flange) 	4	For indoor unit installation	313005446653	313005446653	313005446653	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759	313005446759	313005446759	313005446759
Drain pipe insulation 	1	Insulation the drain hose and vinyl hose connection	313806217708	313806217708	313806217708	313806217708
Wire 	1	Attached only ARXB25/ 30/36/45 model. Use for static pressure more than 40 Pa.	9707003024	9707003024	9707003024	9707003024

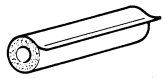
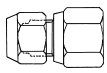
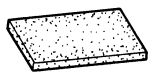
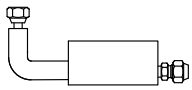
MODELS : ARXC36, ARXC45, ARXC60

Name and Shape	Q'ty	Application	Parts No.		
			ARXC36	ARXC45	ARXC60
Manual (Operation) 	1		9373384021	9373384021	9373384021
Manual (Installation) 	1		9373870029	9373870029	9373870029
Coupler heat Insulation (Large) 	1	For indoor unit installation	9350716029	9350716029	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9352766015	9352766015	9352766015
Special nut A (Large flange) 	4	For indoor unit installation	313005446653	313005446653	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759	313005446759	313005446759

MODELS : ARXC90

Name and Shape	Q'ty	Application	Parts No.
			ARXC90
Manual (Operation) 	1		9373384021
Manual (Installation) 	1		9365748053
Coupler heat Insulation (Large) 	1	For indoor unit installation	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9359141051
Special nut A (Large flange) 	4	For indoor unit installation	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759
Washer 	8	For indoor unit installation	0700132278

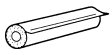
MODELS : AB*A12, AB*A14, AB*A18, AB*A24

Name and Shape	Q'ty	Application	Parts No.			
			AB*A12	AB*A14	AB*A18	AB*A24
Manual (Operation) 	1		9369308024	9369308024	9369308024	9369308024
Manual (Installation) 	1		9367701032	9367701032	9367701032	9367701032
Coupler heat Insulation 	2	For indoor unit installation	9350716012	9350716012	9350716012	9350716012
Adapter B 	1	Use as needed ø9.52-ø6.35 (AB18/24)	-	-	9370242003	9370242003
Insulation (drain hose) 	1	Adhesive type 70×230	9359225003	9359225003	9359225003	9359225003
Insulation (pipe) 	1	Adhesive type 160×110	9377924049	9377924049	9377924049	9377924049
Silencer pipe 	1		9375132026	9375132026	9375132033	9375132033
Wall bracket 	2	For suspending the Indoor unit on the wall	9358597002	9358597002	9358597002	9358597002

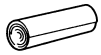
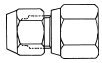
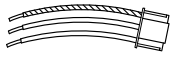
OPTIONAL PARTS FOR INDOOR UNIT

Description	Parts No.	Application
Auxiliary pipe 	9374714025	For indoor side pipe joint (AB18/24 model)

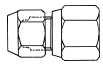
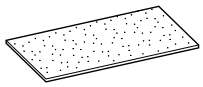
MODELS : AB*A30, AB*A36, AB*A45, AB*A54

Name and Shape	Q'ty	Application	Parts No.			
			AB*A30	AB*A36	AB*A45	AB*A54
Manual (Operation) 	1		9369308024	9369308024	9369308024	9369308024
Manual (Installation) 	1		9367702039	9367702039	9367702039	9367702039
Coupler heat Insulation (Large) 	2	For indoor unit installation	9350716029	9350716029	9350716029	9350716029
Coupler heat Insulation (Small) 	1	For indoor unit installation	9352766015	9352766015	9352766015	9352766015
Special nut A (Large flange) 	4	For indoor unit installation	313005446653	313005446653	313005446653	313005446653
Special nut B (Small flange) 	4	For indoor unit installation	313005446759	313005446759	313005446759	313005446759
Drain hose insulation 	1	For indoor unit installation	9360464002	9360464002	9360464002	9360464002
Auxiliary pipe assembly 	1	For connecting the piping	9374714025	9374714049	9374714049	9374714049

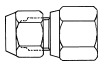
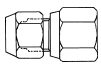
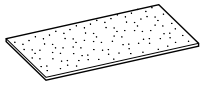
MODELS : AS*E07, AS*E09, AS*E12, AS*E14

Name and Shape	Q'ty	Application	Parts No.			
			AS*E07	AS*E09	AS*E12	AS*E14
Manual (Operation) 	1		9377772015	9377772015	9377772015	9377772015
Manual (Installation) 	1		9377773012	9377773012	9377773012	9377773012
Cloth tape 	1	For indoor unit installation	9310519004	9310519004	9310519004	9310519004
Adapter D 	1	Use as needed ø12.7-ø9.52 (AS7/9)	9370244007	9370244007	-	-
Wire assebly 	1	For wired remote control installation	9707476019	9707476019	9707476019	9707476019
Seal A 	1	For indoor unit installation	9304536000	9304536000	9304536000	9304536000

MODELS : AS*A18, AS*A24, AS*A30

Name and Shape	Q'ty	Application	Parts No.		
			AS*A18	AS*A24	AS*A30
Manual (Operation) 	1		9371056029	9371056029	9371056029
Manual (Installation) 	1		9371057026	9371057026	9371057026
Adapter B 	1	Use as needed ø9.52-ø6.35 (AS18/24)	9370242003	9370242003	-
Insulation (Drain hose) 	1	For indoor unit installation	9361756007	9361756007	9361756007

MODELS : AW*A07, AW*A09, AW*A12, AW*A14
AW*A18, AW*A24, AW*A30

Name and Shape	Q'ty	Application	Parts No.			
			AW*A07 AW*A09	AW*A12 AW*A14	AW*A18 AW*A24	AW*A30
Manual (Operation) 	1		9371039022	9371039022	9371039022	9371039022
Manual (Installation) 	1		9371040028	9371040028	9371040028	9371040028
Adapter D 	1	Use as needed ø12.7-ø9.52 (AW07/09)	9370244007	-	-	-
Adapter B 	1	Use as needed ø9.52-ø6.35 (AW18/24)	-	-	9370242003	-
Insulation (Drain hose) 	1	For indoor unit installation	9361756007	9361756007	9361756007	9361756007

AIRSTAGE™

V SERIES

FUJITSU GENERAL LIMITED

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