

SPLIT TYPE
ROOM AIR CONDITIONER
FLOOR TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
AGYV09LAC	AOYV09LAC
AGYV12LAC	AOYV12LAC
AGYV14LAC	AOYV14LAC
AGYV14LAC	AOYV14LAL

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cooling & heating inverter		
INDOOR UNIT		AGYV09LAC	AGYV12LAC	AGYV14LAC
OUTDOOR UNIT		AOYV09LAC	AOYV12LAC	AOYV14LAC
COOLING CAPACITY		2.60 kW	3.50 kW	4.20 kW
HEATING CAPACITY		3.50 kW	4.50 kW	5.20 kW
POWER SOURCE		230 V	230 V	230 V
FREQUENCY		50 Hz	50 Hz	50 Hz
RUNNING CURRENT	Cooling	2.6 A	4.4 A	5.2 A
	Heating	3.8 A	5.5 A	6.4 A
INPUT WATTS	Cooling	0.53 kW	0.94 kW	1.14 kW
	Heating	0.79 kW	1.19 kW	1.44 kW
E.E.R.	Cooling	4.91 kW/kW	3.72 kW/kW	3.68 kW/kW
COP	Heating	4.43 kW/kW	3.78 kW/kW	3.61 kW/kW
MOISTURE REMOVAL		1.3 L/hr	1.8 L/hr	2.1 L/hr
AIR CIRCULATION HIGH	Cooling	570 m3/hr	570 m3/hr	650 m3/hr
	Heating	600 m3/hr	600 m3/hr	650 m3/hr

FAN MOTOR

POWER SOURCE		230 V	230 V	230 V
INDOOR UNIT cooling (upper fan / lower fan)	High speed	1,190 r.p.m. / 1,000 r.p.m.		1,330 / 1,120 r.p.m.
	Med speed	1,000 r.p.m. / 850 r.p.m.		1,100 / 930 r.p.m.
	Low speed	820 r.p.m. / 690 r.p.m.		890 / 750 r.p.m.
	Quiet	660 r.p.m. / 560 r.p.m.		660 / 560 r.p.m.
INDOOR UNIT heating (upper fan / lower fan)	High speed	1,240 r.p.m. / 1,040 r.p.m.		1,330 / 1,120 r.p.m.
	Med speed	1,040 r.p.m. / 880 r.p.m.		1,100 / 930 r.p.m.
	Low speed	840 r.p.m. / 700 r.p.m.		860 / 730 r.p.m.
	Quiet	660 r.p.m. / 560 r.p.m.		660 / 560 r.p.m.
OUTDOOR UNIT cooling		760 r.p.m.	760 r.p.m.	820 r.p.m.
OUTDOOR UNIT heating		680 r.p.m.	760 r.p.m.	750 r.p.m.

NOISE LEVEL

INDOOR UNIT (cooling / heating)	High speed	40 dB / 40 dB	40 dB / 40 dB	44 dB / 43 dB
	Med speed	35 dB / 35 dB	35 dB / 35 dB	38 dB / 37 dB
	Low speed	29 dB / 29 dB	29 dB / 29 dB	31 dB / 29 dB
	Quiet	22 dB / 22 dB	22 dB / 22 dB	22 dB / 22 dB
OUTDOOR UNIT (cool / heat)		47 dB / 48 dB	48 dB / 49 dB	50 dB / 50 dB

DIMENSIONS

INDOOR UNIT	H x W x D	600 x 740 x 200 mm		
OUTDOOR UNIT	H x W x D	540 x 790 x 290 mm		578 x 790 x 300

WEIGHT

INDOOR UNIT	Gross / Net	17 kg / 14 kg		
OUTDOOR UNIT	Gross / Net	40 kg / 36 kg		44 kg / 40 kg

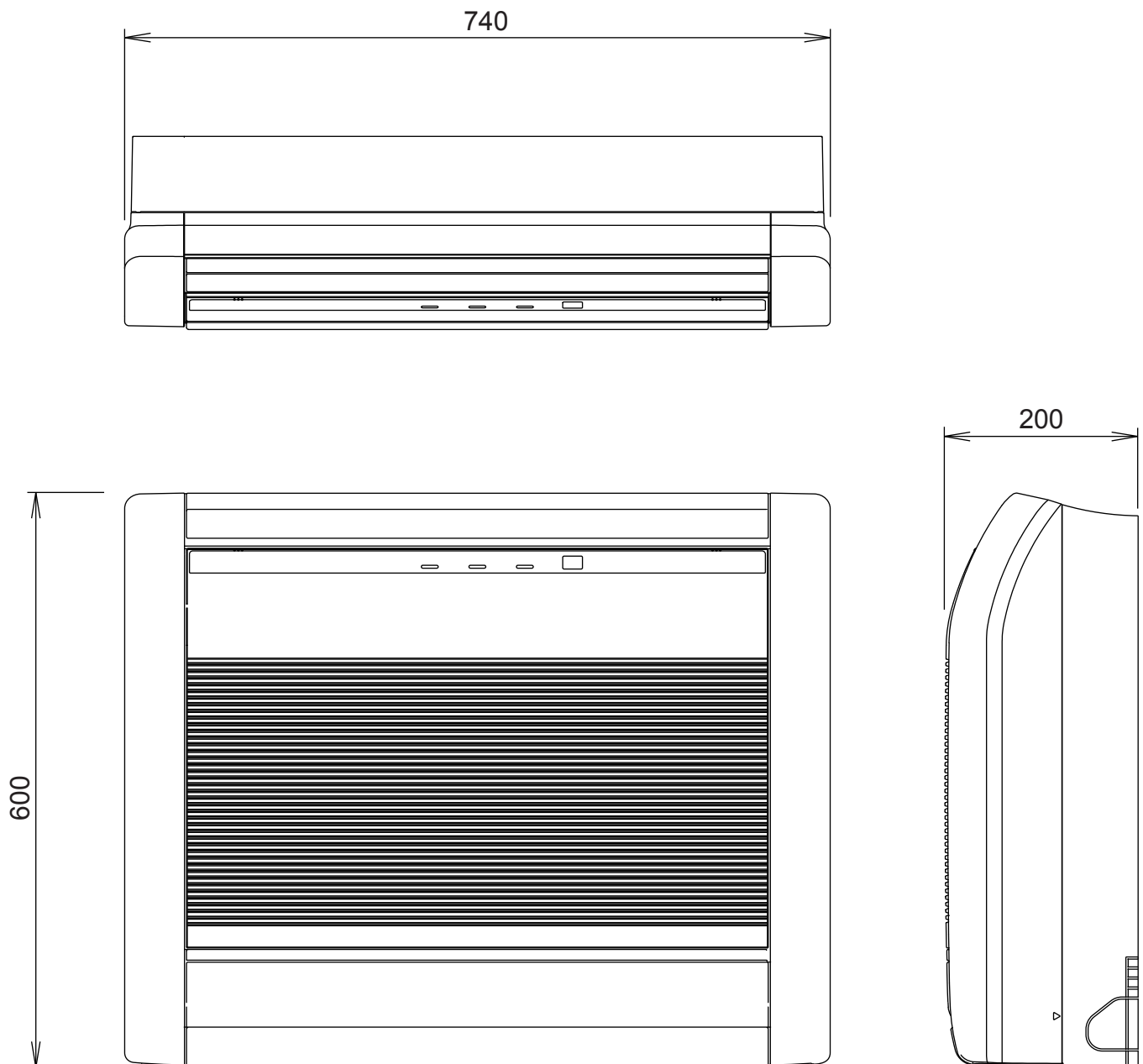
REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary		
DISCRIMINATION		DA89X1C-20FZ	DA89X1C-20FZ2	DA130A1F-25F
PRECHARGED REFRIGERANT		1,050 g	1,050 g	1,150 g
REFRIGERANT TYPE		R410A	R410A	R410A
FULL CHARGE	Pipe length 15 m	1,050 g	1,050 g	1,150 g
	20 m	1,150 g	1,150 g	1,250 g
ADDITIONAL CHARGE		20 g/m	20 g/m	20 g/m
MAXIMUM PIPE HEIGHT		15 m	15 m	15 m

DIMENSIONS

INDOOR UNIT

(unit : mm)



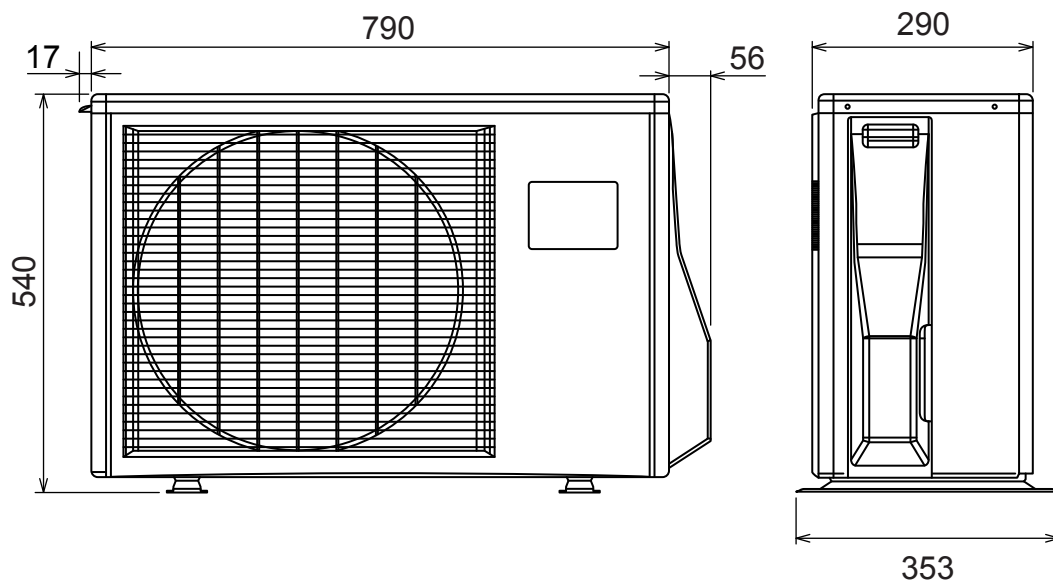
OUTDOOR UNIT

(unit : mm)

Models :

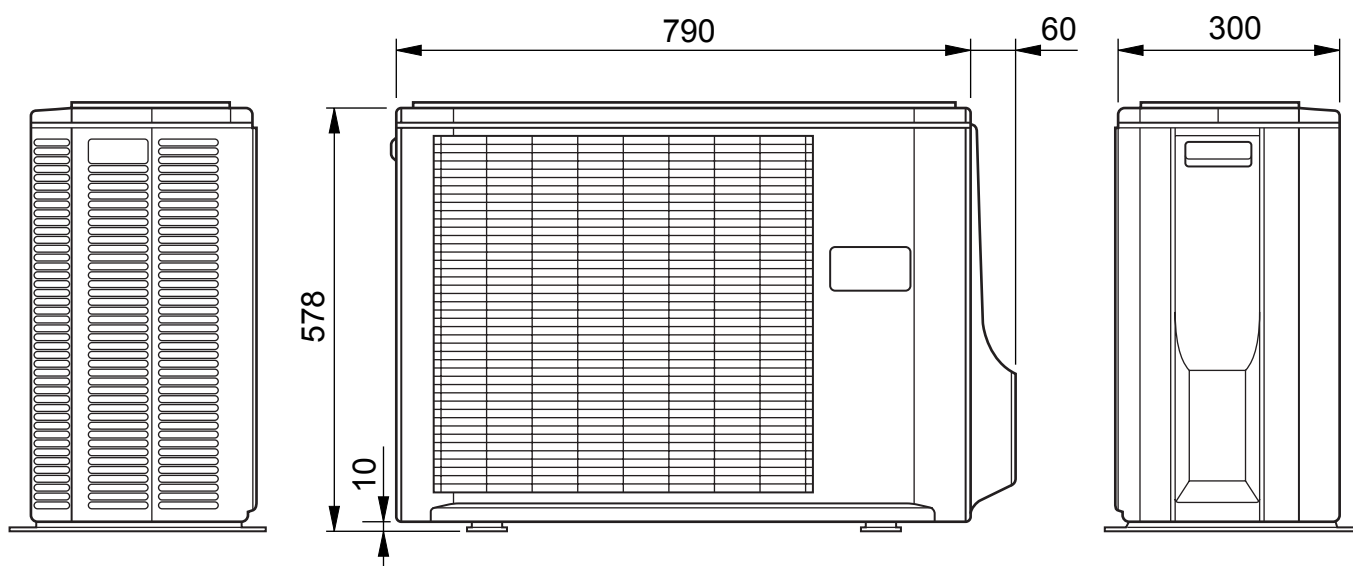
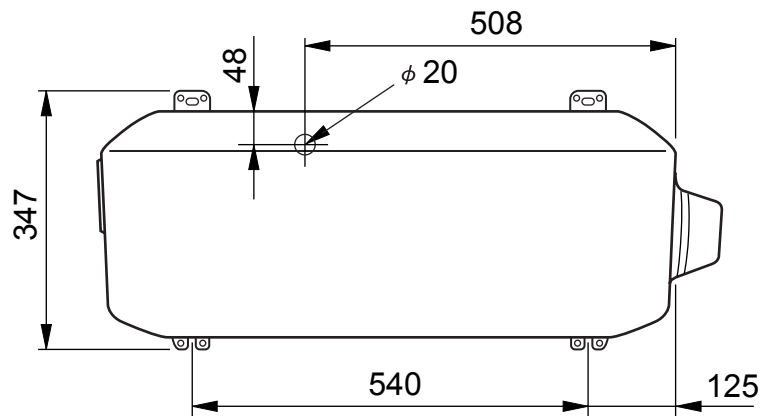
AOYV09LAC

AOYV12LAC

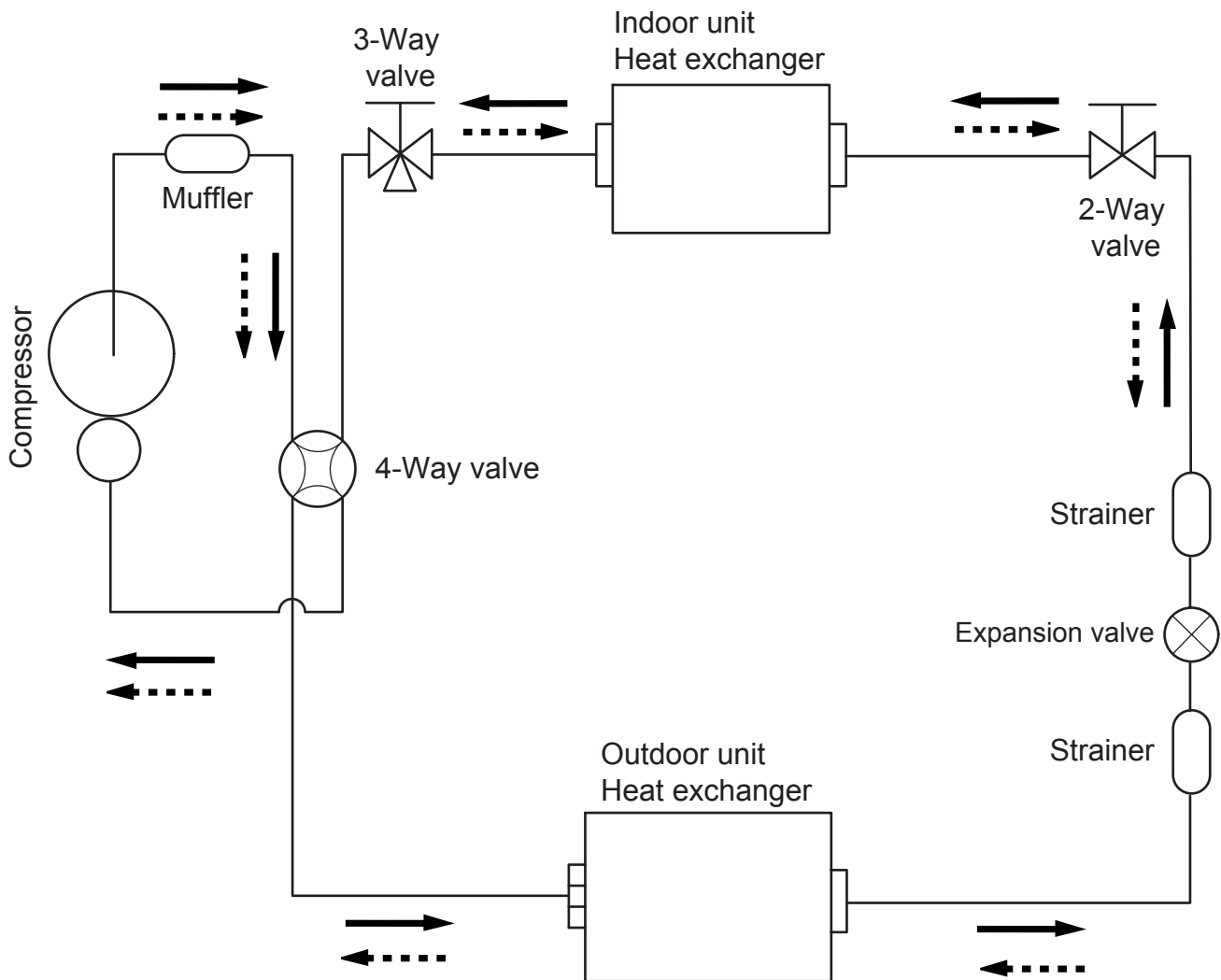


Model :

AOYV14LA_



REFRIGERANT SYSTEM DIAGRAM



Refrigerant direction

————→ Cooling

.....→ Heating

Refrigerant pipe diameter

AGYV09LAC / AOYV09LAC

AGYV12LAC / AOYV12LAC

Liquid : 1/4" (6.35 mm)

Gas : 3/8" (9.52 mm)

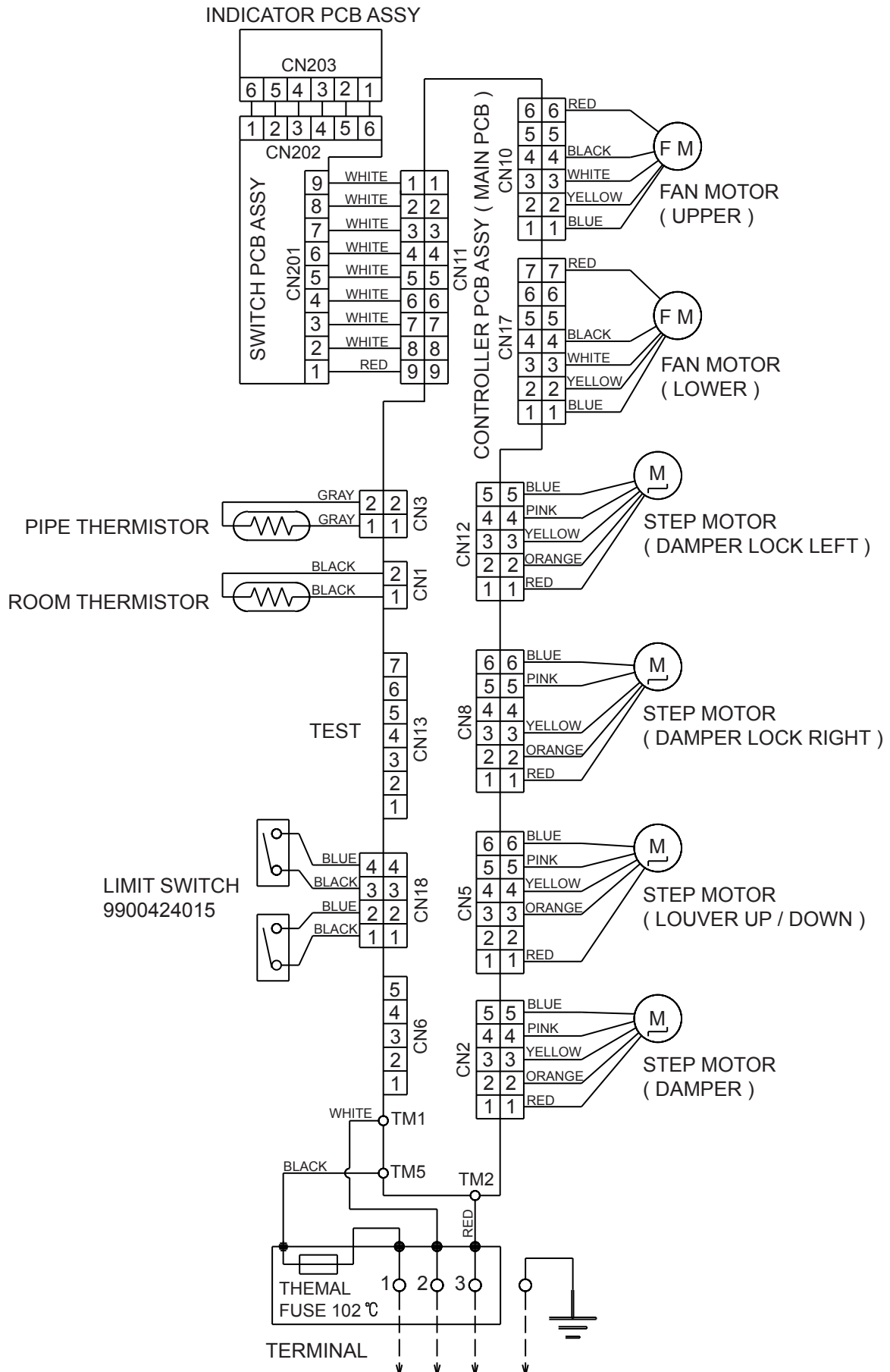
AGYV14LAC / AOYV14LA_

Liquid : 1/4" (6.35 mm)

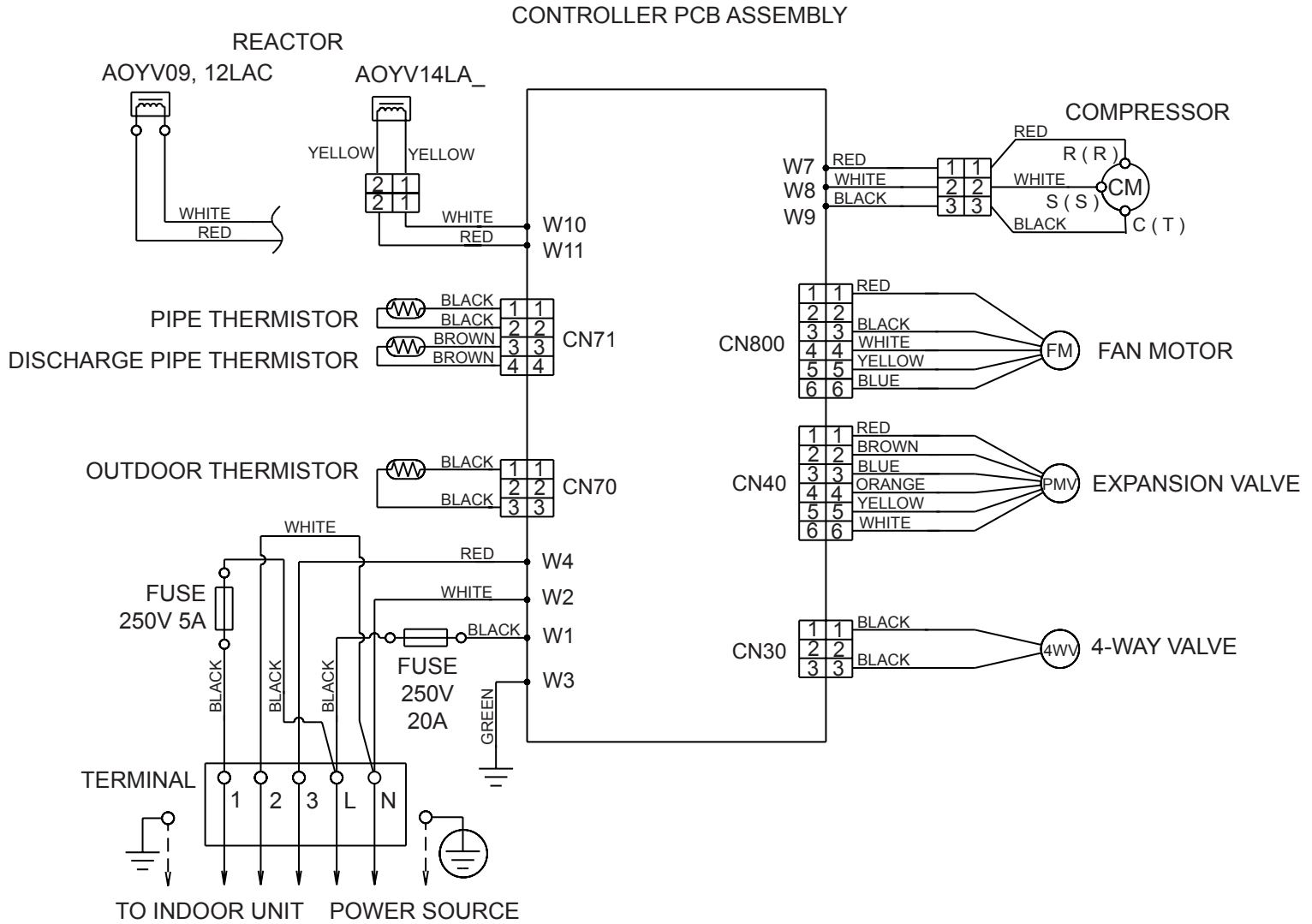
Gas : 1/2" (12.7 mm)

CIRCUIT DIAGRAM

INDOOR UNIT

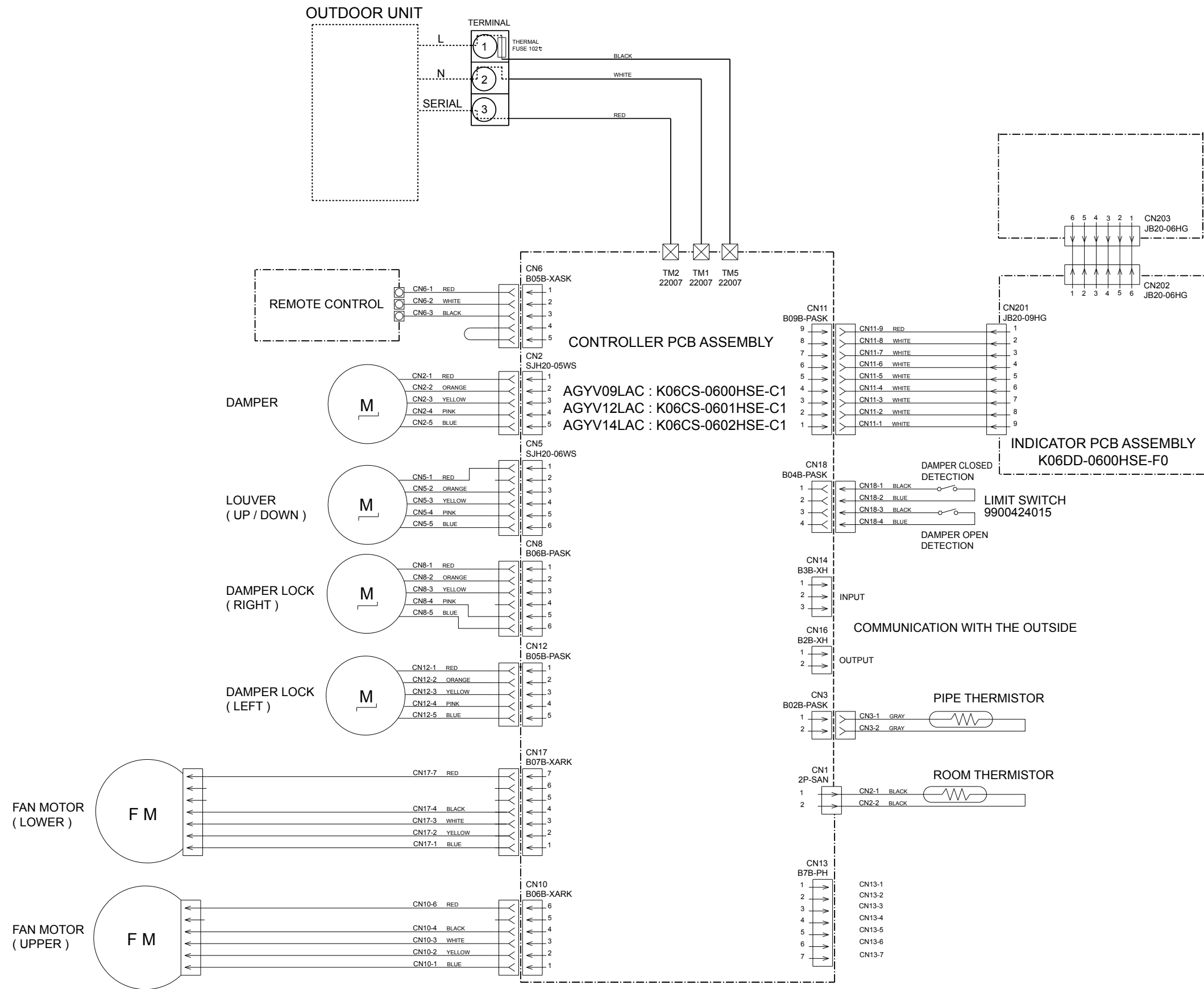


OUTDOOR UNIT

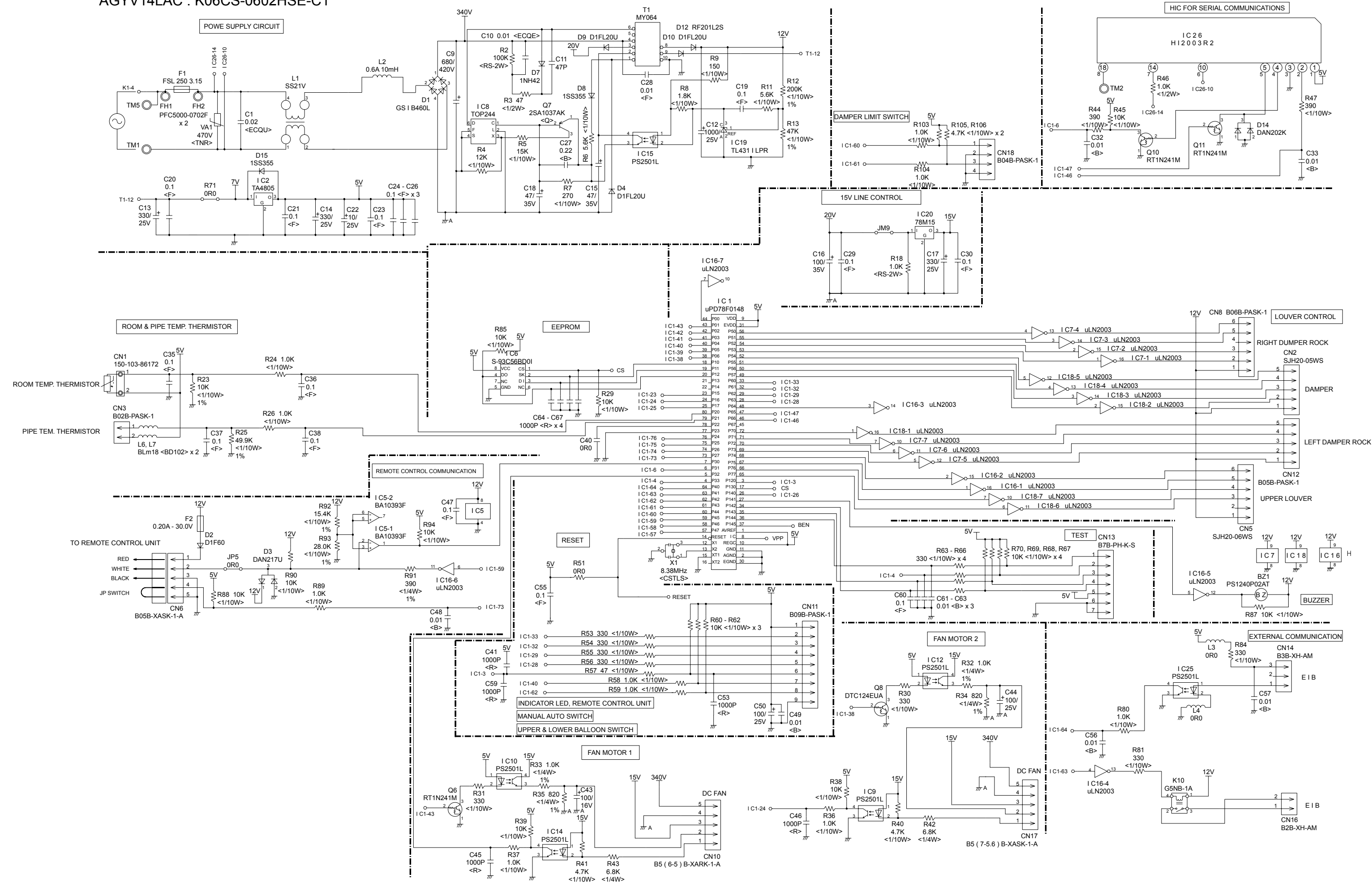


INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
AGYV09LAC : EZ-0060KHSE
AGYV12LAC : EZ-0060LHSE
AGYV14LAC : EZ-0060MHSE

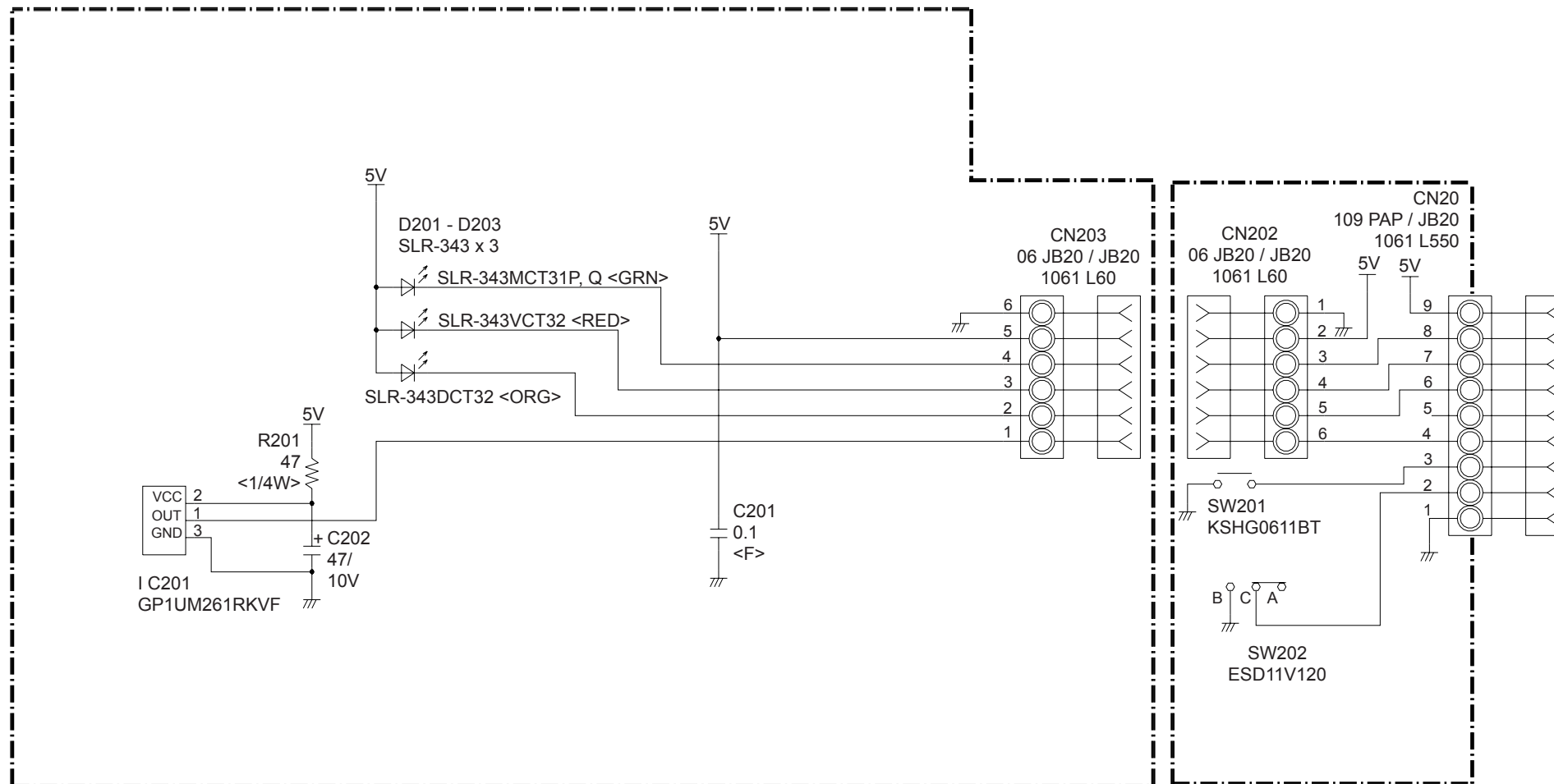


INDOOR UNIT
CONTROLLER PCB ASSEMBLY
AGYV09LAC : K06CS-0600HSE-C1
AGYV12LAC : K06CS-0601HSE-C1
AGYV14LAC : K06CS-0602HSE-C1

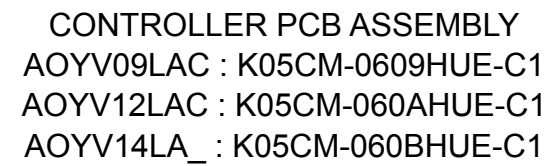


INDOOR UNIT

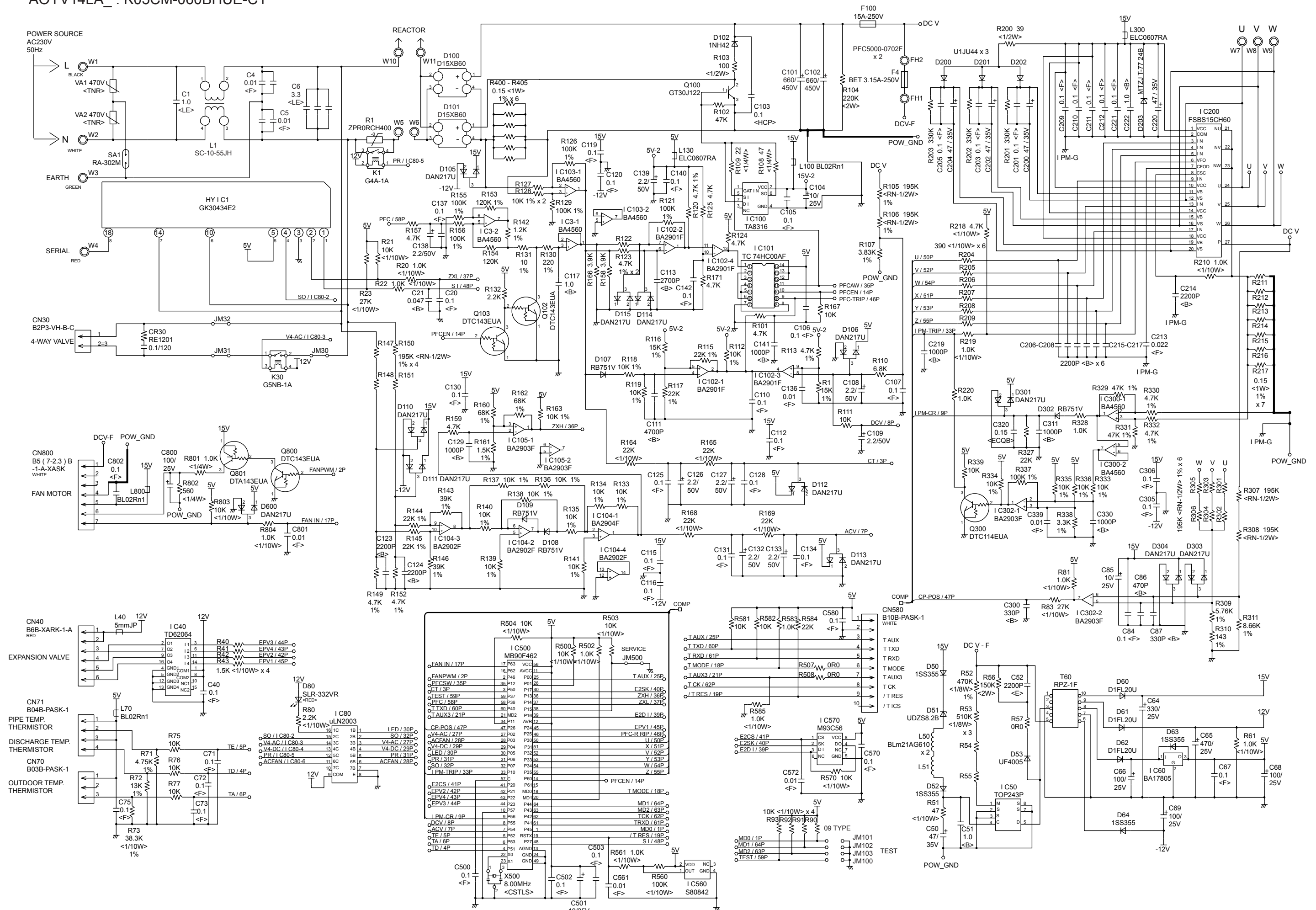
INDICATOR PCB ASSEMBLY K06DD-0600HSE-F0



INVERTER ASSEMBLY
AOYV09LAC : EZ-00605HUE
AOYV12LAC : EZ-00606HUE
AOYV14LA_ : EZ-00607HUE



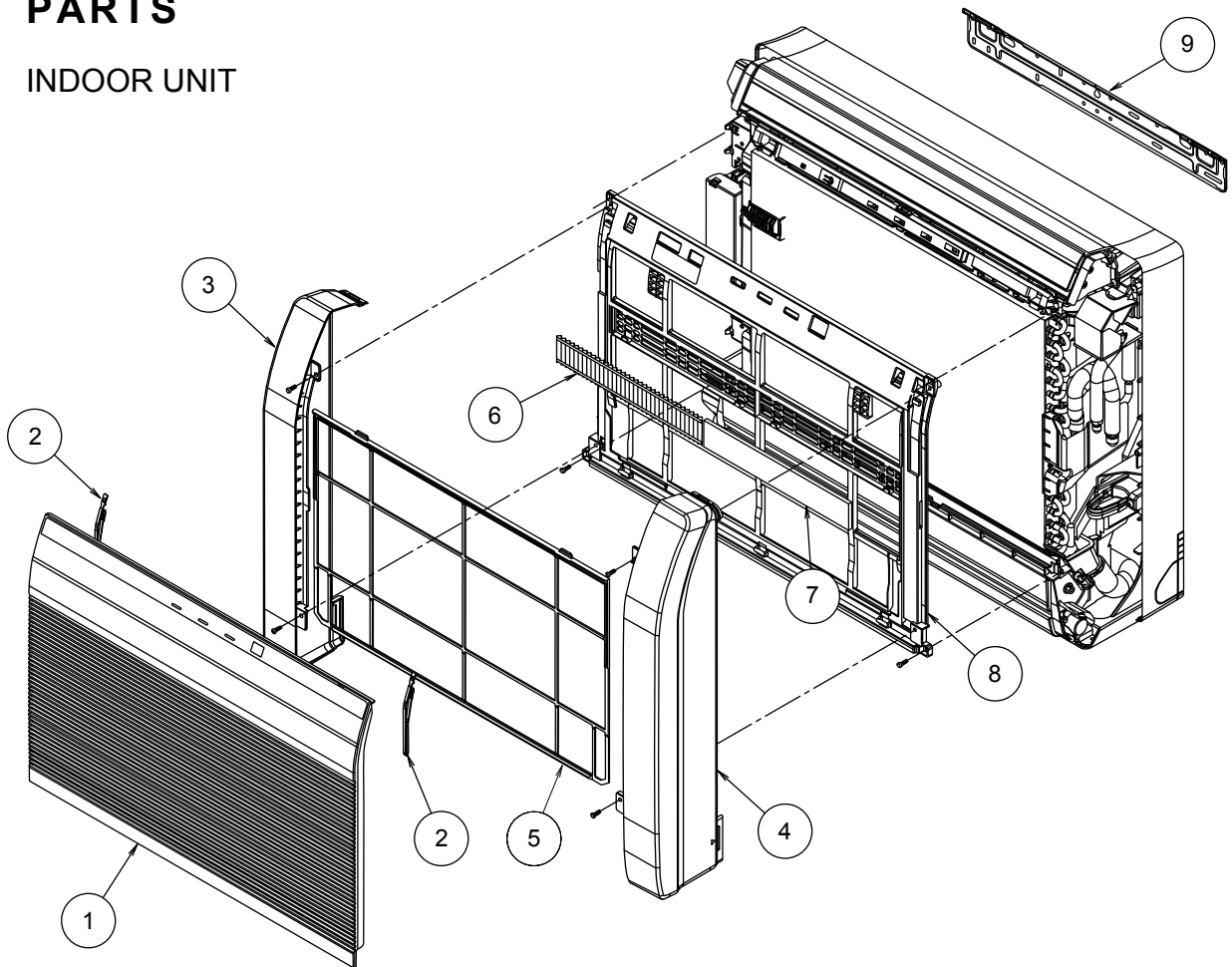
CONTROLLER PCB ASSEMBLY
AOYV09LAC : K05CM-0609HUE-C1
AOYV12LAC : K05CM-060AHUE-C1
AOYV14LA_ : K05CM-060BHUE-C1



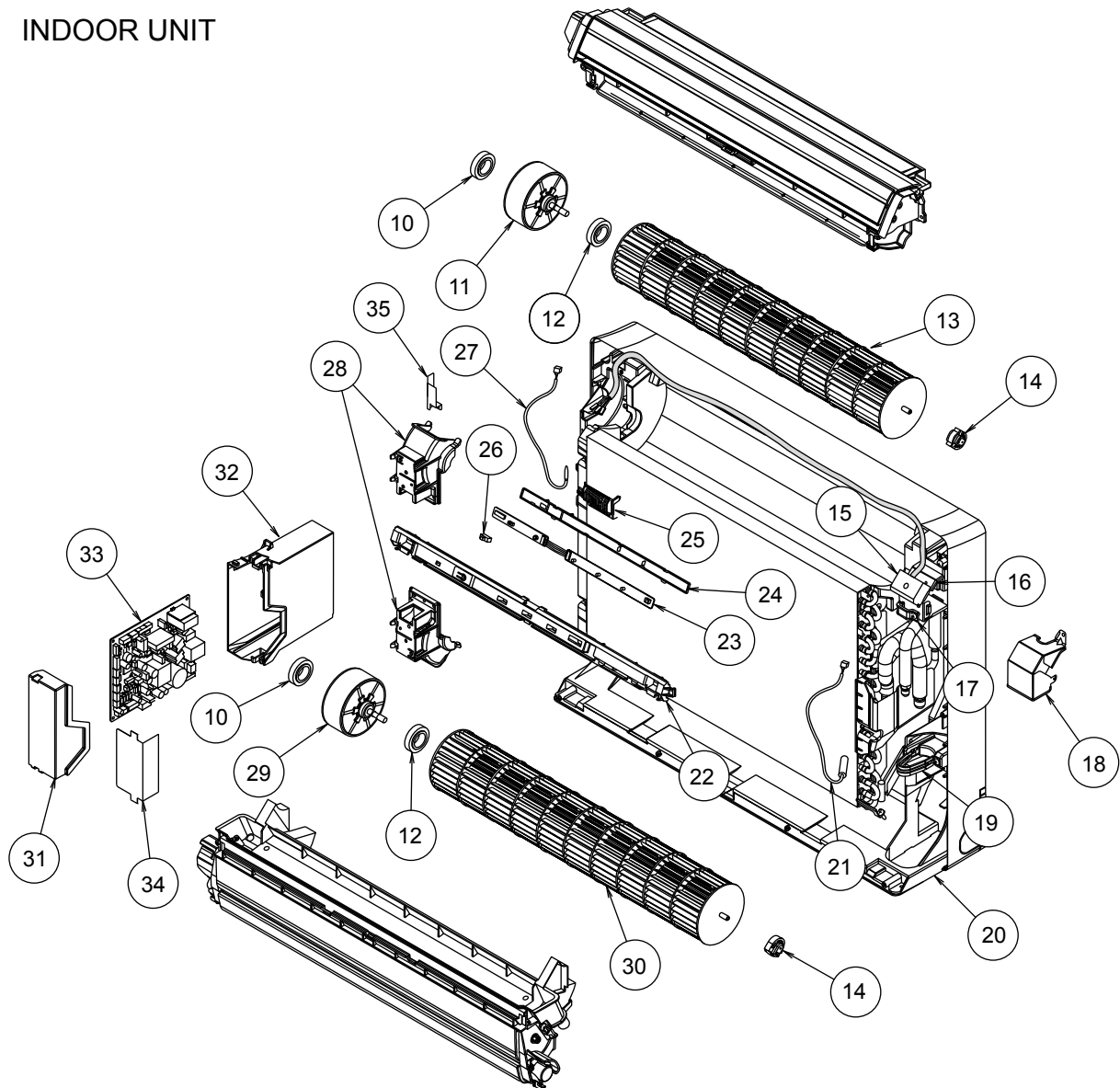
ERROR CONTENTS

Error	Indoor unit LED			Wired remote controller	Error
	Operation LED	Timer LED	10℃ heat LED		
Serial signal error	Off	2 flash	Off	01	Serial signal (reverse) error, at operation start up
		3 flash	Off	01	Serial signal (reverse) error, during operation
		4 flash	Off	13	Serial signal (forward) error, at operation start up
		5 flash	Off	13	Serial signal (forward) error, during operation
		8 flash	Off	00	Wired remote controller error
Indoor unit thermistor error	2 flash	2 flash	Off	02	Indoor air thermistor error
		3 flash	Off	04	Heat exchanger middle thermistor error
Outdoor unit thermistor error	3 flash	2 flash	Off	0C	Discharge pipe thermistor error
		3 flash	Off	06	Heat exchanger thermistor error
		4 flash	Off	0A	Outdoor air thermistor error
		8 flash	Off	15	Compressor thermistor error
Indoor unit control error	4 flash	2 flash	Off	20	Manual auto button welded
Outdoor unit control error	5 flash	2 flash	Off	17	Current trip error
		3 flash	Off	18	CT abnormal
		5 flash	Off	1A	Compressor location detection error
		6 flash	Off	1b	Outdoor unit fan drive system abnormal
Indoor fan motor error	6 flash	2 flash	Off	12	Abnormal lock (upper fan motor)
		3 flash	Off	12	Abnormal rotation (upper fan motor)
		Off	2 flash	12	Abnormal lock (lower fan motor)
		Off	3 flash	12	Abnormal rotation (lower fan motor)
		5 flash	Off	2E	Damper is not normally open or closed
		Off	4 flash	2E	Damper is not normally open or closed
		Off	5 flash	2E	Damper is not normally open or closed
Refrigerant cycle error	7 flash	2 flash	Off	0F	Discharge temperature abnormal
		3 flash	Off	24	Cooling high pressure abnormal rise
		6 flash	Off	2b	Compressor temperature abnormal
Optional function error	8 flash	4 flash	Off	25	PFC circuit error
Power source error	0.1 sec on/off	Off	0.1 sec on/off	08	Power source error
Model information error	0.1 sec on/off	0.1 sec on/off	0.1 sec on/off	11	Model information error

INDOOR UNIT

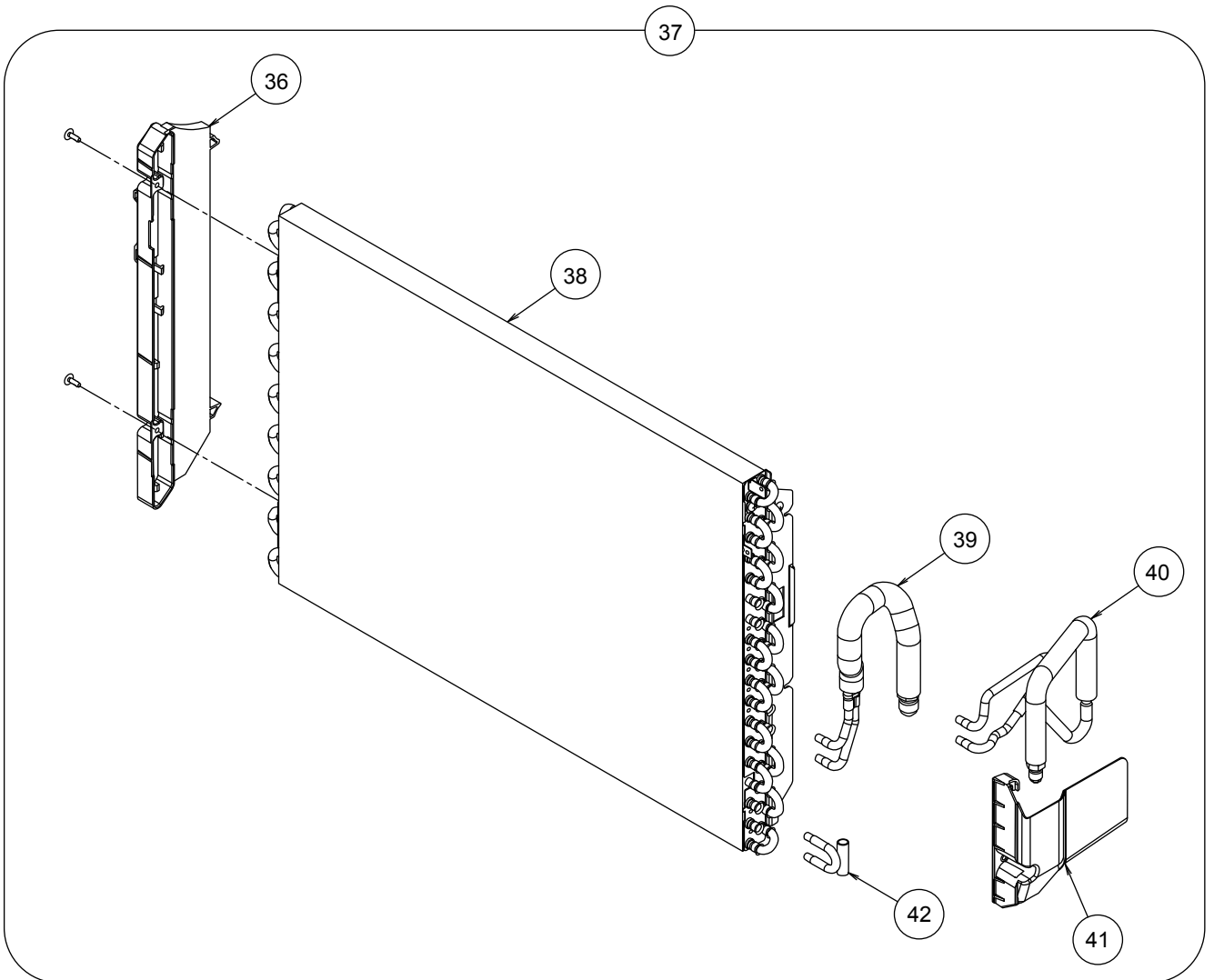
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INDOOR UNIT

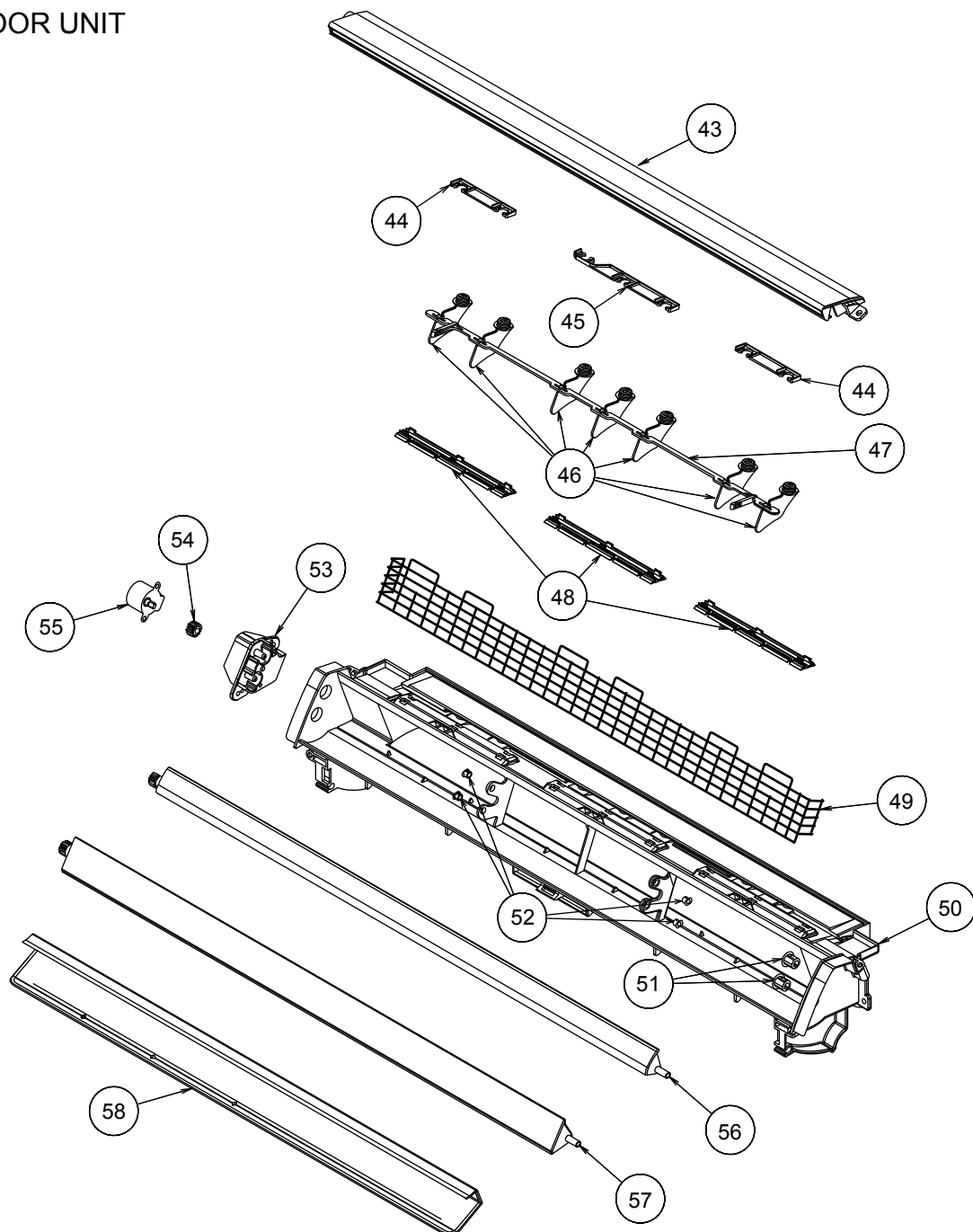


Ref No.	Description	Parts No.					Q'ty
		AGYV09LAC	AGYV12LAC	AGYV14LAC	-	-	
10	MOTOR CUSHION NR	9313168018	9313168018	9313168018	-	-	
11	MOTOR DC BRUSHLESS MFD-34ROM	9602109012	9602109012	9602109012	-	-	
12	MOTOR CUSHION N	9312979011	9312979011	9312979011	-	-	
13	CROSS FLOW FAN ASSY	9312004034	9312004034	9312004034	-	-	
14	BEARING C ASSY	9306628017	9306628017	9306628017	-	-	
15	TERMINAL	9900385026	9900385026	9900385026	-	-	
16	BRACKET (TERMINAL)	9316269019	9316269019	9316269019	-	-	
17	CORD CLAMP	9302271002	9302271002	9302271002	-	-	
18	COVER (TERMINAL)	9316307018	9316307018	9316307018	-	-	
19	BRACKET (PIPE)	9316270015	9316270015	9316270015	-	-	
20	BASE	9316193017	9316193017	9316193017	-	-	
21	PIPE THERMISTOR	9900425012	9900425012	9900425012	-	-	
22	DISPLAY CASE	9316194014	9316194014	9316194014	-	-	
23	DISPLAY PCB	9707571011	9707571011	9707571011	-	-	
24	DISPLAY COVER	9316191013	9316191013	9316191013	-	-	
25	THERMISTOR HOLDER	9316192010	9316192010	9316192010	-	-	
26	SLIDE SWITCH COVER	9316267015	9316267015	9316267015	-	-	
27	ROOM TEMP THERMISTOR	9700801108	9700801108	9700801108	-	-	
28	MOTOR HOLDER	9316195011	9316195011	9316195011	-	-	
29	MOTOR DC BRUSHLESS MFD-14SXM	9602481019	9602481019	9602481019	-	-	
30	CROSS FLOW FAN B ASSY	9316309012	9316309012	9316309012	-	-	
31	CONTROL COVER	9316201019	9316201019	9316201019	-	-	
32	CONTROLLER PCB	9707505016	9707505023	9707505030	-	-	
33	CONTROL BOX	9316200012	9316200012	9316200012	-	-	
34	CONTROL INNER COVER	9316487017	9316487017	9316487017	-	-	
35	SEALED PANEL	9316441019	9316441019	9316441019	-	-	

INDOOR UNIT

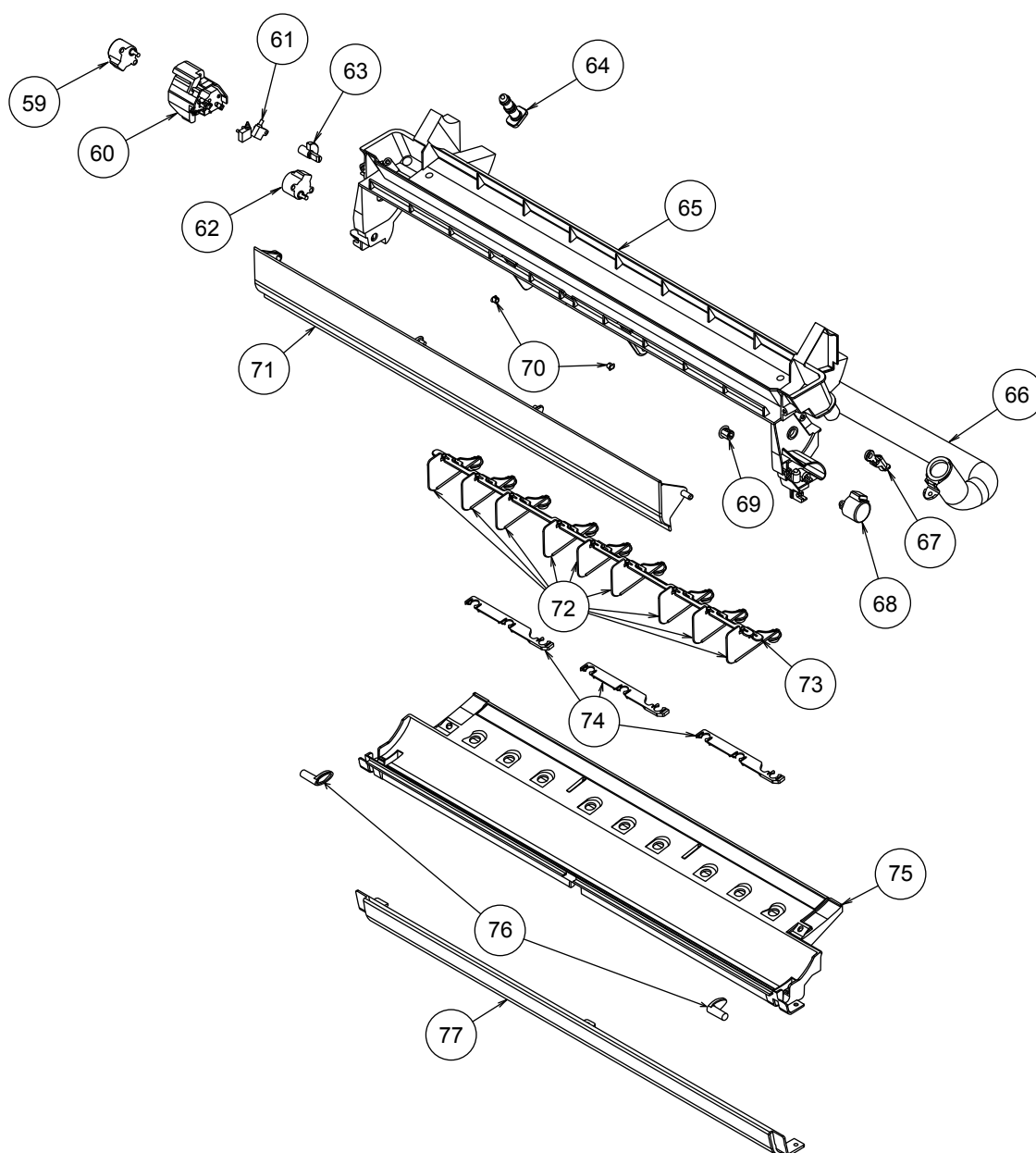
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INDOOR UNIT



Ref No.	Description	Parts No.					Q'ty
		AGYV09LAC	AGYV12LAC	AGYV14LAC	-	-	
43	TOP COVER	9316207011	9316207011	9316207011	-	-	
44	SPACER C	9315281012	9315281012	9315281012	-	-	
45	SPACER D	9315282019	9315282019	9315282019	-	-	
46	R AND L LOUVER U	9316208018	9316208018	9316208018	-	-	
47	JOINT U	9316209015	9316209015	9316209015	-	-	
48	HOLDER (GUARD)	9316210011	9316210011	9316210011	-	-	
49	GUARD (FAN)	9316211018	9316211018	9316211018	-	-	
50	CASING	9316204010	9316204010	9316204010	-	-	
51	BUSING B	9312156016	9312156016	9312156016	-	-	
52	BUSING A	9303529010	9303529010	9303529010	-	-	
53	GEAR CASE	9316213012	9316213012	9316213012	-	-	
54	GEAR A	9309994003	9309994003	9309994003	-	-	
55	MOTOR STEP (UP/DOWN)	9900384043	9900384043	9900384043	-	-	
56	LOUVER U	9316205017	9316205017	9316205017	-	-	
57	LOUVER Z	9316206014	9316206014	9316206014	-	-	
58	REF (CASING)	9316378018	9316378018	9316378018	-	-	

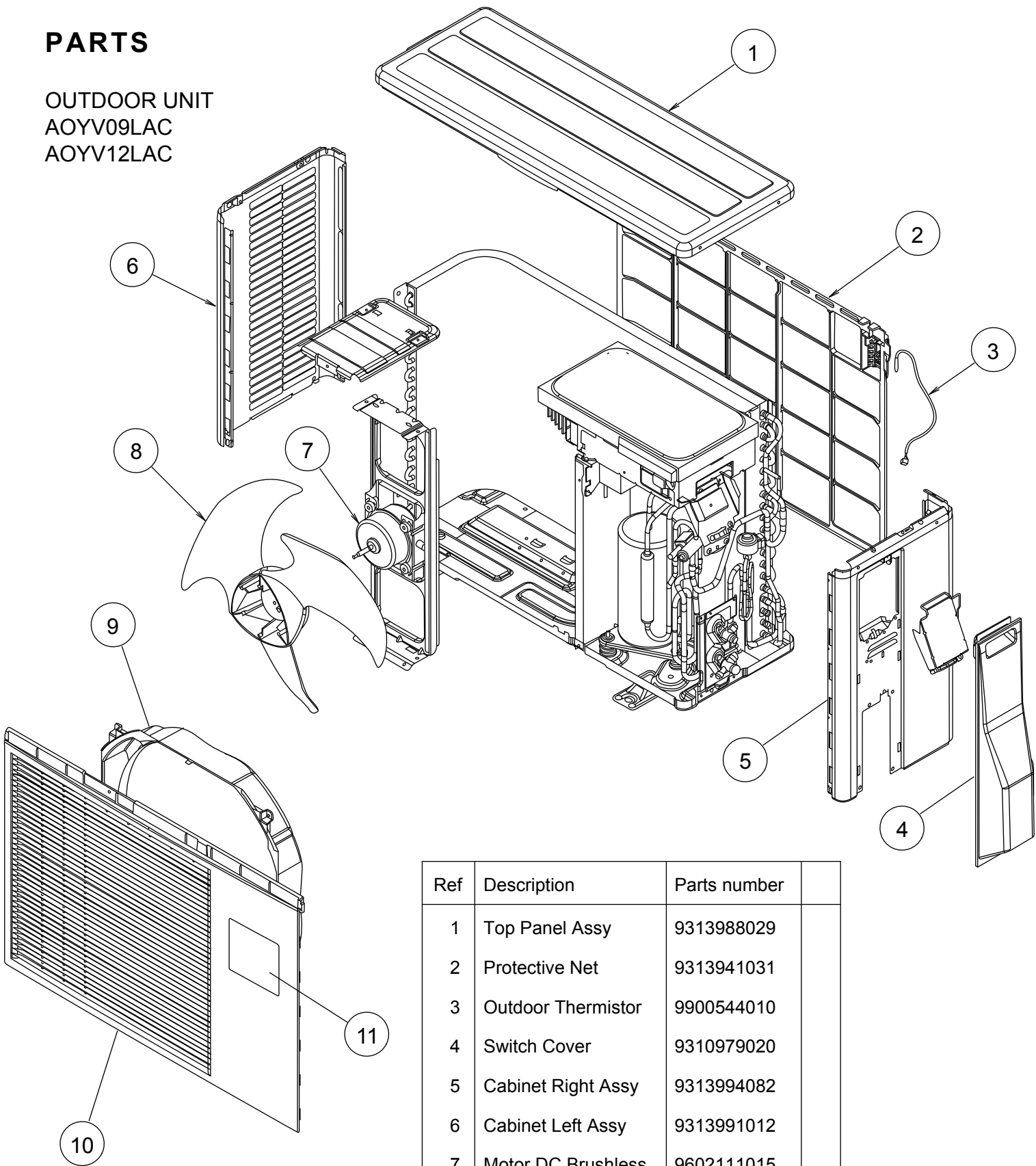
INDOOR UNIT



Ref No.	Description	Parts No.					Q'ty
		AGYV09LAC	AGYV12LAC	AGYV14LAC	-	-	
59	MOTOR STEP (DAMPER)	9900384050	9900384050	9900384050	-	-	
60	LIMIT SWITCH COVER	9316217010	9316217010	9316217010	-	-	
61	SWITCH MICRO (Limit switch)	9900424015	9900424015	9900424015	-	-	
62	MOTOR STEP (DAMPER LOCK LEFT)	9900384067	9900384067	9900384067	-	-	
63	KEY TOP	9316218017	9316218017	9316218017	-	-	
64	CAP (DRAIN)	9316177017	9316177017	9316177017	-	-	
65	DRAIN PAN U	9316214019	9316214019	9316214019	-	-	
66	HOSE (DRAIN) ASSY	9314147029	9314147029	9314147029	-	-	
67	HOLDER (DRAIN HOSE)	9316384019	9316384019	9316384019	-	-	
68	MOTOR STEP (DAMPER LOCK RIGHT)	9900384074	9900384074	9900384074	-	-	
69	BUSING B	9312156016	9312156016	9312156016	-	-	
70	BUSING A	9303529010	9303529010	9303529010	-	-	
71	DAMPER	9316216013	9316216013	9316216013	-	-	
72	R AND L LOUVER Z	9316334014	9316334014	9316334014	-	-	
73	JOINT Z	9316335011	9316335011	9316335011	-	-	
74	SPACER D	9315282019	9315282019	9315282019	-	-	
75	DRAIN PAN Z	9316215016	9316215016	9316215016	-	-	
76	STOPPER	9316219014	9316219014	9316219014	-	-	
77	COVER (LOWER)	9316374010	9316374010	9316374010	-	-	

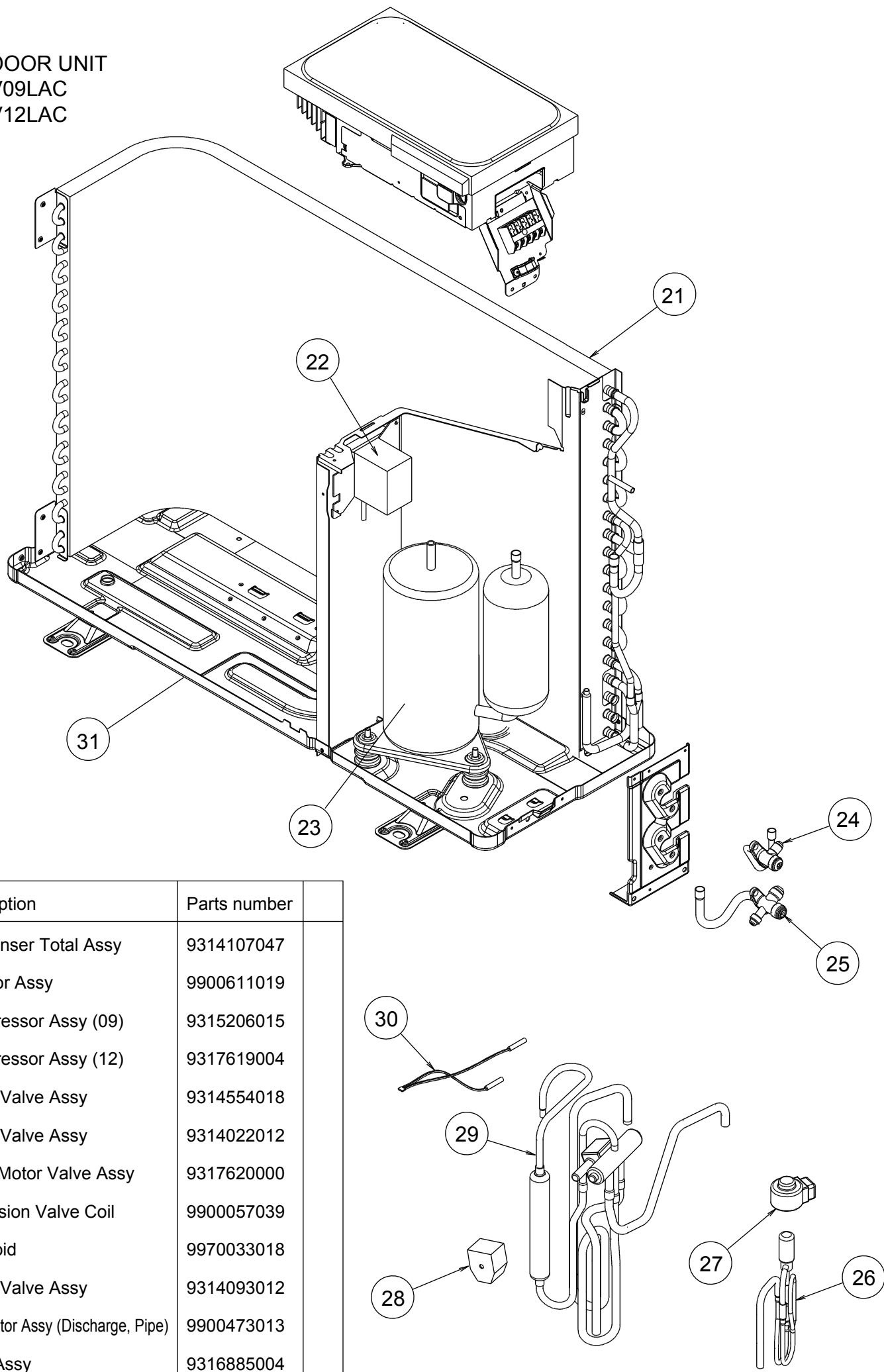
PARTS

OUTDOOR UNIT
AOYV09LAC
AOYV12LAC



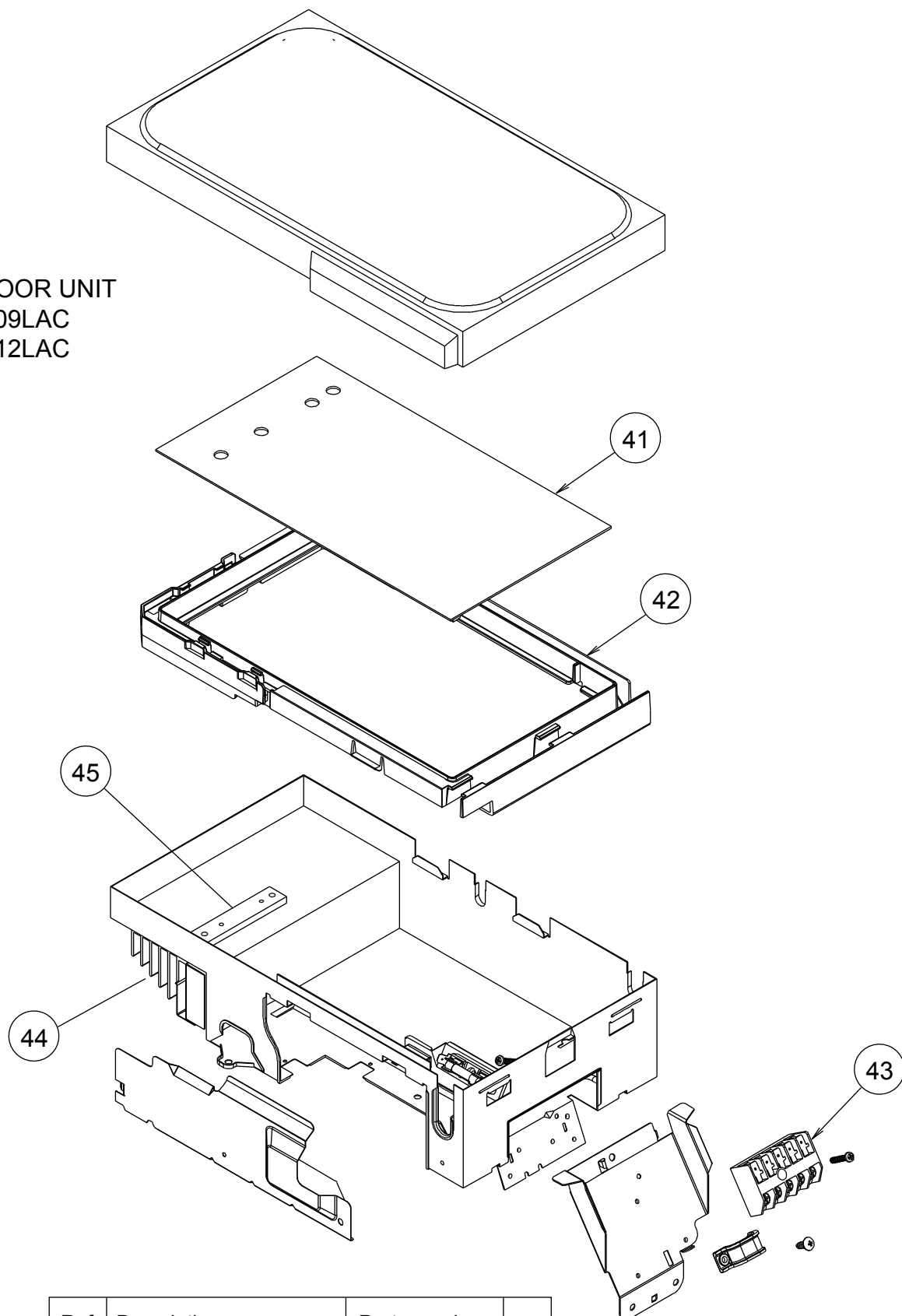
Ref	Description	Parts number	
1	Top Panel Assy	9313988029	
2	Protective Net	9313941031	
3	Outdoor Thermistor	9900544010	
4	Switch Cover	9310979020	
5	Cabinet Right Assy	9313994082	
6	Cabinet Left Assy	9313991012	
7	Motor DC Brushless	9602111015	
8	Propeller Fan	9313808013	
9	Fan Ring	9313807016	
10	Front Panel	9313806026	
11	Rear Emblem	9315210012	

OUTDOOR UNIT
AOYV09LAC
AOYV12LAC



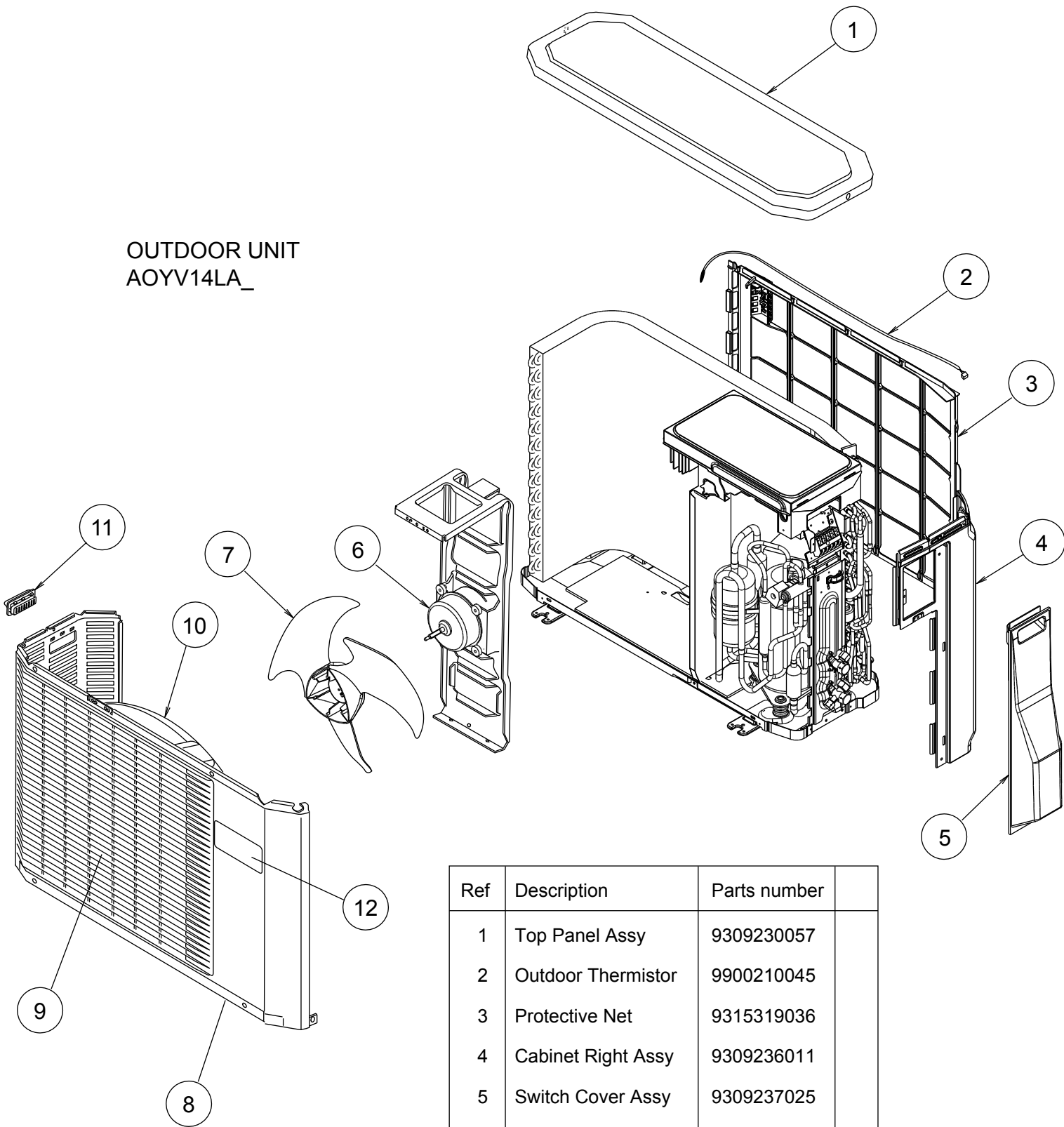
Ref	Description	Parts number
21	Condenser Total Assy	9314107047
22	Reactor Assy	9900611019
23	Compressor Assy (09)	9315206015
23	Compressor Assy (12)	9317619004
24	2-way Valve Assy	9314554018
25	3-way Valve Assy	9314022012
26	Pulse Motor Valve Assy	9317620000
27	Expansion Valve Coil	9900057039
28	Solenoid	9970033018
29	4-way Valve Assy	9314093012
30	Thermistor Assy (Discharge, Pipe)	9900473013
31	Base Assy	9316885004

OUTDOOR UNIT
AOYV09LAC
AOYV12LAC



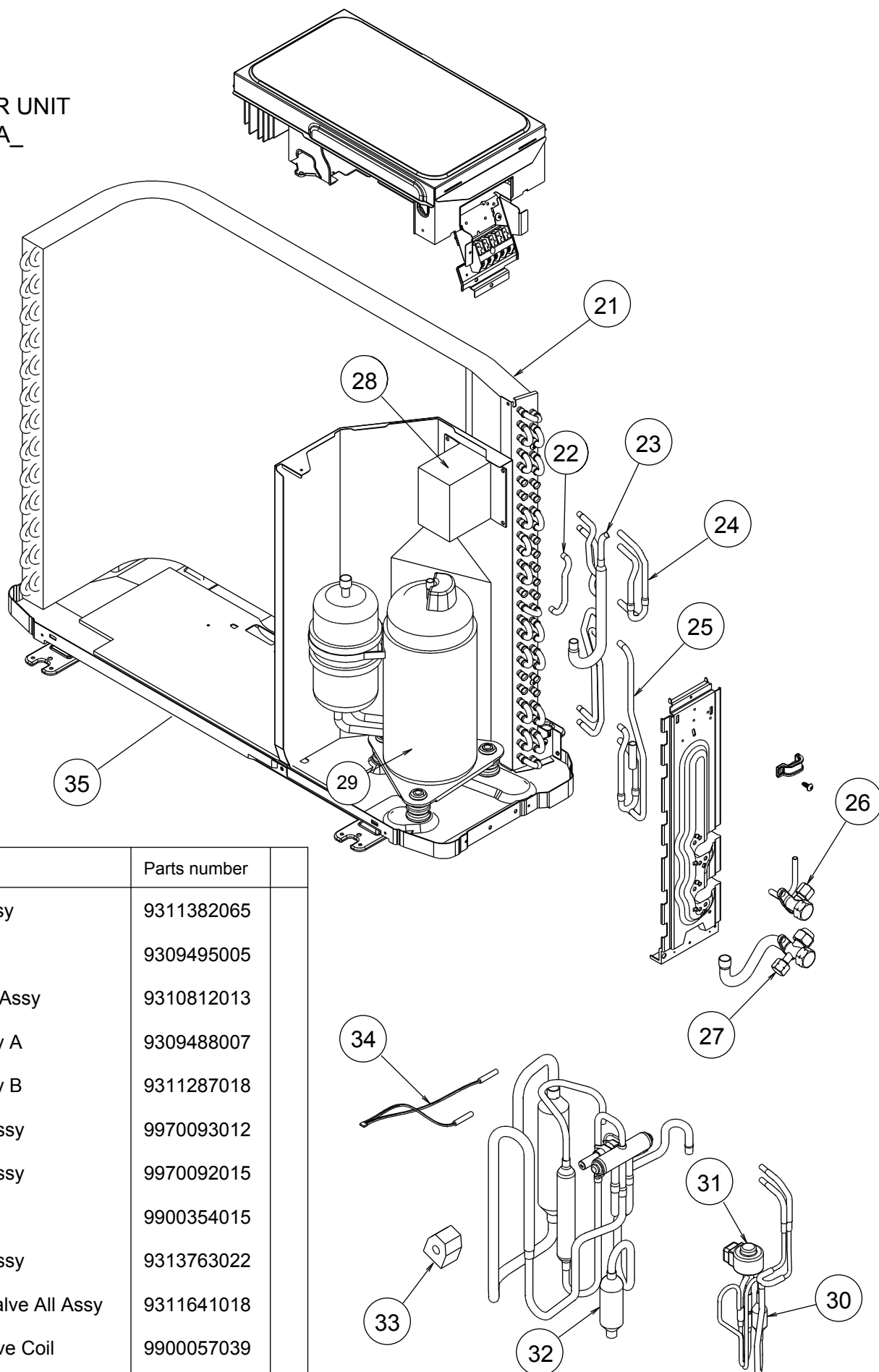
Ref	Description	Parts number	
41	Inverter PCB Assy (09)	9707039221	
41	Inverter PCB Assy (12)	9707039238	
42	PCB Holder	9313074029	
43	Terminal	9703874031	
44	Heat Sink A	9314410017	
45	Heat Sink B	9314090011	

OUTDOOR UNIT
AOYV14LA_



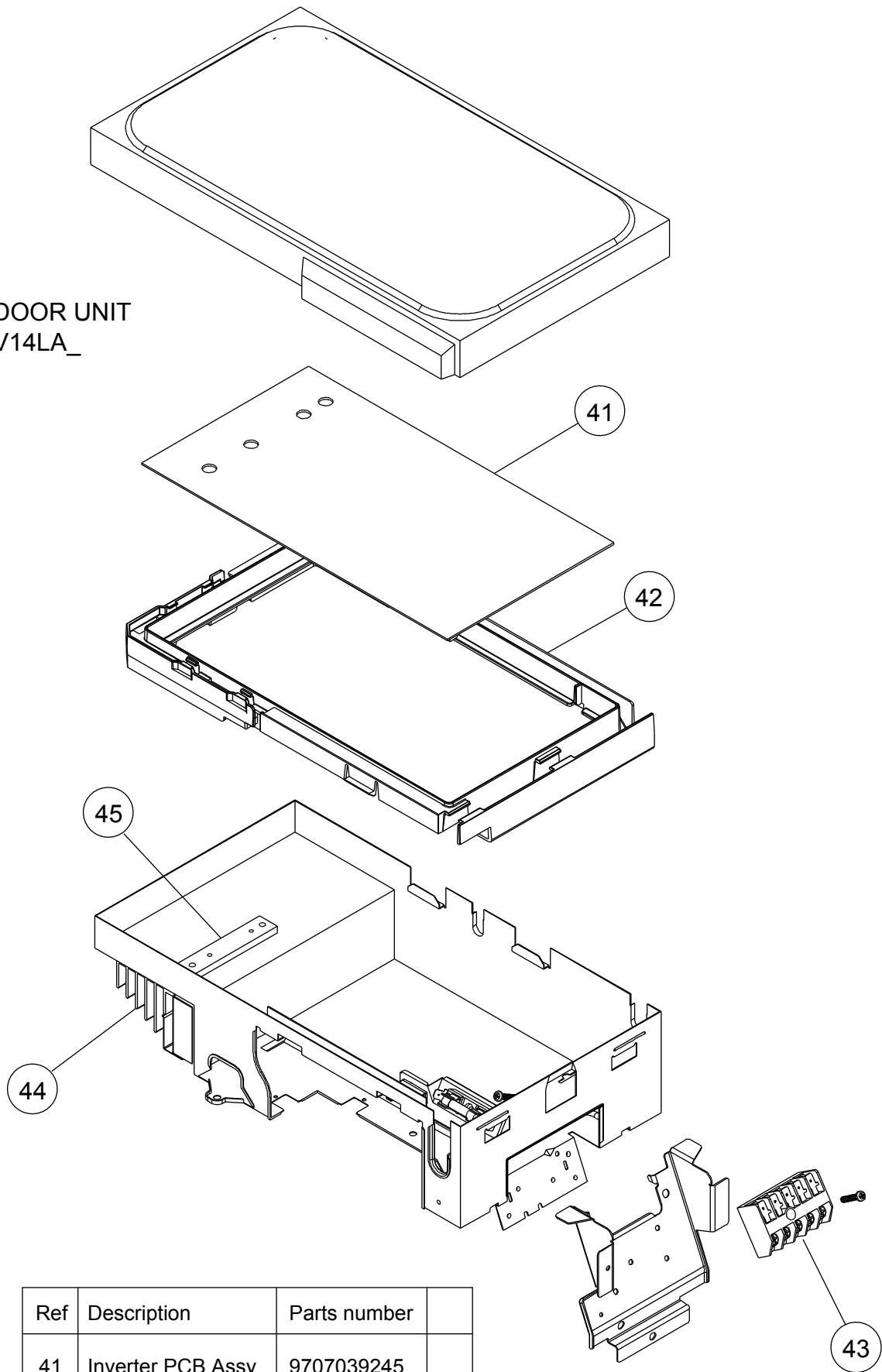
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1	Top Panel Assy	9309230057	
2	Outdoor Thermistor	9900210045	
3	Protective Net	9315319036	
4	Cabinet Right Assy	9309236011	
5	Switch Cover Assy	9309237025	
6	Motor DC Brushless	9601725015	
7	Propeller Fan	9309909014	
8	Cabinet Assy	9314809040	
9	Blow Grille	9308884015	
10	Fan Ring	9308885012	
11	Grip	9308880017	
12	Rear Emblem	9315210012	

OUTDOOR UNIT
AOYV14LA_



Ref	Description	Parts number
21	Condenser Assy	9311382065
22	Joint E	9309495005
23	Entrance Pipe Assy	9310812013
24	Joint Pipe Assy A	9309488007
25	Joint Pipe Assy B	9311287018
26	2-way Valve Assy	9970093012
27	3-way Valve Assy	9970092015
28	Reactor Assy	9900354015
29	Compressor Assy	9313763022
30	Pulse Motor Valve All Assy	9311641018
31	Expansion Valve Coil	9900057039
32	4-way Valve Assy	9316475014
33	Solenoid	9970033018
34	Thermistor Assy (Discharge, Pipe)	9900473013
35	Base Assy	9308869081

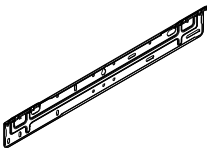
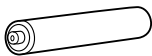
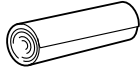
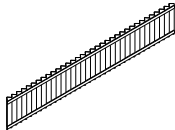
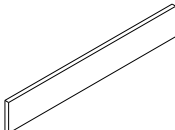
OUTDOOR UNIT
AOYV14LA_



Ref	Description	Parts number	
41	Inverter PCB Assy	9707039245	
42	PCB Holder	9313074029	
43	Terminal	9703874031	
44	Heat Sink A	9314410017	
45	Heat Sink B	9314090011	

ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Use	Part No.	
Bracket panel 	1	For indoor unit installation	9316272019	
Remote control unit AR-RAC1E 	1	Use for air conditioner operation	9316397019	
Battery (penlight) 	2	For remote control unit	0600185527	
Cloth tape 	1	For indoor unit installation	9310519004	
Remote control unit holder 	1	Use as remote control unit holder	9305642045	
Tpping screw (big) ($\phi 4 \times 25$) 	9	For wall hook bracket and body installation	0700076046	
Tpping screw (small) ($\phi 3 \times 12$) 	2	For remote control unit holder installation	0700019036	
Electric filter UTR-FC03-2 	1	With 2 sheets	9312832002	
Ion deodrant filter UTR-FC03-3 	1	With 2 sheets	9312833009	

OUTDOOR UNIT

Name and Shape	Q'ty	Use	Part No.	
			AOYV09/12LAC	AOYV14LA_
Drain pipe assy 	1	For outdoor unit drain piping work	9303029022	9303029015

