

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASYG09LECB	AOYG09LECAN
ASYG12LECB	AOYG12LECAN

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		ASYG09LECB	ASYG12LECB
OUTDOOR UNIT		AOYG09LECAN	AOYG12LECAN
COOLING CAPACITY		2.50 kW	3.40 kW
HEATING CAPACITY		3.20 kW	4.00 kW
POWER SOURCE		230 V	230 V
FREQUENCY		50 Hz	50 Hz
RUNNING CURRENT	Cooling	3.2 A	4.3 A
	Heating	3.7 A	4.6 A
INPUT WATTS	Cooling	0.630 kW	0.895 kW
	Heating	0.750 kW	0.970 kW
E.E.R.	Cooling	3.97 kW/kW	3.80 kW/kW
COP	Heating	4.27 kW/kW	4.12 kW/kW
MOISTURE REMOVAL		1.3 L/h	1.8 L/h
AIR CIRCULATION		735 m ³ /h	735 m ³ /h
MAXIMUM CURRENT	Cooling	6.0 A	7.0 A
	Heating	9.5 A	11.0 A

FAN MOTOR

POWER SOURCE		230 V	230 V
INDOOR UNIT Cooling	High	1,440 r.p.m.	1,440 r.p.m.
	Medium	1,200 r.p.m.	1,200 r.p.m.
	Low	920 r.p.m.	920 r.p.m.
	Quiet	680 r.p.m.	680 r.p.m.
INDOOR UNIT Heating	High	1,440 r.p.m.	1,440 r.p.m.
	Medium	1,200 r.p.m.	1,200 r.p.m.
	Low	980 r.p.m.	980 r.p.m.
	Quiet	700 r.p.m.	700 r.p.m.
OUTDOOR UNIT Cooling		850 r.p.m.	850 r.p.m.
OUTDOOR UNIT Heating		750 r.p.m.	750 r.p.m.

NOISE LEVEL

INDOOR UNIT Cooling	High	43 dB	43 dB
	Medium	38 dB	38 dB
	Low	33 dB	33 dB
	Quiet	21 dB	21 dB
INDOOR UNIT Heating	High	43 dB	43 dB
	Medium	38 dB	38 dB
	Low	33 dB	33 dB
	Quiet	21 dB	21 dB
OUTDOOR UNIT Cooling		48 dB	49 dB
OUTDOOR UNIT Heating		47 dB	48 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE	Hermetic type, 4 pole, DC inverter motor, Rotary		
DISCRIMINATION	DA89X1C-20FZ2		
WEIGHT (with oil)	9.2 kg		
PRECHARGED REFRIGERANT	950 g	1,000 g	
REFRIGERANT TYPE	R410A		R410A
FULL CHARGE	Pipe length 15 m	950 g	1,000 g
	20 m	1,050 g	1,100 g
ADDITIONAL CHARGE	20 g/m		
MAXIMUM PIPING HEIGHT	15m		

DIMENSIONS

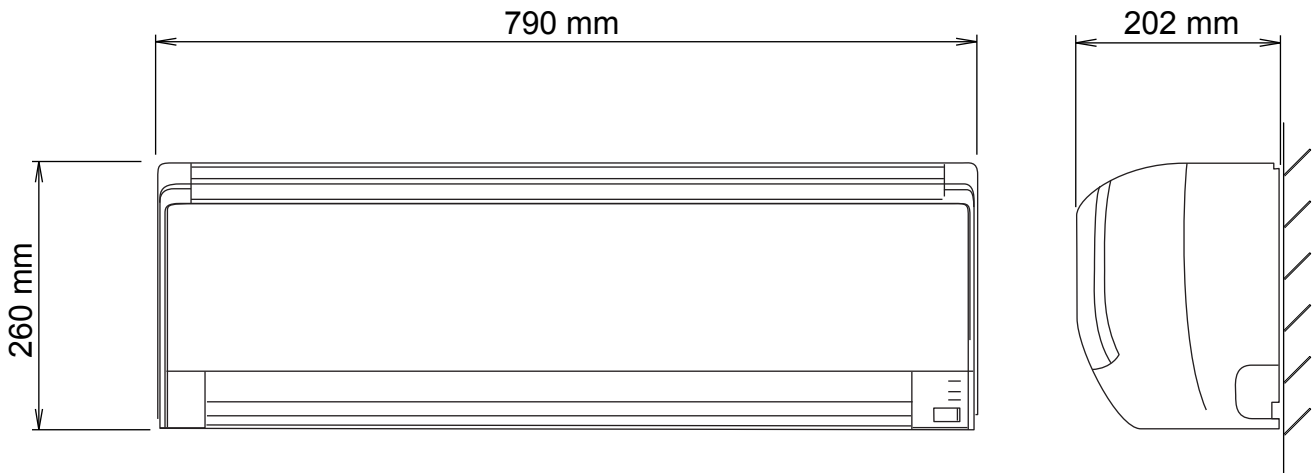
INDOOR UNIT	H x W x D	260 x 790 x 202 mm
OUTDOOR UNIT	H x W x D	540 x 790 x 290 mm

WEIGHT

INDOOR UNIT	Shipping / Net	9.5 kg / 7.5 kg	
OUTDOOR UNIT	Shipping / Net	40 kg / 36 kg	43 kg / 39 kg

DIMENSIONS

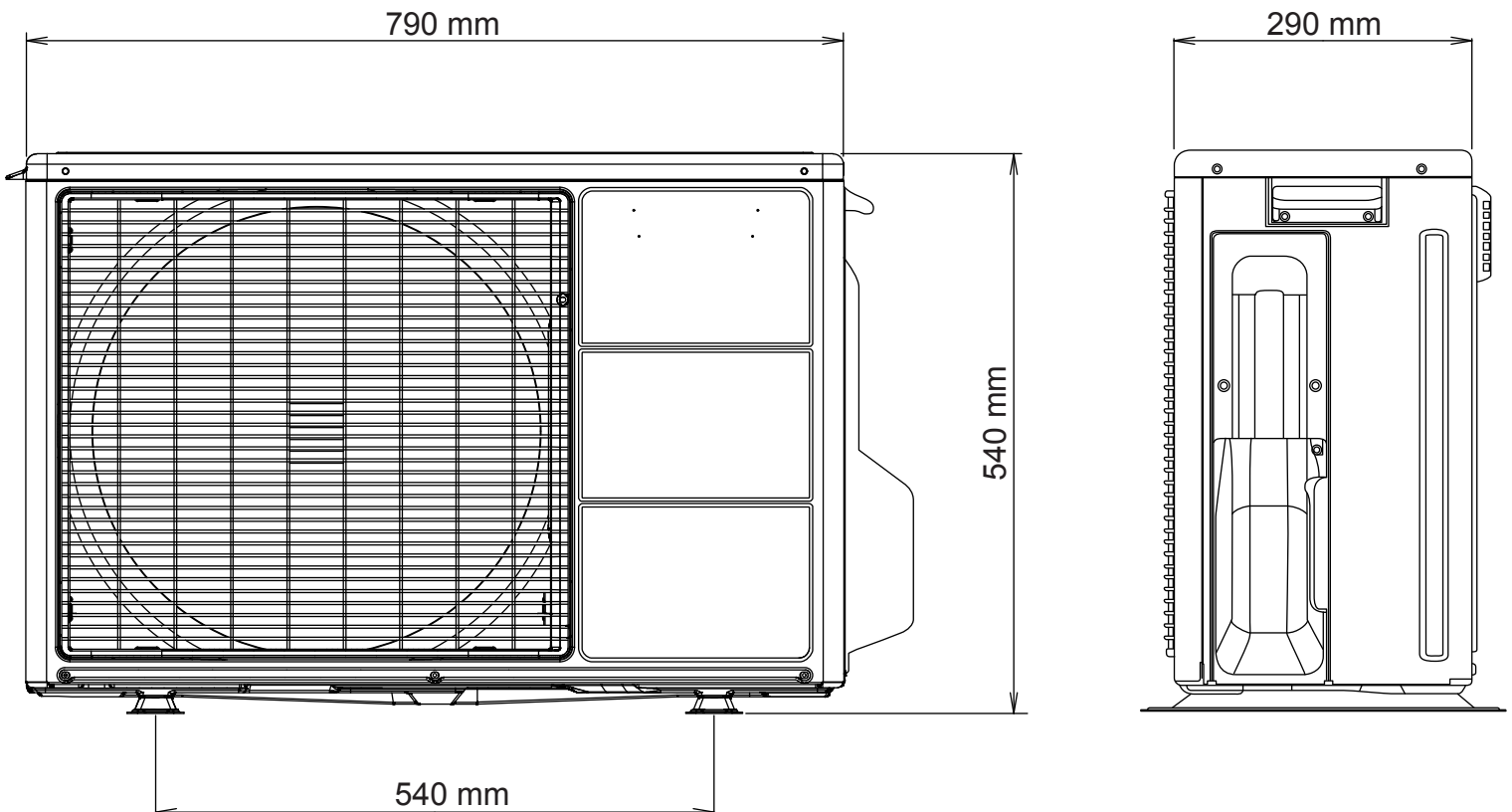
INDOOR UNIT



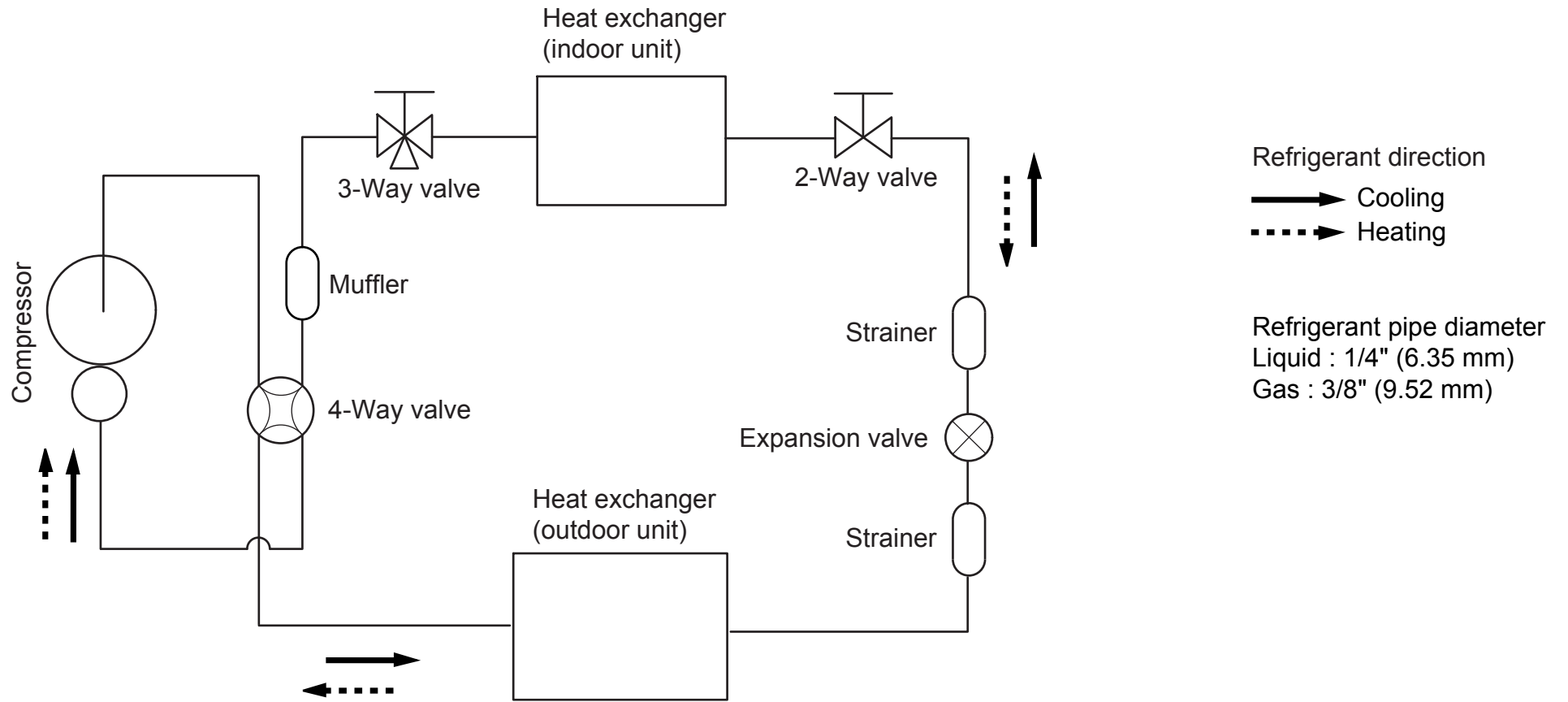
Drain pipe diameter
O.D 15.8 to 16.7 mm

Liquid pipe diameter : 6.35 mm
Gas pipe diameter : 9.52 mm

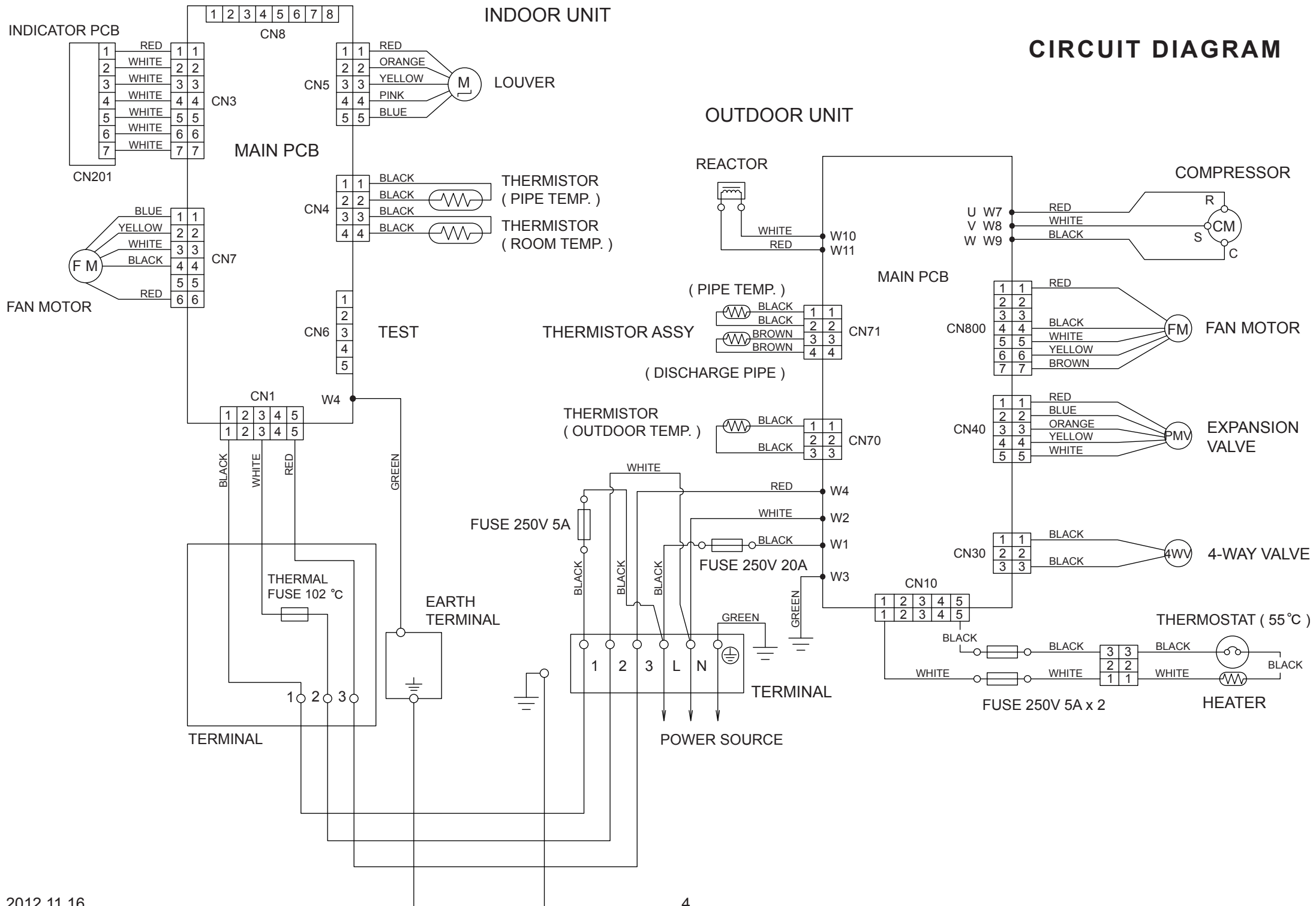
OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM

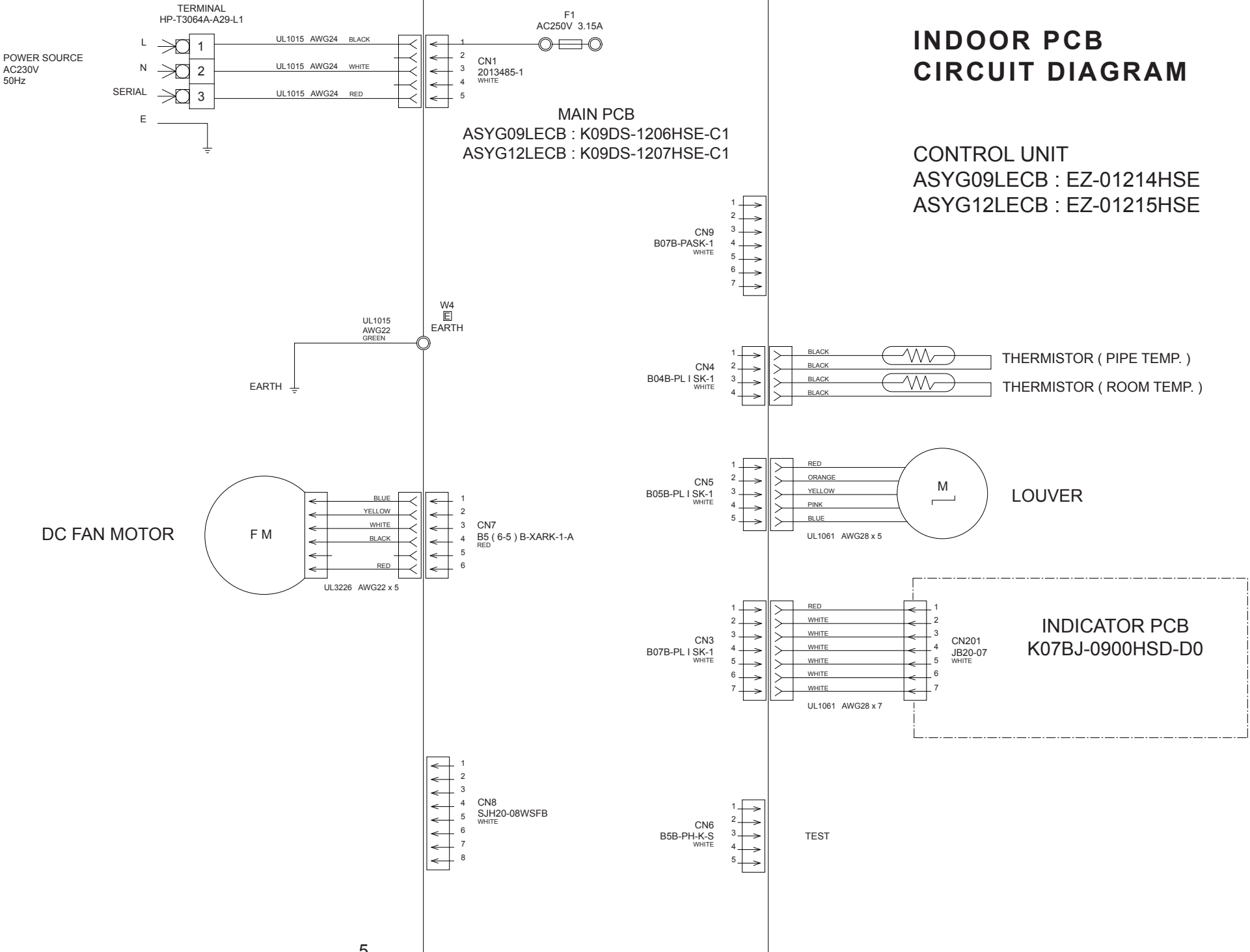


CIRCUIT DIAGRAM

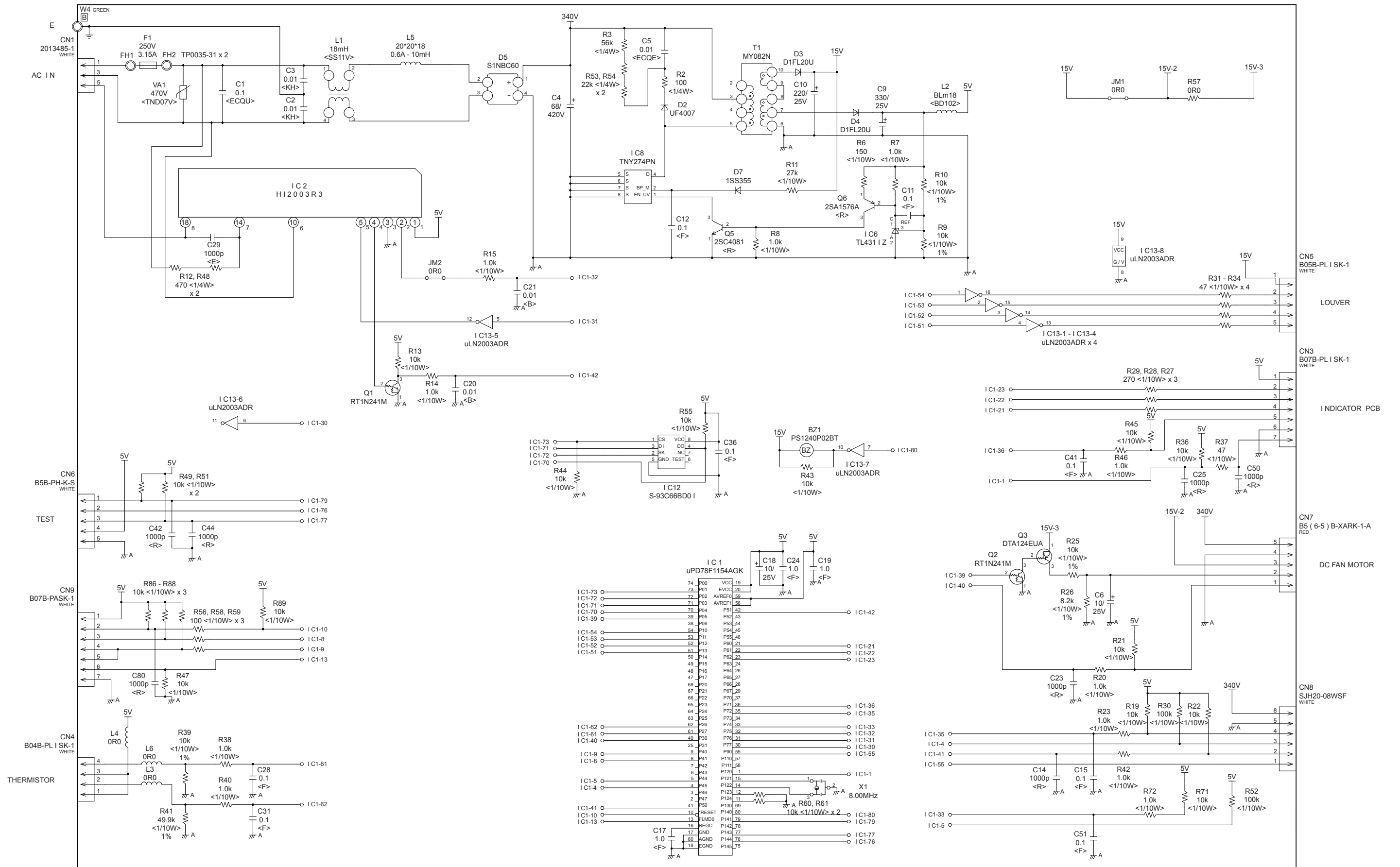


INDOOR PCB CIRCUIT DIAGRAM

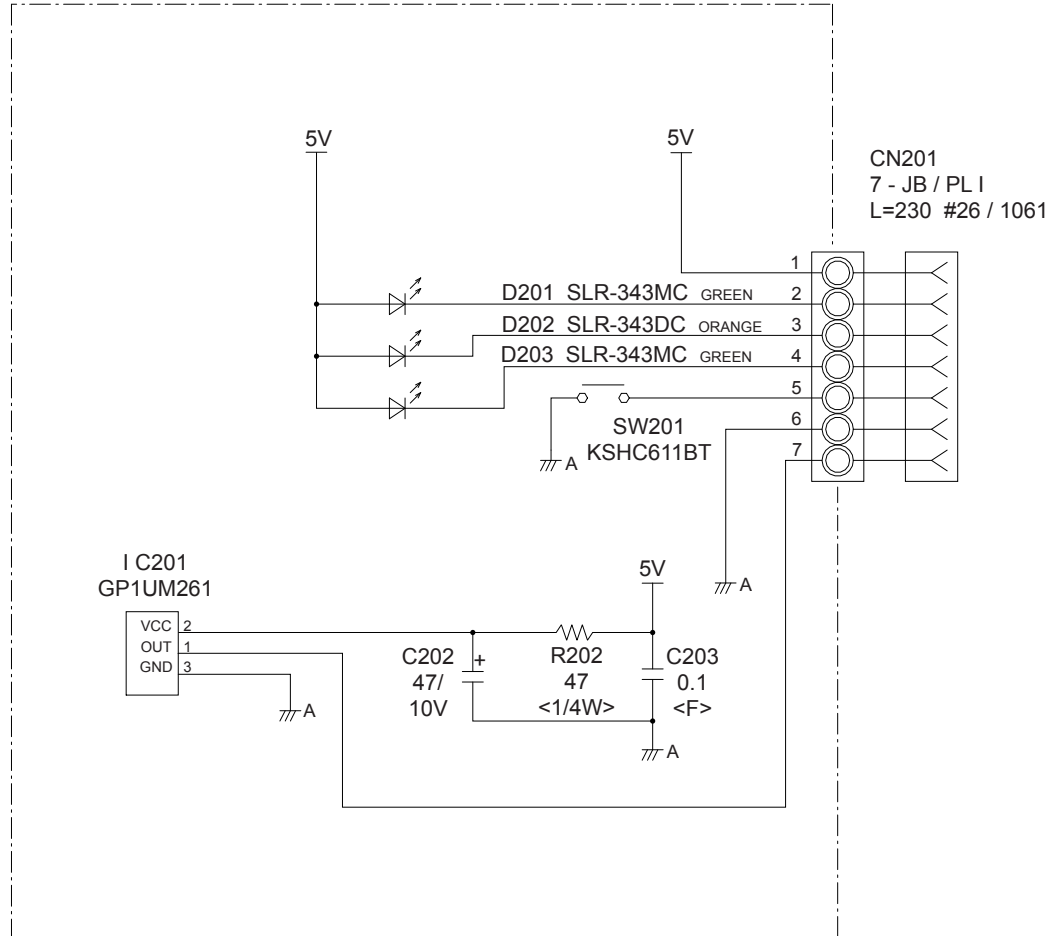
CONTROL UNIT
 ASYG09LECB : EZ-01214HSE
 ASYG12LECB : EZ-01215HSE



INDOOR UNIT
 MAIN PCB
 ASYG09LECB : K09DS-1206HSE-C1
 ASYG12LECB : K09DS-1207HSE-C1

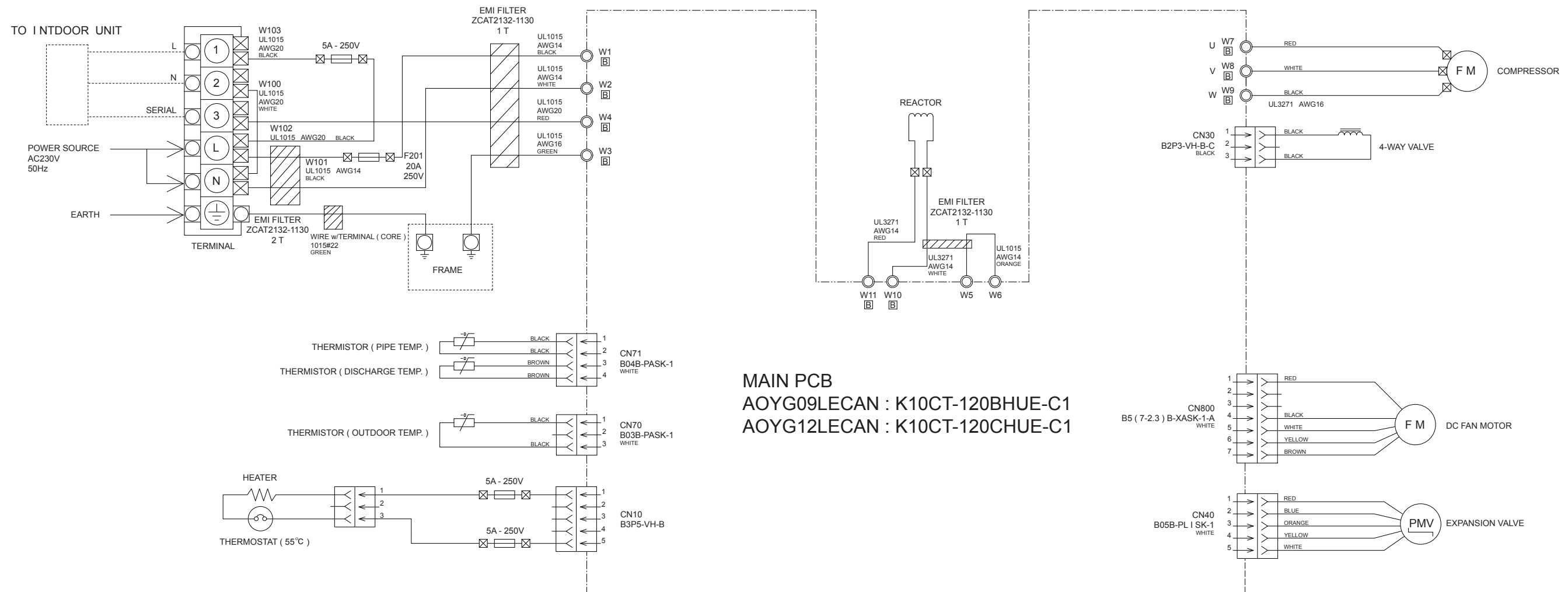


INDOOR UNIT
 INDICATOR PCB
 K07BJ-0900HSD-D0

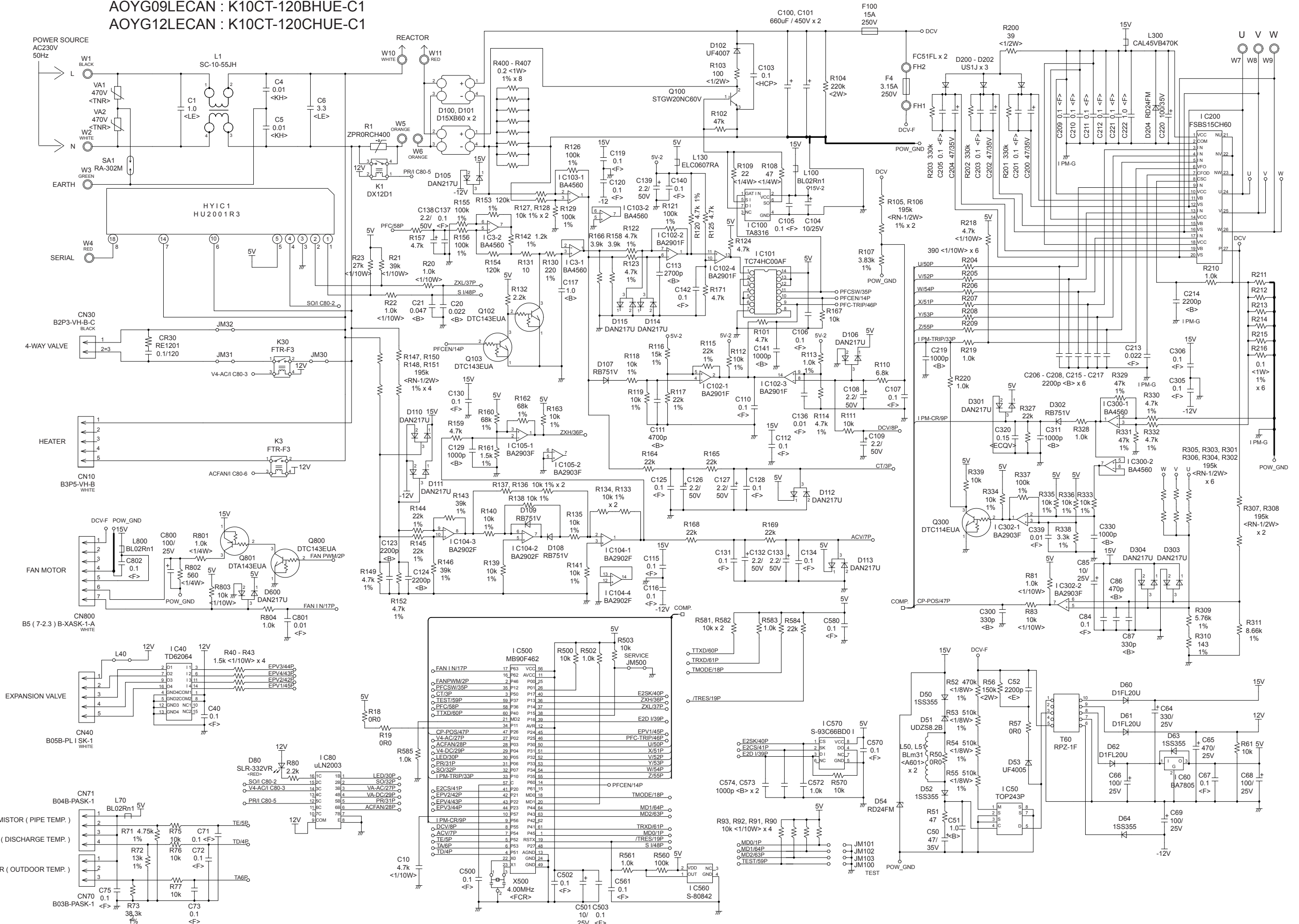


OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOYG09LECAN : EZ-01219HUE
 AOYG12LECAN : EZ-0121AHUE



OUTDOOR UNIT
 MAIN PCB
 AOYG09LECAN : K10CT-120BHUE-C1
 AOYG12LECAN : K10CT-120CHUE-C1



ERROR DETECTION

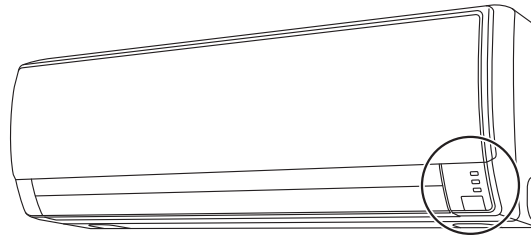
INDOOR UNIT REMOTE CONTROL

If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

If you use a wired remote control, error codes will appear on the remote control display.

See the lamp blinking patterns and error codes in the table.

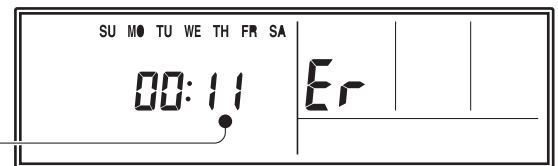
An error display is displayed only during operation.



OPERATION OPERATION lamp (green)
TIMER TIMER lamp (orange)
ECONOMY ECONOMY lamp (green)

Wired remote control display (Option)

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



● : 0.5s ON / 0.5s OFF

◇ : 0.1s ON / 0.1s OFF

() : Number of flashing

Error code

Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (1)	● (5)	◇	15	Check run unfinished
● (2)	● (1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
● (2)	● (2)	◇	22	Indoor unit capacity error
● (2)	● (3)	◇	23	Combination error
● (2)	● (4)	◇	24	•Connection unit number error (indoor unit) [Simultaneous Multi] •Connection unit number error (indoor unit or branch unit) [Flexible Multi]
● (2)	● (7)	◇	27	Master unit, slave unit set-up error [Simultaneous Multi]
● (3)	● (2)	◇	32	Indoor unit PCB model information error
● (3)	● (5)	◇	35	Manual auto switch error
● (4)	● (1)	◇	41	Room temp. sensor error
● (4)	● (2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
● (5)	● (1)	◇	51	Indoor unit fan motor error
● (5)	● (3)	◇	53	Drain pump error
● (5)	● (7)	◇	57	Damper error
● (5)	● (8)	◇	58	Intake grill error
● (5)	● (15)	◇	5U	Indoor unit error
● (6)	● (2)	◇	62	Outdoor unit main PCB model information error or communication error
● (6)	● (3)	◇	63	Inverter error
● (6)	● (4)	◇	64	Active filter error, PFC circuit error
● (6)	● (5)	◇	65	Trip terminal L error

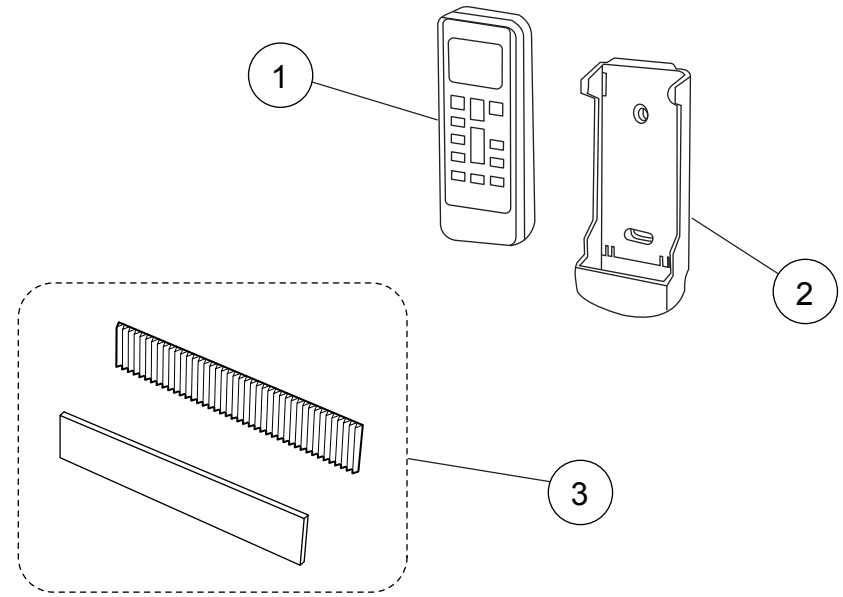
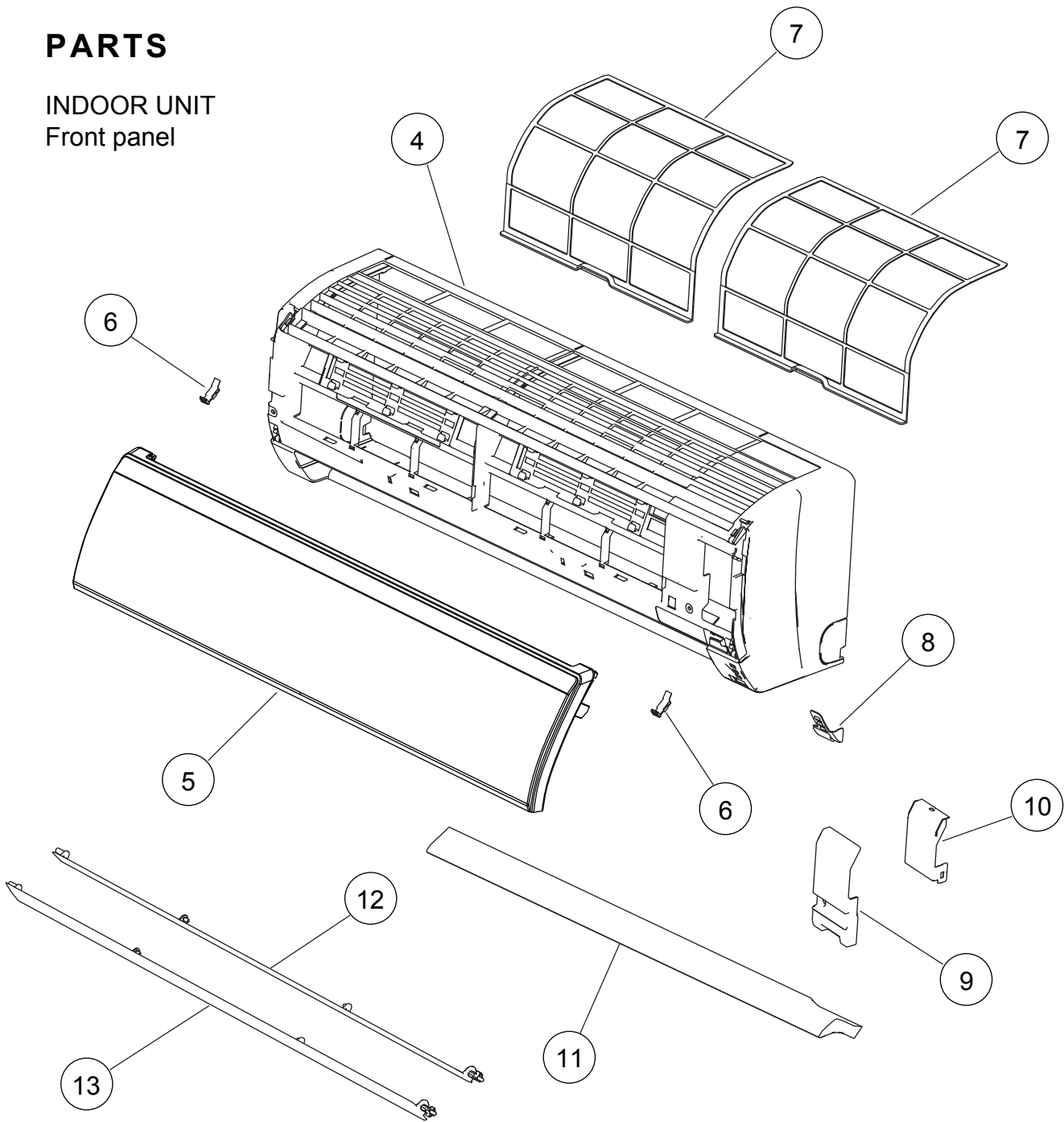
Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (7)	● (5)	◇	75	Suction Gas temp. sensor error
● (7)	● (6)	◇	76	• 2-way valve temp. sensor error • 3-way valve temp. sensor error
● (7)	● (7)	◇	77	Heat sink temp. sensor error
● (8)	● (2)	◇	82	• Sub-cool Heat Ex. gas inlet temp. sensor error • Sub-cool Heat Ex. gas outlet temp. sensor error
● (8)	● (3)	◇	83	Liquid pipe temp. sensor error
● (8)	● (4)	◇	84	Current sensor error
● (8)	● (6)	◇	86	• Discharge pressure sensor error • Suction pressure sensor error • High pressure switch error
● (9)	● (4)	◇	94	Trip detection
● (9)	● (5)	◇	95	Compressor rotor position detection error (permanent stop)
● (9)	● (7)	◇	97	Outdoor unit fan motor error
● (9)	● (9)	◇	99	4-way valve error
● (10)	● (1)	◇	A1	Discharge temp. error
● (10)	● (3)	◇	A3	Compressor temp. error
● (10)	● (4)	◇	A4	High pressure error
● (10)	● (5)	◇	A5	Low pressure error
● (13)	● (2)	◇	J2	Branch boxes error

OUTDOOR UNIT

LED	ERROR
on	Discharge temperature abnormal
0.5 second on / 0.5 second off	IPM overcurrent protection
0.1 second on / 0.1 second off	Thermistor abnormal
2.0 second on / 2.0 second off	CT abnormal
0.1 second on / 2.0 second off	Compressor location abnormal
5.0 second on / 5.0 second off	Fan abnormal

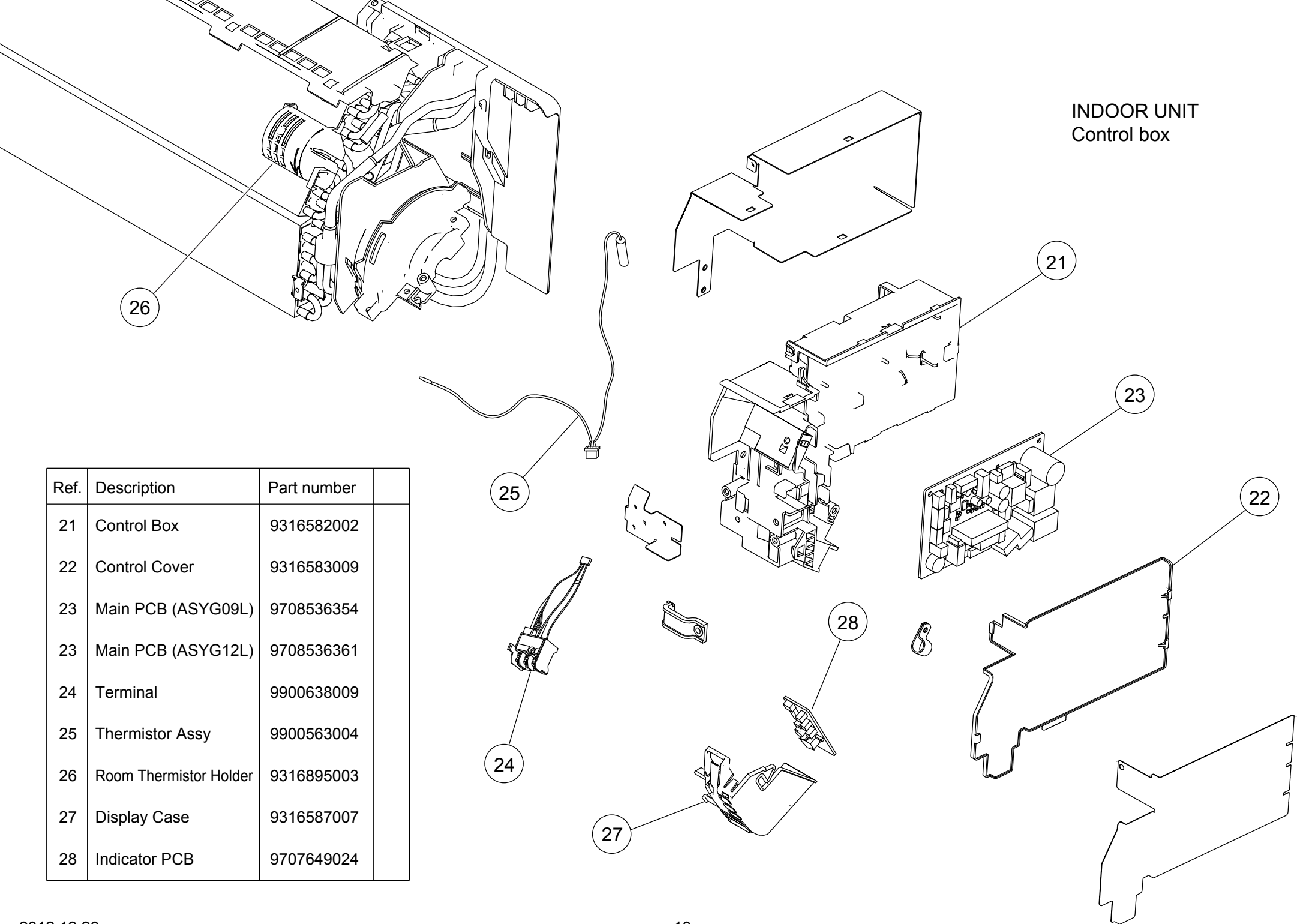
PARTS

INDOOR UNIT
Front panel



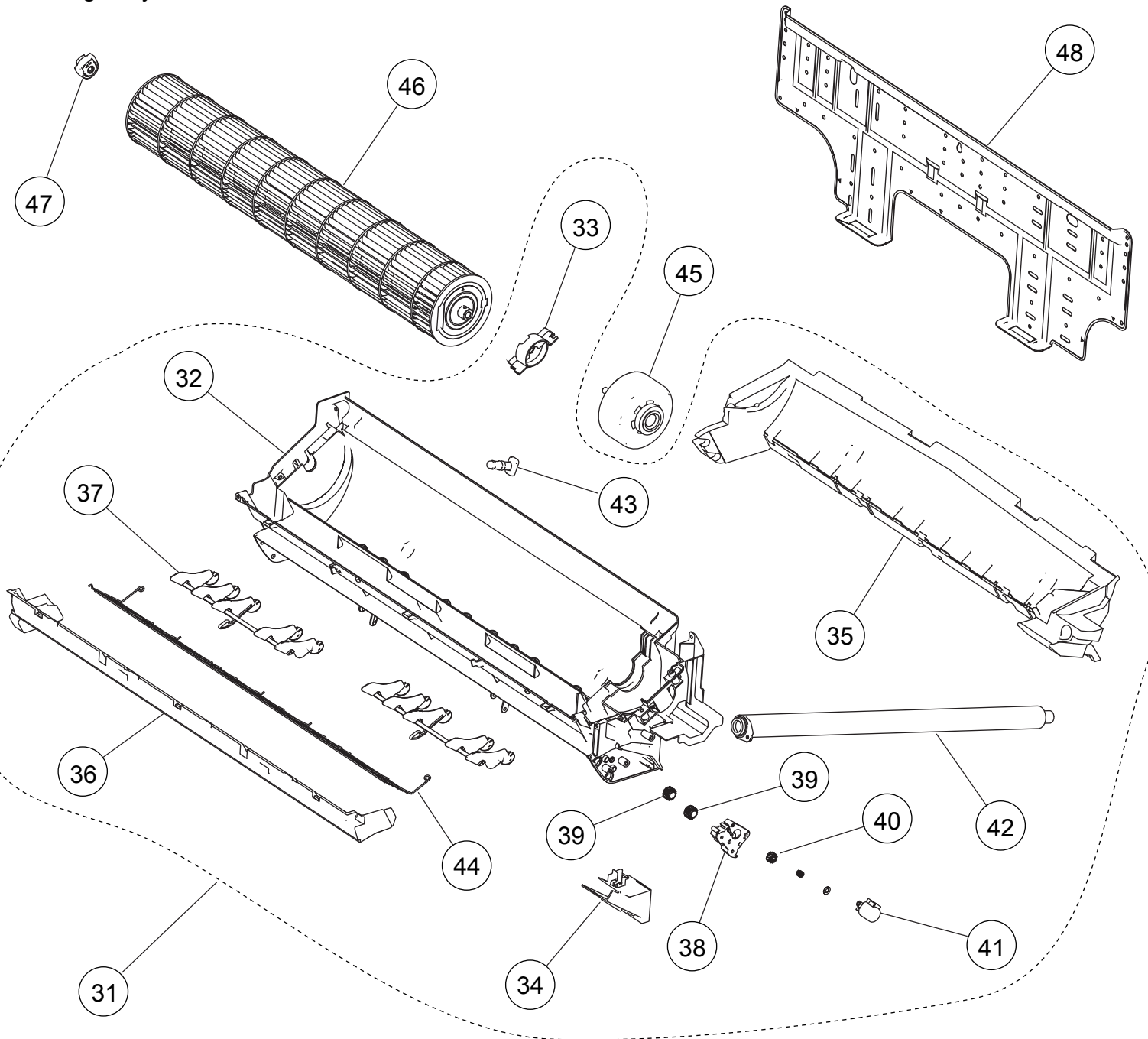
Ref.	Description	Part number
1	Remote Control	9379219006
2	Remote Control Holder	9305642045
3	Air Clean Filter Assy	9317250009
4	Front Panel	9316558045
5	Intake Grille Assy	9332272024
6	Grille Clamper	9316906006
7	Air Filter	9316562004
8	Receiver Window	9316588011
9	Wire Cover	9316559004
10	Wire Shield	9316584006
11	Panel Cover	9316561014
12	Louver Z (Lower)	9316573000
13	Louver U (Upper)	9316572003

INDOOR UNIT
Control box

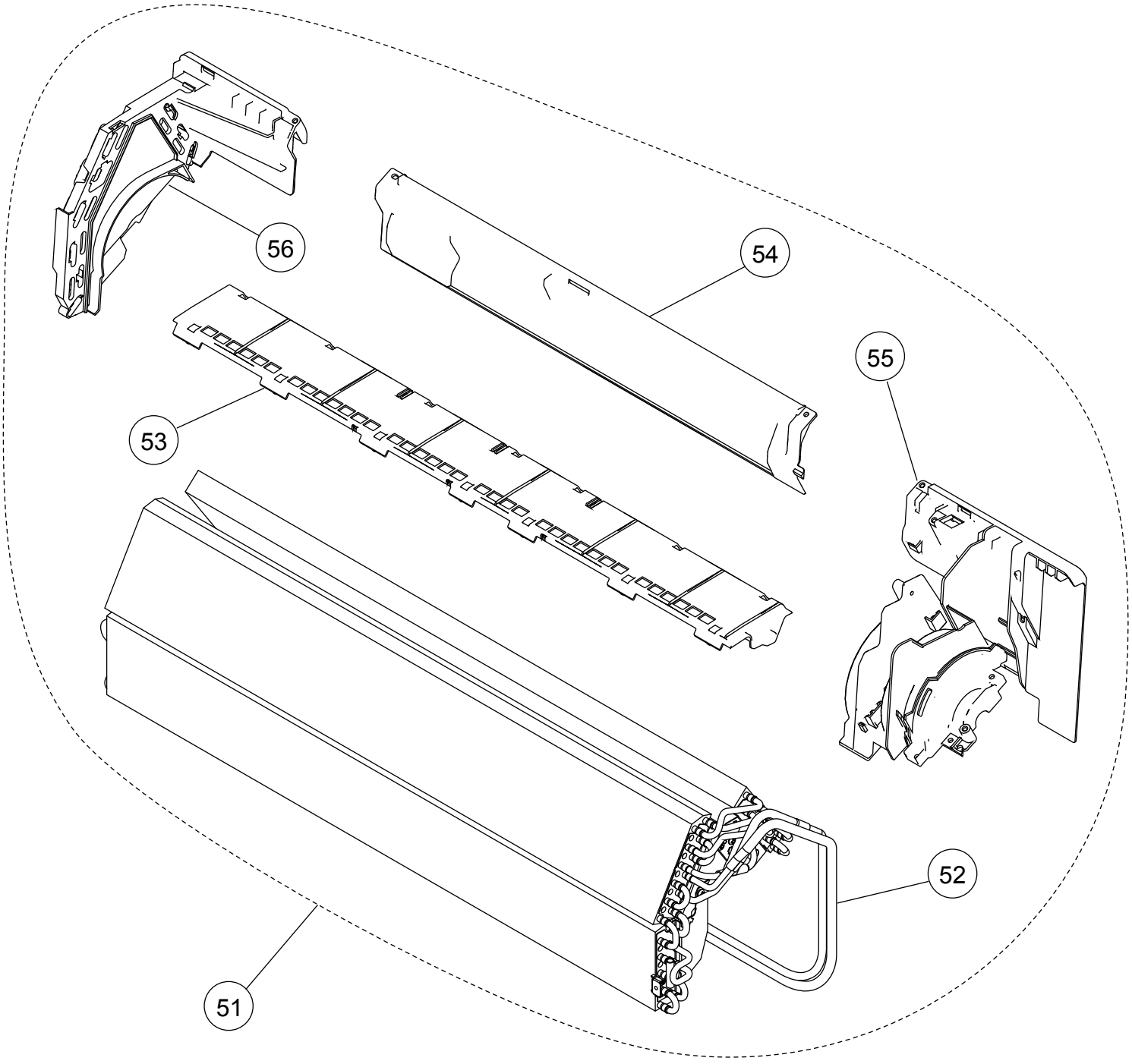


Ref.	Description	Part number
21	Control Box	9316582002
22	Control Cover	9316583009
23	Main PCB (ASYG09L)	9708536354
23	Main PCB (ASYG12L)	9708536361
24	Terminal	9900638009
25	Thermistor Assy	9900563004
26	Room Thermistor Holder	9316895003
27	Display Case	9316587007
28	Indicator PCB	9707649024

INDOOR UNIT
Casing assy

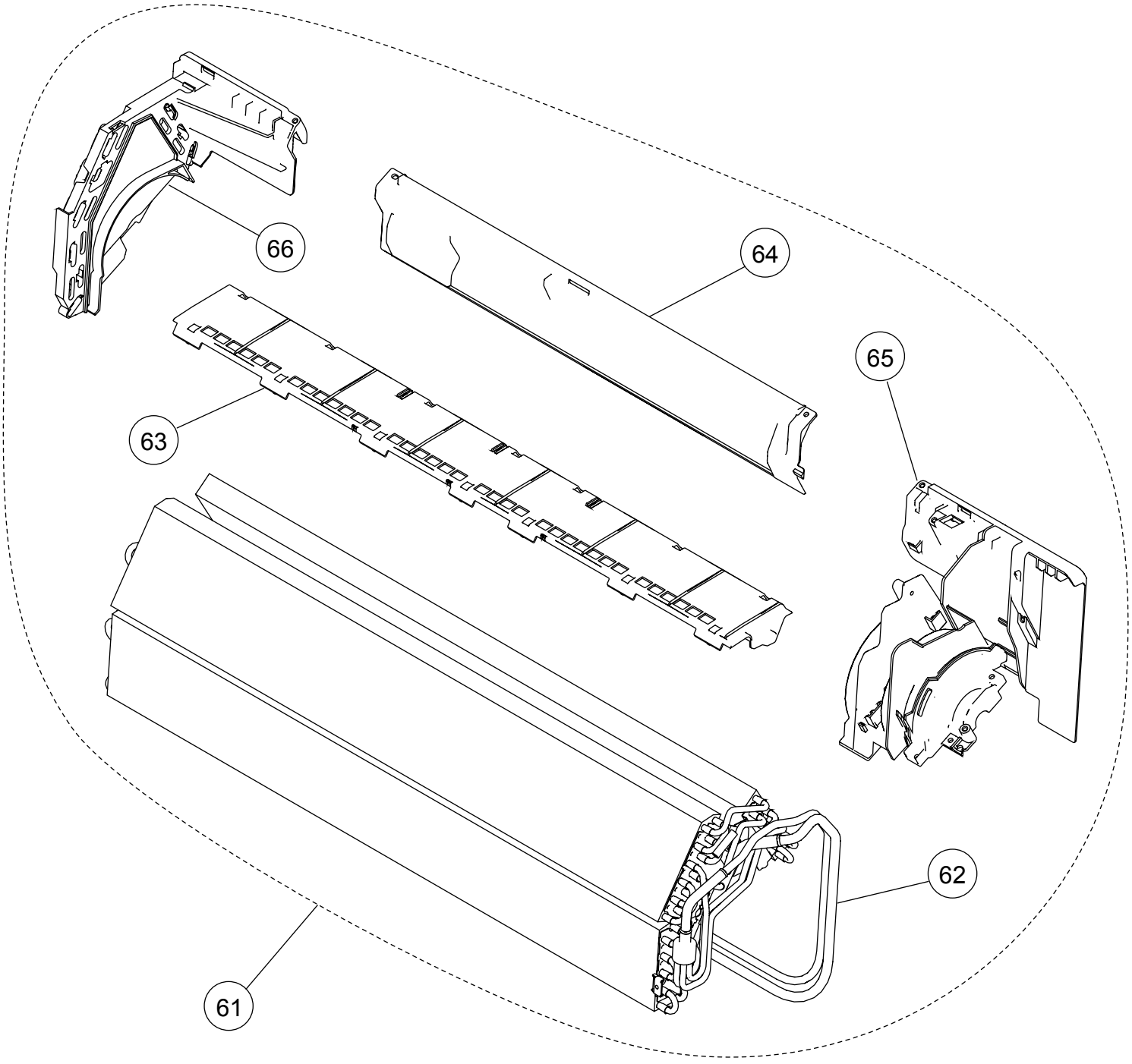


Ref.	Description	Part number
31	Casing Assy	9316892095
32	Casing	9316563001
33	Motor Cover	9316568006
34	Cable Guide	9316567009
35	Casing Cover B	9316569003
36	Casing Cover F	9316570009
37	R and L Louver B	9316961005
38	Louver Gear Holder	9316575004
39	Louver Gear	9316574007
40	Gear A	9309994003
41	Motor Step	9900139193
42	Drain Hose Assy	9316904002
43	Drain Cap	9316177017
44	Fan Guard	9317182003
45	Fan Motor	9602704002
46	Crossflow Fan Assy	9316830004
47	Shaft Holder C	9306628017
48	Bracket Panel	9316590007



INDOOR UNIT
 ASYG09LECB
 Evaporator

Ref.	Description	Part number
51	Evaporator Total Assy	9316893122
52	Joint Pipe Assy	9316923010
53	Filter Guide	9316578005
54	Rear Bracket	9316566019
55	Evaporator Holder R	9316565012
56	Evaporator Holder L	9316564015

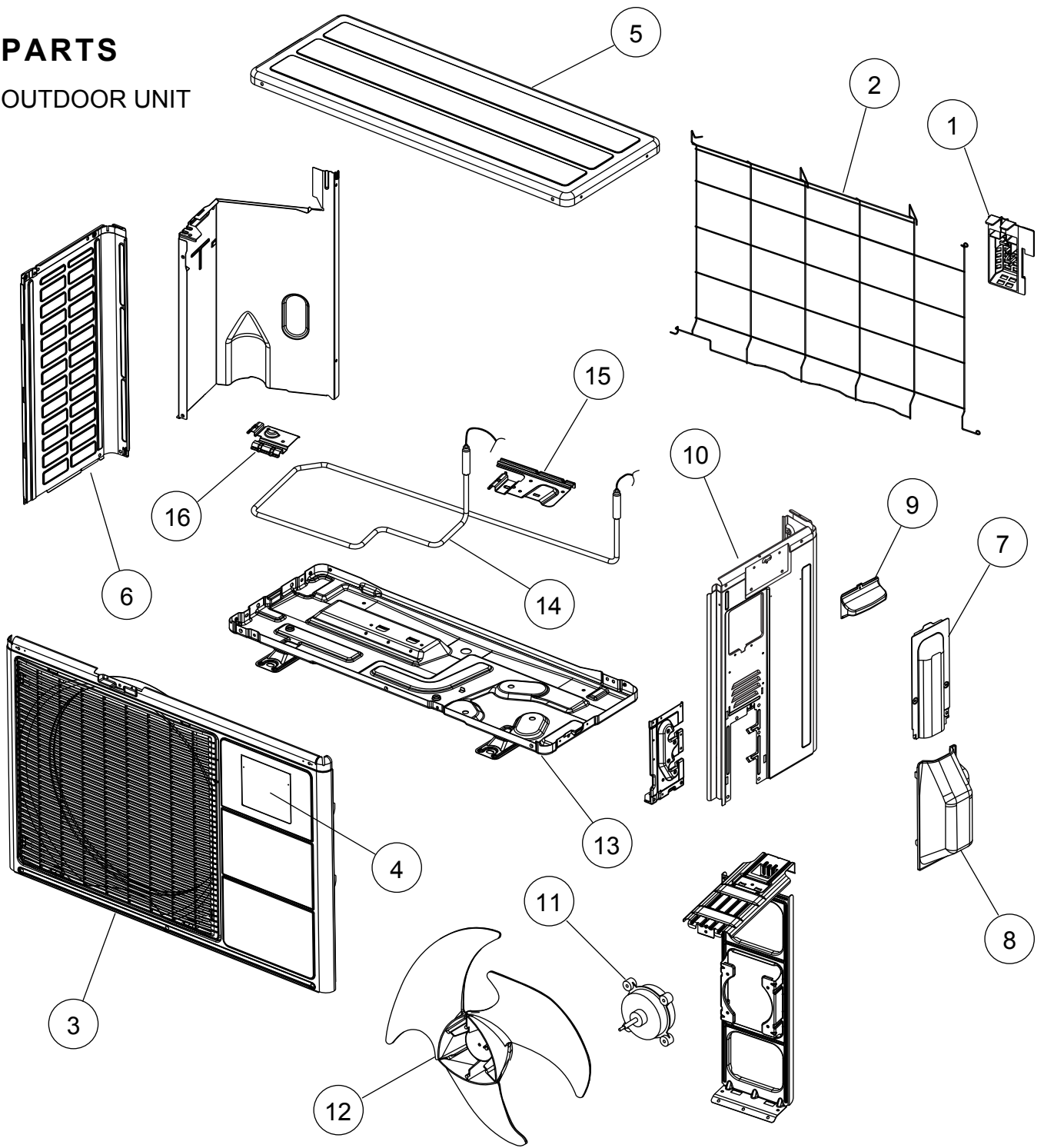


INDOOR UNIT
 ASYG12LECB
 Evaporator

Ref.	Description	Part number
61	Evaporator Total Assy	9316893139
62	Joint Pipe Assy	9317190015
63	Filter Guide	9316578005
64	Rear Bracket	9316566019
65	Evaporator Holder R	9316565012
66	Evaporator Holder L	9316564015

PARTS

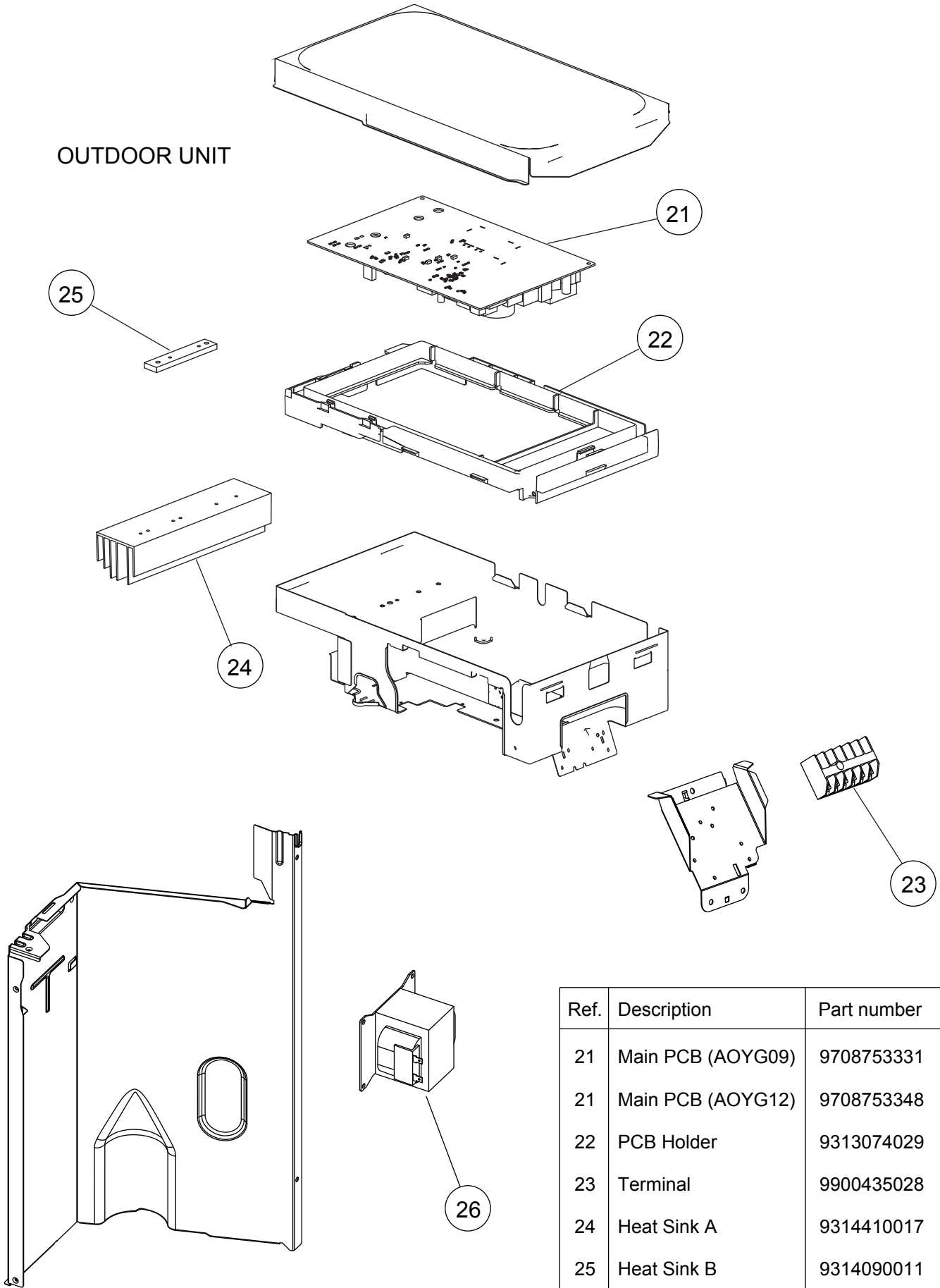
OUTDOOR UNIT



Ref.	Description	Part number
1	Thermistor Holder (09)	9313954048
1	Thermistor Holder (12)	9313954031
2	Protective Net	9318635003
3	Front Panel Assy	9317760041
4	Emblem	9319151007
5	Top Panel Assy	9317761017
6	Cabinet Left Assy	9318247008
7	Switch Cover A Assy	9317795005
8	Switch Cover B	9317582001

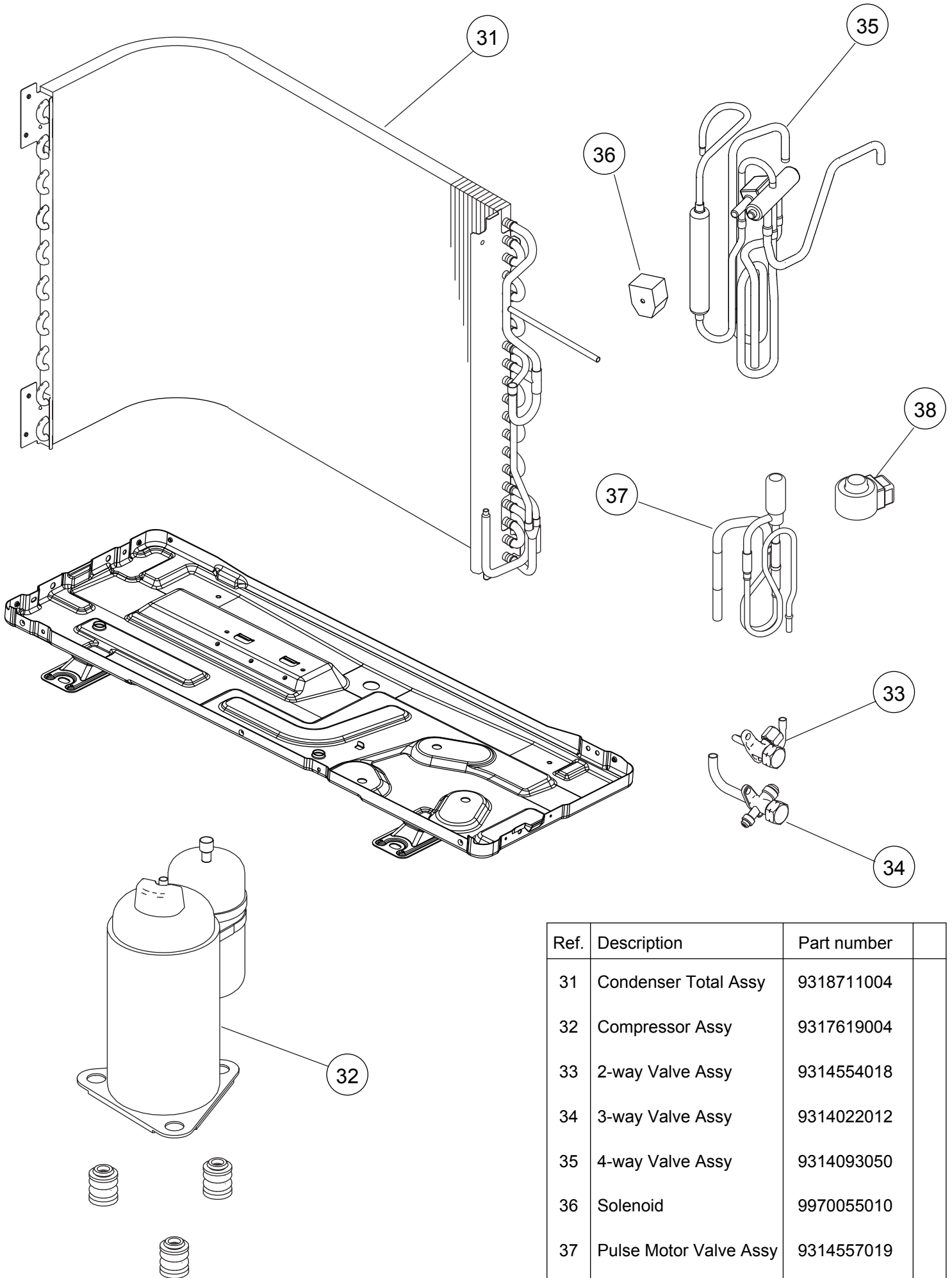
Ref.	Description	Part number
9	Grip	9317588003
10	Cabinet Right Assy	9317759007
11	Fan Motor	9602864003
12	Propeller Fan	9313808013
13	Base Assy	9316885059
14	Heater Unit Assy	9900616007
15	Heater Holder A	9318631005
16	Heater Holder B	9318651003

OUTDOOR UNIT



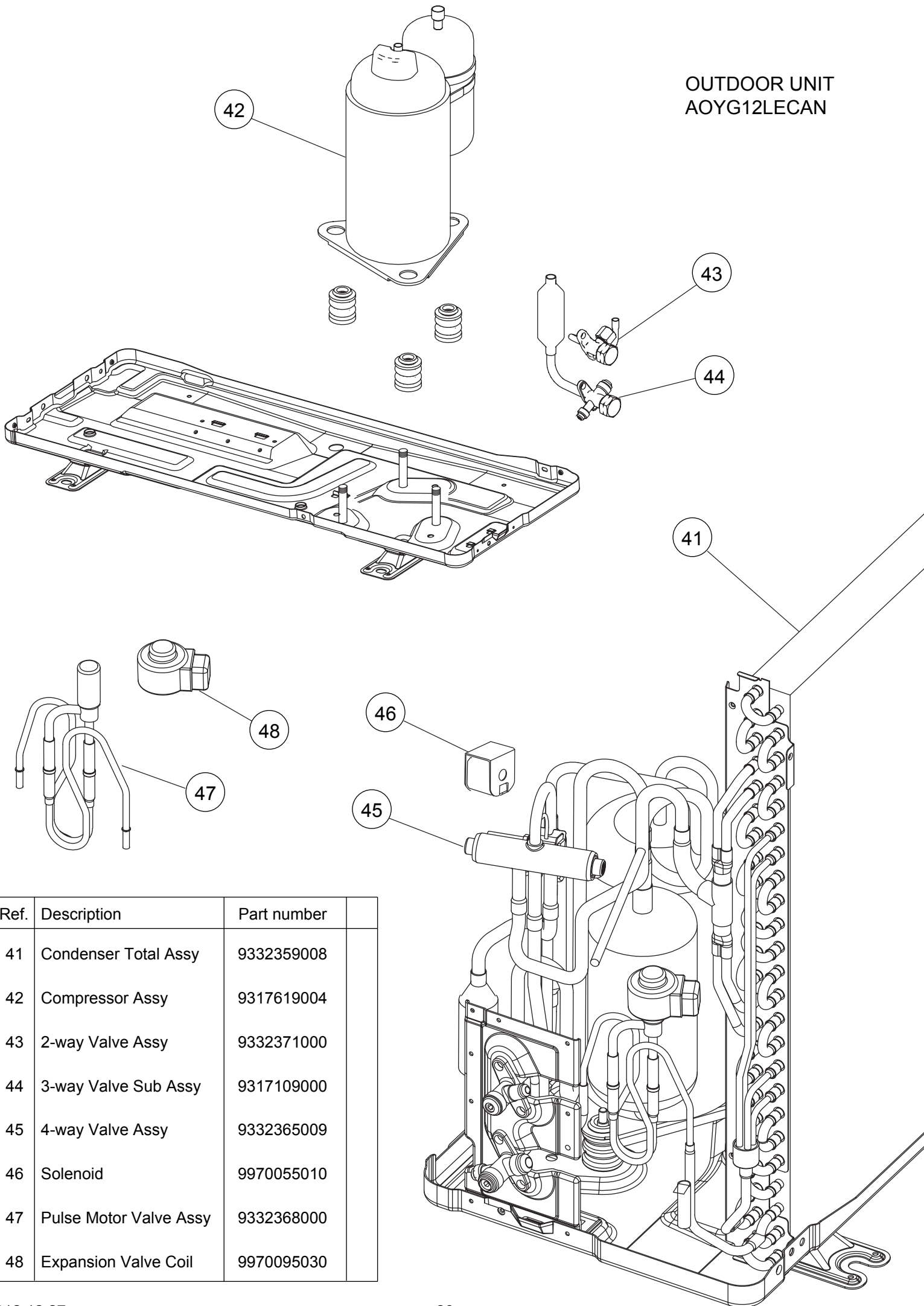
Ref.	Description	Part number
21	Main PCB (AOYG09)	9708753331
21	Main PCB (AOYG12)	9708753348
22	PCB Holder	9313074029
23	Terminal	9900435028
24	Heat Sink A	9314410017
25	Heat Sink B	9314090011
26	Reactor Assy	9900611019
--	Outdoor Thermistor	9900544010
--	Thermistor Assy	9900614003

OUTDOOR UNIT
AOYG09LECAN



Ref.	Description	Part number
31	Condenser Total Assy	9318711004
32	Compressor Assy	9317619004
33	2-way Valve Assy	9314554018
34	3-way Valve Assy	9314022012
35	4-way Valve Assy	9314093050
36	Solenoid	9970055010
37	Pulse Motor Valve Assy	9314557019
38	Expansion Valve Coil	9970095030

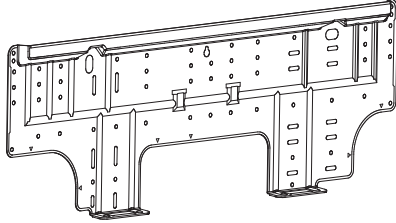
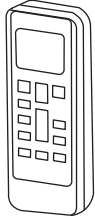
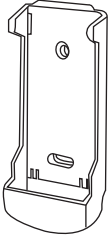

OUTDOOR UNIT
AOYG12LECAN

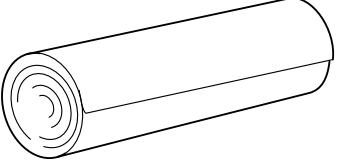

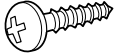
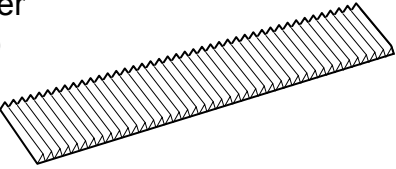
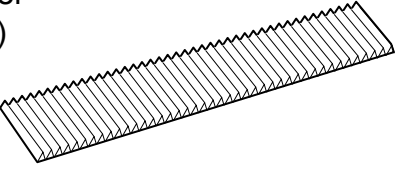


Ref.	Description	Part number
41	Condenser Total Assy	9332359008
42	Compressor Assy	9317619004
43	2-way Valve Assy	9332371000
44	3-way Valve Sub Assy	9317109000
45	4-way Valve Assy	9332365009
46	Solenoid	9970055010
47	Pulse Motor Valve Assy	9332368000
48	Expansion Valve Coil	9970095030

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Wall hook bracket 	9316590007
Remote control 	9379219006
Remote control holder 	9305642045
Battery (penlight) 	0600185541

Name and Shape	Part number
Cloth tape 	9310519004
Tapping screw (big) (ϕ 4 x 25) 	0700076046
Tapping screw (small) (ϕ 3 x 12) 	0700019036
Air cleaning filter (Apple katekin) 	9312153077
Air cleaning filter (Ion deodorant) 	9311925088

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