

SPLIT TYPE AIR CONDITIONER DUCT type (50Hz)

SERVICE MANUAL



Models

Indoor unit	Outdoor unit
ARY30FUAN	AOY30FNBWL
ARY30UUAN	AOY30UNBWL

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SPECIFICATIONS

TYPE	COOLING	COOLING & HEATING
INDOOR UNIT	ARY30FUAN	ARY30UUAN
OUTDOOR UNIT	AOY30FNBWL	AOY30UNBWL
COOLING CAPACITY (kW)	8.40	8.40
HEATING CAPACITY (kW)	----	9.50

ELECTRICAL DATA

POWER SOURCE (V)	230	
FREQUENCY (Hz)	50	
RUNNING CURRENT (A)	COOLING	14.0
	HEATING	12.4
INPUT WATTS (kW)	COOLING	2.99
	HEATING	2.63
E.E.R. (kW/kW)	COOLING	2.81
	HEATING	3.61
MOISTURE REMOVAL (ℓ/hr)	3.0	
AIR CIRCULATION (m³/hr)	1,400	

COMPRESSOR

TYPE	Hermetic type, 2 poles, Induced by condenser, Rotary
DISCRIMINATION	5JS330DAE01

FAN MOTOR

POWER SOURCE (V)	230	
INDOOR UNIT	DISCRIMINATION	MFA-30PTT
	HI-SPEED (r.p.m.)	990
	MED-SPEED (r.p.m.)	920
	LO-SPEED (r.p.m.)	850
OUTDOOR UNIT	DISCRIMINATION	MFB-30PTT
	HI-SPEED (r.p.m.)	780
	LO-SPEED (r.p.m.)	400

DIMENSIONS

INDOOR UNIT	H x W x D (mm)	270 x 1,135 x 700
OUTDOOR UNIT	H x W x D (mm)	830 x 900 x 330

WEIGHT

INDOOR UNIT	NET / GROSS (kg)	43 / 50
OUTDOOR UNIT	NET / GROSS (kg)	68 / 74 69 / 75

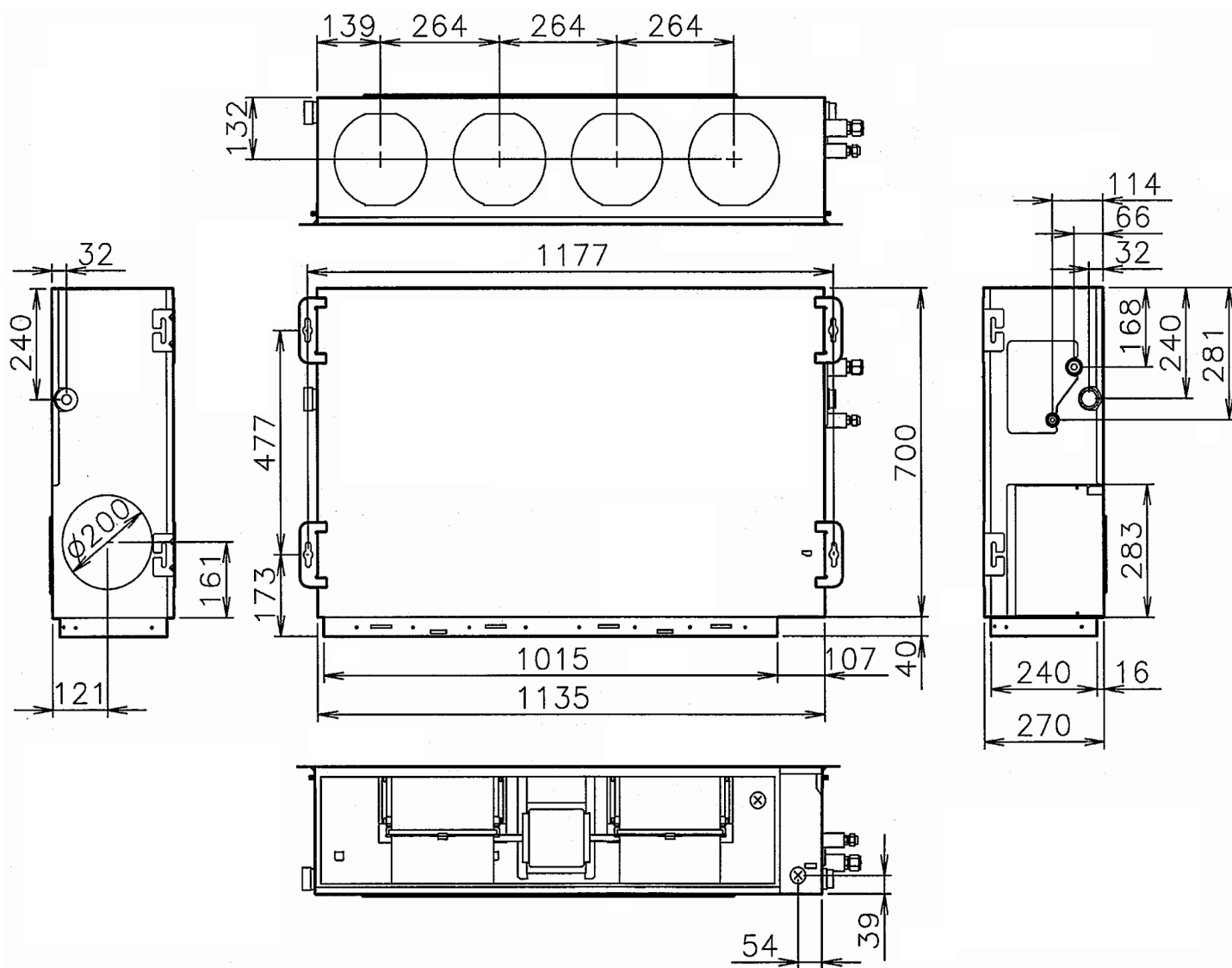
ADDITIONAL REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	Pipe Length	7.5 m (25 ft)	2,300 g (81.1 oz)	2,300 g (81.1 oz)
		10.0 m (33 ft)	2,350 g (82.9 oz)	2,400 g (84.7 oz)
		20.0 m (66 ft)	2,550 g (89.9 oz)	2,800 g (98.8 oz)
		30.0 m (99 ft)	2,750 g (97.0 oz)	3,200 g (112.9 oz)
ADDITIONAL CHARGE		20 g / m (0.21 oz/ft)	40 g / m (0.43 oz/ft)	

DIMENSIONS

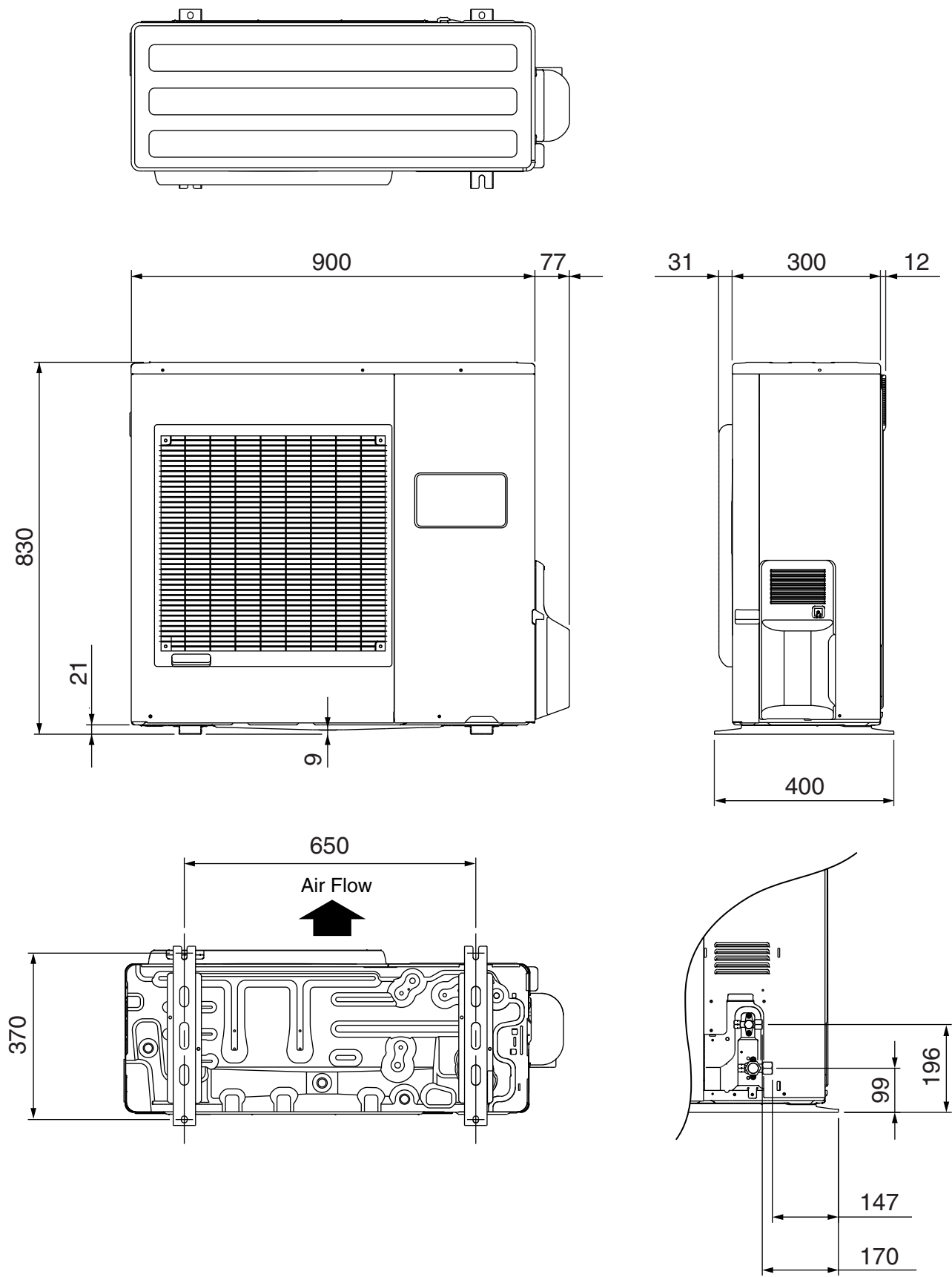
INDOOR UNIT

Unit : mm



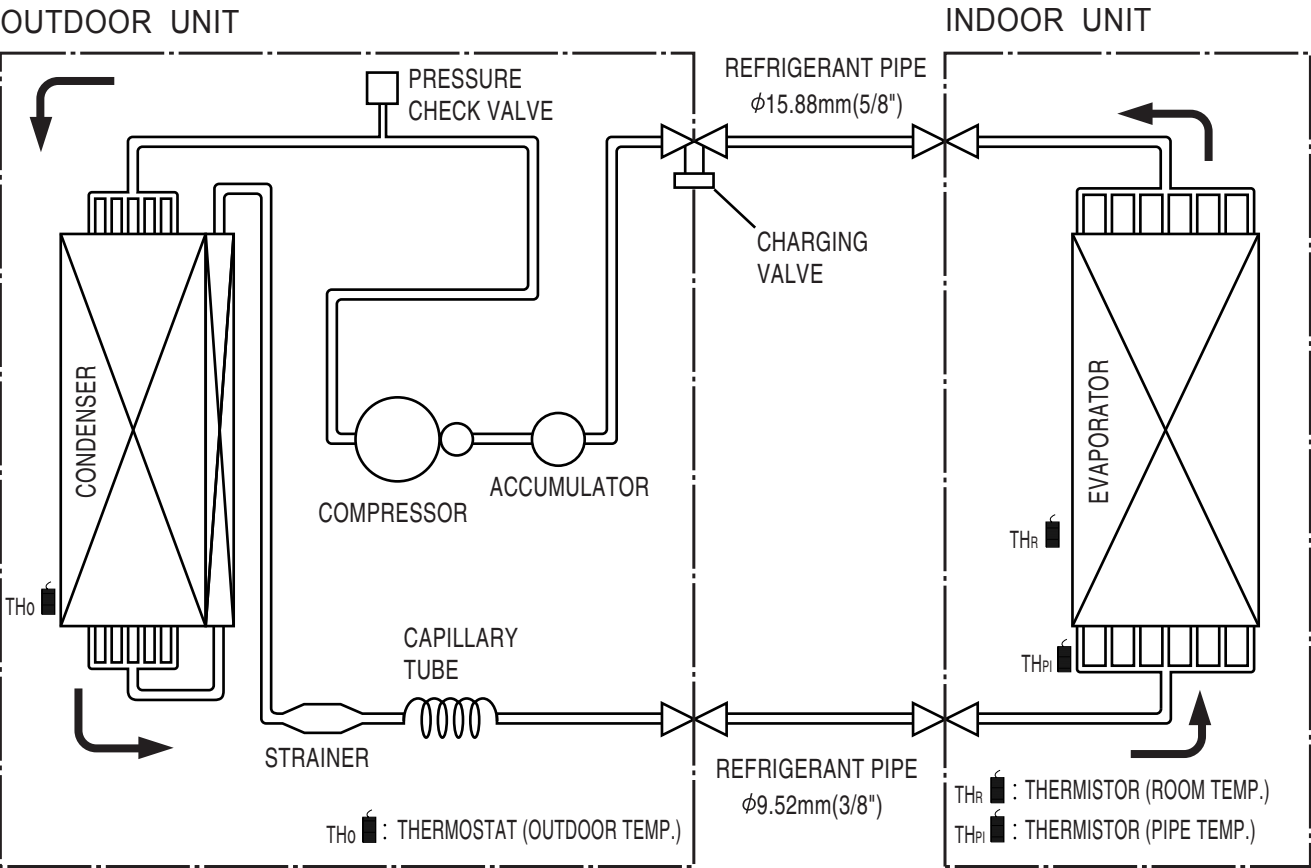
OUTDOOR UNIT

Unit : mm

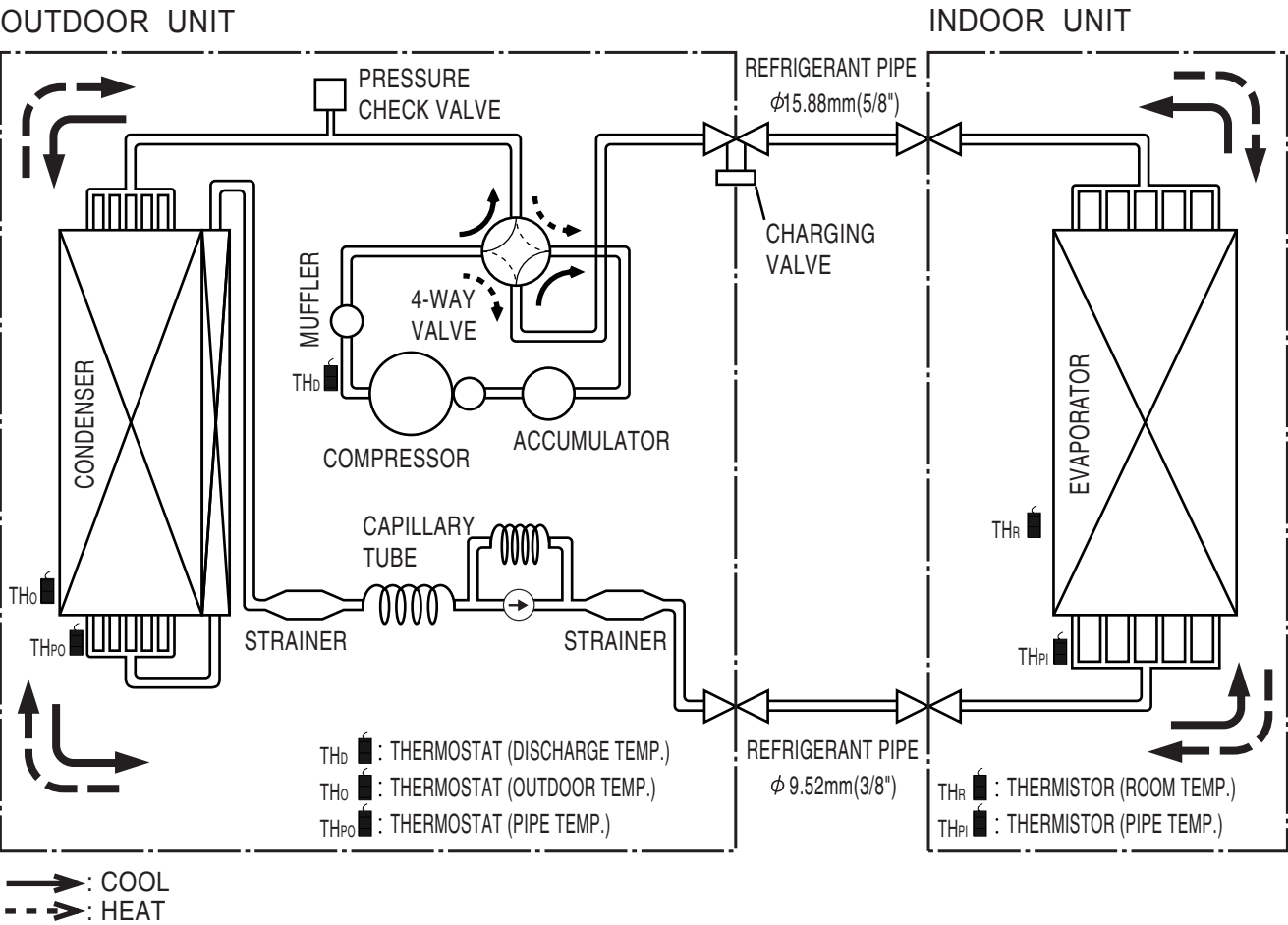


REFRIGERANT SYSTEM DIAGRAM

Models : ARY30FUAN / AOY30FNBWL



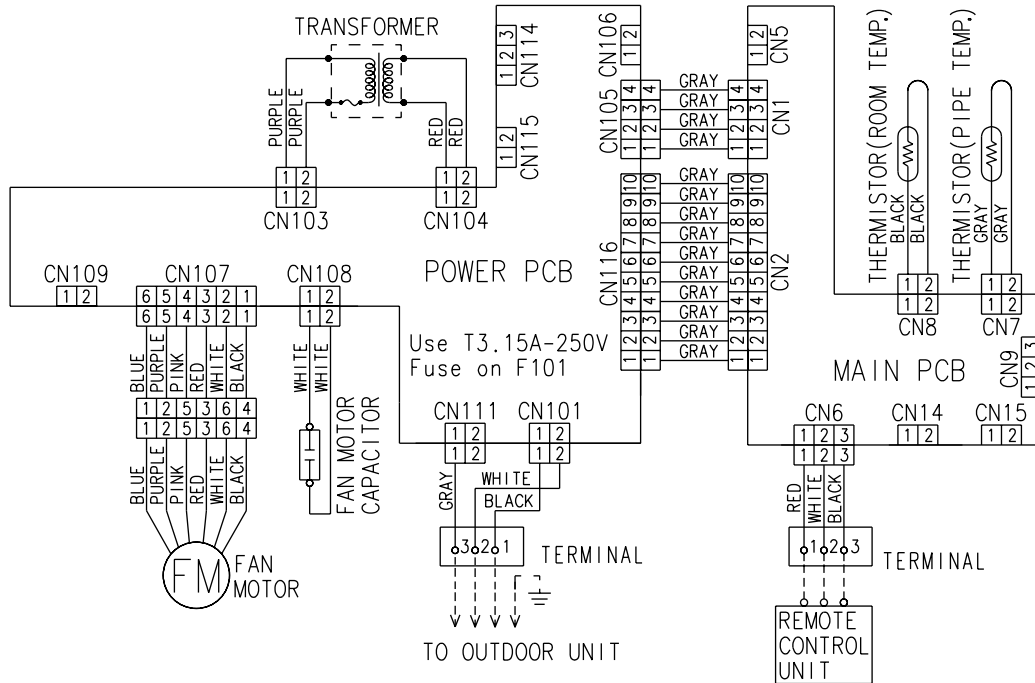
Models : ARY30UUAN / AOY30UNBWL



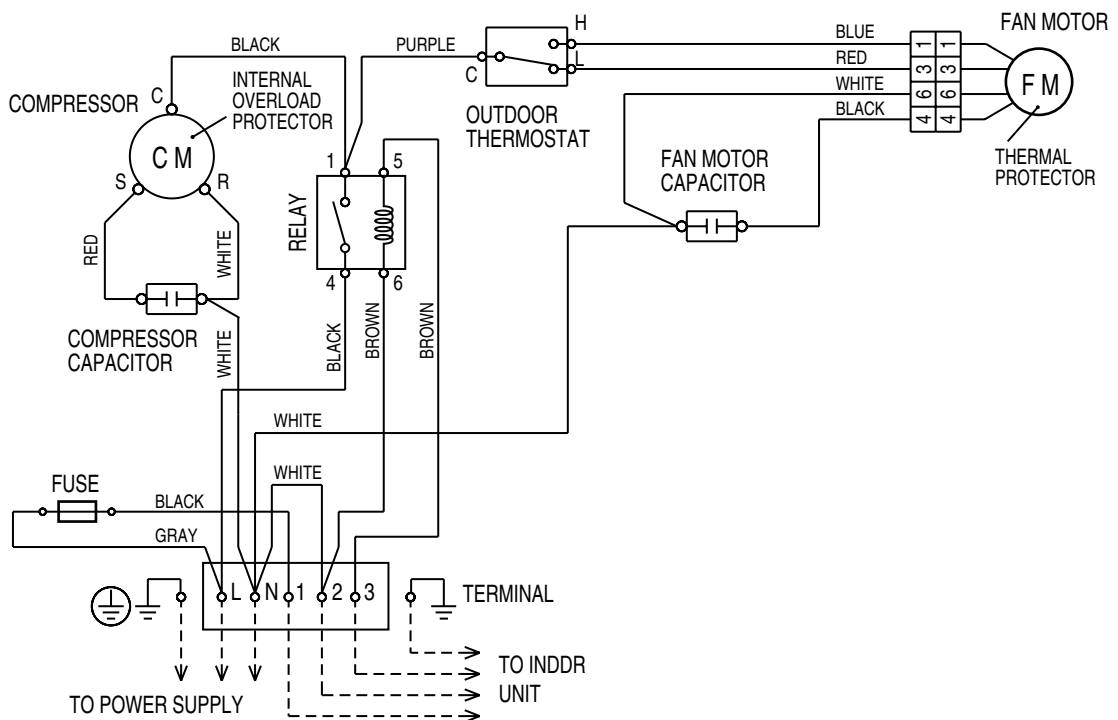
CIRCUIT DIAGRAM

Models : ARY30FUAN / AOY30FNBWL

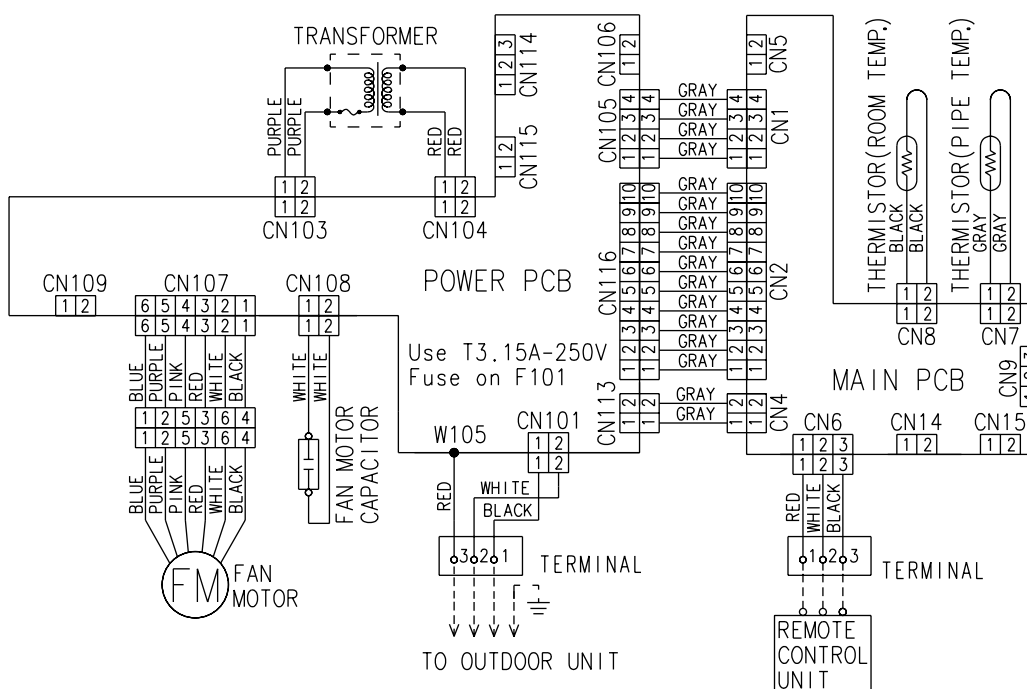
INDOOR UNIT



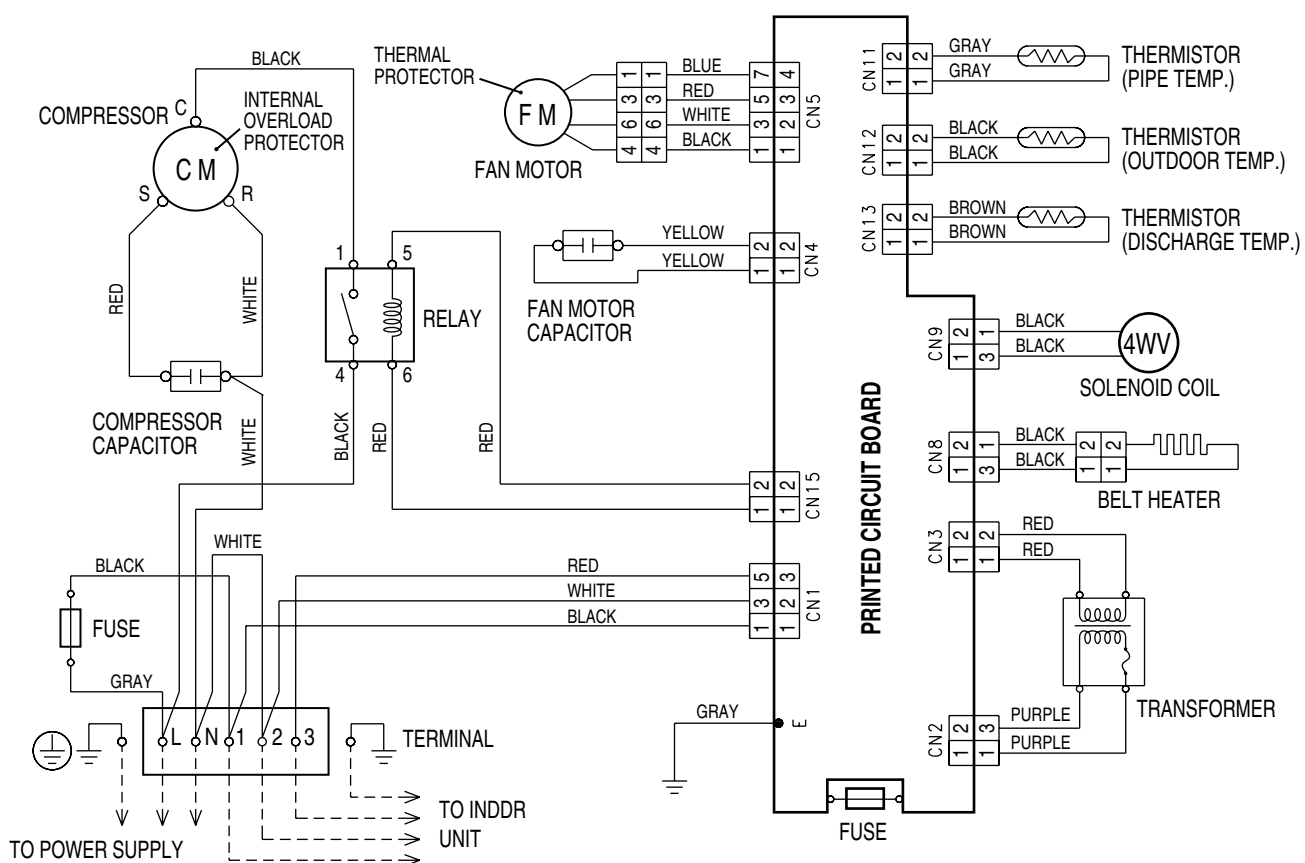
OUTDOOR UNIT



INDOOR UNIT



OUTDOOR UNIT



INDOOR PCB CIRCUIT DIAGRAM

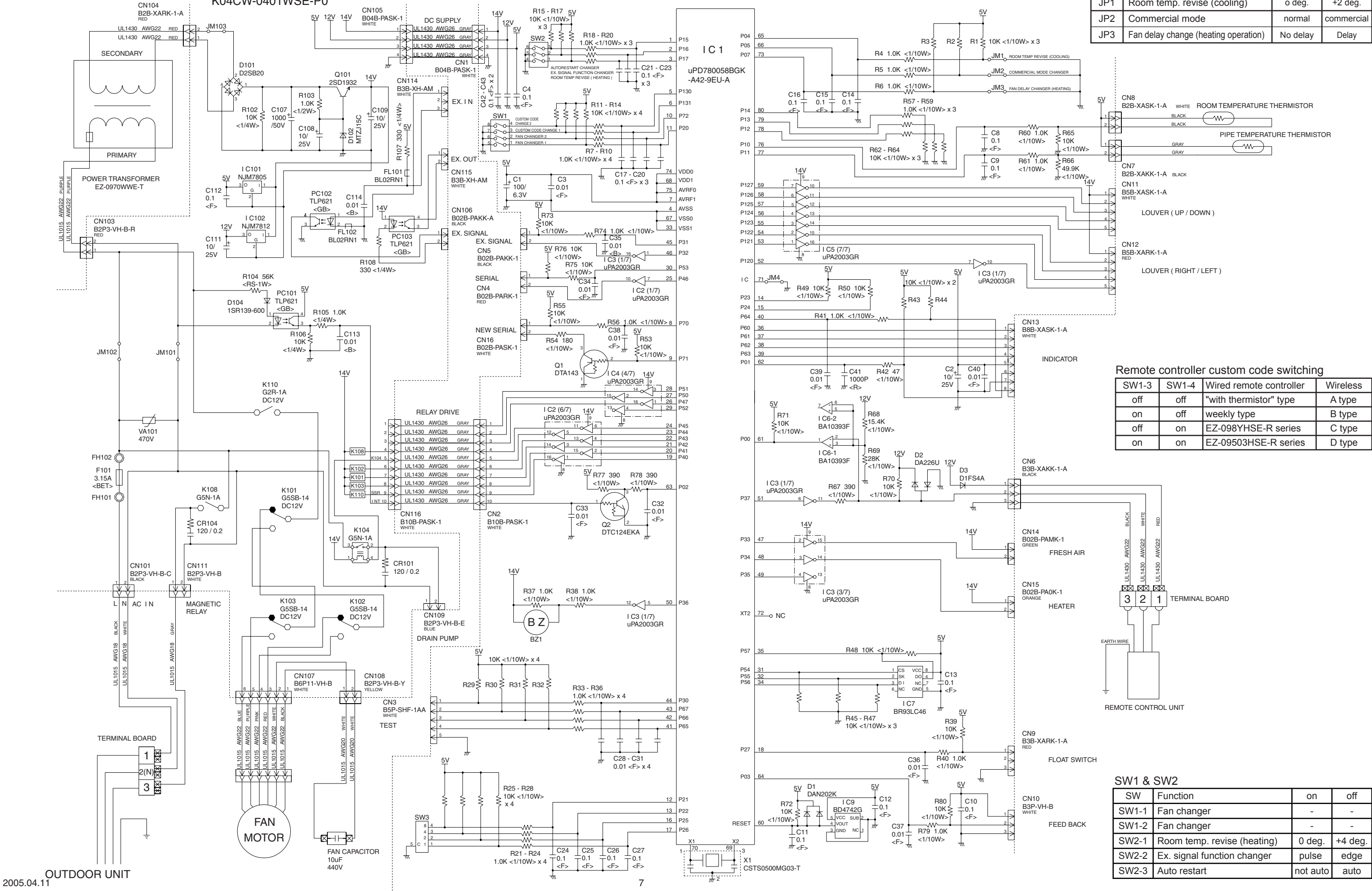
Model : ARY30FUAN

POWER SUPPLY PCB
K04CW-0401WSE-P0

CONTROLLER PCB ASSEMBLY (MAIN PCB)
K03BZ-0408WSE-C1

JP

JP	Function	on	off
JP1	Room temp. revise (cooling)	o deg.	+2 deg.
JP2	Commercial mode	normal	commercial
JP3	Fan delay change (heating operation)	No delay	Delay



Remote controller custom code switching

SW1-3	SW1-4	Wired remote controller	Wireless
off	off	"with thermistor" type	A type
on	off	weekly type	B type
off	on	EZ-098YHSE-R series	C type
on	on	EZ-09503HSE-R series	D type

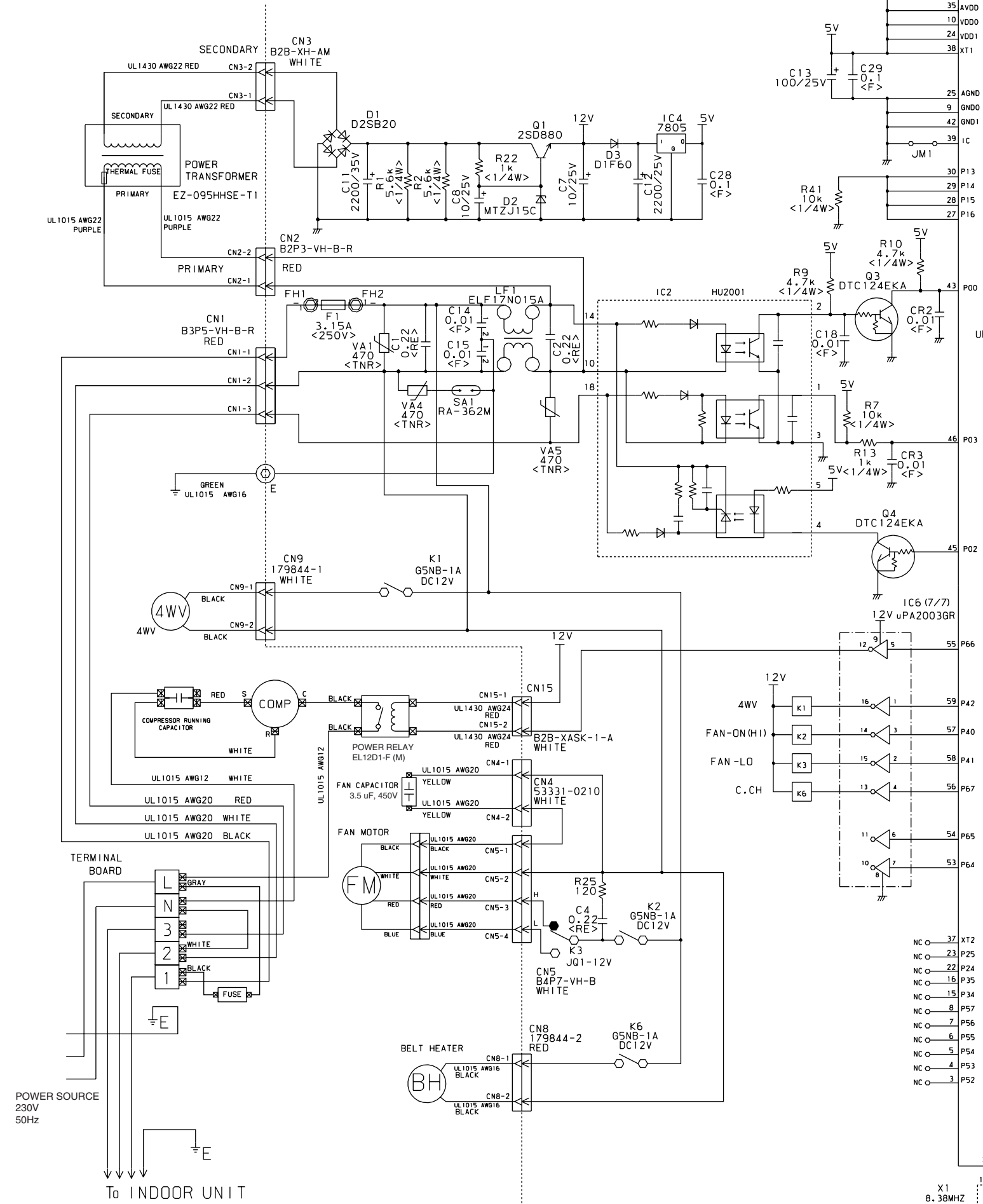
SW1 & SW2

SW	Function	on	off
SW1-1	Fan changer	-	-
SW1-2	Fan changer	-	-
SW2-1	Room temp. revise (heating)	0 deg.	+4 deg.
SW2-2	Ex. signal function changer	pulse	edge
SW2-3	Auto restart	not auto	auto

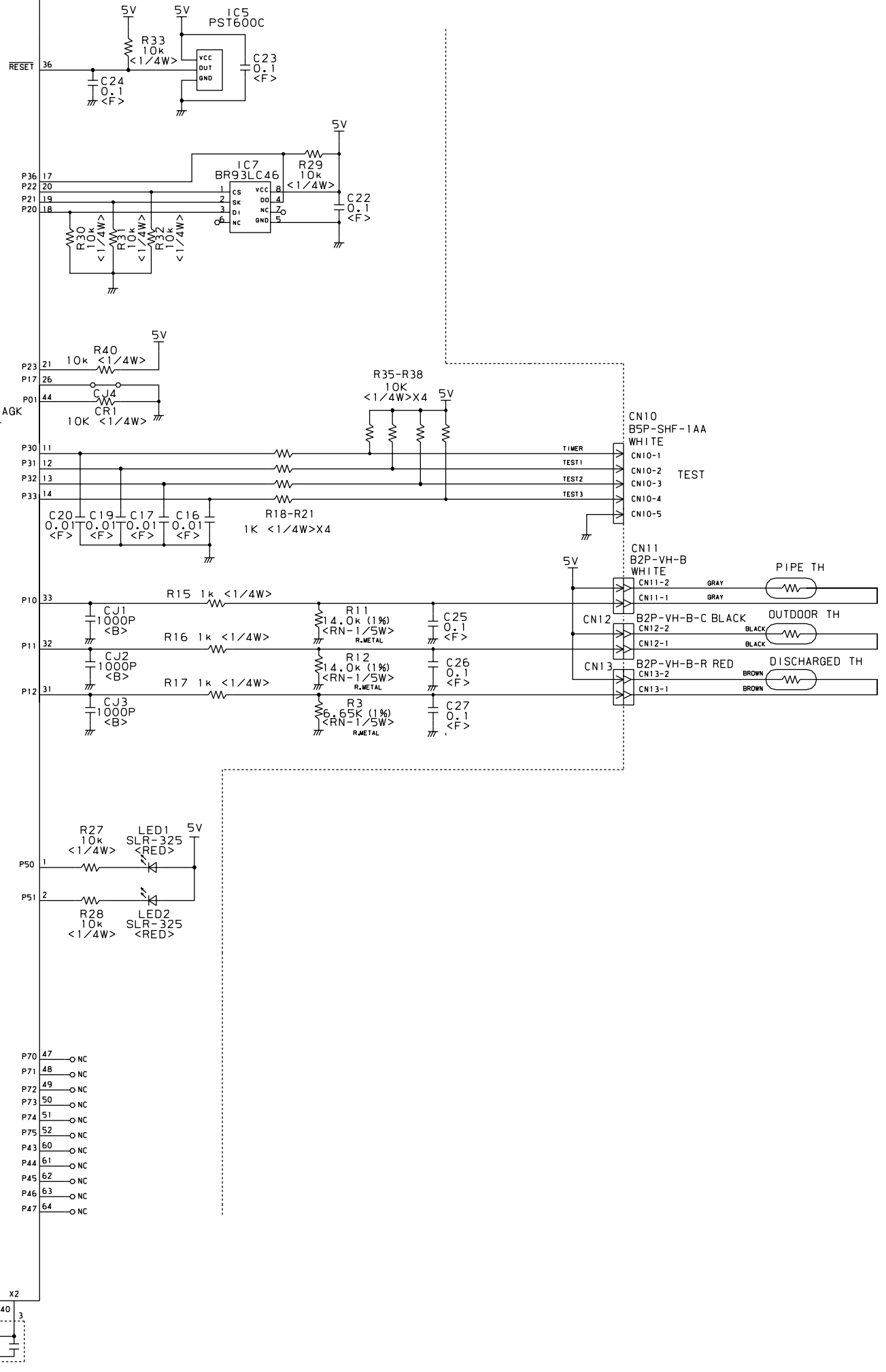


OUTDOOR PCB CIRCUIT DIAGRAM

Model : AOY30UNBWL

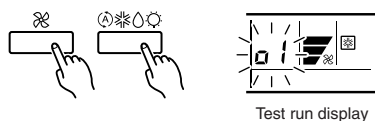


CONTROLLER PCB ASSEMBLY (MAIN PCB) EZ-0028HUE-C



ERROR CONTENTS

- (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.



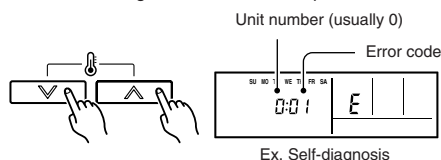
- (3) Press the start/stop button to stop the test run.

[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
00	Communication error (indoor unit $\leftrightarrow$ remote controller)
01	Communication error (indoor unit $\leftrightarrow$ 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 open
07	Outdoor heat exchanger temperature sensor short-circuited
08	Power source connection error
09	Float switch operated
0A	Outdoor temperature sensor open
0b	Outdoor temperature sensor short-circuited
0c	Discharge pipe temperature sensor open
0d	Discharge pipe temperature sensor short-circuited
0E	Outdoor high pressure abnormal
0F	Discharge pipe temperature abnormal
11	Model abnormal
12	Indoor fan abnormal
13	Outdoor signal abnormal
14	Outdoor EEPROM abnormal

2. OUTDOOR UNIT

ERROR : Heat & Cool model (Reverse cycle) only

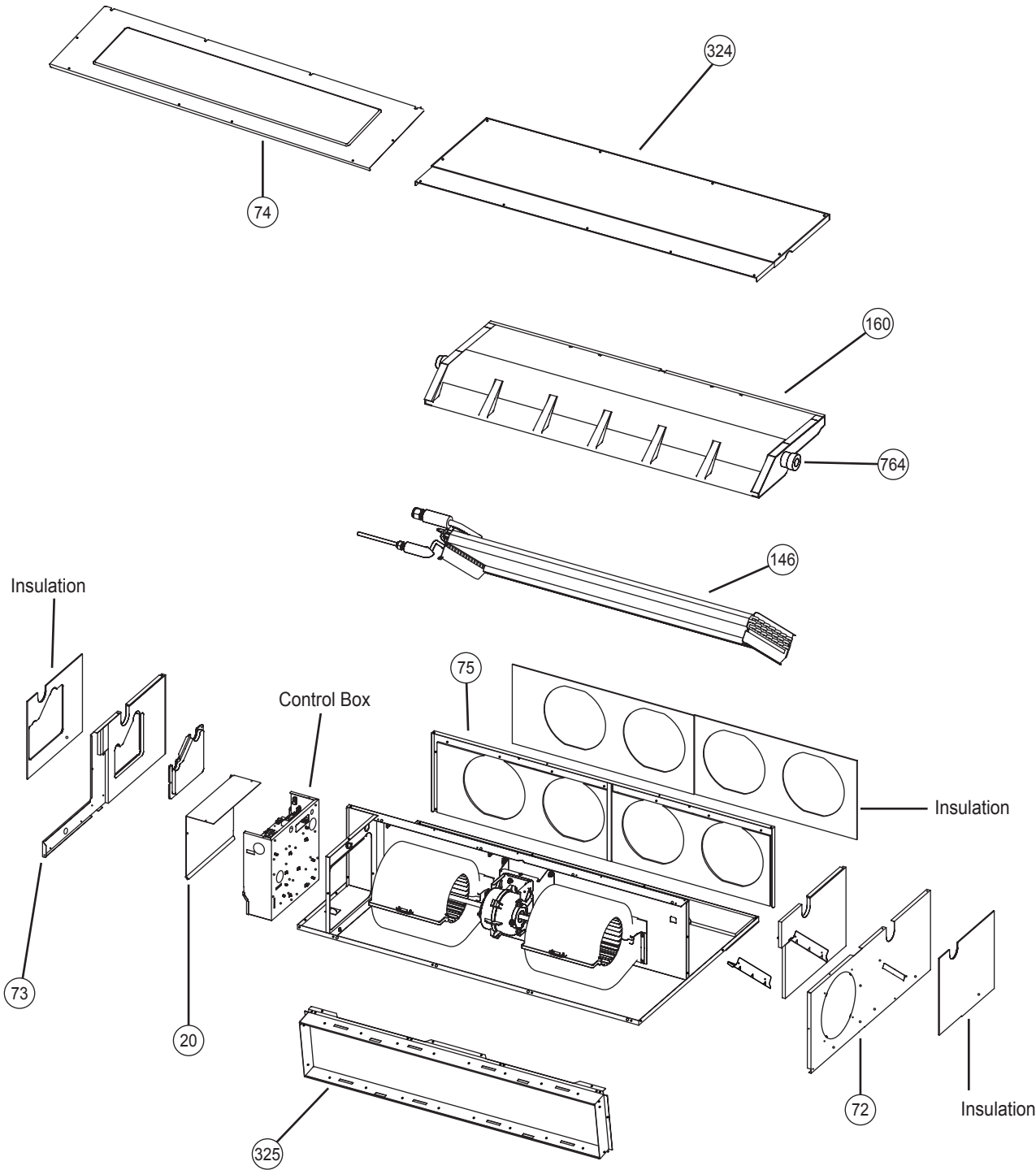
When a malfunction occurs in the outdoor unit, the LEDs on the circuit board light to indicate the error. Refer to the following table for the description of each error according to the LEDs.

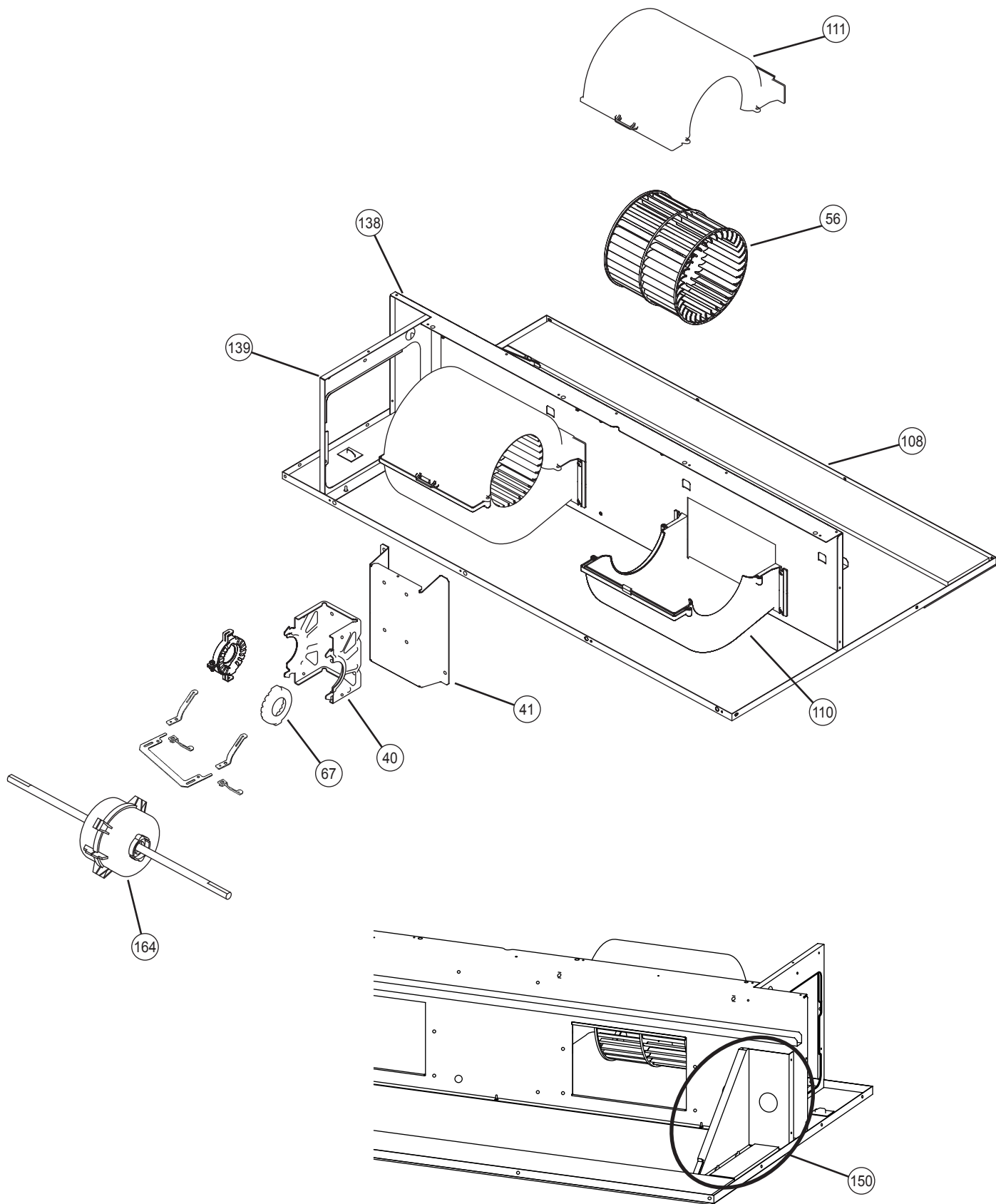
Error display		Error contents
LED1	LED2	
Quick flash continued	Quick flash continued	Model abnormal or EEPROM abnormal
1 quick flash repeated	Lighting continued	Power source connection error
2 quick flash repeated	Lighting continued	Discharge temperature sensor error
3 quick flash repeated	Lighting continued	Outdoor heat exchanger temperature sensor error
4 quick flash repeated	Lighting continued	Outdoor temperature sensor error
5 quick flash repeated	Lighting continued	Communication signal error
6 quick flash repeated	Lighting continued	Indoor unit error
7 quick flash repeated	Lighting continued	Discharge temperature abnormal
8 quick flash repeated	Lighting continued	High pressure abnormal
5 quick flash repeated	Dislighting continued	Discharge temperature abnormal (24h)
6 quick flash repeated	Dislighting continued	High pressure abnormal (24h)

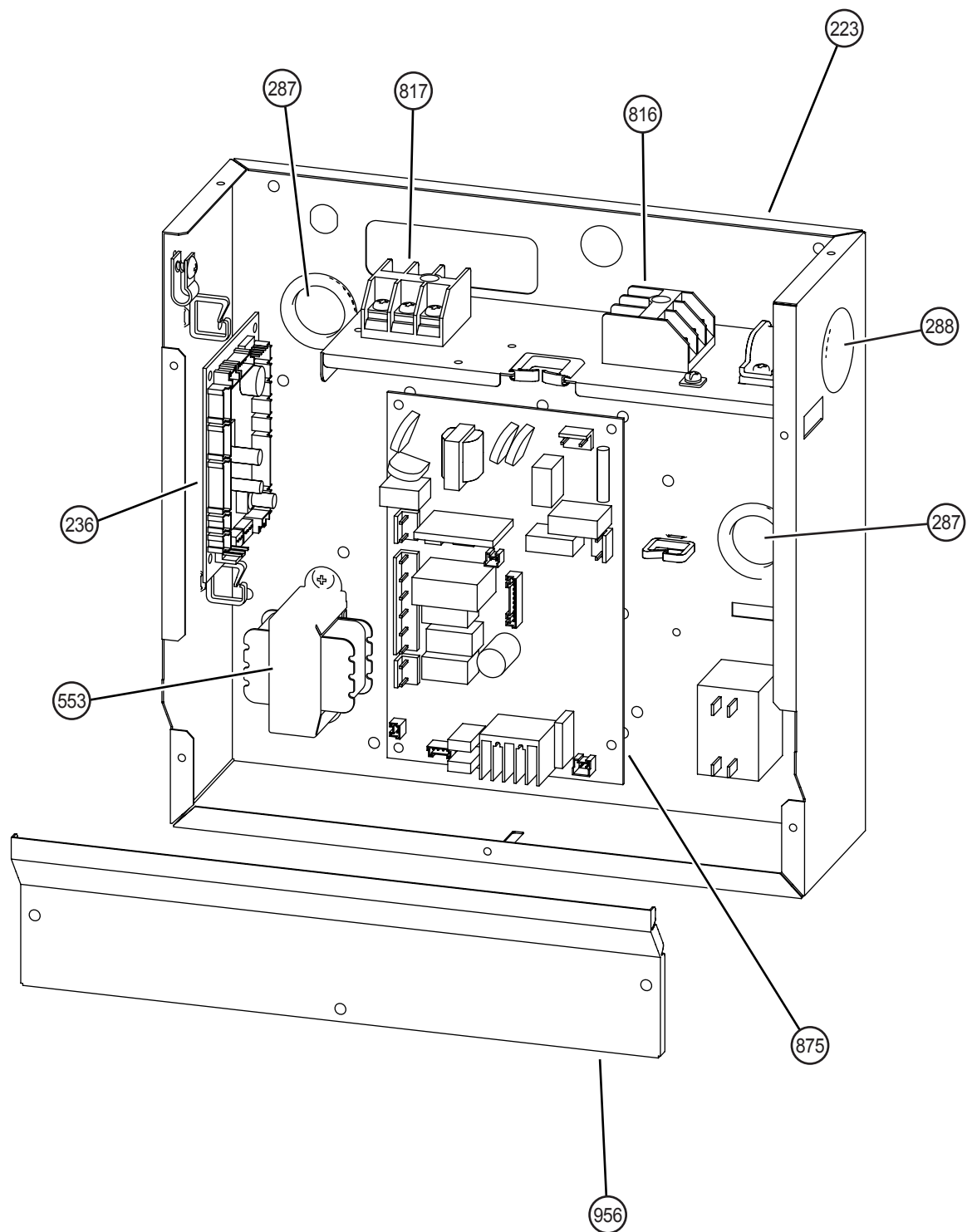
When the fault is cleared, the LED lamp goes off. However, for discharge pipe temperature abnormal and high pressure abnormal, the LED lamp lights continuously for 24 hours, as long as the power is not turned off.

DISASSEMBLY ILLUSTRATION

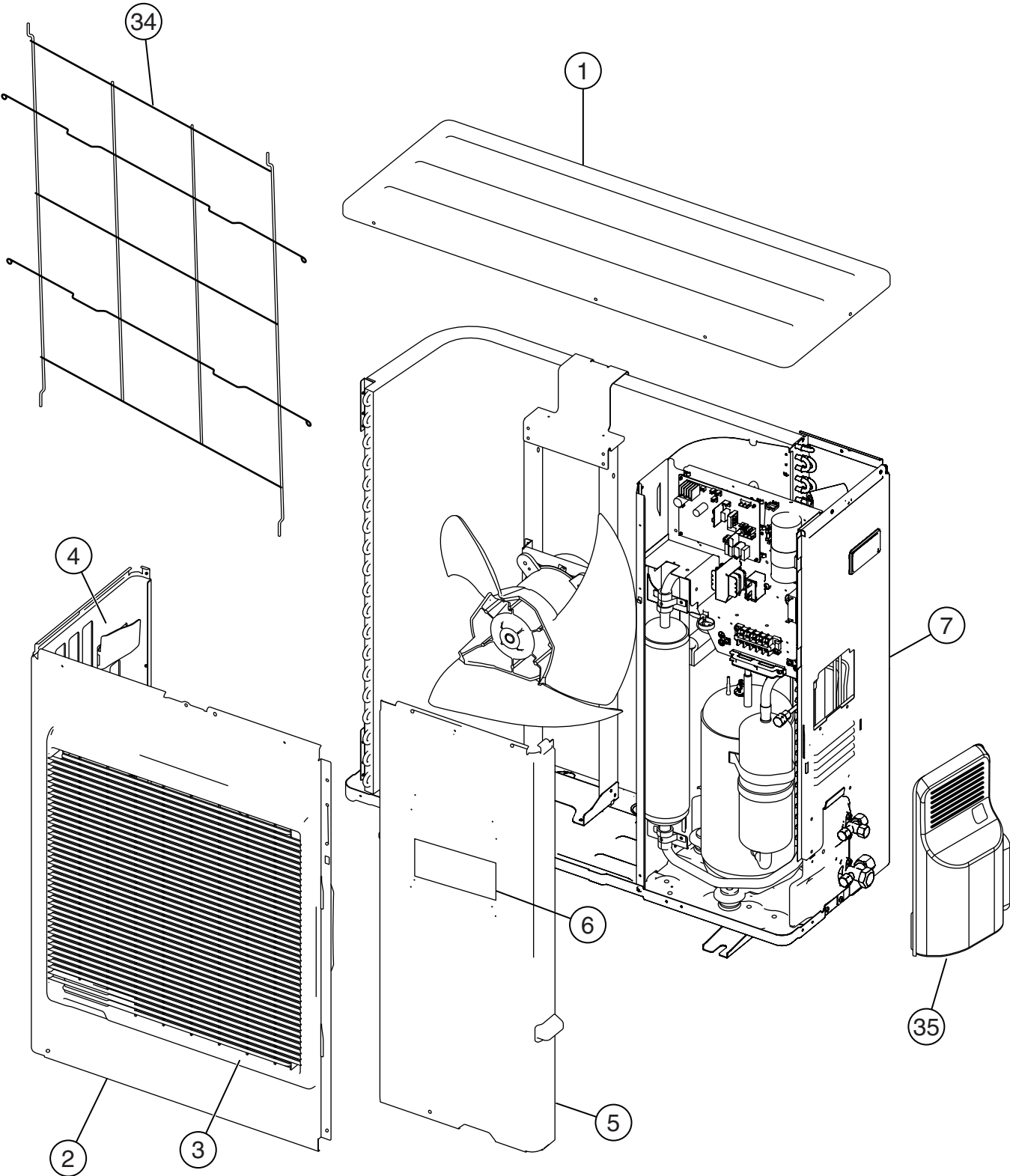
Models : ARY30FUAN
ARY30UUAN



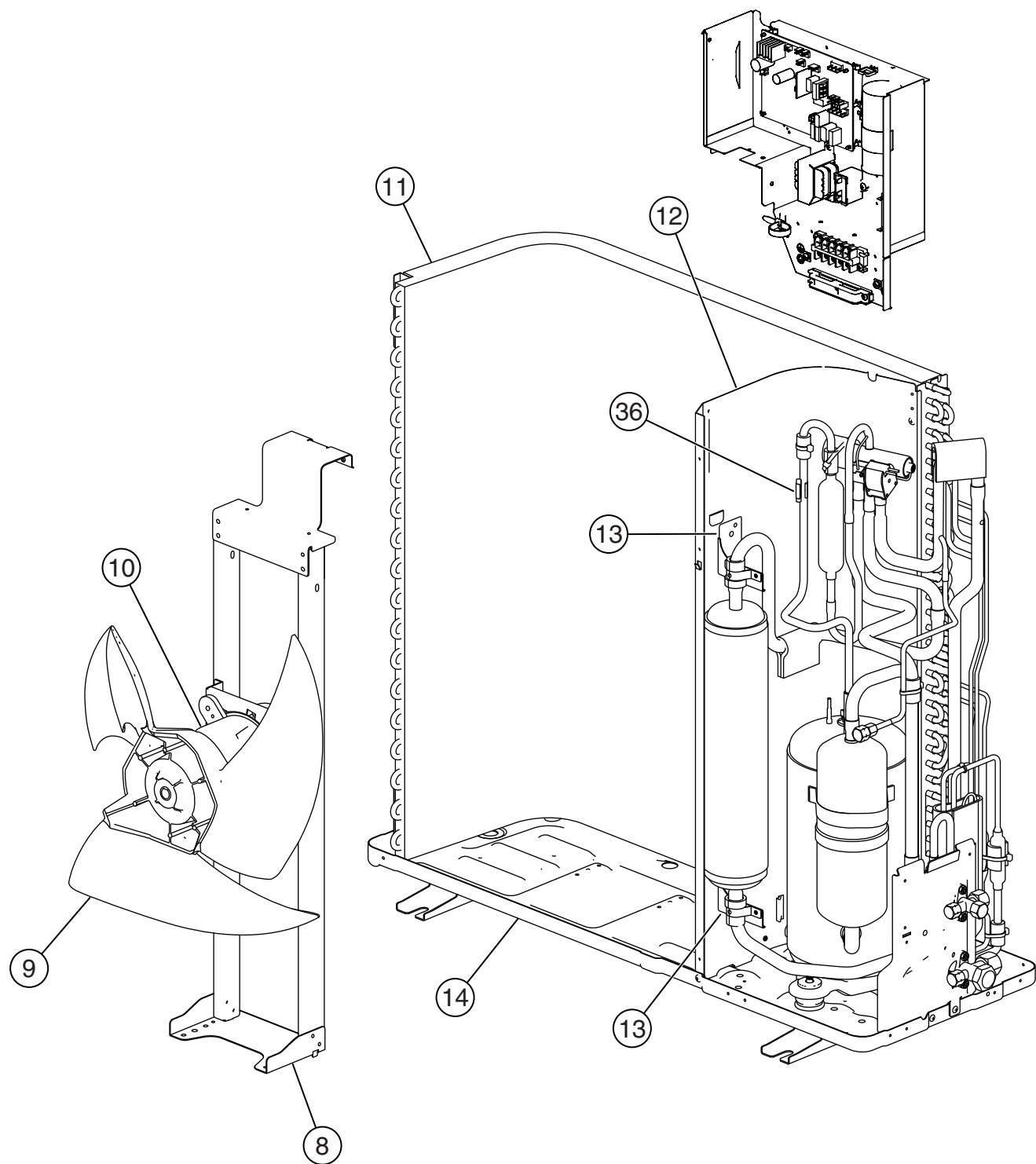




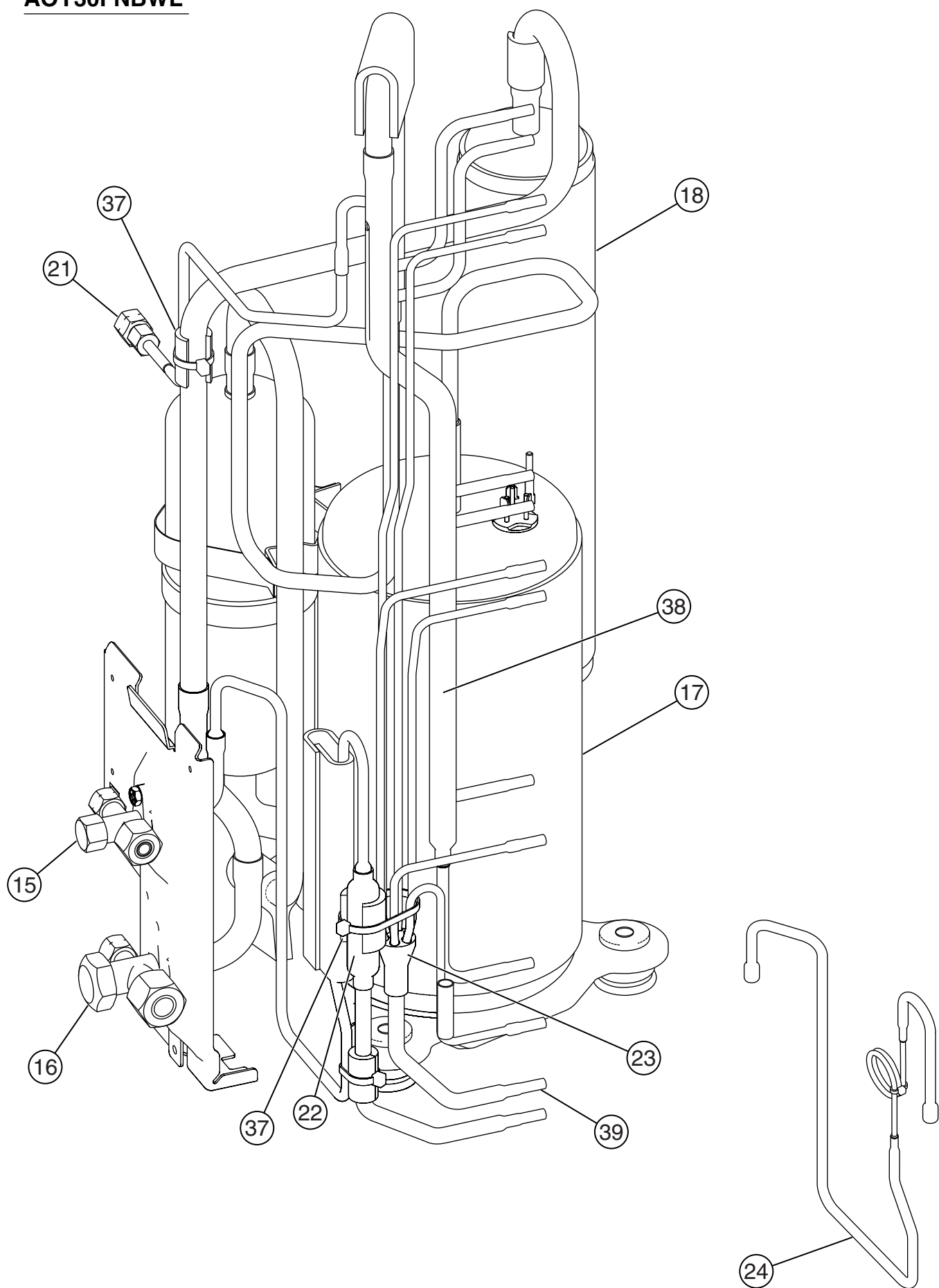
Models :
AOY30FNBWL
AOY30UNBWL



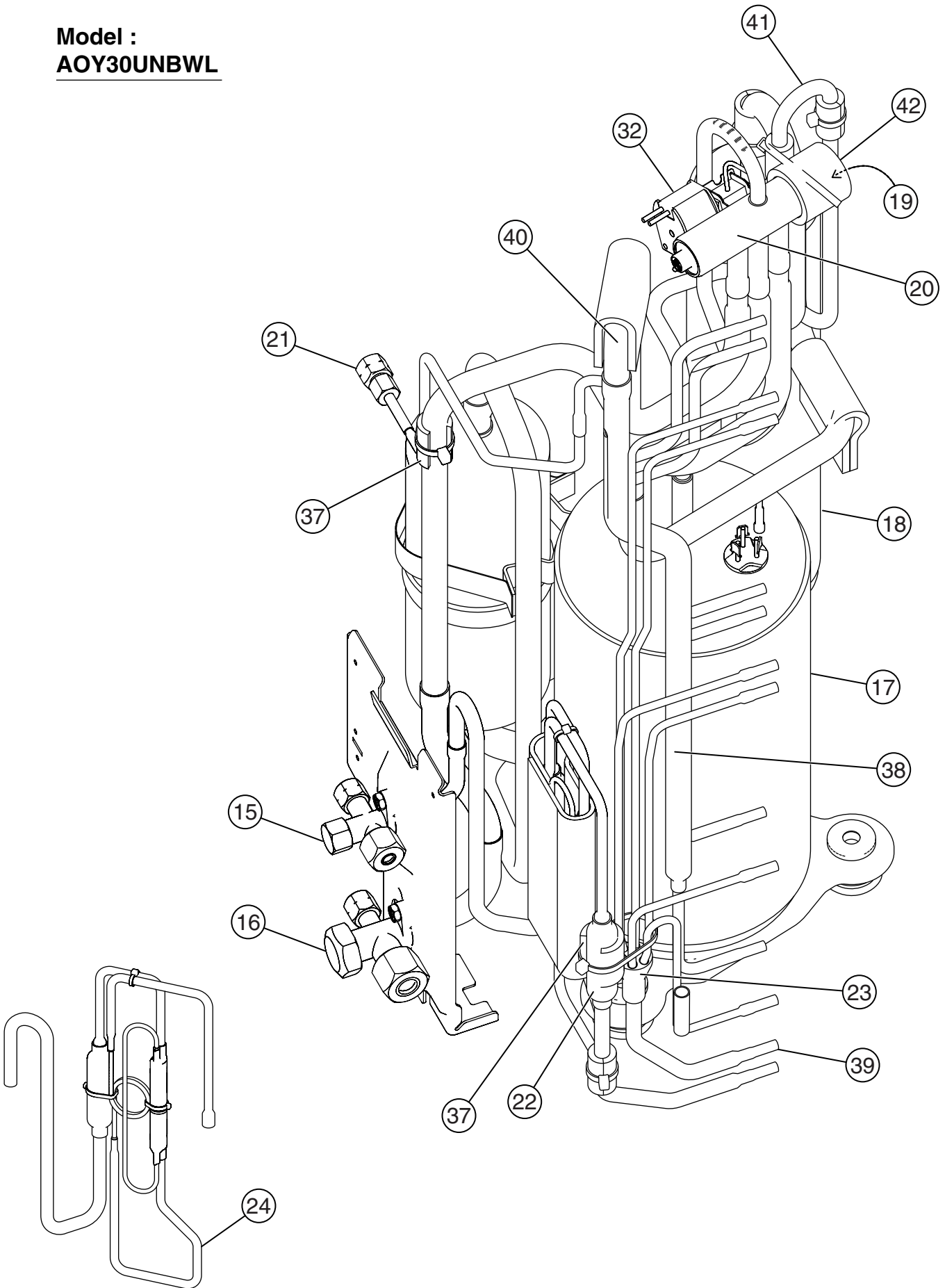
Models :
AOY30FNBWL
AOY30UNBWL



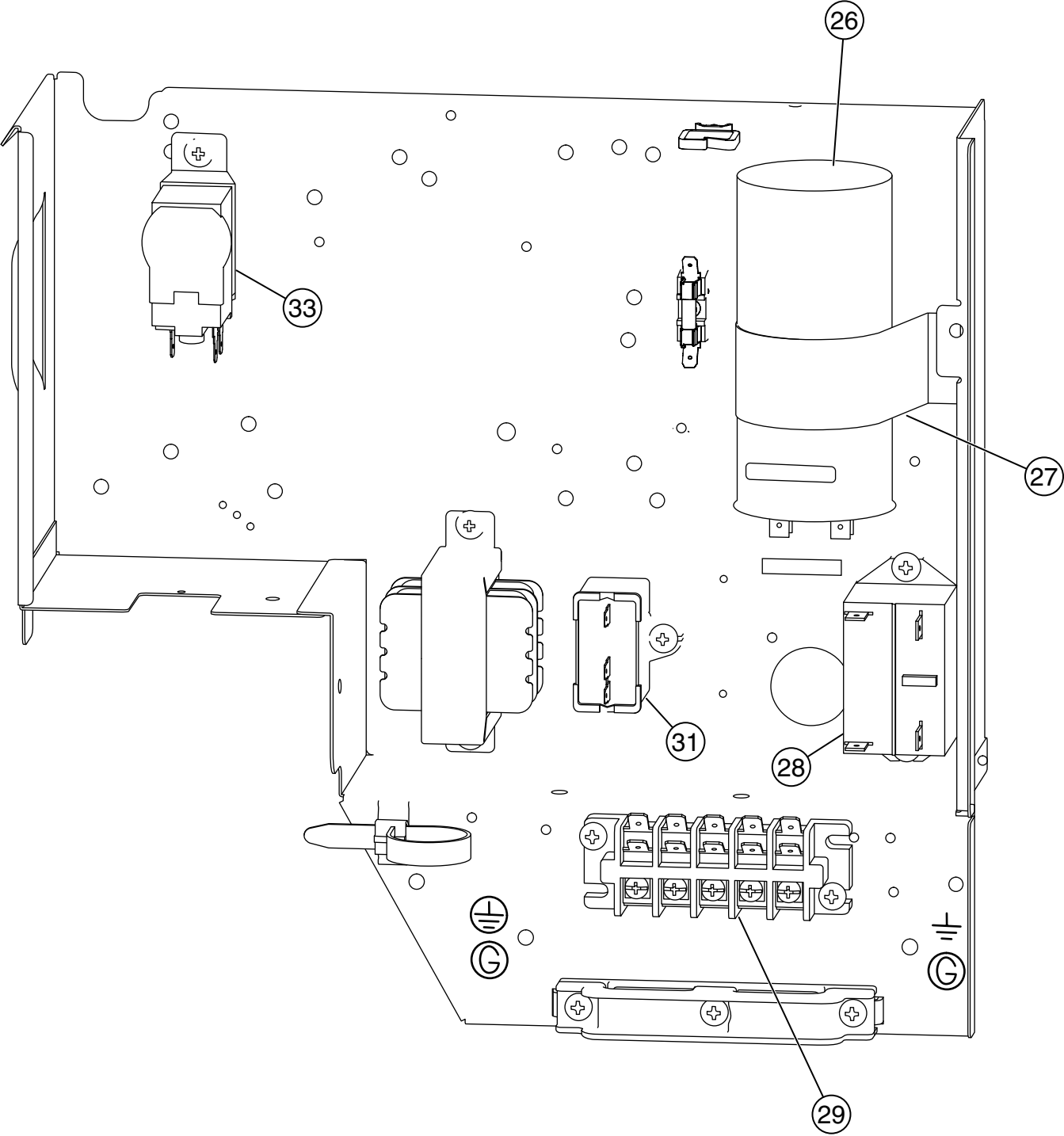
Model :
AOY30FNBWL



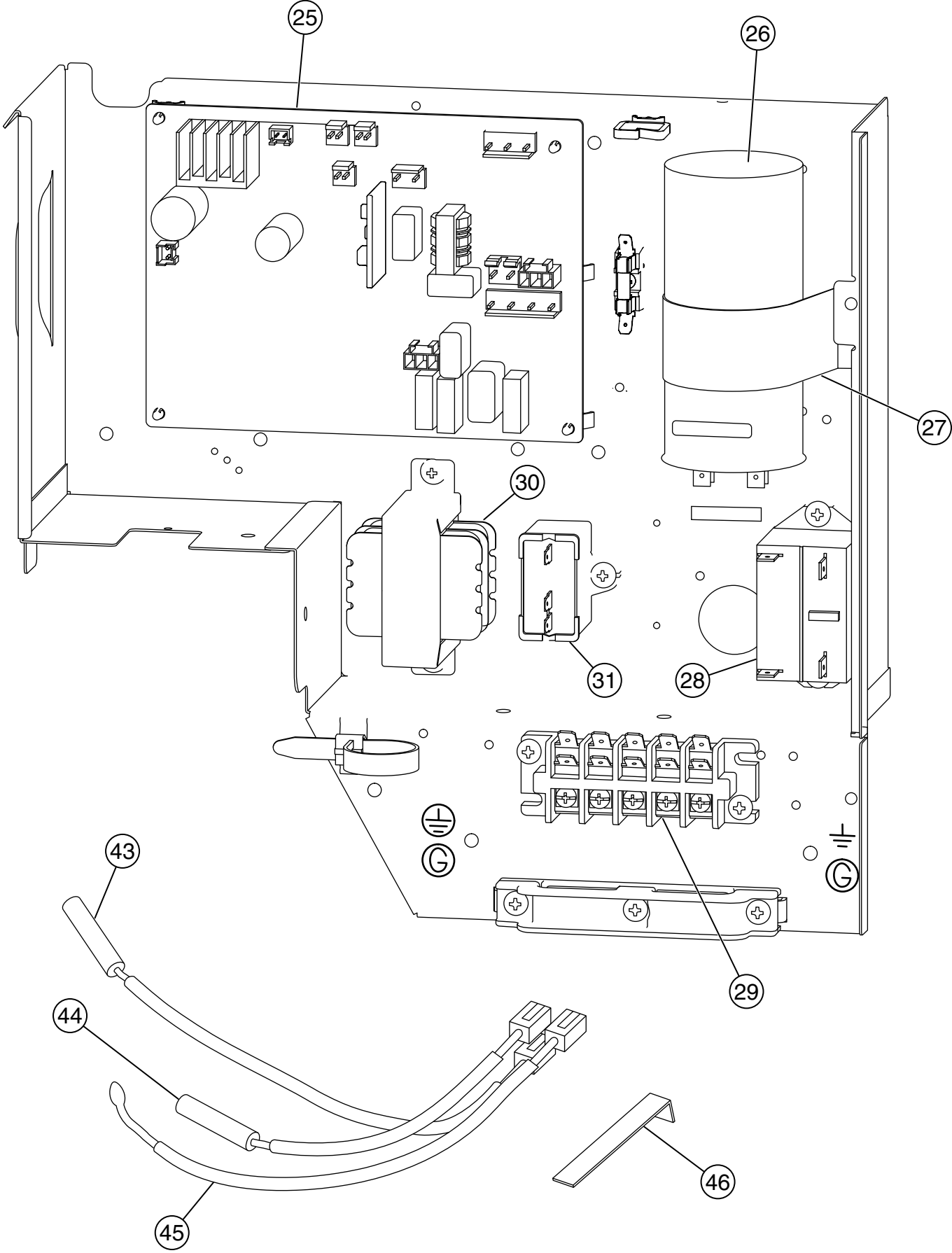
Model :
AOY30UNBWL



Model :
AOY30FNBWL



Model :
AOY30UNBWL



PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		ARY30FUAN	ARY30UUAN	
20	Control Cover -A Sub Assy	9374516018	9374516018	
40	Motor Mount	9374281015	9374281015	
41	Bracket Motor Assy	9374230013	9374230013	
56	Sirocco Fan Assy	9356531022	9356531022	
67	Rubber	313659068604	313659068604	
72	Cabinet L Sub Assy	9374509010	9374509010	
73	Cabinet R Sub Assy	9374508013	9374508013	
74	Intake Cover Sub Assy	9374512010	9374512010	
75	Outlet Panel Sub Assy	9374510016	9374510016	
108	Base Sub Assy	9374504015	9374504015	
110	Casing A	9374233014	9374233014	
111	Casing B	9374234011	9374234011	
138	Separatewall Assy	9374228010	9374228010	
139	Panel (Control Box) Sub Assy	9374506019	9374506019	
146	Evaporator Total Assy	9374517015	9374517015	
150	Bracket (Eva) -R	9374207015	9374207015	
160	Drain Pan Sub Assy	9374513017	9374513017	
164	Motor, Induct	9600830086	9600830086	
223	Control Box -A	9374219018	9374219018	
236	Controller PCB Assy	9705246089	9705246096	
287	Cap (Power)	9352173011	9352173011	
288	One Touch Bush	9374407019	9374407019	
324	Main Panel Sub Assy	9374511013	9374511013	
325	Intake Frame Assy	9374216017	9374216017	
553	Transformer (Power)	9704129017	9704129017	
764	Drain Cap	9356541007	9356541007	
816	Terminal 3P	9703345012	9703345012	
817	Terminal 3P	9306489045	9306489045	
875	Power PCB Assy	9705668027	9705668010	
956	Control Cover -B	9374222018	9374222018	
	Thermo. Spring -A	313728262708	313728262708	
	Thermistor Assy -Room	9703299025	9703299025	
	Thermistor Assy -Pipe	9703297021	9703297021	
	Remotecontroller Assy	9372266021	9372266014	
	RFM (Motor Band)	9374646012	9374646012	
	Motor Band -B	9374648023	9374648023	
	Control Box -B	9374220014	9374220014	
	Motor Band -A Assy	9374647019	9374647019	
	Wire with Connector	9704856012	9704856012	
	Wire with Connector	---	9705245020	
	Wire with Connector	9705243026	9705243026	
	Wire with Connector	9705244023	9705244023	

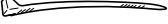
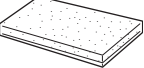
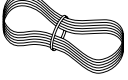
OUTDOOR UNIT

Ref.	Description	Part number	
		AOY30FNBWL	
1	Top Panel Sub Assy	9374417018	
2	Front Panel	9374094066	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Sub Assy	9374415038	
6	Emblem-Rear	9351355005	
7	Right Panel Sub Assy	9374416035	
8	Motor Bracket Sub Assy	9374418039	
9	Propeller Fan Assy	9366378013	
10	Fan Motor	9601671060	
11	Condenser Assy	9374433063	
12	Separate Wall Sub Assy	9374413034	
13	Accumulator Support-B	9355350006	
14	Base Assy	9374166046	
15	3-Way Valve Assy	9372205044	
16	3-Way Valve Assy	9372205075	
17	Compressor Assy	9372558089	
18	Accumulator	9374338016	
21	Check Valve Assy	9374274024	
22	Strainer Assy	9372524015	
23	Distributor	9369128004	
24	Capillary Assy	9372197349	
26	Capacitor Plastic	9900269081	
27	Capacitor Clamp	9351770013	
28	Relay	9900074012	
29	Terminal 5P	9900203023	
31	Capacitor (Fan)	9900270049	
33	Thermostat Outdoor	9900275013	
34	Protective Net	9374255030	
35	Valve Cover	9374174010	
37	Capillary Holder Rubber	313394274808	
38	Inlet Pipe (Condenser) A Assy	9373461067	
39	Outlet Pipe (Condenser) A Assy	9374266050	
	Special Nut M5 (compressor)	9300301015	
	Discharge A Assy	9372264089	
	Inlet Pipe (Condenser) C Assy	9374469017	
	Cover Gasket (Comp)	9371512013	
	Terminal Cover (Compressor)	9371511016	
	Rubber Seat (Compressor)	9351049010	
	Compressor Cover	9374430031	

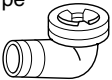
Ref.	Description	Part number	
		AOY30UNBWL	
1	Top Panel Sub Assy	9374417018	
2	Front Panel	9374094066	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Sub Assy	9374415038	
6	Emblem-Rear	9351355005	
7	Right Panel Sub Assy	9374416035	
8	Motor Bracket Sub Assy	9374418039	
9	Propeller Fan Assy	9366378013	
10	Fan Motor	9601671060	
11	Condenser Assy	9374433056	
12	Separate Wall Sub Assy	9374413034	
13	Accumulator Support-B	9355350006	
14	Base Assy	9374166046	
15	3-Way Valve Assy	9372205044	
16	3-Way Valve Assy	9372205075	
17	Compressor Assy	9372558089	
18	Accumulator	9374338016	
19	Muffler	9372369012	
20	4-Way Valve	9900163013	
21	Check Valve Assy	9374274024	
22	Strainer Assy	9372524015	
23	Distributor	9369128004	
24	Capillary Assy	9372197325	
25	Controller PCB Assy	9704299024	
26	Running Capacitor	9900269081	
27	Capacitor Clamp	9351770013	
28	Main Relay	9900074029	
29	Terminal 5P	9900203023	
30	Transformer	9900039011	
31	Capacitor (Fan)	9900270049	
32	Solenoid	9900165055	
34	Protective Net	9374255030	
35	Valve Cover	9374174010	
36	Thermostat Holder	9357804002	
37	Capillary Holder Rubber	313394274808	
38	Inlet Pipe (Condenser) A Assy	9373461067	
39	Outlet Pipe (Condenser) A Assy	9374266050	
40	Inlet Pipe (Condenser) C Assy	9374469017	
41	Discharge B Assy	9372246054	
42	4-Way Valve Rubber	313728251908	
43	Heat Exchanger Thermistor	9900043049	
44	Thermistor-Discharge	9900038038	
45	Thermistor (Out Temp)	9900037048	
46	Thermo. Spring A	313728262708	
	Cover Gasket (Comp)	9371512013	
	Terminal Cover (Compressor)	9371511016	
	Rubber Seat (Compressor)	9351049010	
	Compressor Cover	9374430031	
	Varistor	0000361224	
	Varistor (Arrester)	0600280154	
	Relay on PCB	9900200015	
	Belt Heater	9361140257	
	Special Nut M5 (compressor)	9300301015	

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Part No.	
			ARY30FUAN	ARY30UUAN
Hanger 	4	For suspending the indoor unit from ceiling	9356563009	9356563009
Special nut A (large flange) 	4	For suspending the indoor unit from ceiling	313005446653	313005446653
Special nut B (small flange) 	4		313005446759	313005446759
Coupler heat insulation (large) 	2	For indoor side pipe joint (large pipe)	9350716029	9350716029
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)	9352766015	9352766015
Nylon fastener 	1 (large)	For fixing the drain hose	312300787605	312300787605
	1 (small)	For fixing the remote controller cord	313361275805	31361275805
Remote control unit 	1		9372266021	9372266014
Tapping screw 	2	For installing the remote control unit cord clamp	0700181108	0700181108
Drain hose insulation 	1	Insulates the drain hose and vinyl hose connection	313806217708	313806217708
Remote controller cord 	1		9372714010	9372714010

OUTDOOR UNIT ACCESSORIES

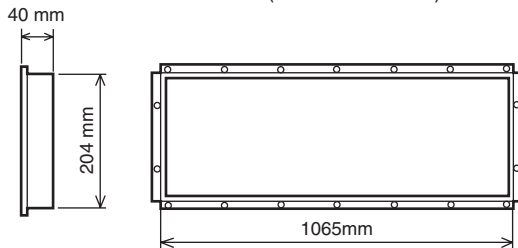
Name and Shape	Q'ty	Application
Drain pipe 	1	For outdoor unit drain piping work (May not be supplied, depending on the model.)
Drain cap 	2	
Insulation (seal) 	1	For filling in a gap at the entrance of connection cords

OPTIONAL PARTS

When connecting the square duct and round duct, use the optional square flange or round flange and flexible duct.

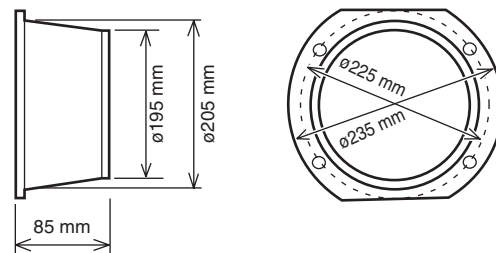
Square flange

Model name : UTD-SF045T (P/N 9098180007)



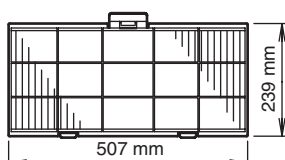
Round flange

Model name : UTD-RF204 (P/N 9093160004)



Long-life filter

Model name : UTD-LF25NA (P/N9079892004)



Simple remote controller

Model name : UTB-YPB (P/N9077582006)

Remote sensor

Model name : UTD-RS100 (P/N9072619004)

