

SPLIT TYPE  
AIR CONDITIONER  
CASSETTE TYPE (50 Hz)

# SERVICE MANUAL



Indoor unit	Outdoor unit
AUYA36LATU	AOYA36LATL
AUYA45LATU	AOYA45LATL

## CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS .....	2
REFRIGERANT SYSTEM DIAGRAM.....	4
CIRCUIT DIAGRAM.....	5
INDOOR PCB CIRCUIT DIAGRAM.....	6
OUTDOOR PCB CIRCUIT DIAGRAM.....	10
ERROR CONTENTS.....	13
PARTS (INDOOR UNIT).....	16
PARTS (OUTDOOR UNIT).....	21
ACCESSORIES.....	25

# SPECIFICATIONS

## ELECTRICAL DATA

TYPE		Cooling & Heating	
INDOOR UNIT		AUYA36LATU	AUYA45LATU
OUTDOOR UNIT		AOYA36LATL	AOYA45LATL
COOLING CAPACITY		10.0 kW	12.5 kW
HEATING CAPACITY		11.2 kW	14.0 kW
POWER SOURCE		230 V 50 Hz	230 V 50 Hz
RUNNING CURRENT	Cooling	13.6 A	17.0 A
	Heating	13.2 A	16.5 A
INPUT WATTS	Cooling	3.11 kW	3.89 kW
	Heating	3.02 kW	3.77 kW
E.E.R.	Cooling	3.21 kW/kW	3.21 kW/kW
	Heating	3.71 kW/kW	3.71 kW/kW
STARTING CURRENT		15 A	15 A
MOISTURE REMOVAL		3.5 L/hr	4.5 L/hr
AIRCIRCULATION INDOOR		1,650 m3/hr	1,750 m3/hr
AIRCIRCULATION OUTDOOR		6,600 m3/hr	6,600 m3/hr
MAXIMUM CURRENT		19.0 A	20.0 A

## COMPRESSOR AND REFRIGERANT

TYPE	Hermetic type, Inverter, 4 poles, 3 phase, DC motor, Twin Rotary		
DISCRIMINATION	DA420A3F-21ZA		
WEIGHT (with oil)	23.7 kg		
REFRIGERANT TYPE	R410A		
STANDARD REFRIGERANT	3,350 g		
MAX PIPE LENGTH	50 m		
MAX PIPE HEIGHT	30 m		
FULL CHARGE	Pipe length	20 m	3,350 g
		30 m	3,850 g
		40 m	4,350 g
		50 m	4,850 g
ADDITIONAL CHARGE	50 g/m		

## FAN MOTOR

INDOOR UNIT	Discrimination	MFF-45RV	MFF-45RV
	High speed	680 r.p.m.	720 r.p.m.
	Med speed	570 r.p.m.	590 r.p.m.
	Low speed	480 r.p.m.	500 r.p.m.
	Quiet (cool/heat)	400/420 r.p.m.	440/440 r.p.m.
OUTDOOR UNIT	Discrimination	MFE-60PO	MFE-60PO
	Upper fan	850 r.p.m.	850 r.p.m.
	Lower fan	750 r.p.m.	750 r.p.m.

## NOISE LEVEL

INDOOR UNIT	High speed	50 dB	52 dB
	Med speed	46 dB	47 dB
	Low speed	41 dB	42 dB
	Quiet (cool/heat)	36 dB / 37 dB	39 dB / 39 dB
OUTDOOR UNIT	Cooling	54 dB	55 dB
	Heating	55 dB	56 dB

## DIMENSIONS

INDOOR UNIT	H x W x D	296 x 830 x 830 mm
OUTDOOR UNIT	H x W x D	1,290 x 900 x 330 mm

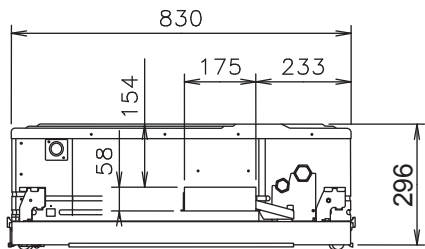
## WEIGHT

INDOOR UNIT	Gross / Net	54 kg / 39 kg
OUTDOOR UNIT	Gross / Net	107 kg / 98 kg

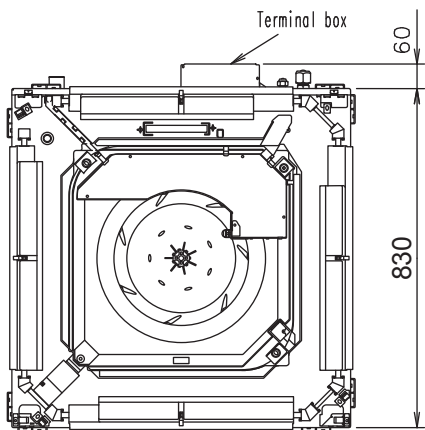
# DIMENSIONS

## INDOOR UNIT

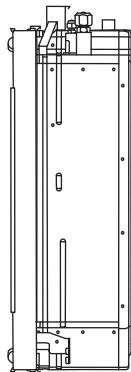
(Unit : mm)



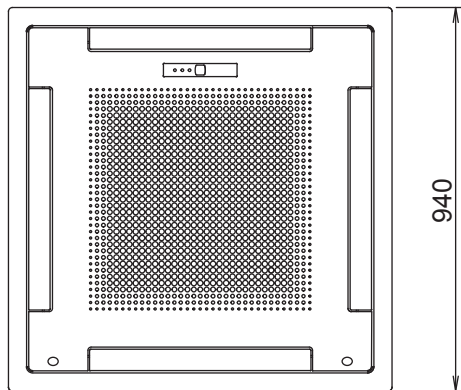
Side view



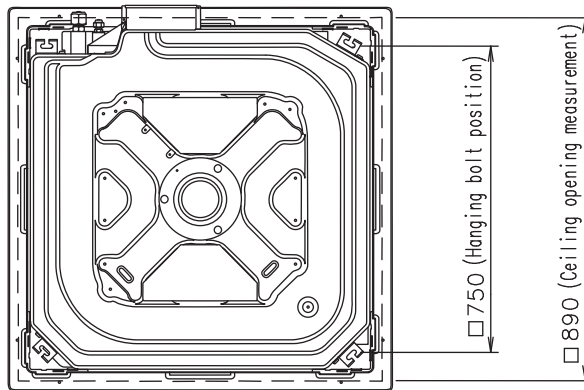
Bottom view



### Panel

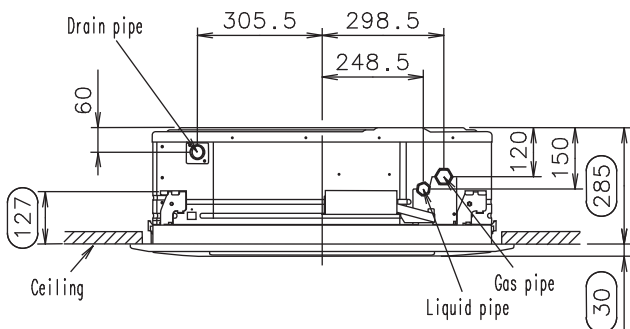


Bottom view

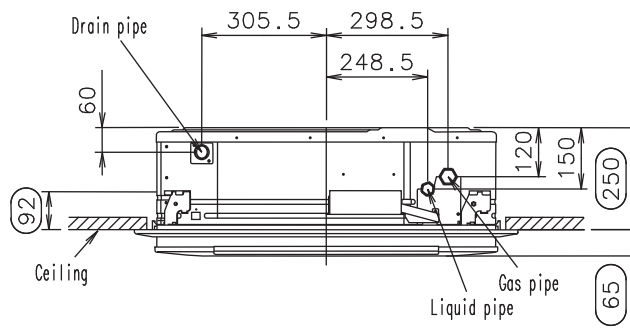


Top view

### Selection of setting



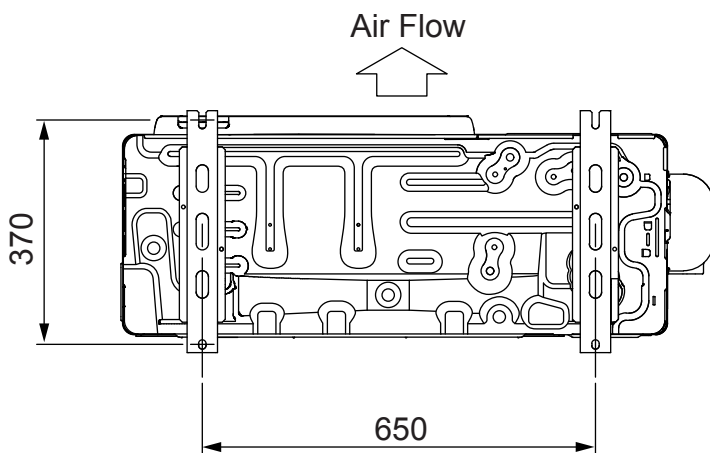
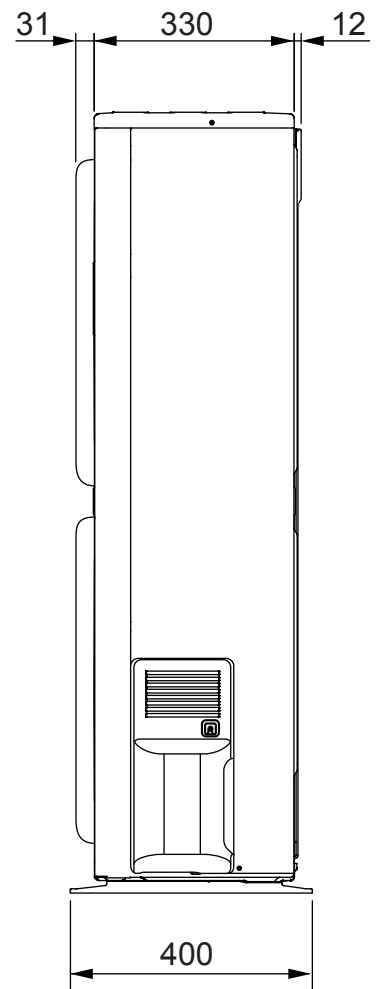
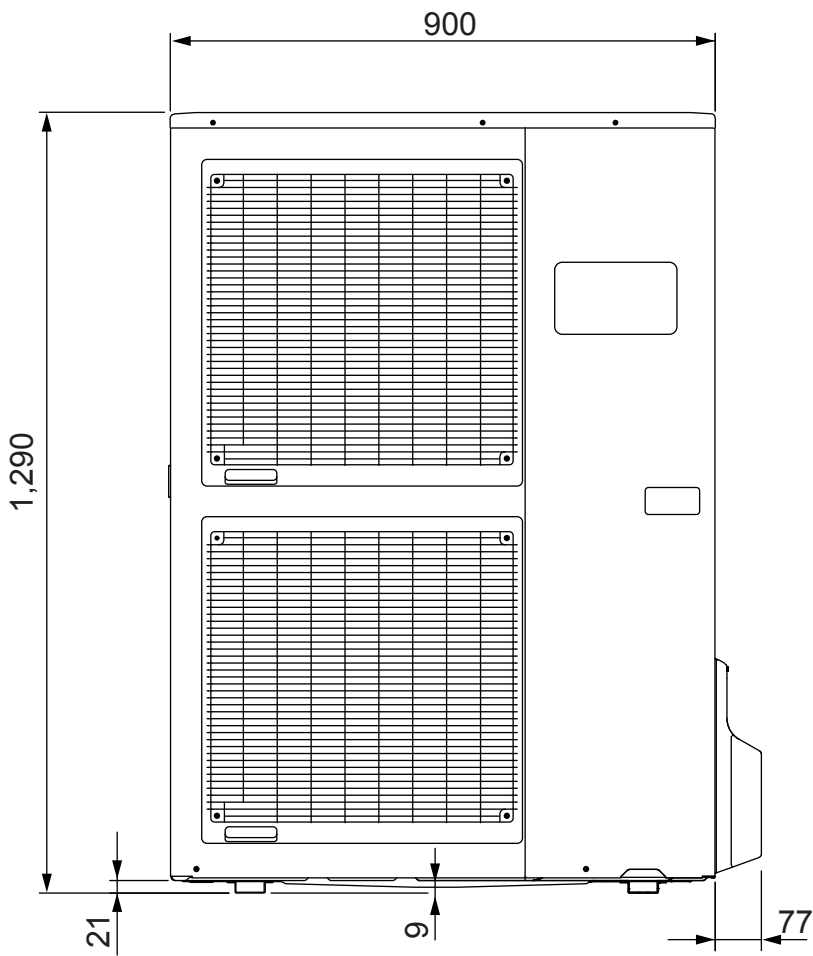
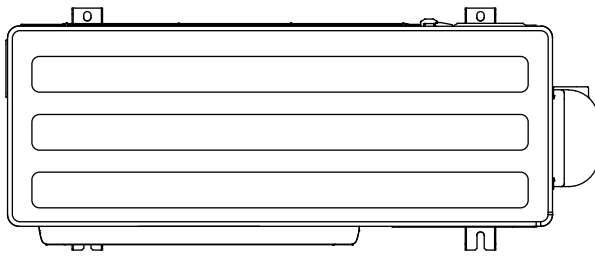
Side view (Standard setting)



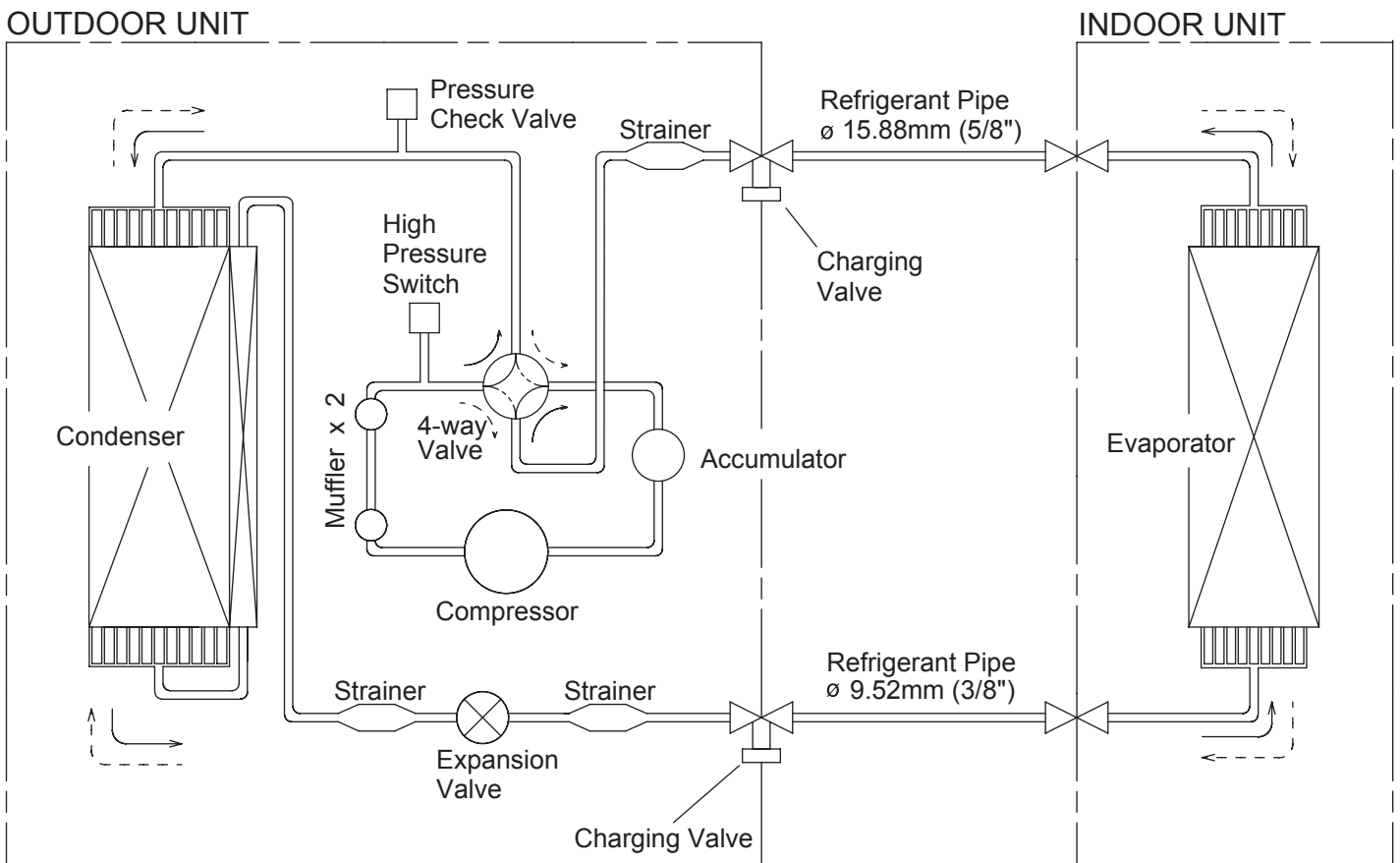
Side view (Slender setting)

# OUTDOOR UNIT

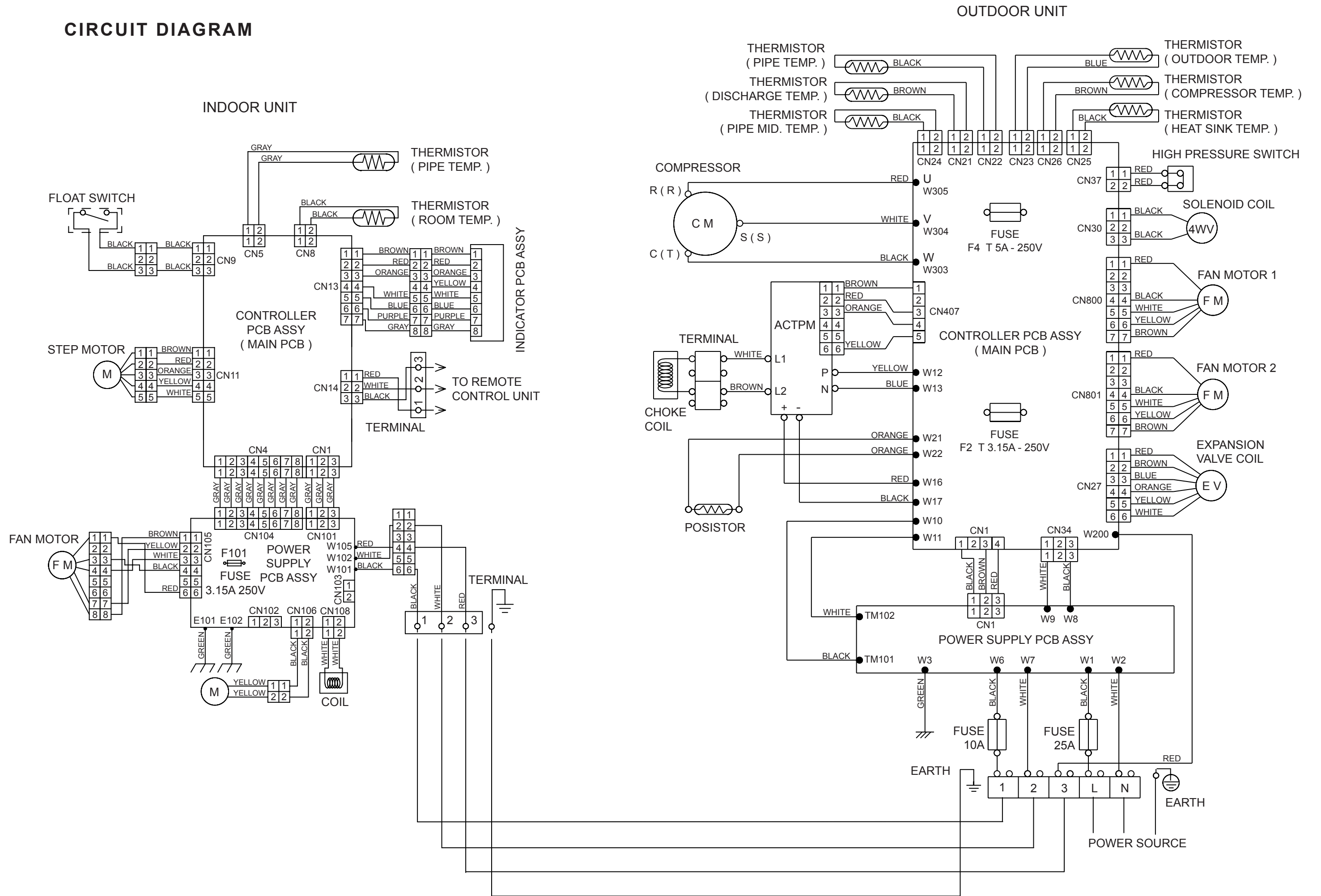
(Unit : mm)



# REFRIGERANT SYSTEM DIAGRAM

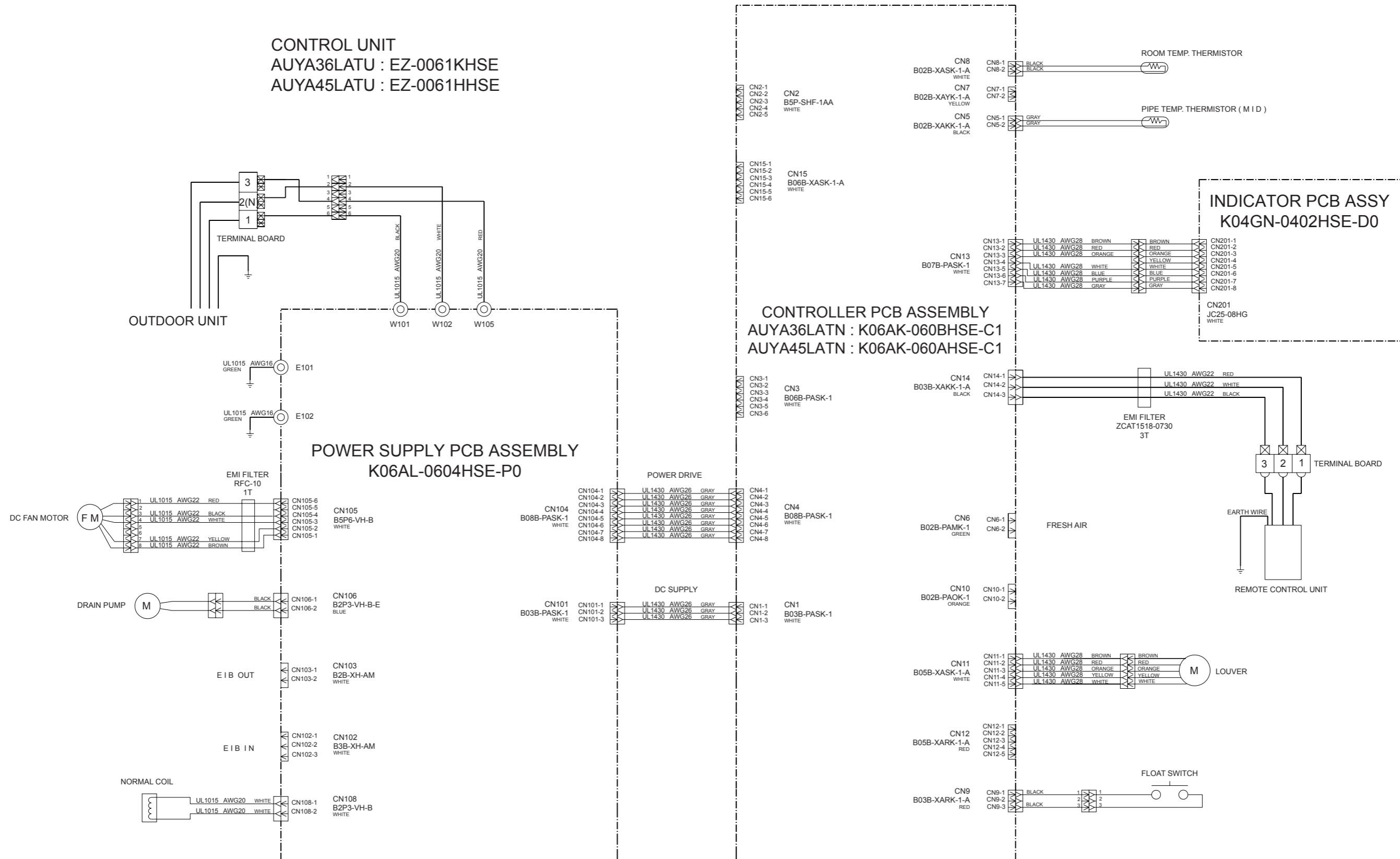


# CIRCUIT DIAGRAM

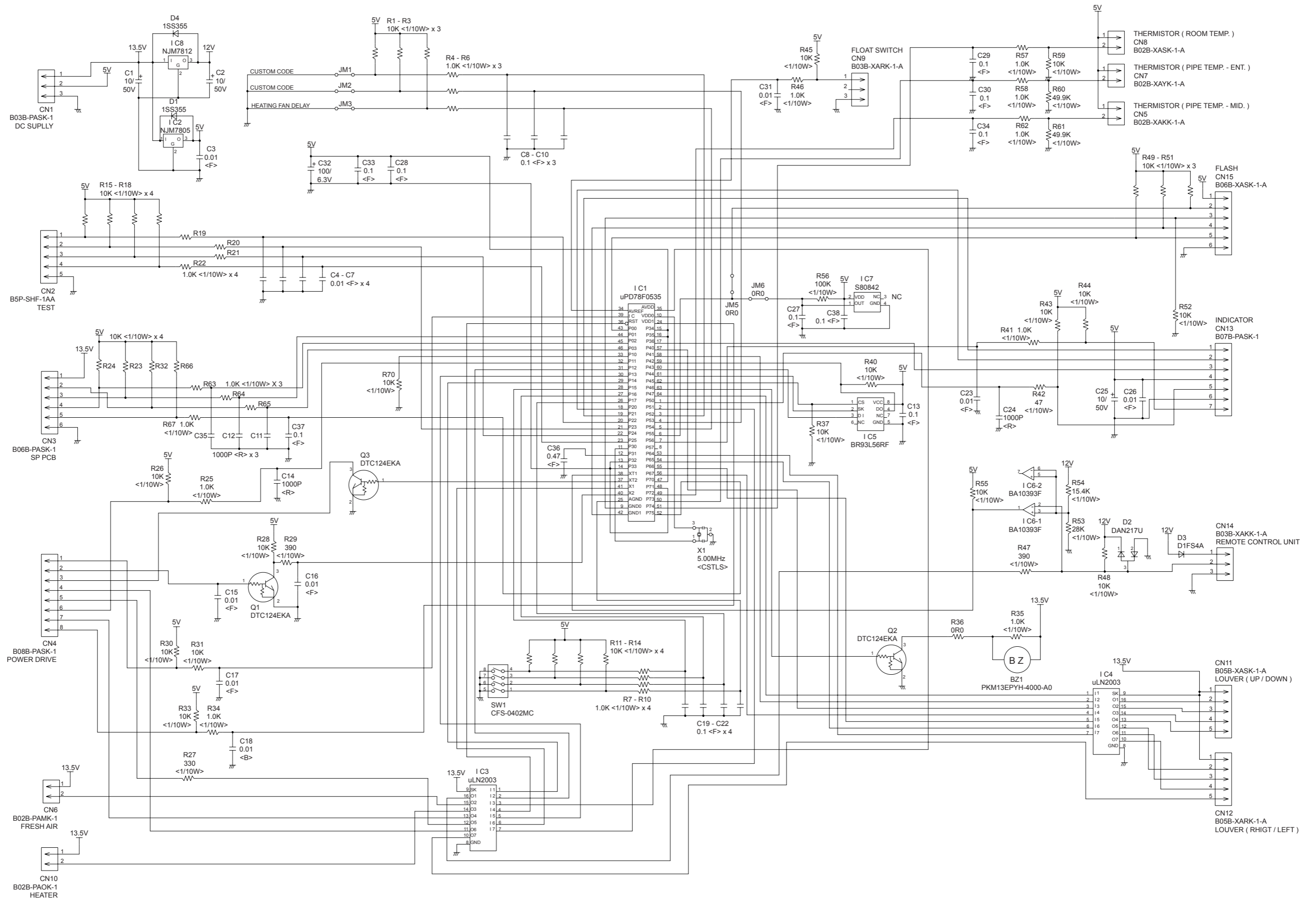


# INDOOR PCB CIRCUIT DIAGRAM

**CONTROL UNIT**  
 AUYA36LATU : EZ-0061KHSE  
 AUYA45LATU : EZ-0061HHSE

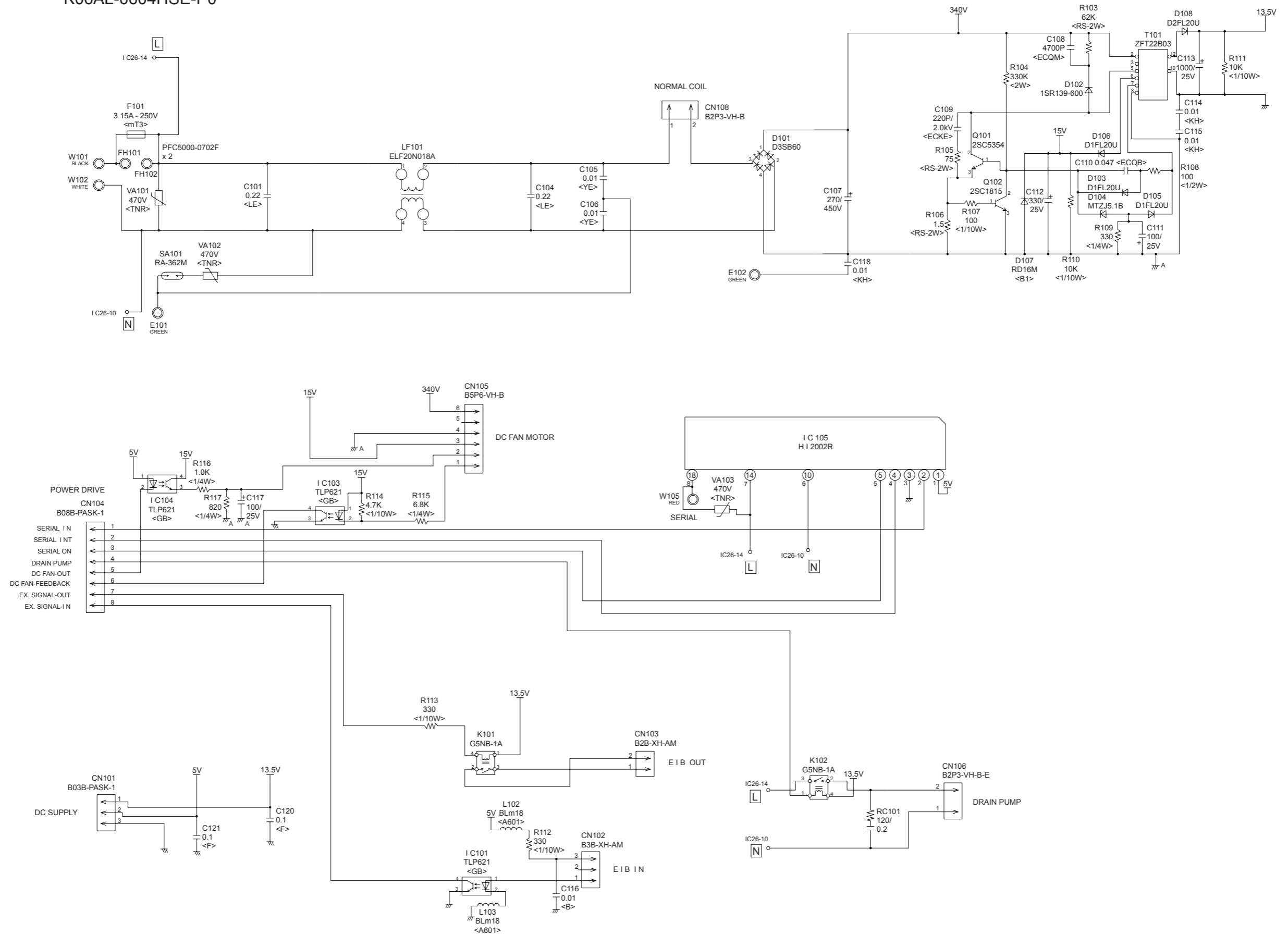


INDOOR UNIT  
 CONTROLLER PCB ASSEMBLY ( MAIN PCB )  
 AUYA36LATU : K06AK-060BHSE-C1  
 AUYA45LATU : K06AK-060AHSE-C1

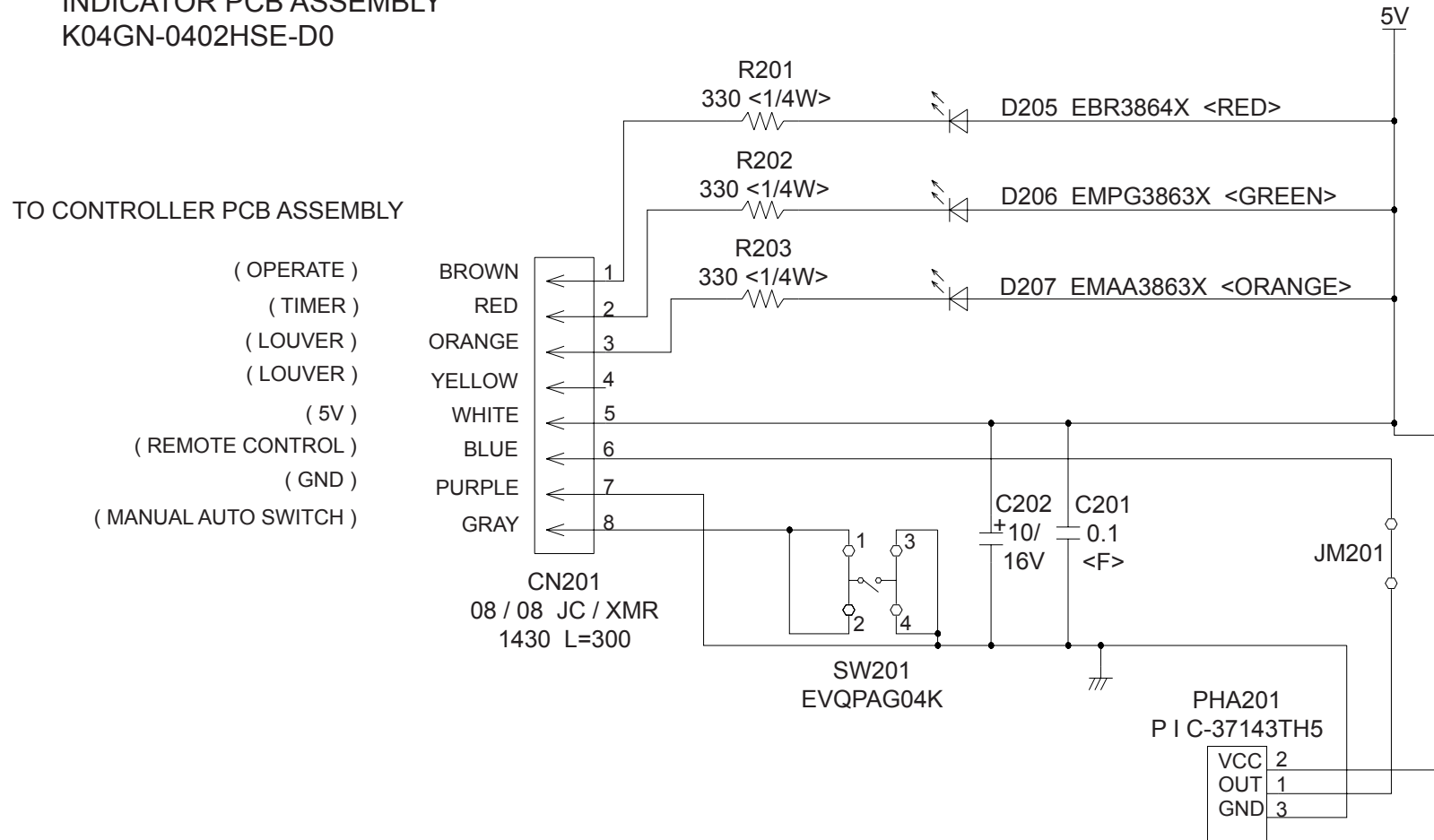




INDOOR UNIT  
POWER SUPPLY PCB ASSEMBLY  
K06AL-0604HSE-P0



INDOOR UNIT  
 INDICATOR PCB ASSEMBLY  
 K04GN-0402HSE-D0

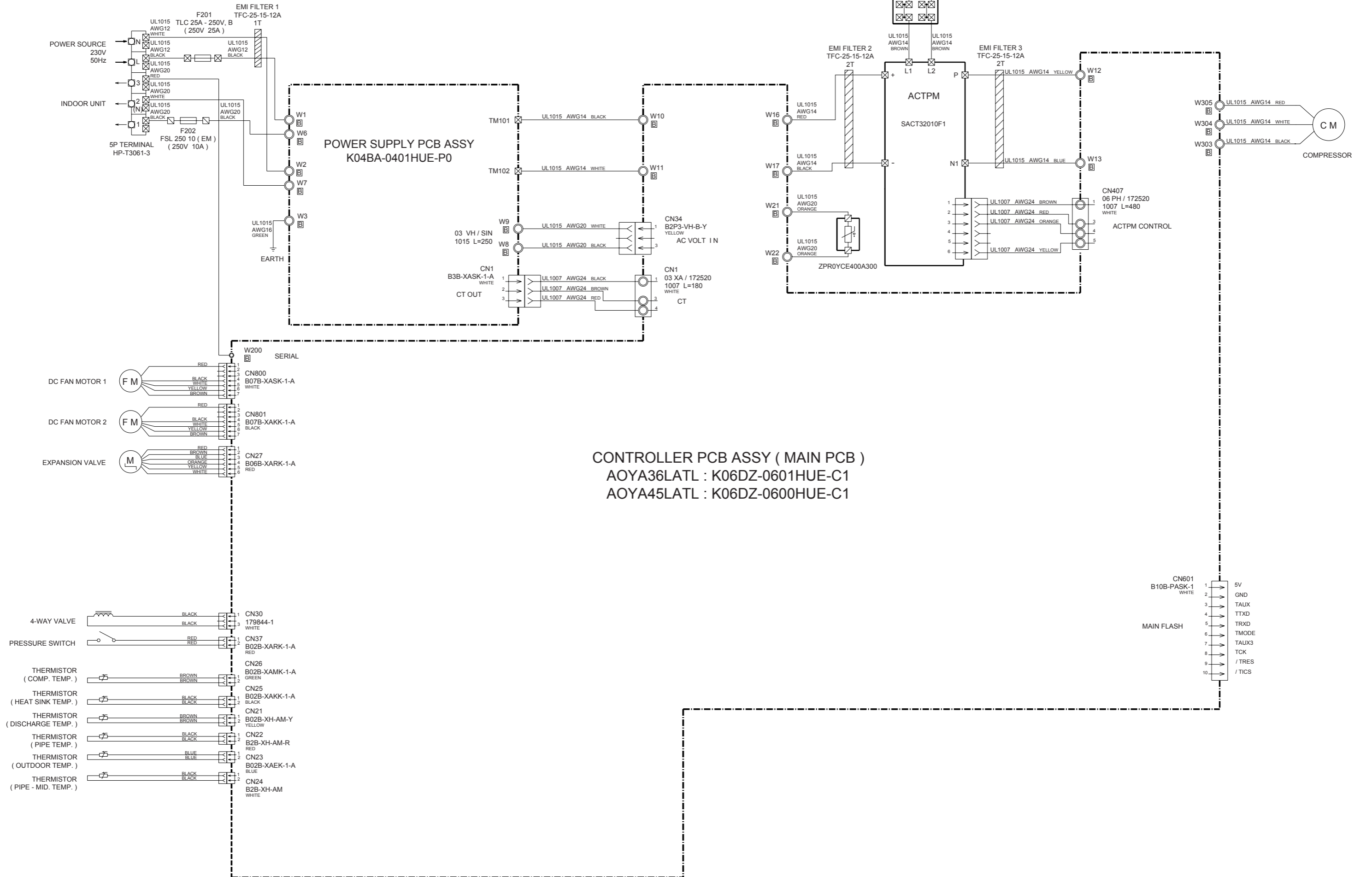


# OUTDOOR PCB CIRCUIT DIAGRAM

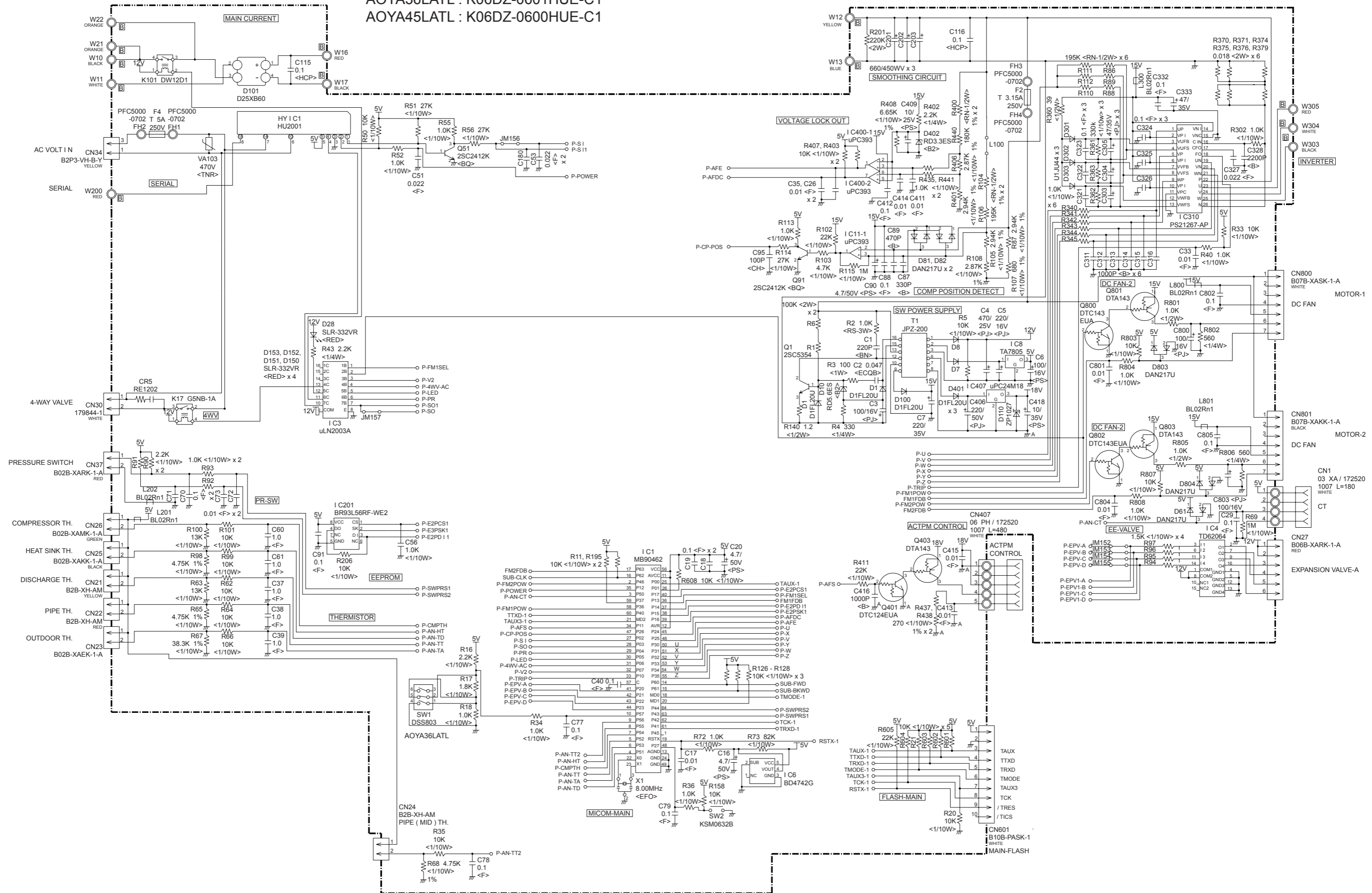
## INVERTER ASSEMBLY

AOYA36LATL : EZ-00603HUE

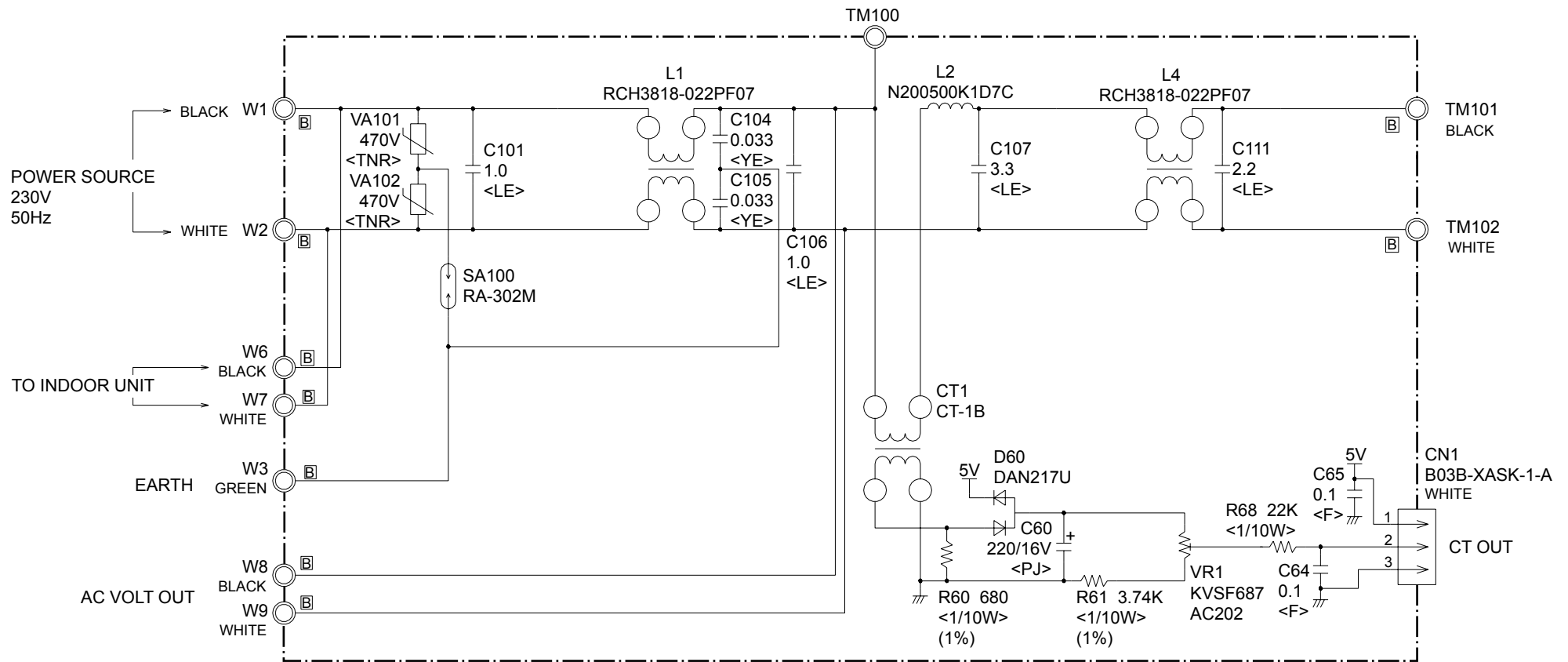
AOYA45LATL : EZ-00604HUE



OUTDOOR UNIT  
 CONTROLLER PCB ASSEMBLY ( MAIN PCB )  
 AOYA36LATL : K06DZ-0601HUE-C1  
 AOYA45LATL : K06DZ-0600HUE-C1



OUTDOOR UNIT  
 POWER SUPPLY PCB ASSEMBLY  
 K04BA-0401HUE-P0



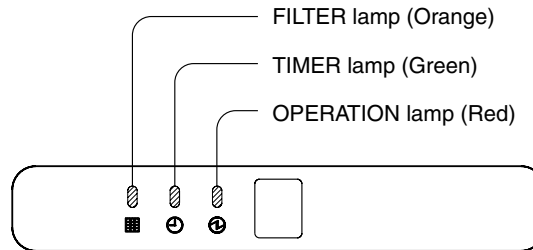
# ERROR CONTENTS

## INDOOR UNIT

### TROUBLESHOOTING

#### Troubleshooting with the indoor display

Troubleshooting at the display is possible either on the wired or wireless remote control.



The OPERATION, TIMER and FILTER lamp operate as follows table according to the error contents.

Error contents	OPERATION lamp (RED)	TIMER lamp (GREEN)	FILTER lamp (ORANGE)
Indoor signal error	×	○	×
Wired remote controller abnormal	×	(8 times) ○	×
Indoor room temperature sensor error	(2 times) ○	(2 times) ○	×
Indoor heat exchanger temperature sensor (middle) error	(2 times) ○	(3 times) ○	×
Indoor heat exchanger temperature sensor (inlet) error	(2 times) ○	(4 times) ○	×
Float switch operated	(2 times) ○	(6 times) ○	×
Outdoor discharge pipe temperature sensor error	(3 times) ○	(2 times) ○	×
Outdoor heat exchanger temperature sensor (outlet) error	(3 times) ○	(3 times) ○	×
Outdoor temperature sensor error	(3 times) ○	(4 times) ○	×
Heatsink sensor error	(3 times) ○	(7 times) ○	×
Compressor temperature sensor error	(3 times) ○	(8 times) ○	×
2-way valve temperature sensor error	(3 times) ○	×	(2 times) ○
3-way valve temperature sensor error	(3 times) ○	×	(3 times) ○
Outdoor heat exchanger temperature sensor (middle) error	(3 times) ○	×	(4 times) ○
Indoor manual auto switch abnormal	(4 times) ○	(2 times) ○	×
Power supply frequency detection error	(4 times) ○	(4 times) ○	×
IPM protection	(5 times) ○	(2 times) ○	×
CT error	(5 times) ○	(3 times) ○	×
Compressor location error	(5 times) ○	(5 times) ○	×
Outdoor fan error	(5 times) ○	(6 times) ○	×
Connected indoor unit abnormal	(5 times) ○	(7 times) ○	×
Outdoor unit computer communication error	(5 times) ○	(8 times) ○	×
Indoor fan abnormal	(6 times) ○	(2 or 3 times) ○	×
Discharge temperature error	(7 times) ○	(2 times) ○	×
Excessive high pressure protection on cooling	(7 times) ○	(3 times) ○	×
4-way valve abnormal	(7 times) ○	(4 times) ○	×
Pressure switch abnormal	(7 times) ○	(5 times) ○	×
Compressor temperature error	(7 times) ○	(6 times) ○	×
Active filter abnormal	(8 times) ○	(2 or 3 times) ○	×
PFC circuit error	(8 times) ○	(4 times) ○	×

○: 0.5s ON/0.5s OFF (Flash)    ×: OFF

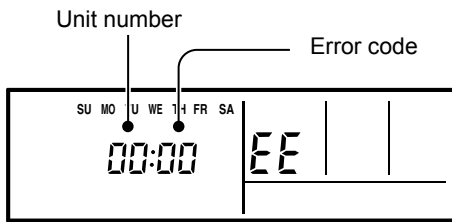
# ERROR CONTENTS

## REMOTE CONTROL UNIT

Troubleshooting at the remote control LCD

This is possible only on the wired remote control.

If an error occurs, the following display will be shown.  
("EE" will appear in the set room temperature display.)



Code	Error contents
<b>01 13 26 27</b>	Indoor signal error
<b>00</b>	Wired remote controller abnormal
<b>02</b>	Indoor room temperature sensor error
<b>04</b>	Indoor heat exchanger temperature sensor (middle) error
<b>28</b>	Indoor heat exchanger temperature sensor (inlet) error
<b>09</b>	Float switch operated
<b>0C</b>	Outdoor discharge pipe temperature sensor error
<b>06</b>	Outdoor heat exchanger temperature sensor (outlet) error
<b>0A</b>	Outdoor temperature sensor error
<b>0E</b>	Heatsink sensor error
<b>15</b>	Compressor temperature sensor error
<b>1d</b>	2-way valve temperature sensor error
<b>1E</b>	3-way valve temperature sensor error
<b>29</b>	Outdoor heat exchanger temperature sensor (middle) error
<b>20</b>	Indoor manual auto switch abnormal
<b>2A</b>	Power supply frequency detection error
<b>17</b>	IPM protection
<b>18</b>	CT error
<b>1A</b>	Compressor location error
<b>1b</b>	Outdoor fan error
<b>1F</b>	Connected indoor unit abnormal
<b>1c</b>	Outdoor unit computer communication error
<b>12</b>	Indoor fan abnormal
<b>0F</b>	Discharge temperature error
<b>24</b>	Excessive high pressure protection on cooling
<b>2c</b>	4-way valve abnormal
<b>16</b>	Pressure switch abnormal
<b>2b</b>	Compressor temperature error
<b>19</b>	Active filter abnormal
<b>25</b>	PFC circuit error

If "CO" appears in the unit number display, there is a remote control error. Refer to the installation instruction sheet included with the remote control.

## OUTDOOR UNIT LEDS

Make a TEST RUN in accordance with the installation instruction sheet for the indoor unit.

When a malfunction occurs in the outdoor unit, the LED on the circuit board lights to indicate the error. Refer to the following table for the description of each error according to the LED.

LED	Error contents
1 flash	Communication error (Indoor unit - Outdoor unit)
2 flash	Discharge pipe temperature sensor
3 flash	Outdoor heat exchanger temperature (outlet) sensor
4 flash	Outdoor temperature sensor
5 flash	Outdoor heat exchanger temperature (mid) sensor
6 flash	Discharge pipe temperature abnormal
7 flash	Compressor temperature sensor
8 flash	Heat sink temperature sensor
9 flash	Pressure switch abnormal
10 flash	Compressor temperature abnormal
12 flash	IPM error
13 flash	Compressor rotor position cannot detect
14 flash	Compressor cannot operate
15 flash	Outdoor fan abnormal (upper fan)
16 flash	Outdoor fan abnormal (lower fan)
5 sec. on/ 1 sec. off repeat	Protect operation
1 sec. on/ 1 sec. off repeat	Pump down operation
off	No error

# SPECIAL INSTALLATION SETTING

## PUMP DOWN (Refrigerant collecting operation)

Perform the following procedures to collect the refrigerant when moving the indoor unit or outdoor unit

### 1. When the product is stopped:

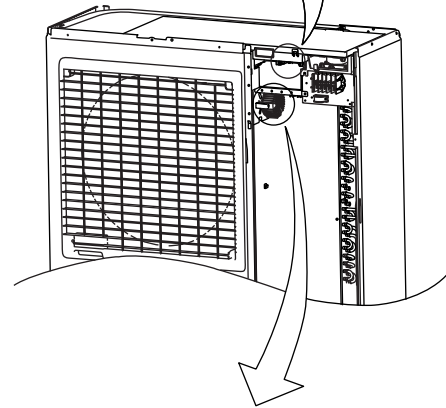
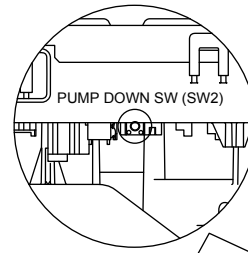
①	Press the PUMP DOWN switch on the outdoor unit. (The LED on the outdoor unit circuit board starts flashing.) (1 sec. on / 1 sec. off repeated)
②	The pump down operation (cooling operation) begins right away. After operation starts, close the three-way valve (liquid).
③	After 2 - 3 minutes, operation stops. Close the three-way valve (gas) within one minute after operations stops.
④	The LED will go out three minutes after it stops. Disconnect the power supply after confirming that the LED has gone out.

### 2. When the product is operating:

①	Press the PUMP DOWN switch on the outdoor unit. The LED on the outdoor unit circuit board starts flashing ( 1 sec. on / 1 sec. off repeated), and operation stops. At this point, recovery has not been completed, so do not close the three-way valves. (liquid and gas)
②	The pump down operation (cooling operation) begins after three minutes. Close the three-way valve (liquid) after operation starts.
③	After 2 - 3 minutes, operation stops. Close the three-way valve (gas) within one minute after operations stops.
④	The LED will go out three minutes after it stops. Disconnect the power supply after confirming that the LED has gone out.

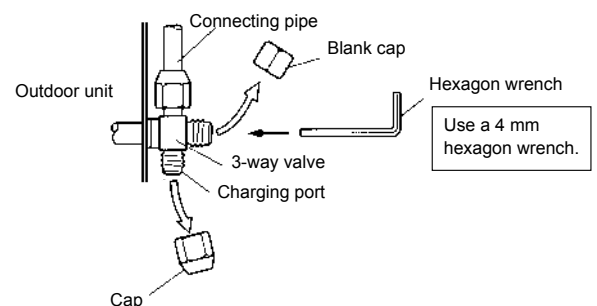
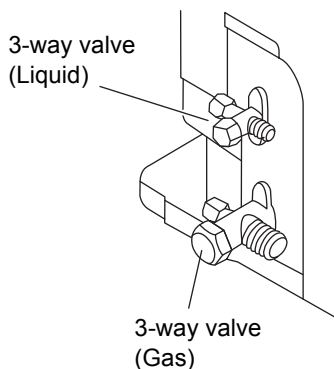
\*When the pump down operation is repeated, temporarily disconnect the power supply after opening the closed valves (both liquid and gas). Reconnect the power supply after 2 - 3 minutes and perform the pump down operation.

\*When the start of the operation after pump down operation has been completed, temporarily disconnect the power supply after opening the closed valves (both liquid and gas). Reconnect the power supply after 2-3 minutes and be sure to perform a test operation for cooling.



<b>⚠ DANGER</b>
This part (Choke coil) generates high voltages. Never touch this part.

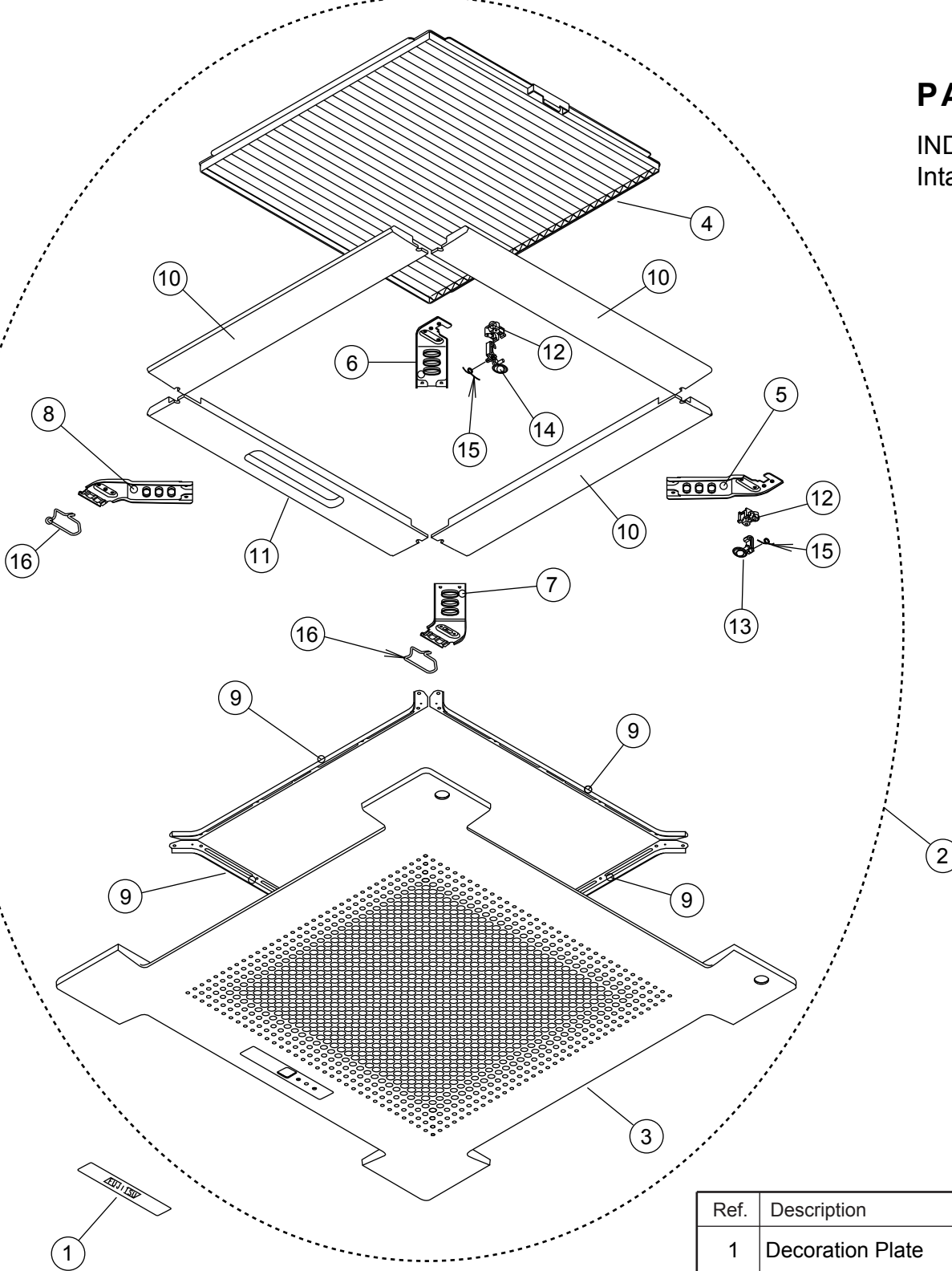
		Tightening torque
Blank cap	6.35 mm (1/4 in.)	20 to 25 N-m (200 to 250 kgf-cm)
	9.52 mm (3/8 in.)	20 to 25 N-m (200 to 250 kgf-cm)
	12.70 mm (1/2 in.)	25 to 30 N-m (250 to 300 kgf-cm)
	15.88 mm (5/8 in.)	30 to 35 N-m (300 to 350 kgf-cm)
	19.05 mm (3/4 in.)	35 to 40 N-m (350 to 400 kgf-cm)
Charging port cap		10 to 12 N-m (100 to 120 kgf-cm)
Spindle (Hexagon wrench)		6 to 7 N-m (60 to 70 kgf-cm)





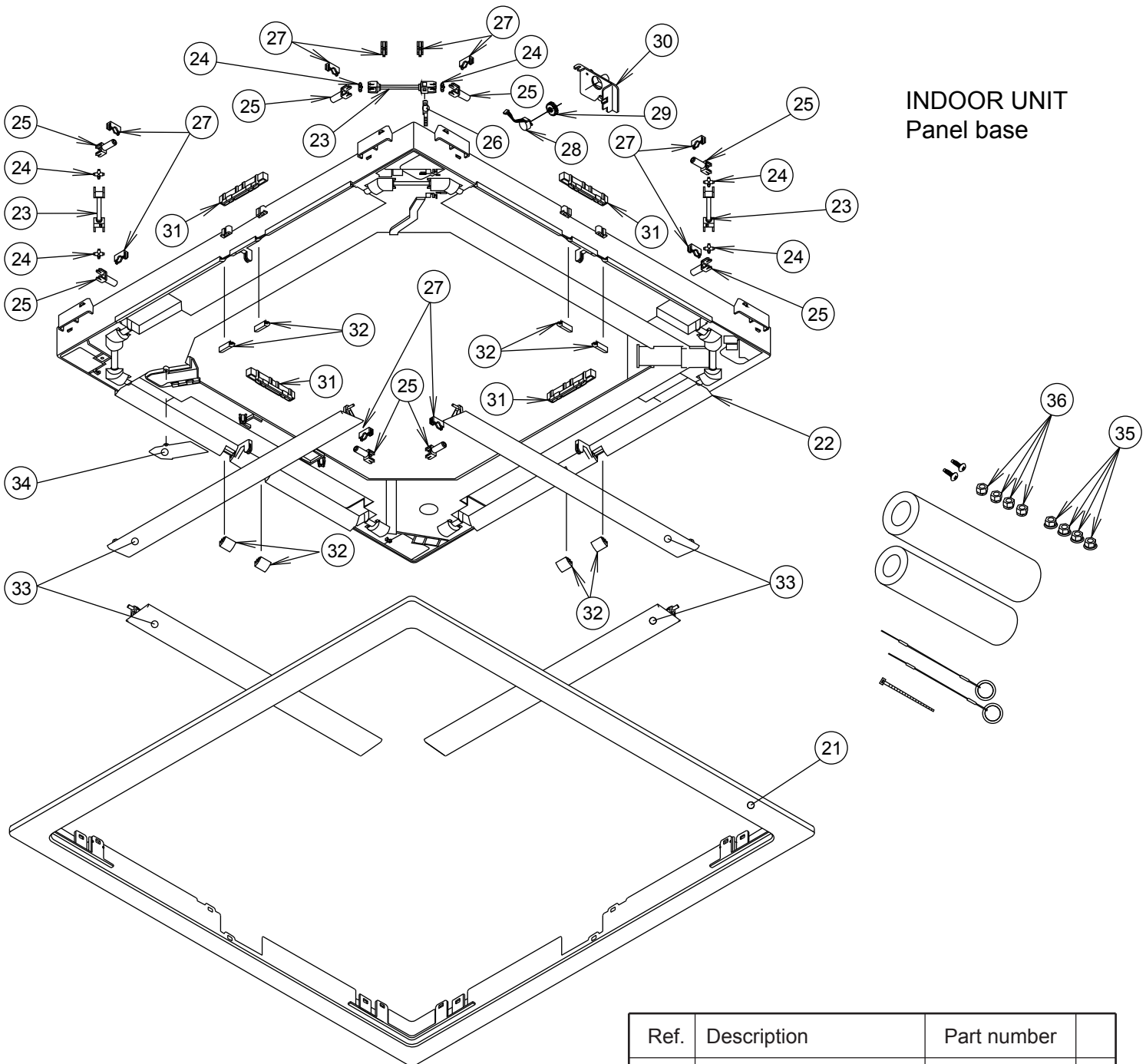
# PARTS

## INDOOR UNIT Intake grille sub assy



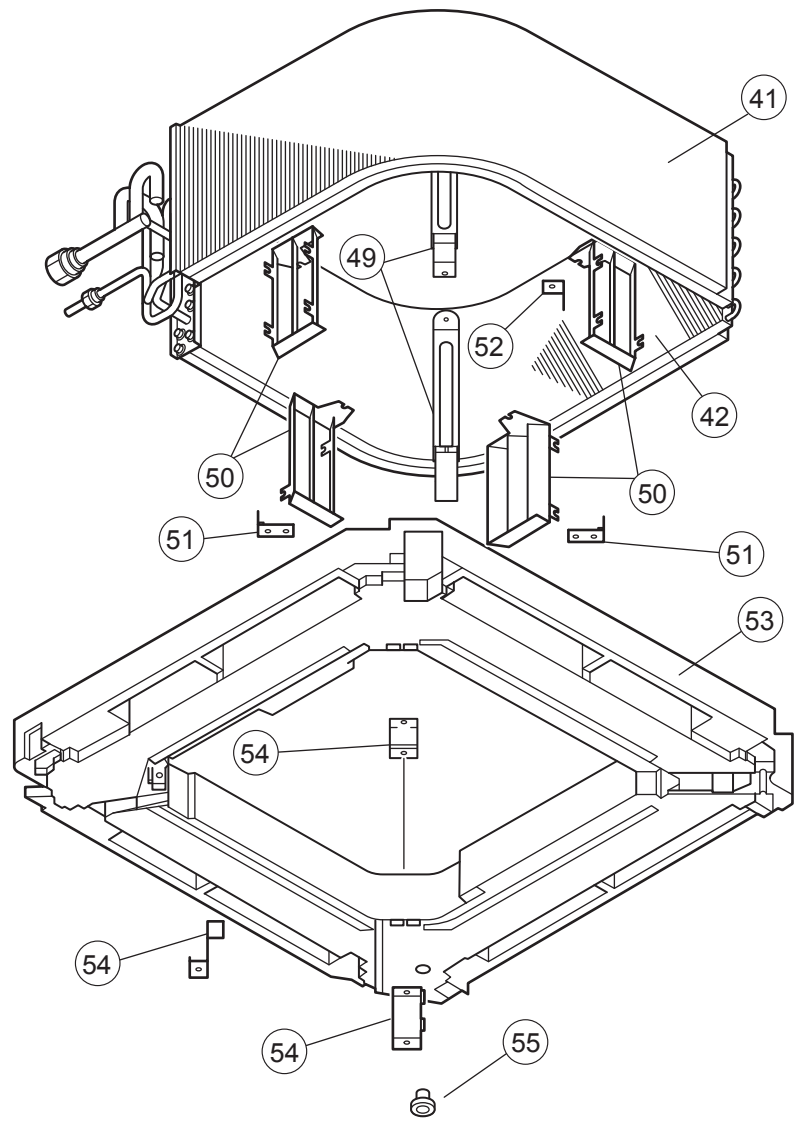
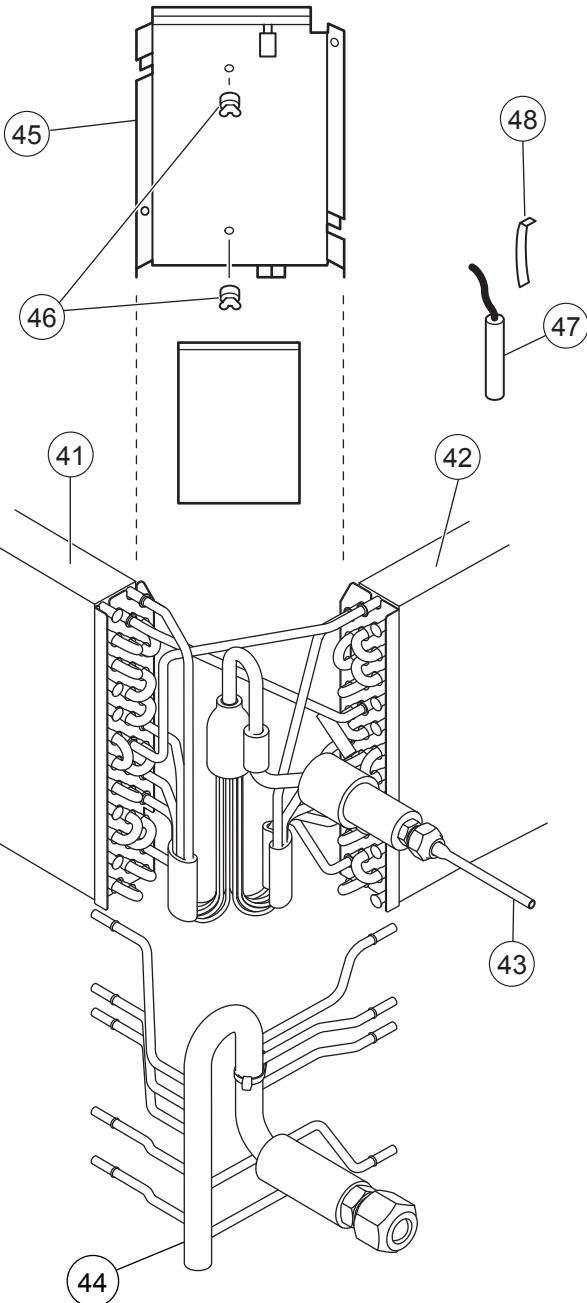
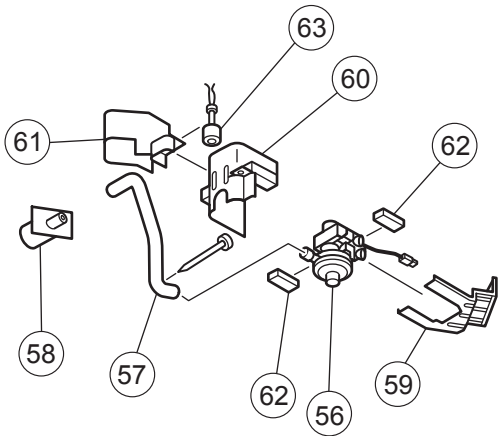
Ref.	Description	Parts number
1	Decoration Plate	9378017016
2	Intake Grille Sub Assy	9362818131
3	Intake Grille	9362767019
4	Filter	9362766005
5	Grille Reinforcement-T (A)	9362738002
6	Grille Reinforcement-T (B)	9362739009
7	Grille Reinforcement-T (C)	9362740005
8	Grille Reinforcement-T (D)	9362741002
9	Grille Reinforcement-T (E)	9362742009
10	Insulation (Grille)-A	9362780001
11	Insulation (Grille)-B	9362781008
12	Grille Hook Holder	9362782005
13	Grille Hook-A	9362779012
14	Grille Hook-B	9362778015
15	Grille Spring	9362755009
16	Grille Hinge Wire	9362754002

INDOOR UNIT  
Panel base



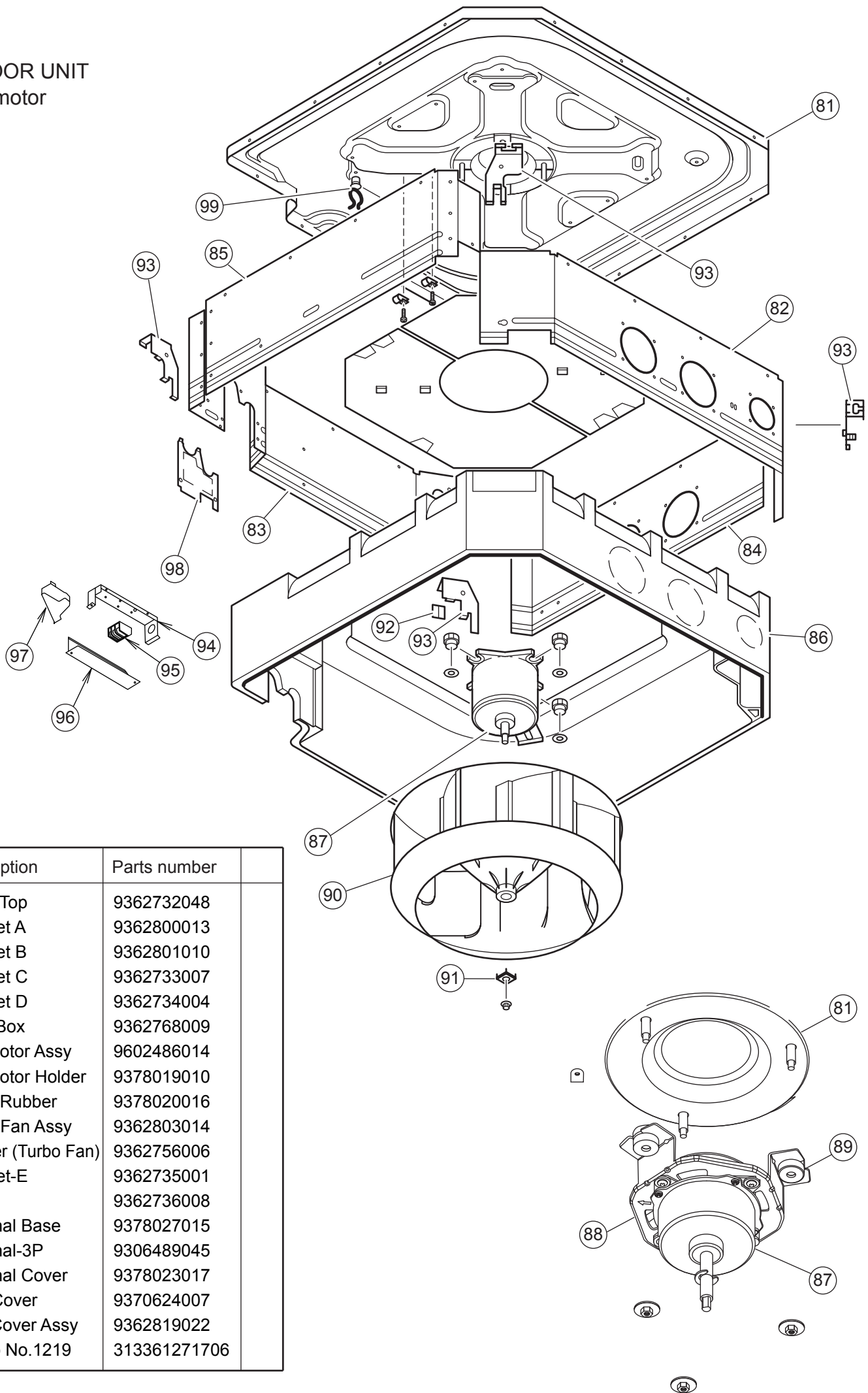
Ref.	Description	Part number
21	Panel Frame Holder	9362758017
22	Panel Base	9362759014
23	Joint A	9362773003
24	Joint Shaft	9362771009
25	Louver Supporter	9362770019
26	Joint Gear	9362772006
27	Rubber Support Holder	9362799003
28	Step Motor	9900362027
29	Motor Gear	9362764001
30	Motor Holder	9362765008
31	Panel Frame Holder	9362761017
32	Panel Base Holder	9362760010
33	Louver Assy	9362836012
34	Wire Cover-B	9362788007
35	Spacial Nut-A (Large)	313005446653
36	Spacial Nut-B (Small)	313005446759
---	PCB Holder	9364855004
---	Indicator PCB Assy	9705891036

INDOOR UNIT  
Evaporator  
Drain pan

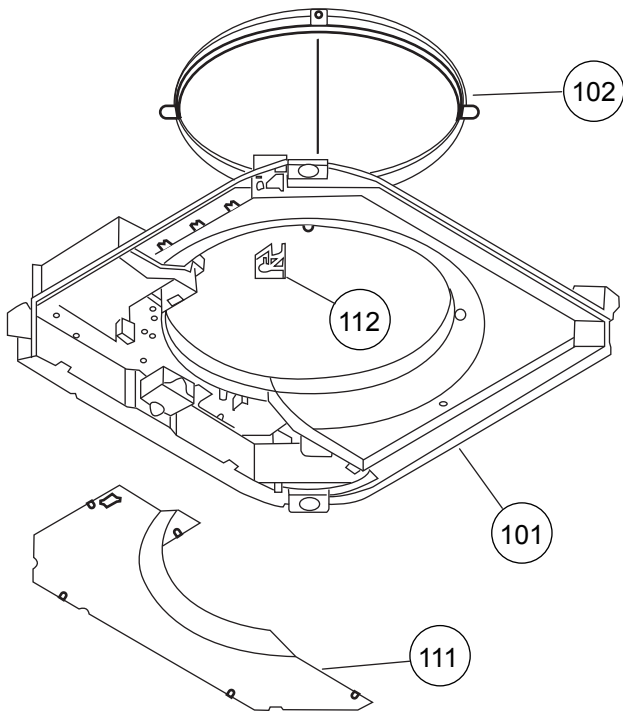


Ref.	Description	Parts number
41	Evaporator A Assy	9373799047
42	Evaporator B Assy	9373800040
43	Distributor Assy	9371325101
44	Coupling Pipe Assy	9373038290
45	Separate Wall	9362737005
46	Clamp No.1219	313361271706
47	Pipe Thermistor	9703297021
48	Thermistor Spring-A	313728262708
49	Evaporator Holder Assy	9362802017
50	Wind Guide Board	9373444015
51	Reinforcement (Eva. )-A	9362749008
52	Reinforcement (Eva. )-B	9362750004
53	Kit (Drain Pan Assy)	9370934021
54	Reinforcement (Drain Pan)	9362757003
55	Rubber Cap	313005174654
56	Pump Unit	9900360030
57	Drain Hose	9362784009
58	Drain Port	9362786003
59	Drain pump Holder	9362753005
60	Pump Cover-A	9362775007
61	Pump Cover-B	9362776004
62	Cushion Rubber (Pump)	9362777001
63	Float Switch	9900361020
--	Rubber (Discharge Pipe)	313194159807

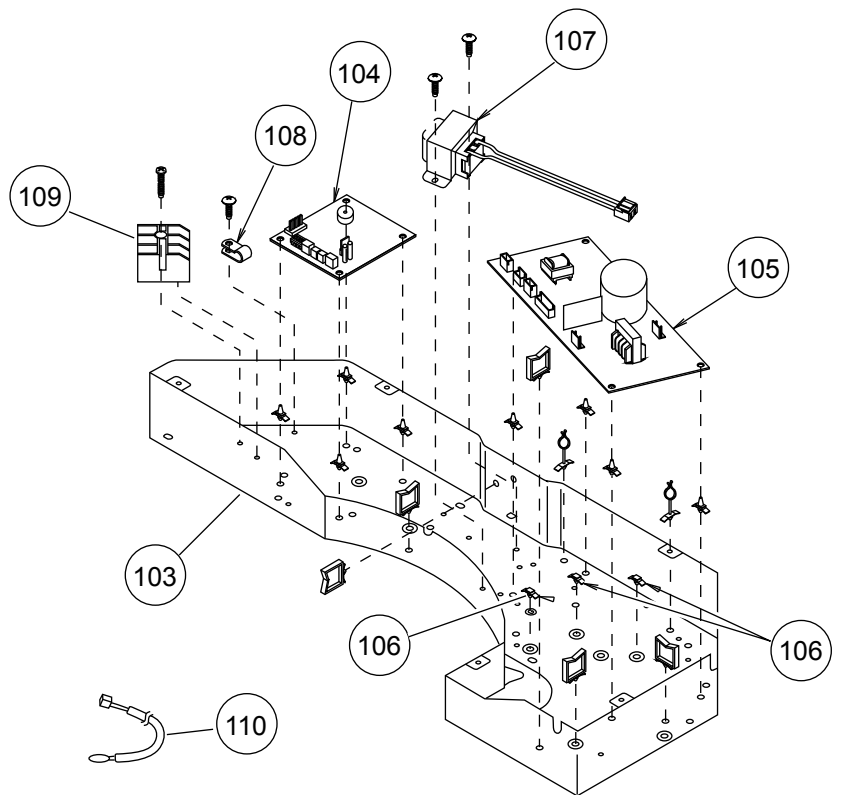
INDOOR UNIT  
Fan motor



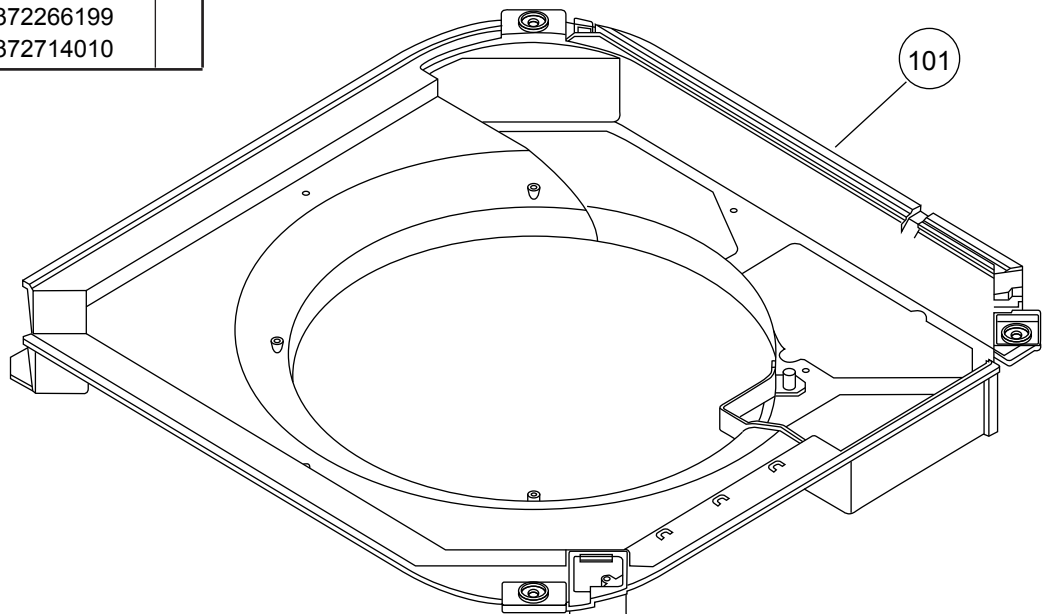
Ref.	Description	Parts number
81	Panel Top	9362732048
82	Cabinet A	9362800013
83	Cabinet B	9362801010
84	Cabinet C	9362733007
85	Cabinet D	9362734004
86	Inner Box	9362768009
87	Fan Motor Assy	9602486014
88	Fan Motor Holder	9378019010
89	Motor Rubber	9378020016
90	Turbo Fan Assy	9362803014
91	Washer (Turbo Fan)	9362756006
92	Cabinet-E	9362735001
93	Hook	9362736008
94	Terminal Base	9378027015
95	Terminal-3P	9306489045
96	Terminal Cover	9378023017
97	Wire Cover	9370624007
98	Pipe Cover Assy	9362819022
99	Clamp No.1219	313361271706



INDOOR UNIT  
Control unit

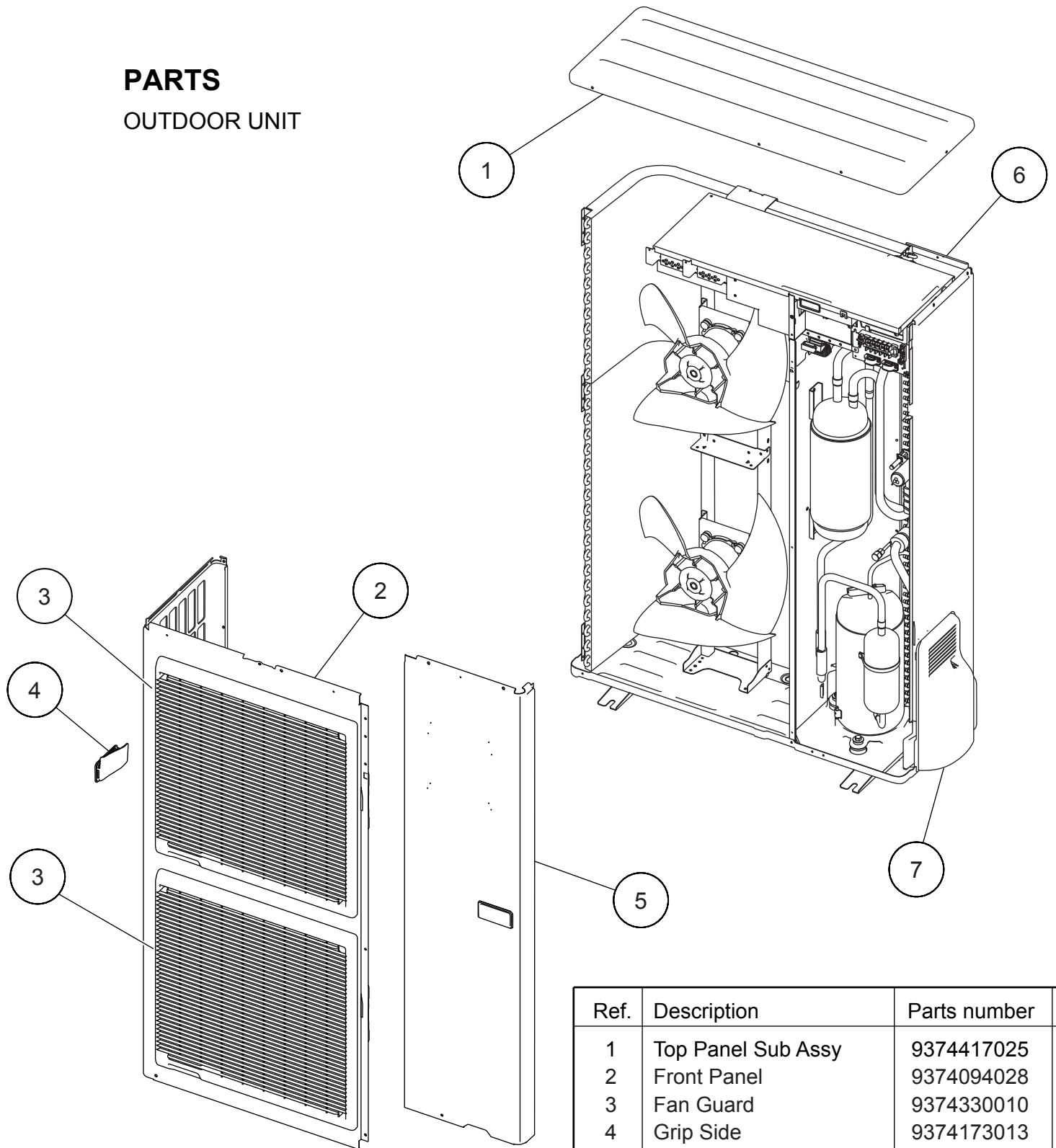


Ref.	Description	Parts number
101	Control Box	9368523015
102	Bellmouth B	9362774000
103	Control Box Assy	9368533007
104	Controller PCB Assy (36)	9707393101
104	Controller PCB Assy (45)	9707393095
105	Power Supply PCB Assy	9707398052
106	Spacer	0600118075
107	Reactor Assy	9707457018
108	Clamp NK-4N	313714328805
109	Terminal-3P	9703345012
110	Room Thermistor	9703299063
111	Control Box Cover	9368524005
112	Wire Cover A	9362789004
--	Remote Control	9372266199
--	Wire Assembly	9372714010



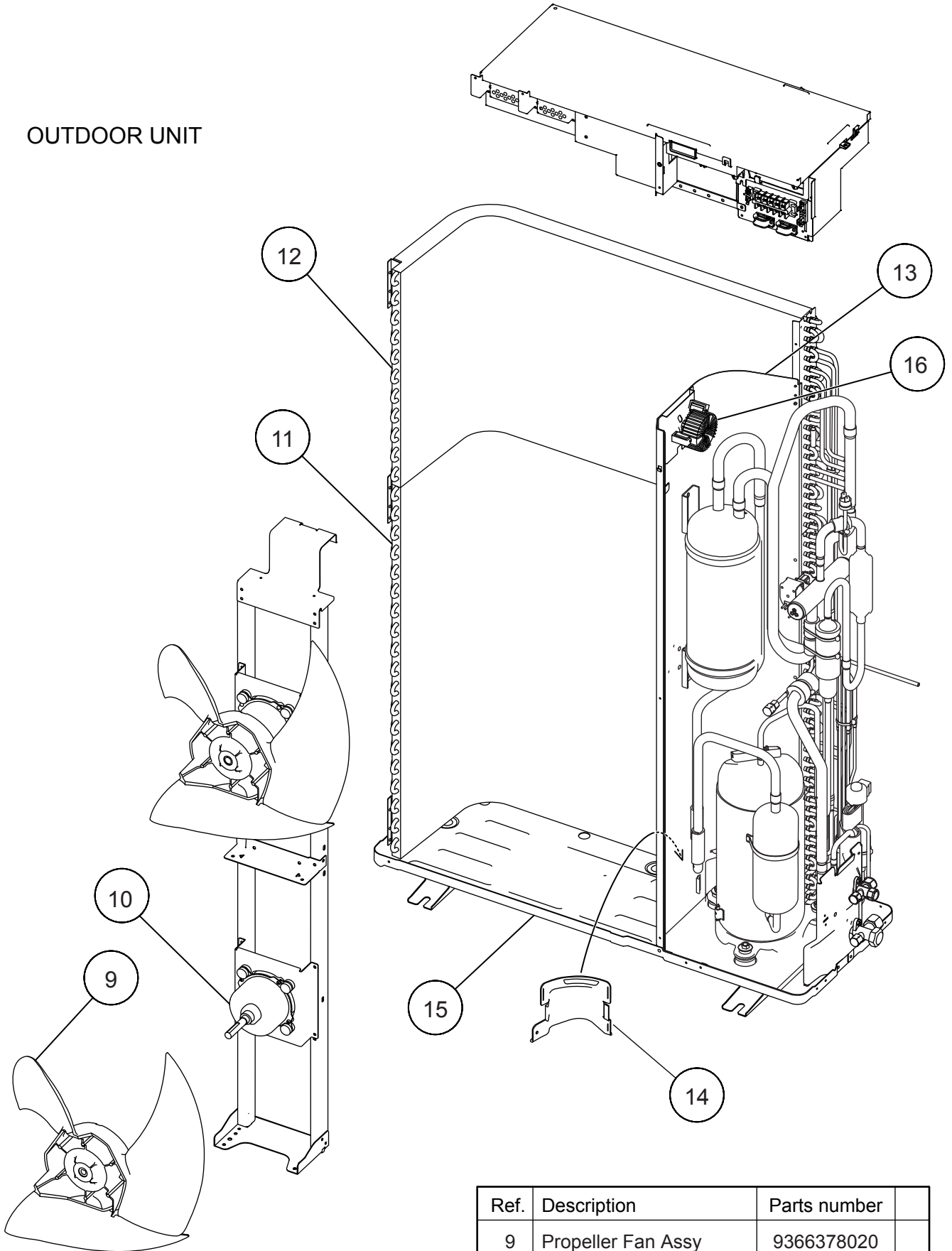
# PARTS

## OUTDOOR UNIT



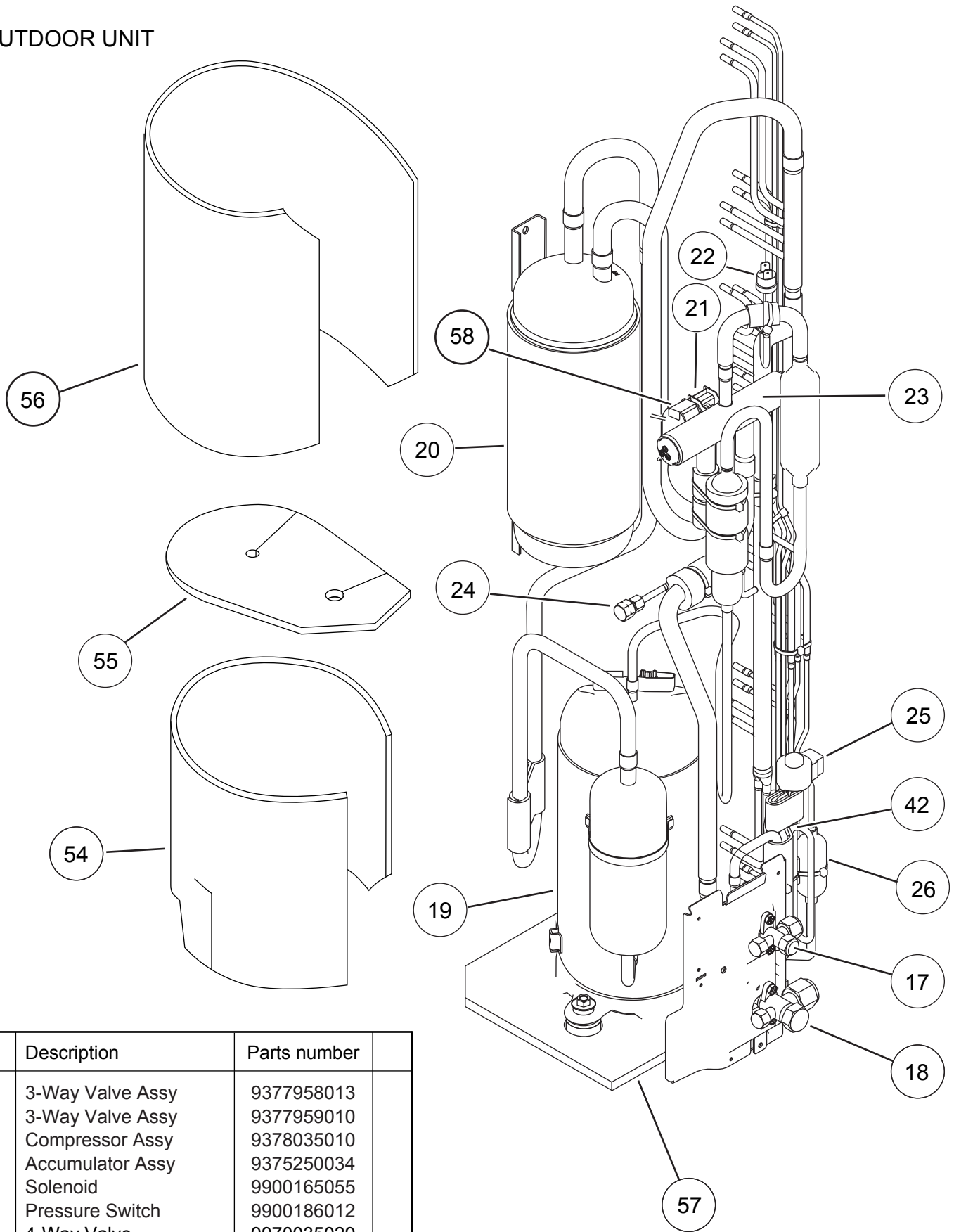
Ref.	Description	Parts number
1	Top Panel Sub Assy	9374417025
2	Front Panel	9374094028
3	Fan Guard	9374330010
4	Grip Side	9374173013
5	Service Panel Sub Assy	9374415069
6	Right Panel Sub Assy	9374416141
7	Valve Cover	9374174010
--	Emblem Rear	9351355005

# OUTDOOR UNIT



Ref.	Description	Parts number
9	Propeller Fan Assy	9366378020
10	Motor DC Brushless	9601882015
11	Condenser A Assy	9374433018
12	Condenser B Assy	9374434015
13	Sepa Wall	9374629015
14	Cap Foot	9374345014
15	Base Assy	9374166046
16	Coil Choke	9703458019

# OUTDOOR UNIT

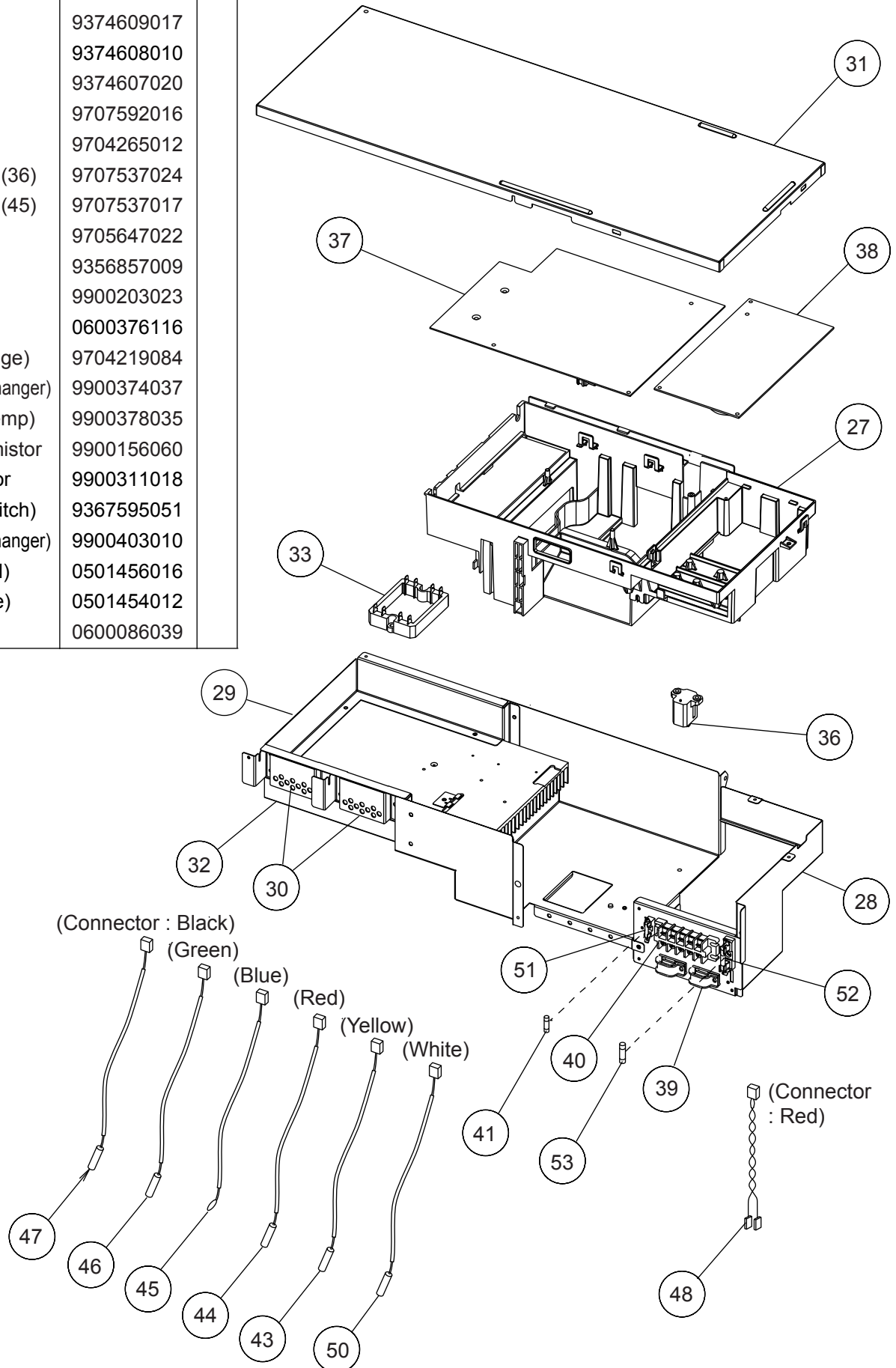


Ref.	Description	Parts number
17	3-Way Valve Assy	9377958013
18	3-Way Valve Assy	9377959010
19	Compressor Assy	9378035010
20	Accumulator Assy	9375250034
21	Solenoid	9900165055
22	Pressure Switch	9900186012
23	4-Way Valve	9970035029
24	Check Valve Assy	9374274017
25	Coil (Expansion Valve)	9900197025
26	Strainer Assy	9372524039
42	Expansion Valve Assy	9370947175
54	Compressor Cover A	9374430109
55	Compressor Cover B	9374431106
56	Compressor Cover C	9372067086
57	Compressor Cover D	9375382025
58	Solenoid	9900165055







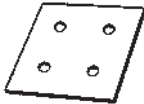



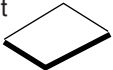
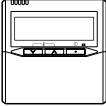
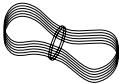
Ref.	Description	Parts number
27	Inverter Box A	9374603015
28	Inverter Box B	9374625017
29	Inverter Box C	9374605026
30	Inverter Box Duct	9374609017
31	Inverter Box Cover	9374608010
32	Heat Sink B	9374607020
33	ACTPM	9707592016
36	Posistor	9704265012
37	Inverter PCB Assy (36)	9707537024
37	Inverter PCB Assy (45)	9707537017
38	Power PCB Assy	9705647022
39	Clamp (Cord)	9356857009
40	Terminal	9900203023
41	Fuse (Small)	0600376116
43	Thermistor (Dischage)	9704219084
44	Thermistor (Heat Exchanger)	9900374037
45	Thermistor (Out Temp)	9900378035
46	Compressor Thermistor	9900156060
47	Heatsink Thermistor	9900311018
48	Wire (Pressure Switch)	9367595051
50	Thermistor (Heat Exchanger)	9900403010
51	Fuse Holder (Small)	0501456016
52	Fuse Holder (Large)	0501454012
53	Fuse (Large)	0600086039

## OUTDOOR UNIT

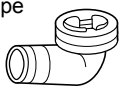

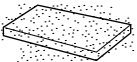


# ACCESSORIES

## INDOOR UNIT

Name and Shape	Q'ty	Application
Coupler heat insulation 	2	For indoor side pipe joint
Tapping Screw (flush heads) 	2	For installing the remote controller (option)
Special nut A (large flange) 	4	For installing indoor unit
Special nut B (small flange) 	4	For installing indoor unit
Template 	1	For ceiling hole cutting
Binder 	1	For fixing the remote controller cord
Blower cover insulation 	2	For discharged air
Hook wire 	2	For installing intake grille
Rubber sheet 	2	For wiring cover
Remote control 	1	For air conditioner operation
Remote controller cord 	1	For connecting the remote controller

## OUTDOOR UNIT

Name and Shape	Q'ty	Application	Part number
Drain pipe 	1	For outdoor unit drain piping work (May not be supplied, depending on the model)	9303029015
Drain cap 	2		313166024302
Installation (seal) 	1	For filling in a gap at the entrance of connection cords	9374756018

0708G3258