

**SPLIT TYPE
AIR CONDITIONER**

CASSETTE type (50Hz)

SERVICE MANUAL



Models

Indoor unit

AUY30LUAS

AUY36LUAS

Outdoor unit

AOY30LMBWL

AOY36LMBWL

CONTENTS

SPECIFICATIONS	1
DIMENSIONS	2
REFRIGERANT SYSTEM DIAGRAM	4
CIRCUIT DIAGRAM	5
INDOOR PCB CIRCUIT DIAGRAM	6
OUTDOOR PCB CIRCUIT DIAGRAM	7
ERROR CONTENTS	10
DISASSEMBLY ILLUSTRATION	12
PARTS LIST	20
STANDARD ACCESSORIES	22

SPECIFICATIONS

TYPE	COOLING & HEATING	
INDOOR UNIT	AUY30LUAS	AUY36LUAS
OUTDOOR UNIT	AOY30LMBWL	AOY36LMBWL
COOLING CAPACITY	8.5 kW	10.0 kW
HEATING CAPACITY	10.0 kW	11.2 kW

ELECTRICAL DATA

POWER SOURCE		230V 50Hz	
RUNNING CURRENT	COOLING	12.5 A	17.6 A
	HEATING	12.4 A	15.2 A
INPUT WATTS	COOLING	2.86 kW	4.01 kW
	HEATING	2.84 kW	3.49 kW
E.E.R. (kW/kW)	COOLING	2.97	2.49
	HEATING	3.52	3.21
STARTING CURRENT		15 A	15 A
MOISTURE REMOVAL (ℓ/hr)		3.0	4.0
AIRCIRCULATION-Hi (m³/hr)		1,550	

COMPRESSOR

TYPE	Total enclosed type, 4 poles, Inverter, Twin Rotary		
DISCRIMINATION	TNB220FPBM9		
REFRIGERANT R410A	2,200 g		

FAN MOTOR

INDOOR UNIT	DISCRIMINATION	MFA-54PZM
	HI-SPEED	600 r.p.m.
	MED-SPEED	490 r.p.m.
	LO-SPEED	420 r.p.m.
	S-LO-SPEED	300 r.p.m.
OUTDOOR UNIT	DISCRIMINATION	MFE-60PO
	COOL	850 r.p.m.
	HEAT	900 r.p.m.

DIMENSIONS

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

WEIGHT

INDOOR UNIT	GROSS / NET	52 / 37 kg
OUTDOOR UNIT	GROSS / NET	70 / 64 kg

TYPE	COOLING & HEATING	
INDOOR UNIT	AUY30LUAS	AUY36LUAS
OUTDOOR UNIT	AOY30LMBWL	AOY36LMBWL

NOISE LEVEL

INDOOR UNIT	HI-SPEED	48.0 dB	
	MED-SPEED	44.0 dB	
	LO-SPEED	41.0 dB	
OUTDOOR UNIT	COOL	53.0 dB	54.0 dB
	HEAT	55.0 dB	55.0 dB

Note : Static pressure : 30Pa

Duct length : Inlet 1m, Outlet 2m

REFRIGERANT CHARGE (R410A)

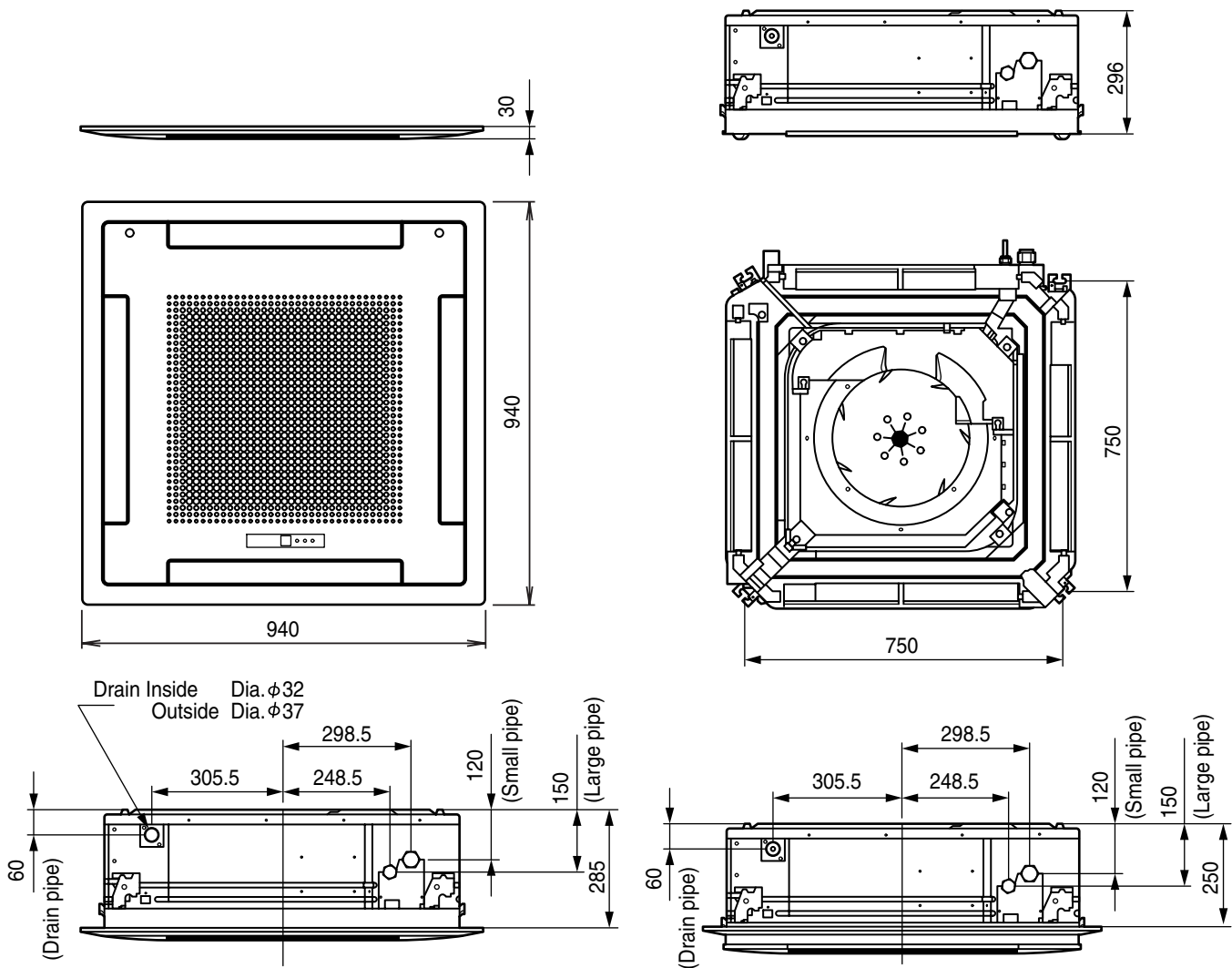
MAX PIPE LENGTH		50 m
MAX PIPE HEIGHT		30 m
FULL CHARGE AMOUNT	PIPE LENGTH 15 m	2,200 g
	20 m	2,400 g
	30 m	2,800 g
	40 m	3,200 g
	50 m	3,600 g
ADDITIONAL REFRIGERANT		40 g / m

DIMENSIONS

(Unit : mm)

INDOOR UNIT

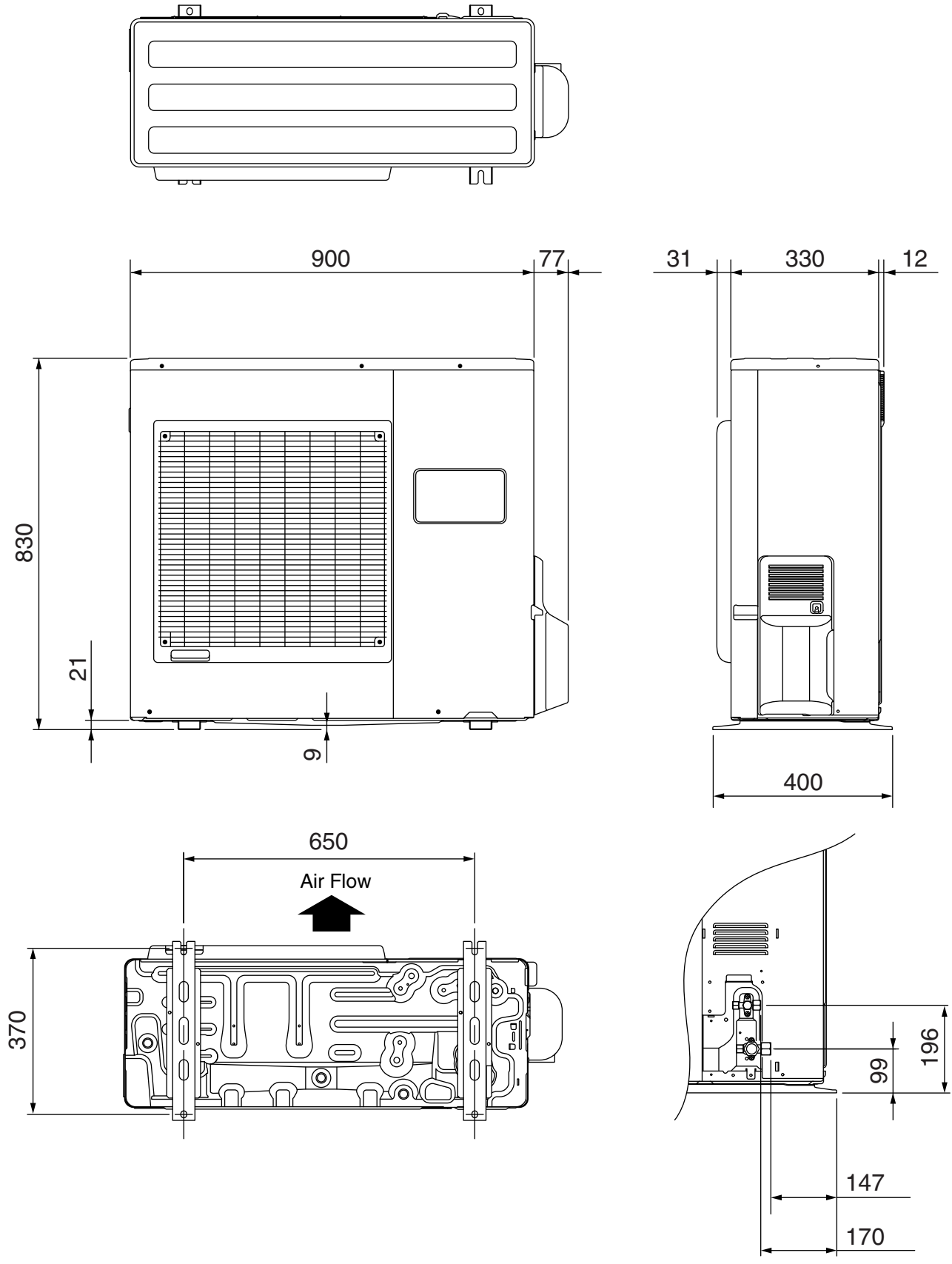
Models : AUY30LUAS
AUY36LUAS



OUTDOOR UNIT

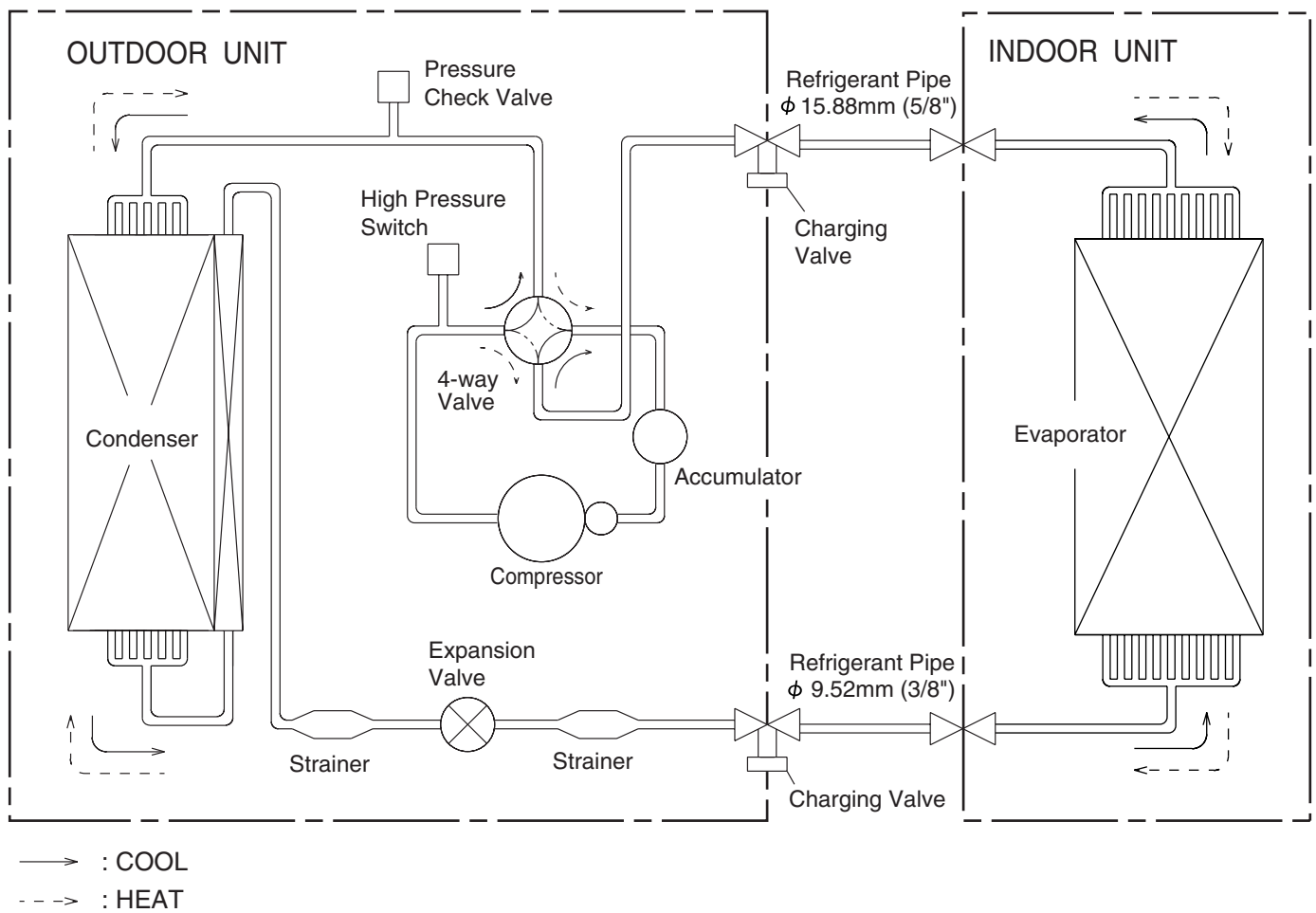
Models : AOY30LMBWL
AOY36LMBWL

(Unit : mm)



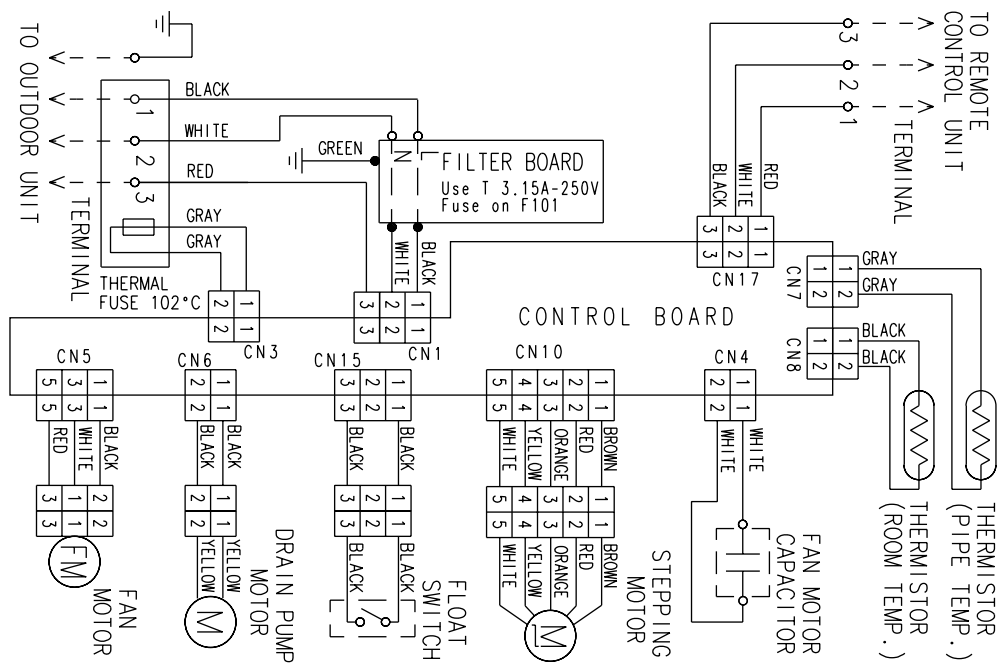
REFRIGERANT SYSTEM DIAGRAM

Models : AU30LUAS / AO30LMBWL
AU36LUAS / AO36LMBWL

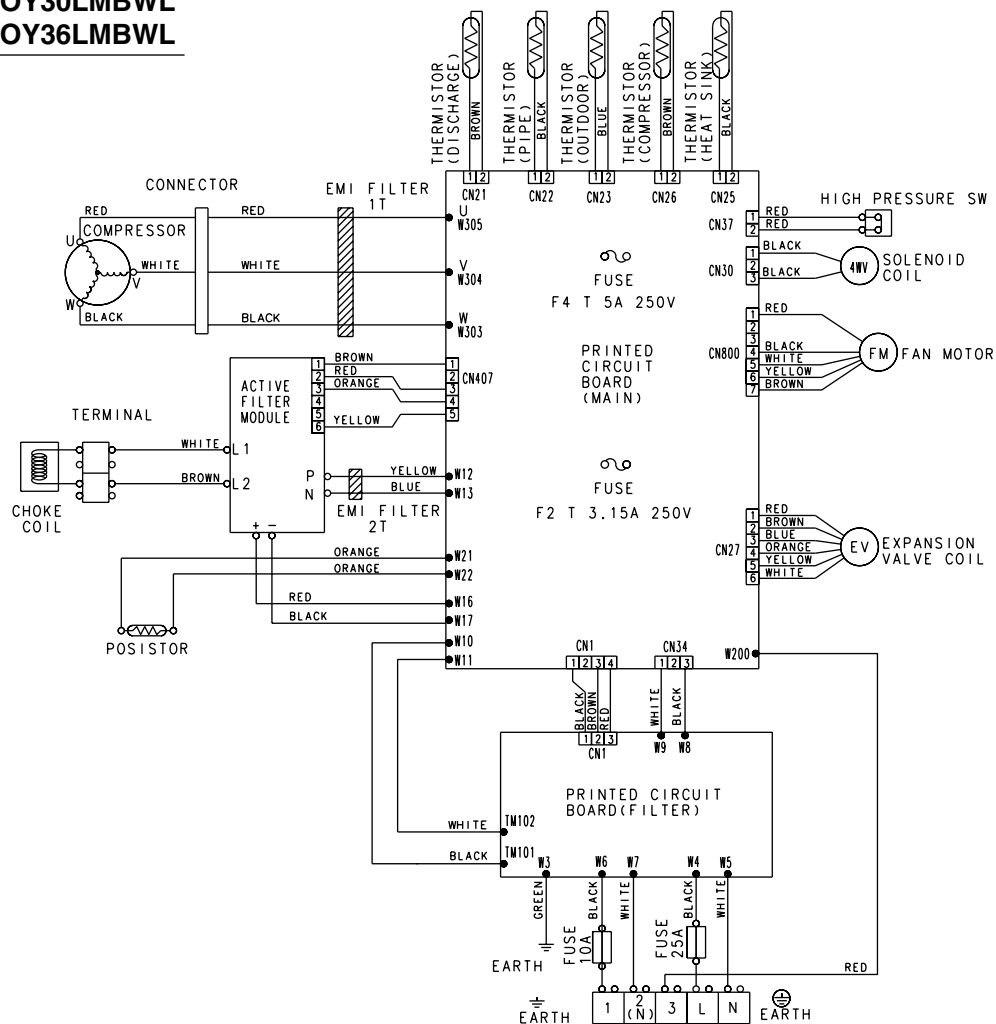


CIRCUIT DIAGRAM

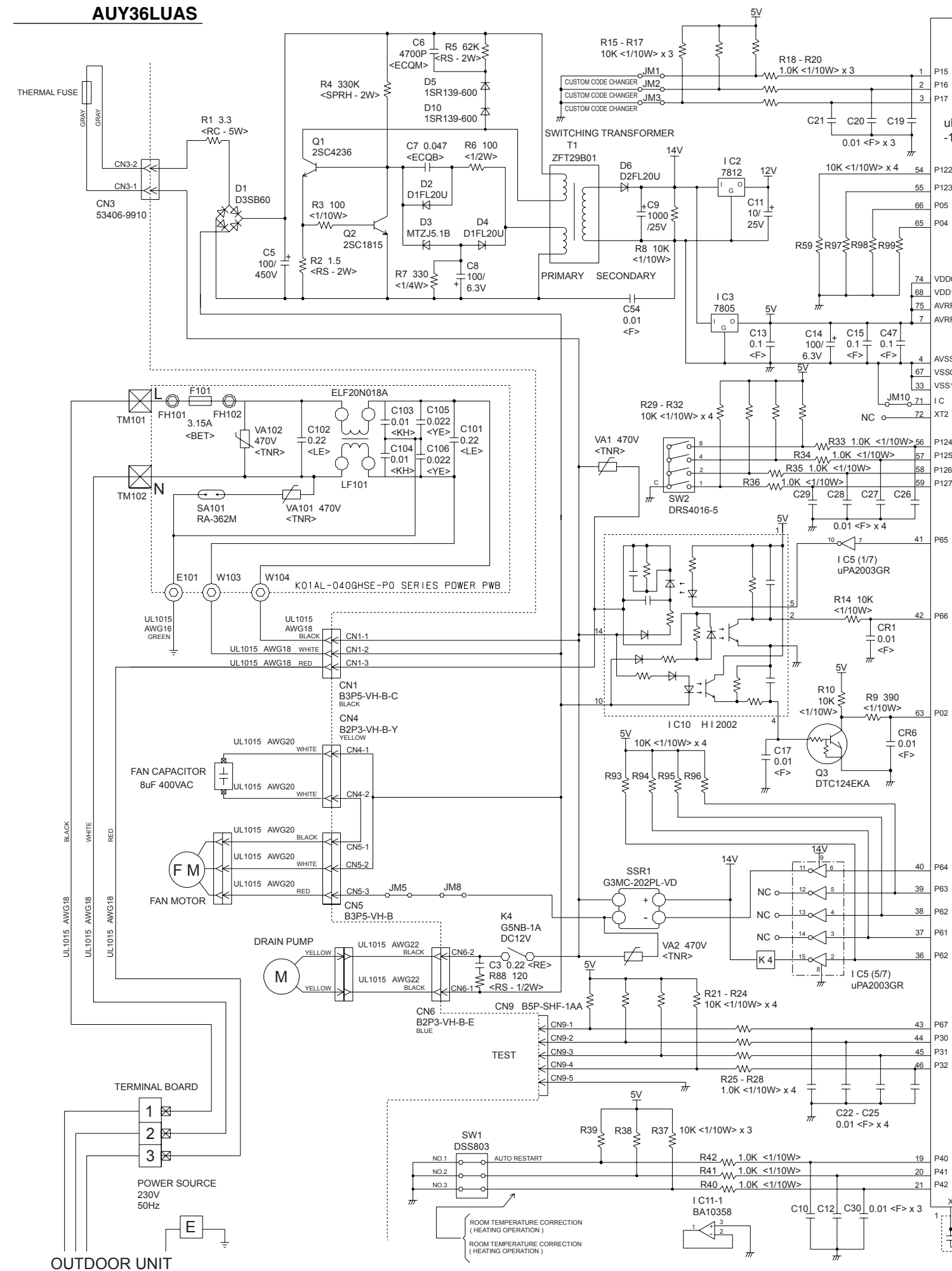
Models : AUY30LUAS
AUY36LUAS



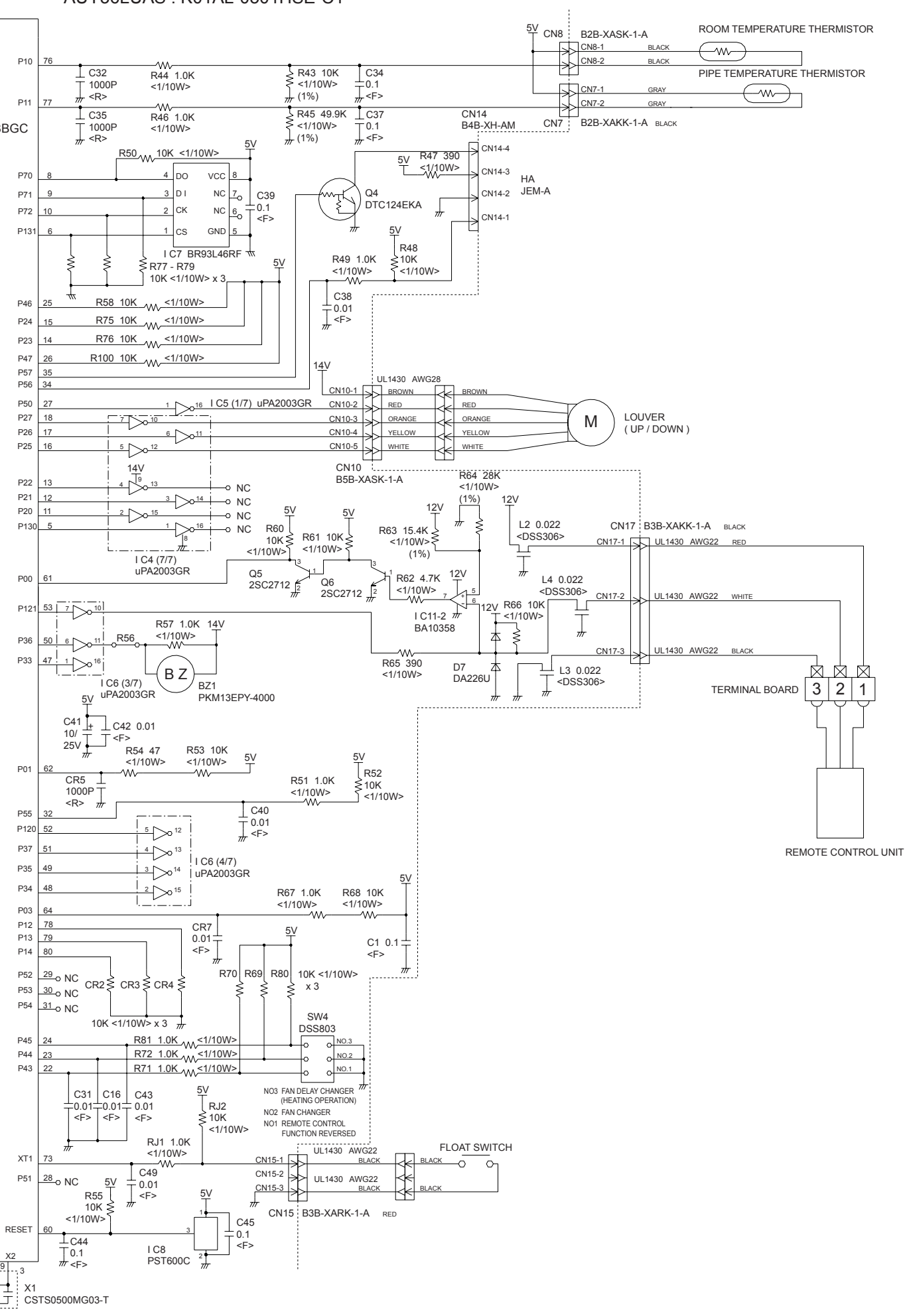
Models : AOY30LMBWL
AOY36LMBWL



**Models : AUY30LUAS
AUY36LUAS**

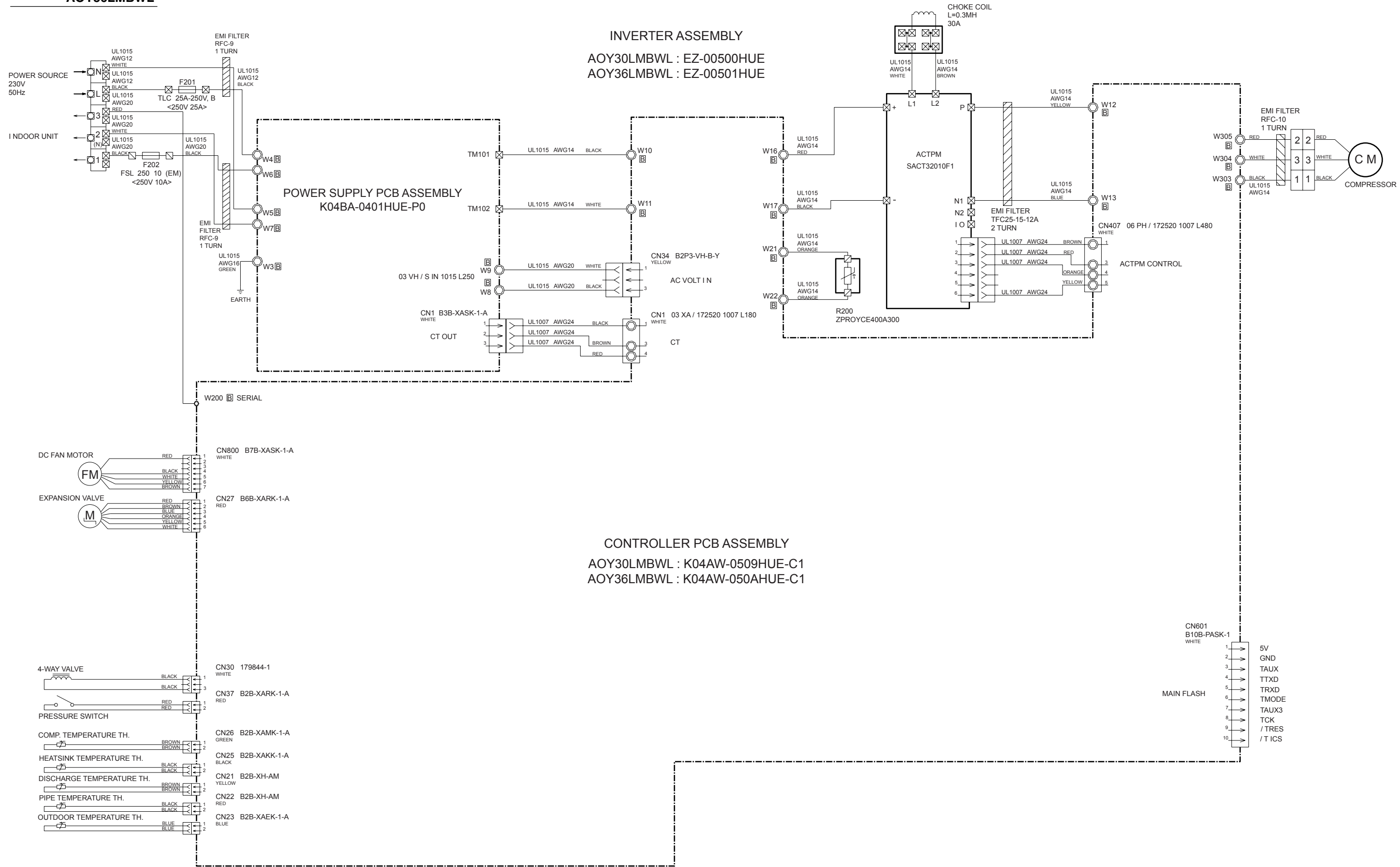


AUY30LUAS : K01AL-0500HSE-C1
AUY36LUAS : K01AL-0501HSE-C1

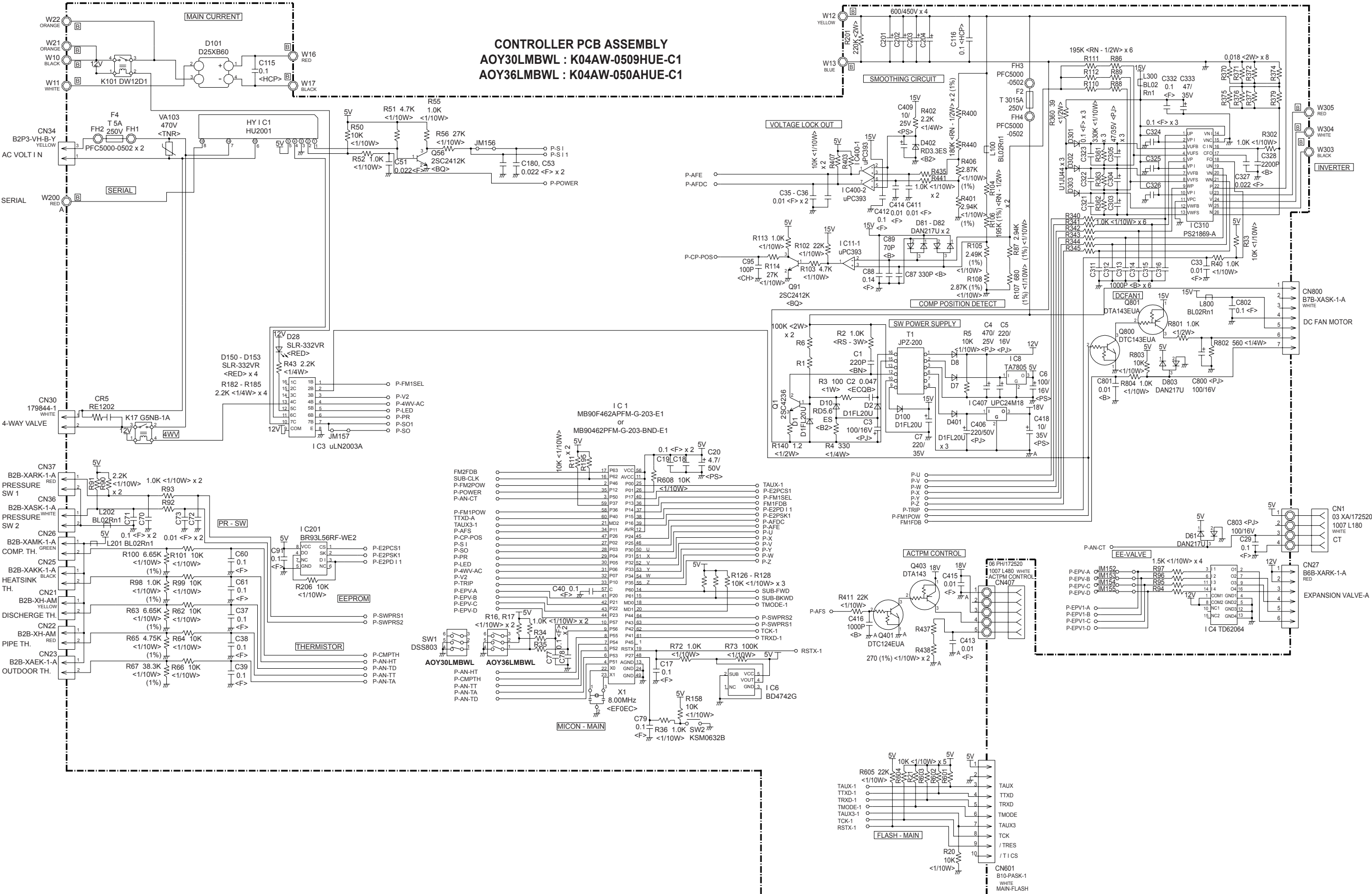


OUTDOOR PCB CIRCUIT DIAGRAM

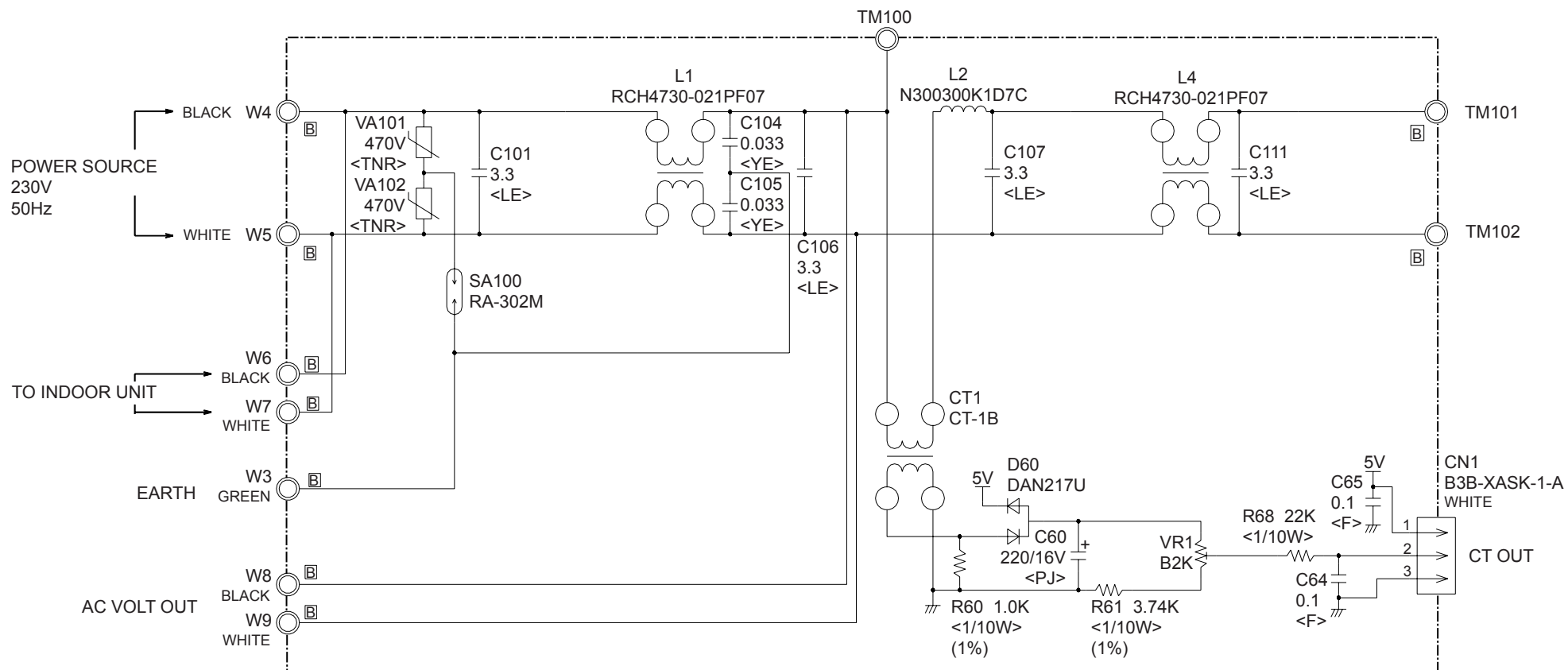
Models : AOY30LMBWL
AOY36LMBWL



Models : AOY30LMBWL
AOY36LMBWL



POWER SUPPLY PCB ASSEMBLY
K04BA-0401HUE-P0

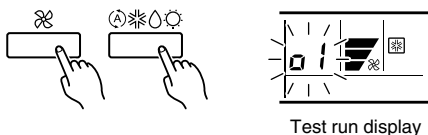


ERROR CONTENTS (indoor unit)

⚠ CAUTION

Supply power to the crankcase heater for at least 12 hours before the start of operation in winter.

- (1) Stop the air conditioner operation.
- (2) Press the master control button and the fan control button simultaneously for 2 seconds or more to start the test run.



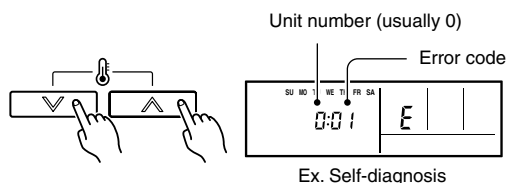
- (3) Press the start/stop button to stop the test run.

[SELF-DIAGNOSIS]

When the error indication "E:EE" is displayed, follow the following items to perform the self-diagnosis. "E:EE" indicates an error has occurred.

1. REMOTE CONTROLLER DISPLAY

- (1) Stop the air conditioner operation.
- (2) Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to start the self-diagnosis.
Refer to the following tables for the description of each error code.



- (3) Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to stop the self-diagnosis.

Error code	Error contents
01	Indoor unit doesn't accept the signal from outdoor unit.
02	Room temperature sensor open
03	Room temperature sensor short-circuited
04	Indoor heat exchanger temperature sensor open
05	Indoor heat exchanger temperature sensor short-circuited
06	Outdoor heat exchanger temperature sensor
08	Power source connection error
09	Float switch operated
0A	Outdoor temperature sensor
0c	Discharge pipe temperature sensor
11	Model abnormal
12	Indoor fan abnormal

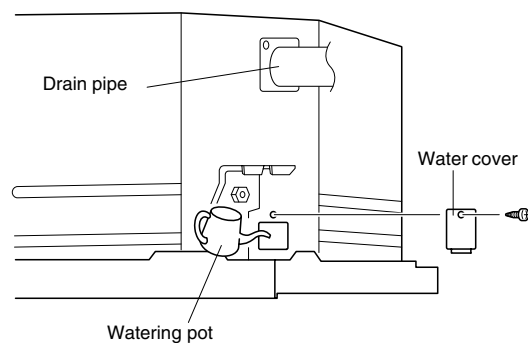
Error code	Error contents
13	Outdoor unit doesn't accept the signal from indoor unit.
14	Excessive outdoor pressure (permanent stop)
15	Compressor temperature sensor
16	Pressure switch error
17	IPM error
18	CT error
19	Active filter module (AFM) error
1A	Compressor does not operate
1b	Outdoor unit fan error
1c	Communication error (inverter → multicontroller)
1d	2 way valve sensor error
1E	Expansion valve error
1F	Connection indoor unit error

* 1c, 1d, 1E, 1F errors are only for multi type.

2. CHECKING DRAINAGE

To check the drain, remove the water cover and fill with 2 to 3 of water as shown in figure.

The drain pump operates when operating in the cooling mode.



ERROR CONTENTS (outdoor unit)

⚠ CAUTION

Always turn on the power 12 hours prior to the start of the operation in order to ensure compressor protection

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

2. OUTDOOR UNIT LEDS

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.

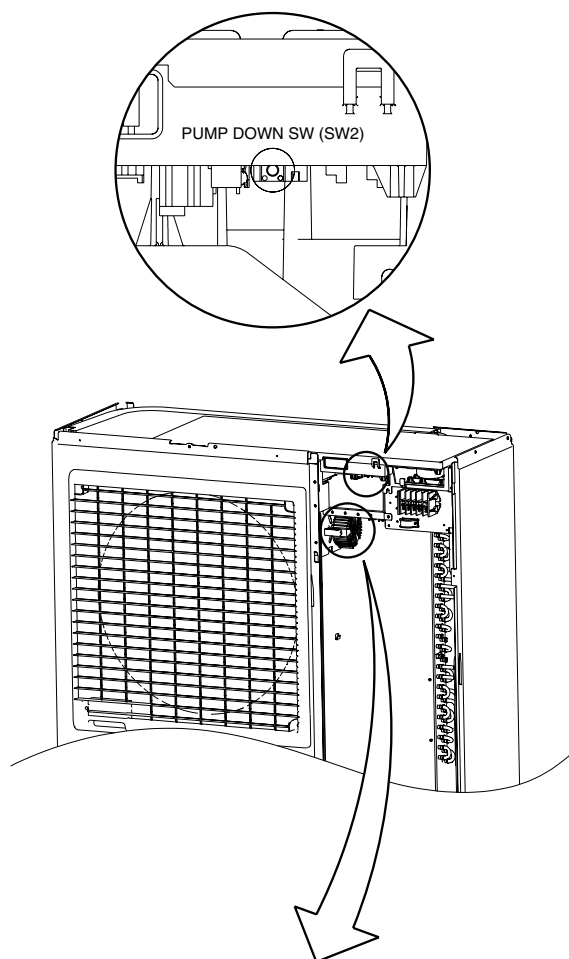
LED	Error contents
1 flash	Communication error (Indoor unit - Outdoor unit)
2 flash	Discharg pipe temperature sensor
3 flash	Outdoor heat exchanger temperature sensor
4 flash	Outdoor temperature sensor
7 flash	Compressor temperature sensor
8 flash	Heat sink temperature sensor
9 flash	Pressure switch 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 repeated	Protect operation
lighting	No error

SPECIAL INSTALLATION SETTING

PUMP DOWN (Refrigerant collecting operation)

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

- (1) Press the push-button switch (SW2) on the circuit board once.
The LED on the circuit board starts flashing (one second ON/one second OFF). This indicates the start of PUMP DOWN operation.
When the switch is pressed while the compressor is in operation, PUMP DOWN operation starts automatically.
When the switch is pressed while the compressor is in stop, the compressor starts to operate automatically, and then move on to PUMP DOWN operation.
- (2) PUMP DOWN operation continues for about 1 minute. When PUMP DOWN operation is completed, the compressor stops automatically.
Then close the 2-way valve and 3-way valve immediately.
- (3) Turn the power off.

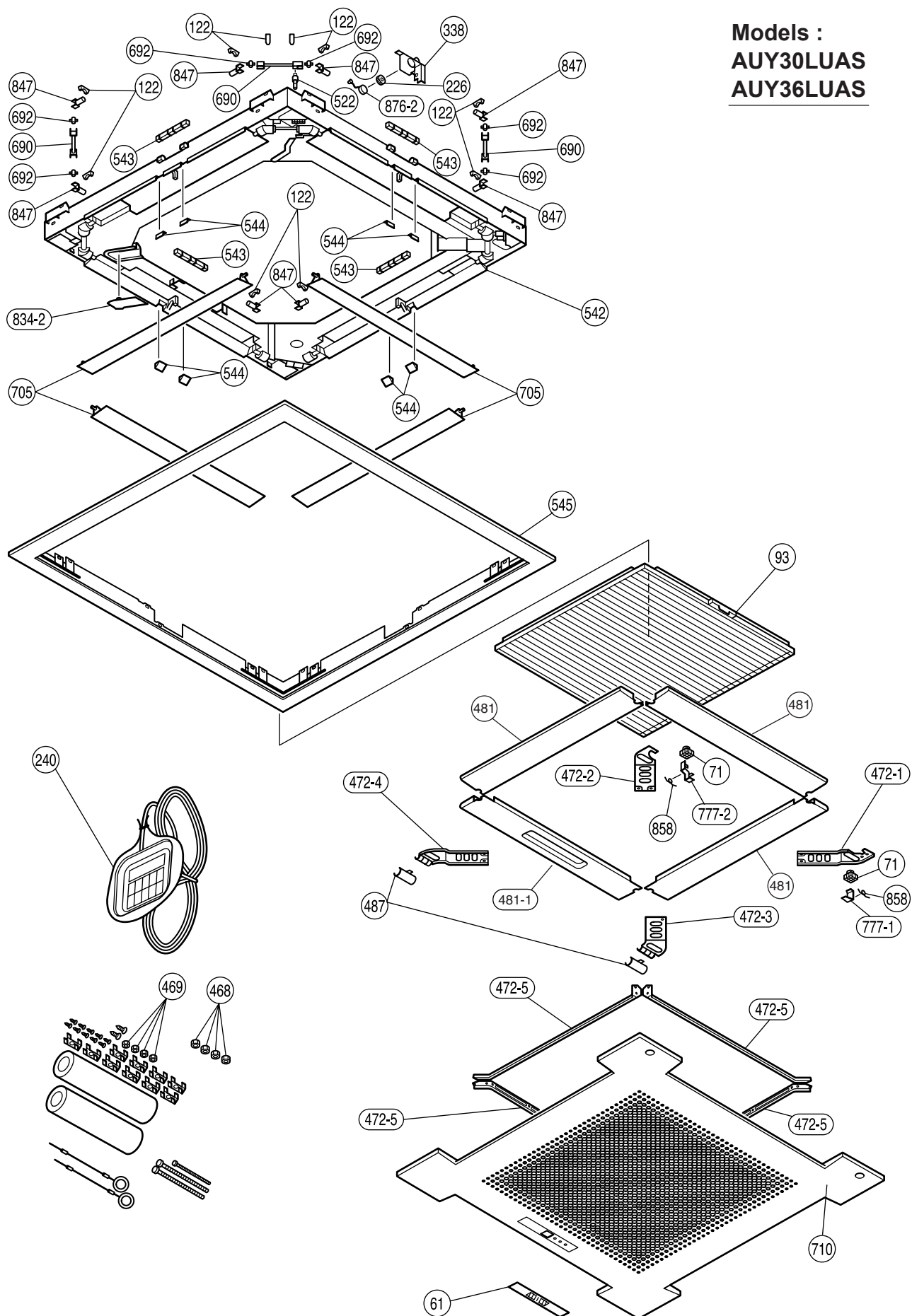


⚠ DANGER

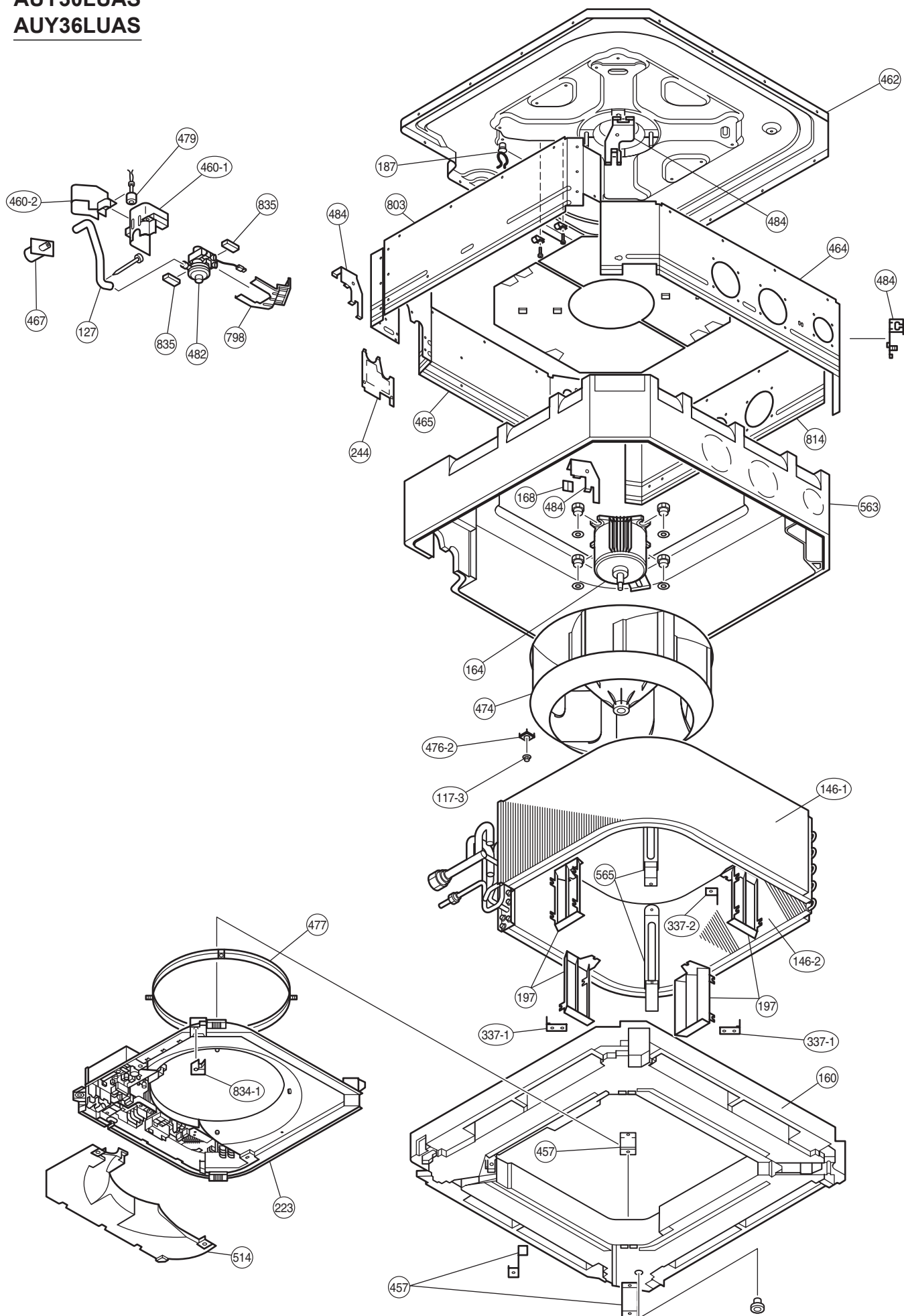
This part (Choke coil) generates high voltages.
Never touch this part.

DISASSEMBLY ILLUSTRATION

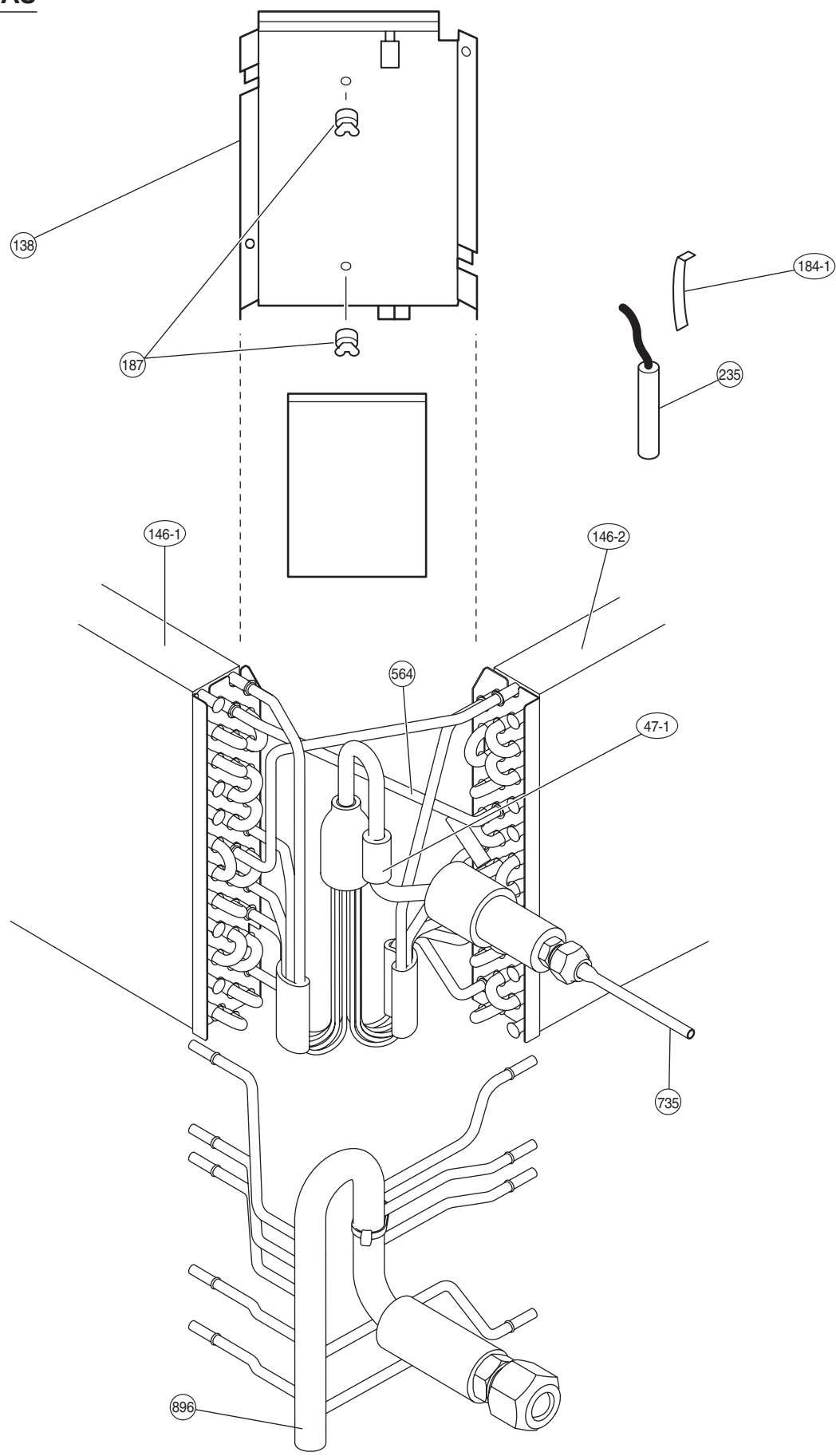
Models :
AUY30LUAS
AUY36LUAS



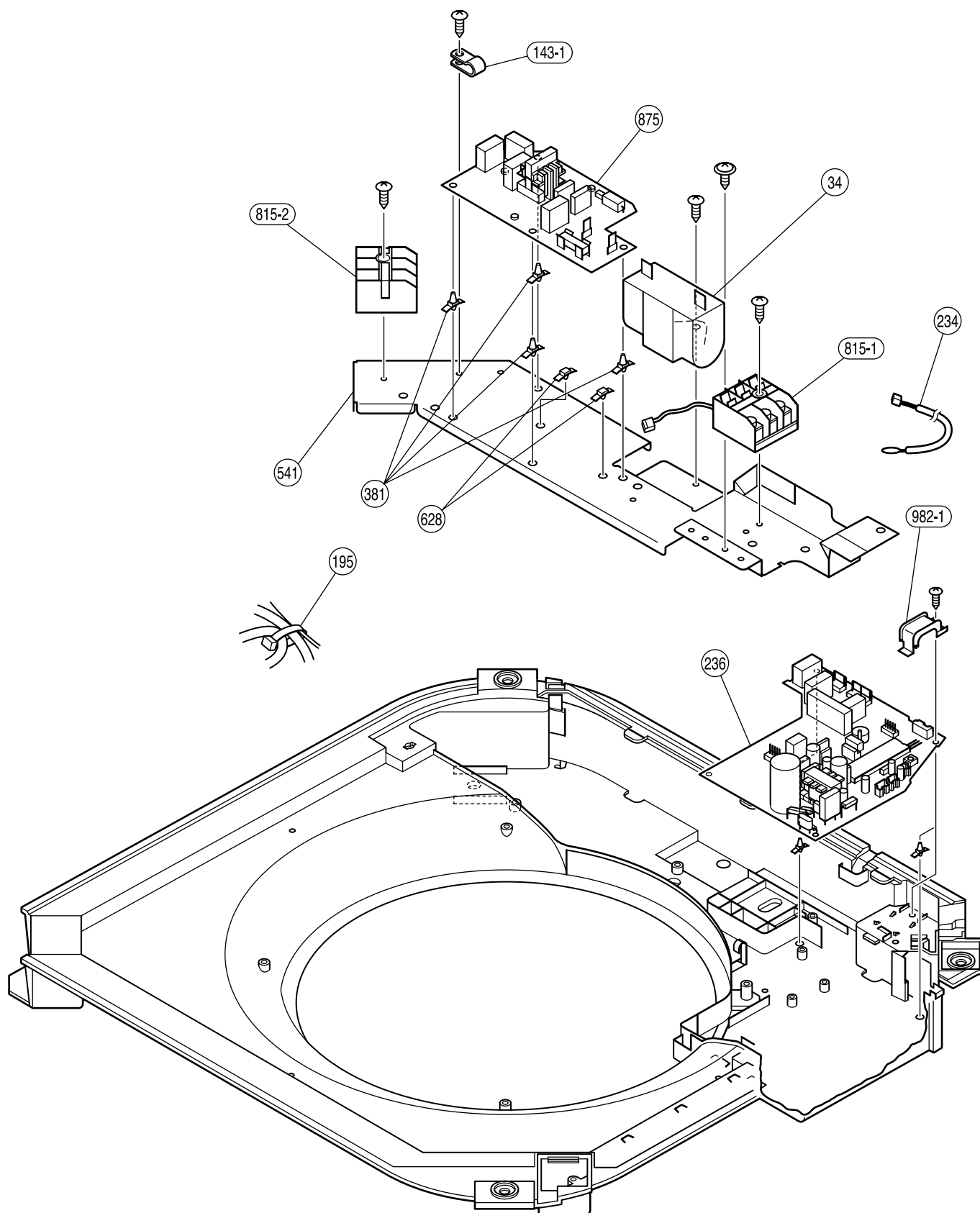
Models :
AUY30LUAS
AUY36LUAS



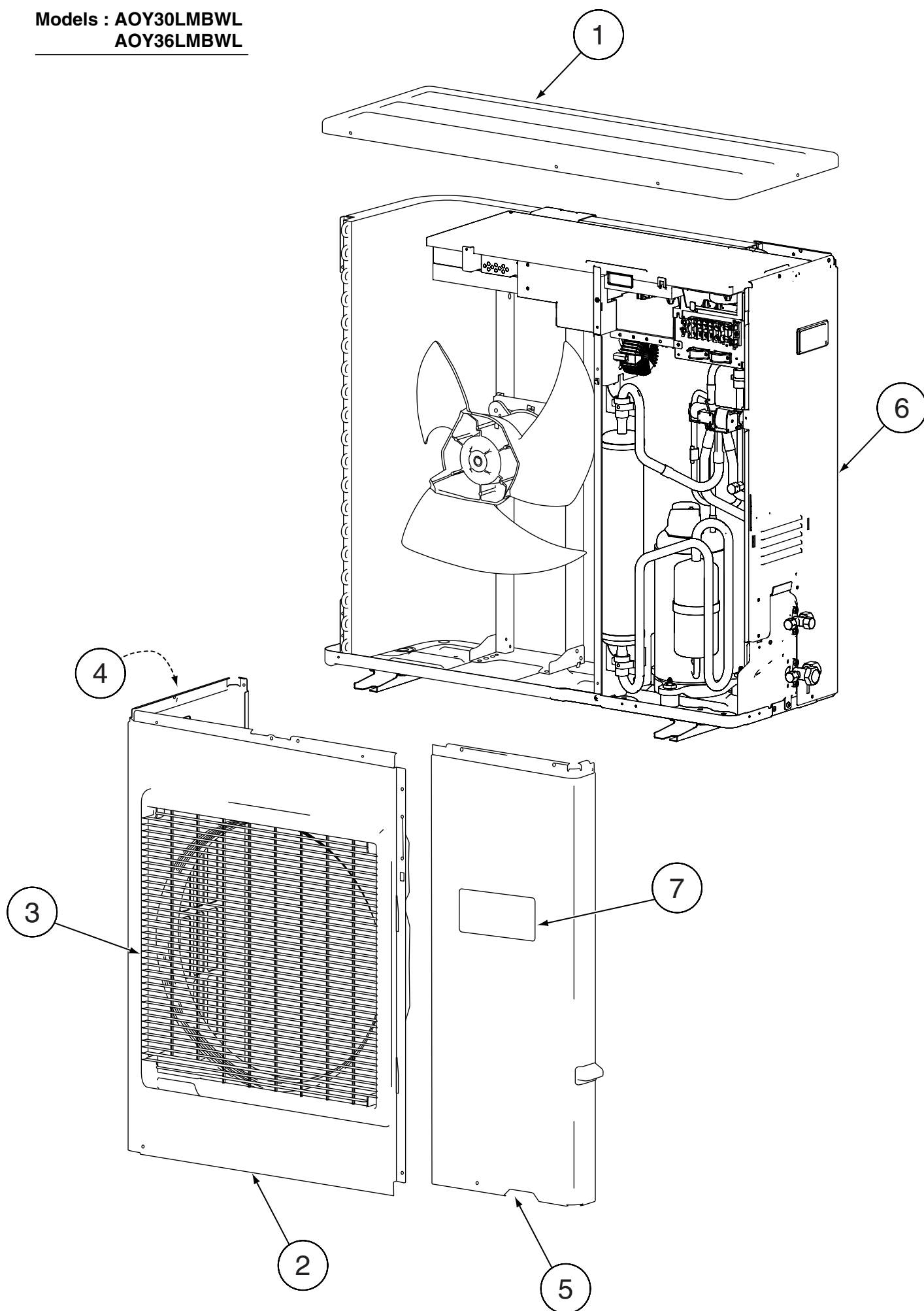
Models :
AUY30LUAS
AUY36LUAS



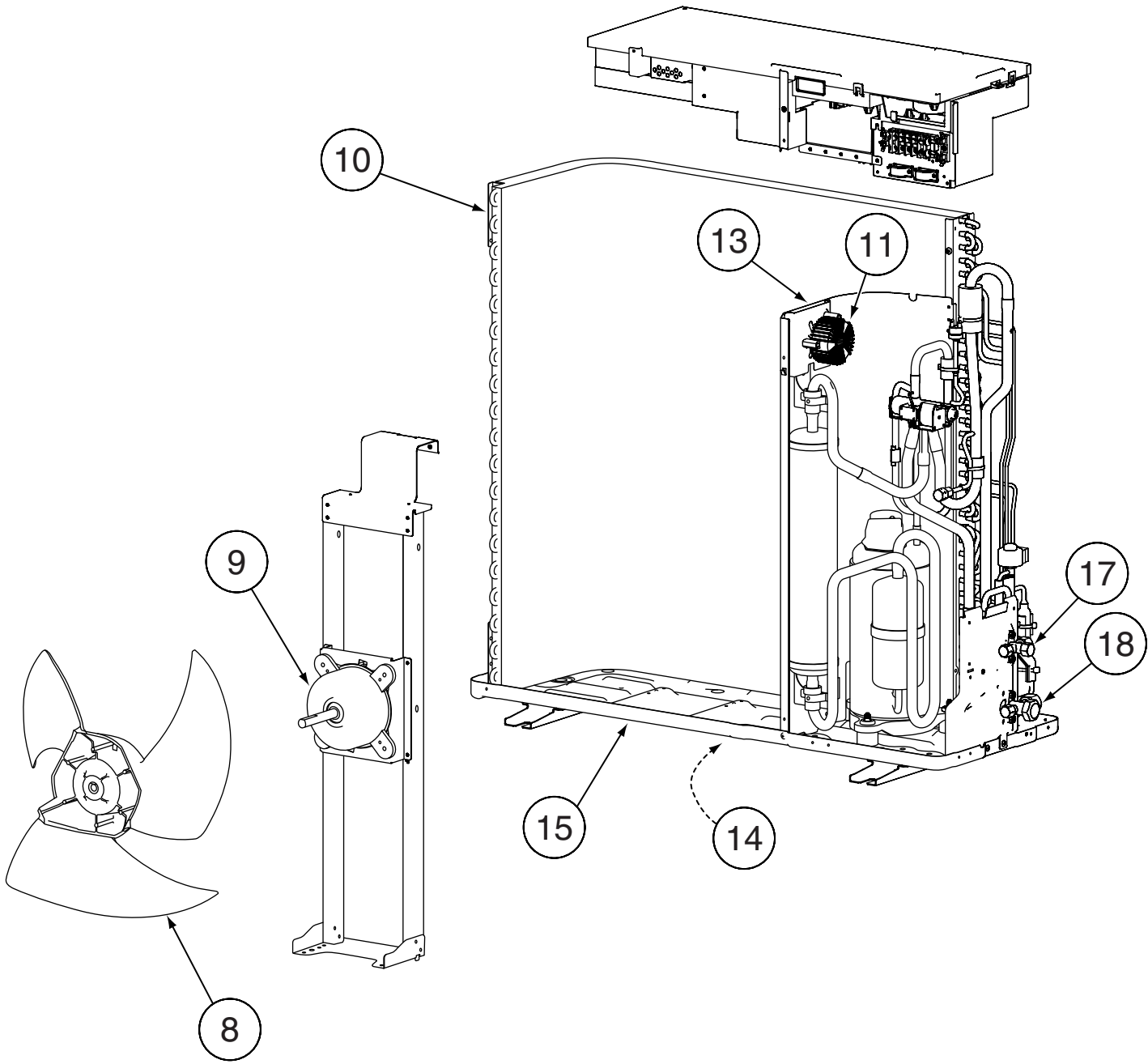
Models :
AUY30LUAS
AUY36LUAS



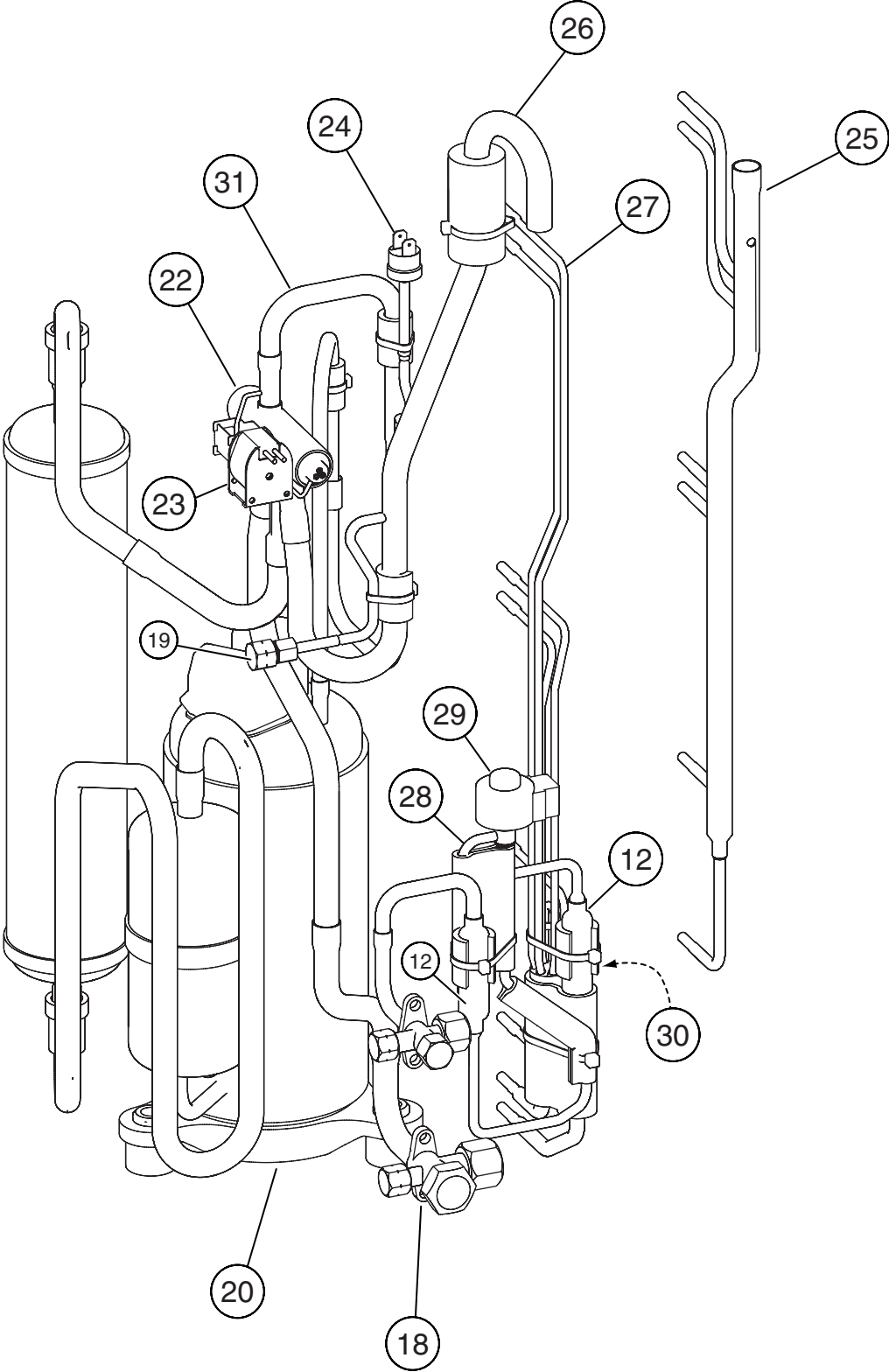
Models : AOY30LMBWL
AOY36LMBWL



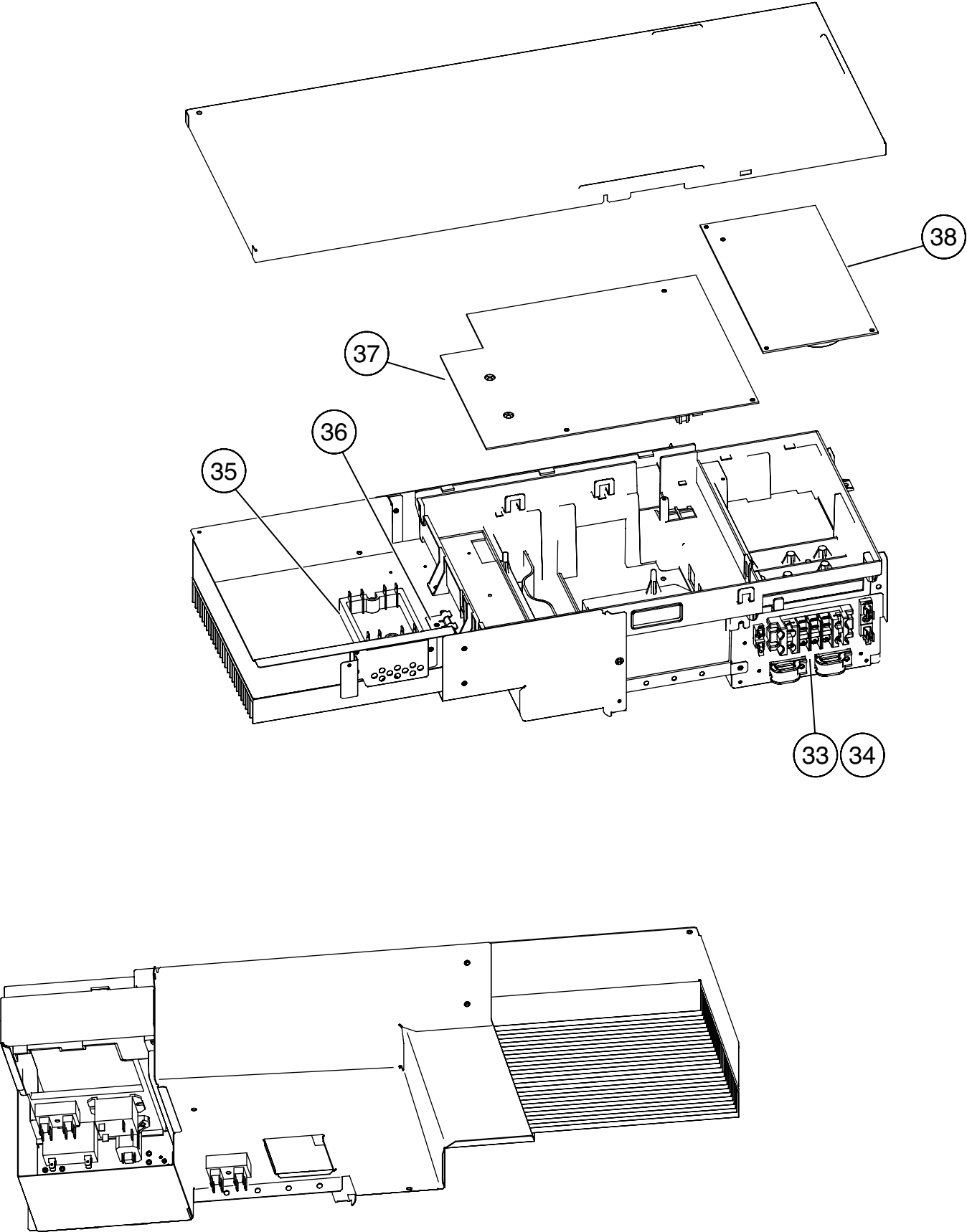
Models : AOY30LMBWL
AOY36LMBWL



Models : AOY30LMBWL
AOY36LMBWL



Models : AOY30LMBWL
AOY36LMBWL



PARTS LIST

INDOOR UNIT

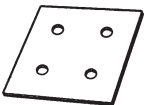
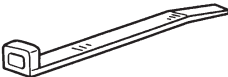
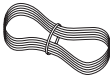
Ref. No.	Description	Part No.		Ord. Q'ty	Ref. No.	Description	Part No.		Ord. Q'ty
		AUY30LUAS	AUY36LUAS				AUY30LUAS	AUY36LUAS	
34	Capacitor (Fan Motor)	9900270162	9900270162		472-5	RFM (Grille)-E	9362742009	9362742009	
47-1	Rubber (Discharge Pipe)	313194159807	313194159807		474	Turbo Fan Assy	9362803014	9362803014	
61	Decoration Plate	9362787000	9362787000		476-2	Washer (Turbo Fan)	9362756006	9362756006	
71	Holder (Hook)	9362782005	9362782005		477	Bellmouth-B	9362774000	9362774000	
93	Filter	9362766005	9362766005		479	Float Switch	9703285004	9703285004	
117-3	Hexagon Nut	301721180114	301721180114		481	Insulation (Grille)-A	9362780001	9362780001	
122	Holder (Louver Supporter)	9362799003	9362799003		481-1	Insulation (Grille)-B	9362781008	9362781008	
127	Drain Hose	9362784009	9362784009		482	Pump Unit	9703125010	9703125010	
138	Separate wall	9362737005	9362737005		484	Hook	9362736008	9362736008	
143-1	Clamp NK-3	313361274700	313361274700		487	Hinge Wire (Grille)	9362754002	9362754002	
146-1	Evaporator-A Assy	9373799054	9373799054		488	Drain Pan Plug	313005174654	313005174654	
146-2	Evaporator-B Assy	9373800057	9373800057		514	Control Box Cover	9362763004	9362763004	
160	Kit (Drain Pan Sub Assy)	9370934014	9370934014		522	Joint Gear	9362772006	9362772006	
164	Motor, Induction	9601915010	9601915010		541	Terminal Plate	9363642001	9363642001	
168	Cabinet-E	9362735001	9362735001		542	Panel Base	9362759014	9362759014	
184-1	Thermistor Spring-A	313728262708	313728262708		543	Holder (Panel Frame)	9362761017	9362761017	
187	Clamp No. 1219	313361271706	313361271706		544	Holder (Panel Base)	9362760010	9362760010	
195	Binder-C	313361275805	313361275805		545	Panel Frame	9362758017	9362758017	
197	Wind Guide Board	9373444015	9373444015		563	Inner Box	9362768009	9362768009	
223	Control Box	9362762007	9362762007		564	Bypass Pipe-A Assy	9371323053	9371323053	
226	Motor Gear	9362764001	9362764001		565	Evaporator Holder Assy	9362802017	9362802017	
234	Room Temp. Thermistor	9703299025	9703299025		628	Locking Spacer-B	313005446558	313005446558	
235	Pipe Temp. Thermistor	9703297014	9703297014		690	Joint-A	9362773003	9362773003	
236	Controller PCB Assy	9705914049	9705914056		692	Joint Shaft	9362771009	9362771009	
240	Remote Control Unit	9372266052	9372266052		705	Louver Assy	9362836012	9362836012	
244	Pipe Cover Assy	9362819015	9362819015		710	Intake Grille	9362767019	9362767019	
337-1	RFM (Eva.)-A	9362749008	9362749008		735	Distributor Assy	9371325132	9371325132	
337-2	RFM (Eva.)-B	9362750004	9362750004		777-1	Hook (Grille)-A	9362779012	9362779012	
338	Motor Holder	9362765008	9362765008		777-2	Hook (Grille)-B	9362778015	9362778015	
381	Locking Spacer	313209391506	313209391506		798	Drain Pump Holder	9362753005	9362753005	
457	RFM (Drain Pan)	9362757003	9362757003		803	Cabinet-D	9362734004	9362734004	
460-1	Pump Cover-A	9362775007	9362775007		814	Cabinet-C	9362733007	9362733007	
460-2	Pump Cover-B	9362776004	9362776004		815-1	Terminal-3P	9306489069	9306489069	
462	Panel (Top) Assy	9362806015	9362806015		815-2	Terminal-3P	9703345012	9703345012	
464	Cabinet-A Assy	9362800013	9362800013		834-1	Cover (Wire)-A	9362789004	9362789004	
465	Cabinet-B Assy	9362801010	9362801010		834-2	Cover (Wire)-B	9362788007	9362788007	
467	Drain Port	9362786003	9362786003		835	Cushion (Pump)	9362777001	9362777001	
468	M10 Nut-A (Large)	313005446653	313005446653		847	Louver Supporter	9362770019	9362770019	
469	M10 Nut-B (Small)	313005446759	313005446759		858	Spring (Grille)	9362755009	9362755009	
472-1	RFM (Grille)-A	9362738002	9362738002		875	Power Supply PCB Assy	9704561220	9704561220	
472-2	RFM (Grille)-B	9362739009	9362739009		876-2	Motor, Step	9900362027	9900362027	
472-3	RFM (Grille)-C	9362740005	9362740005		896	Coupling Pipe Assy	9373038221	9373038221	
472-4	RFM (Grille)-D	9362741002	9362741002		982-1	Clamp (Cord)	9356857009	9356857009	

OUTDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		AOY30LMBWL	AOY36LMBWL	
1	Top Panel Sub Assy	9374417025	9374417025	
2	Front Panel	9374094066	9374094066	
3	Fan Guard	9374330010	9374330010	
4	Grip Side	9374173013	9374173013	
5	Service Panel Sub Assy	9374415038	9374415038	
6	Right Panel Sub Assy	9374416066	9374416066	
7	Emblem Rear	9351355005	9351355005	
8	Propeller Fan Assy	9366378020	9366378020	
9	Motor, Induction	9601882015	9601882015	
10	Condenser-A Assy	9374433056	9374433056	
11	Coil Choke	9703458019	9703458019	
12	Strainer Assy	9372524015	9372524015	
13	Separate Wall Assy	9374629022	9374629022	
14	Cap Foot	9374345014	9374345014	
15	Base Assy	9374166084	9374166084	
17	3-Way Valve Assy (3/8)	9372205044	9372205044	
18	3-Way Valve Assy (5/8)	9372205075	9372205075	
19	Check Joint Assy	9372802038	9372802038	
20	Compressor Assy	9373711018	9373711018	
22	4-Way Valve	9900164010	9900164010	
23	Solenoid	9900165055	9900165055	
24	Pressure Switch	9900186012	9900186012	
25	Inlet Pipe Cond A Assy	9373461067	9373461067	
26	Inlet Pipe Cond B Assy	9373463054	9373463054	
27	Outlet Pipe Cond A Assy	9374266050	9374266050	
28	Expansion Valve Assy	9370947113	9370947113	
29	Coil (Expansion Valve)	9900057039	9900057039	
30	Distributor	9369128004	9369128004	
31	Discharge Pipe A Assy	9372264126	9372264126	
33	Terminal 2P	9701971015	9701971015	
34	Terminal 5P	9900203023	9900203023	
35	ACTPM	9703457012	9703457012	
36	Holder Thermo	9372797013	9372797013	
37	Inverter PCB Assy	9705642157	9705642164	
38	Power PCB Assy	9705647022	9705647022	
----	Fuse 25A-250V	0600086039	0600086039	
----	Fuse 3.15A-250V	0600222512	0600222512	
----	Fuse 5A-250V	0600222529	0600222529	
----	Thermistor (Outdoor Temp.)	9703516078	9703516078	
----	Heat Exchanger Thermistor	9704220042	9704220042	
----	Thermistor (Discharge)	9704219114	9704219114	
----	Compressor Thermistor	9900156022	9900156022	
----	Thermistor	9704265012	9704265012	
----	Heatsink Thermistor	9900311018	9900311018	
----	Transformer	9702334024	9702334024	
----	Varistor	0000361224	0000361224	
----	Arrester	0600280147	0600280147	
----	Relay	9900117016	9900117016	
----	Relay	9900007010	9900007010	
----	Switch Push	9703476013	9703476013	
----	Switch Slide	9701392018	9701392018	
----	Drain Pipe (I-Type)	9301102000	9301102000	
----	Drain Pipe Packing	9301143003	9301143003	
----	Drain Cap	313166024302	313166024302	

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application
Coupler heat insulation 	2	For indoor side pipe joint
Screw 	2	For installing the remote controller
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 (small)	For remote controller and remote controller cord binding
Blower cover insulation 	2	For discharged air
Hook wire 	2	For installing intake grille
Remote controller 	1	
Remote controller cord 	1	For connecting the remote controller

⚠ WARNING

- ① For the air conditioner to operate satisfactorily, install it as outlined in this installation instruction sheet.
- ② Connect the indoor unit and outdoor unit with the room air conditioner piping and cords available standards parts. This installation instruction sheet describes the correct connections using the installation set available from our standard parts.
- ③ Installation work must be performed in accordance with national wiring standards by authorized personnel only.
- ④ Also, do not use an extension cord.
- ⑤ Do not turn on the power until all installation work is complete.
- ⑥ Do not purge the air with refrigerants but use a vacuum pump to vacuum the installation.
- ⑦ There is not extra refrigerant in the outdoor unit for air purging.
- ⑧ Use a vacuum pump for R410A exclusively.
- ⑨ Using the same vacuum pump for different refrigerants may damage the vacuum pump or the unit.
- ⑩ Use a clean gauge manifold and charging hose for R410A exclusively.
- ⑪ If refrigerant leaks while work is being carried out, ventilate the area. If the refrigerant comes in contact with a flame, it produces a toxic gas.

- Be careful not to scratch the air conditioner when handling it.
- After installation, explain correct operation to the customer, using the operating manual.
- Let the customer keep this installation instruction sheet because it is used when the air conditioner is serviced or moved.

STANDARD PARTS

The following installation parts are furnished.
Use them as required.

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

CONNECTION PIPE REQUIREMENT

⚠ CAUTION

The maximum lengths of this product are shown in the following table. If the units are further apart than this, correct operation can not be guaranteed.

Model Type	Diameter		Pipe length		Maximum height (between indoor and outdoor)
	Liquid	Gas	MAX.	MIN.	
30,000 BTU/h class	9.52 mm (3/8 in.)	15.88 mm (5/8 in.)	50 m	5 m	30 m
36,000 BTU/h class			70 m		
45,000 BTU/h class					

- Use pipe with water-resistant heat insulation.

⚠ CAUTION

Install heat insulation around both the gas and liquid pipes. Failure to do so may cause water leaks.
Use heat insulation with heat resistance above 120 °C. (Reverse cycle model only)
In addition, if the humidity level at the installation location of the refrigerant piping is expected to exceed 70%, install heat insulation around the refrigerant piping. If the expected humidity level is 70-80%, use heat insulation that is 15 mm or thicker and if the expected humidity exceeds 80%, use heat insulation that is 20 mm or thicker.
If heat insulation is used that is not as thick as specified, condensation may form on the surface of the insulation.
In addition, use heat insulation with heat conductivity of 0.045 W/(mK) or less (at 20 °C).

0511G2942