

SERVICE MANUAL



Indoor unit	Outdoor unit
RSG07LUCA	ROG07LUC
RSG09LUCA	ROG09LUC

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		RSG07LUCA	RSG09LUCA
OUTDOOR UNIT		ROG07LUC	ROG09LUC
COOLING CAPACITY		2.00 kW	2.50 kW
HEATING CAPACITY		3.00 kW	3.20 kW
POWER SOURCE		230 V	230 V
FREQUENCY		50 Hz	50 Hz
RUNNING CURRENT	Cooling	2.6 A	3.1 A
	Heating	3.4 A	3.8 A
INPUT WATTS	Cooling	0.46 kW	0.555 kW
	Heating	0.66 kW	0.68 kW
E.E.R.	Cooling	4.35 kW/kW	4.50 kW/kW
COP	Heating	4.55 kW/kW	4.71 kW/kW
MOISTURE REMOVAL		1.0 L/h	1.3 L/h
AIR CIRCULATION HIGH	Cooling	680 m ³ /h	800 m ³ /h
	Heating	730 m ³ /h	800 m ³ /h
MAXIMUM CURRENT	Cooling	6.0 A	
	Heating	7.5 A	

FAN MOTOR

POWER SOURCE		230 V	
INDOOR UNIT Cooling	High speed	1,140 r.p.m.	1,300 r.p.m.
	Middle speed	1,050 r.p.m.	1,080 r.p.m.
	Low speed	930 r.p.m.	960 r.p.m.
	Quiet	650 r.p.m.	650 r.p.m.
INDOOR UNIT Heating	High speed	1,180 r.p.m.	1,300 r.p.m.
	Middle speed	1,050 r.p.m.	1,120 r.p.m.
	Low speed	930 r.p.m.	960 r.p.m.
	Quiet	650 r.p.m.	650 r.p.m.
OUTDOOR UNIT Cooling		730 r.p.m.	780 r.p.m.
OUTDOOR UNIT Heating		650 r.p.m.	720 r.p.m.

NOISE LEVEL

INDOOR UNIT Cooling	High speed	38 dB	42 dB
	Middle speed	35 dB	36 dB
	Low speed	31 dB	32 dB
	Quiet	21 dB	21 dB
INDOOR UNIT Heating	High speed	38 dB	42 dB
	Middle speed	35 dB	37 dB
	Low speed	31 dB	32 dB
	Quiet	21 dB	21 dB
OUTDOOR UNIT Cooling		46 dB	48 dB
OUTDOOR UNIT Heating		46 dB	48 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION		5SS072XAA	
WEIGHT (with oil)		5.9 kg	
PRECHARGED REFRIGERANT		700 g	850 g
REFRIGERANT TYPE		R410A	R410A
FULL CHARGE	Pipe length 15 m	700 g	850 g
	20 m	800 g	950 g
ADDITIONAL REFRIGERANT		20 g/m	
MAXIMUM PIPING HEIGHT		15m	

DIMENSIONS

INDOOR UNIT	H x W x D	282 x 870 x 185 mm
OUTDOOR UNIT	H x W x D	540 x 660 x 290 mm

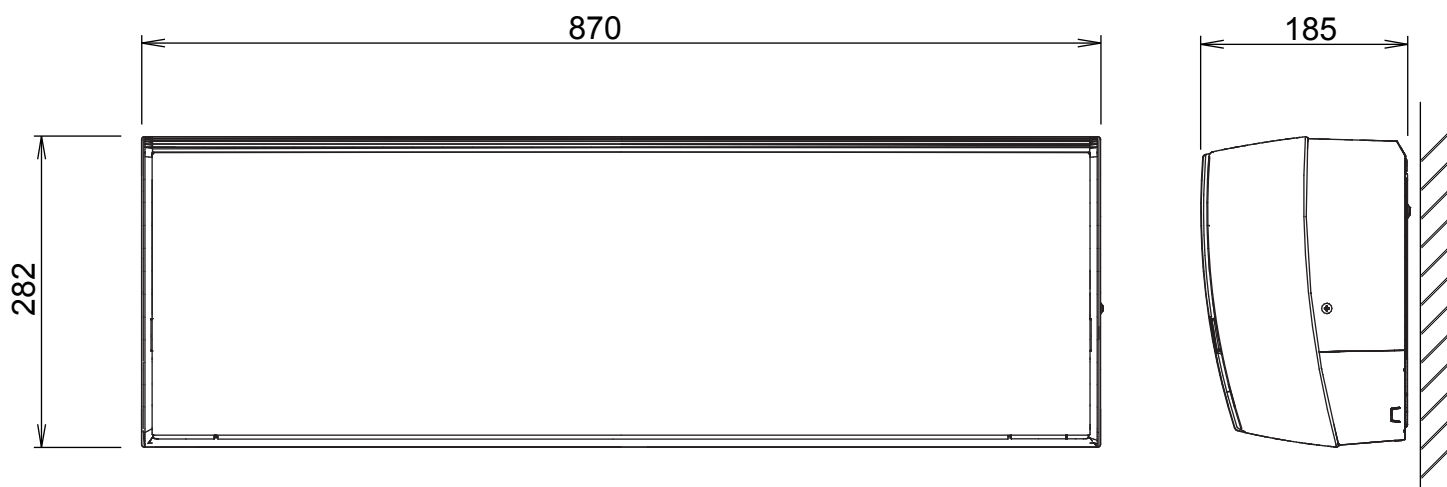
WEIGHT

INDOOR UNIT	Shipping / Net	12 kg / 9.5 kg
OUTDOOR UNIT	Shipping / Net	27 kg / 23 kg 28 kg / 25 kg

DIMENSIONS

unit : mm

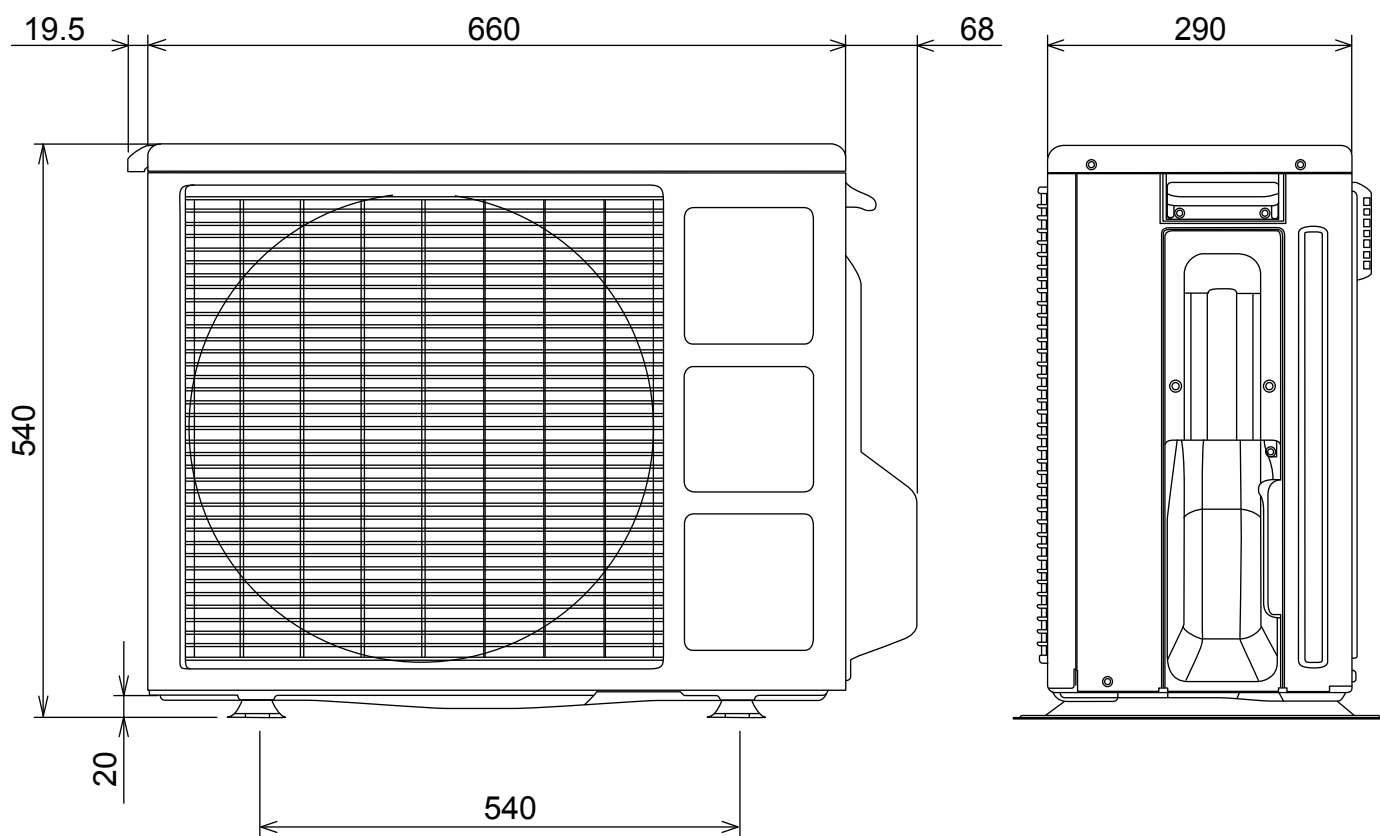
INDOOR UNIT



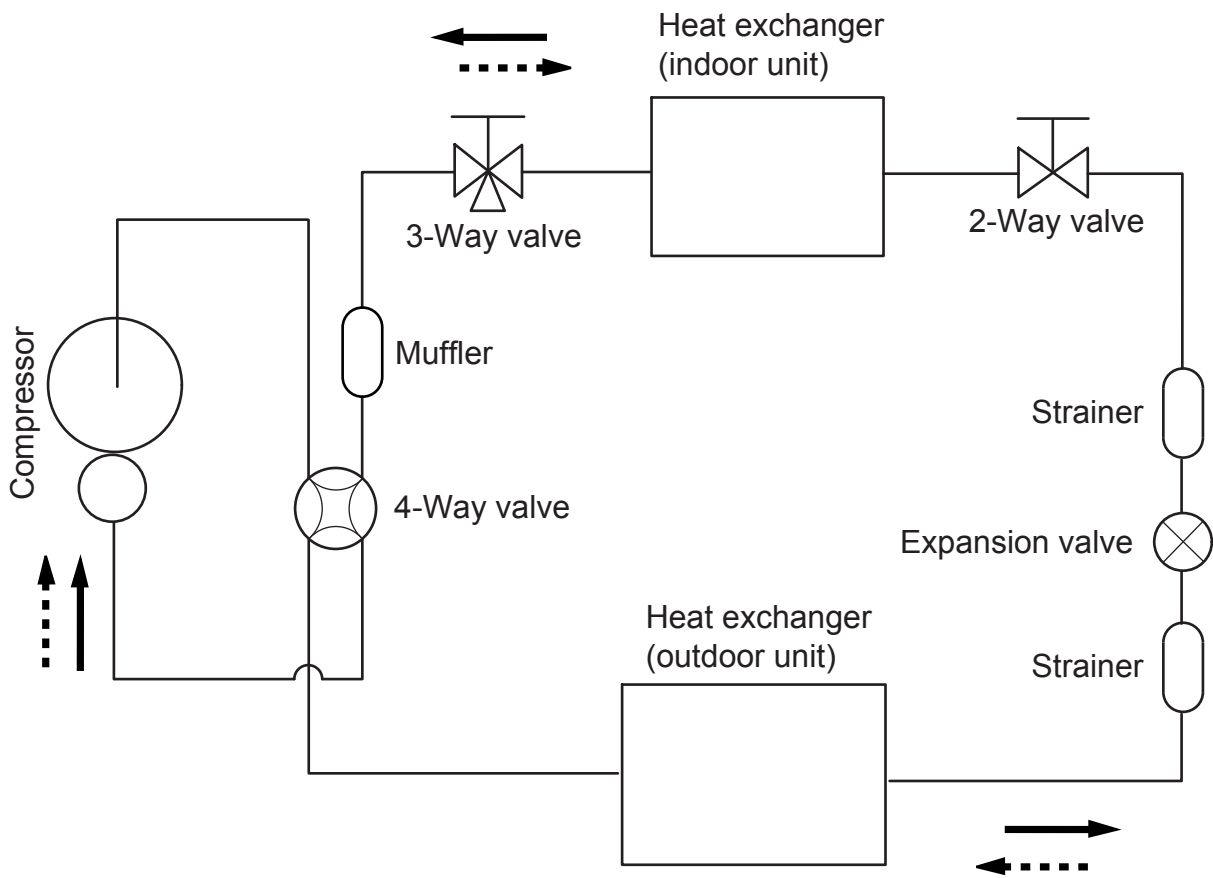
Drain pipe diameter
16.2 mm

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

OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM



Refrigerant direction

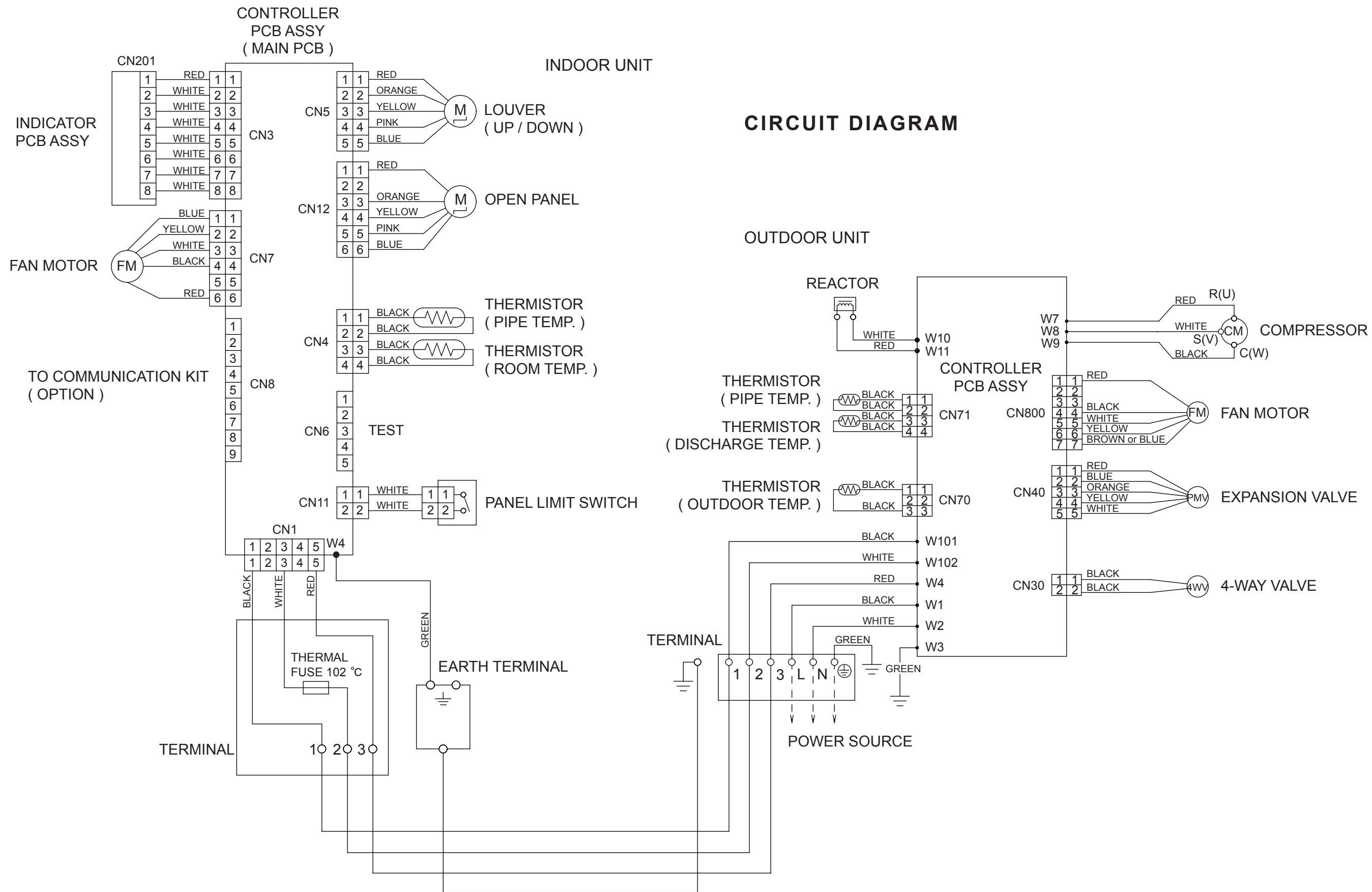
————→ Cooling

- - - - -> Heating

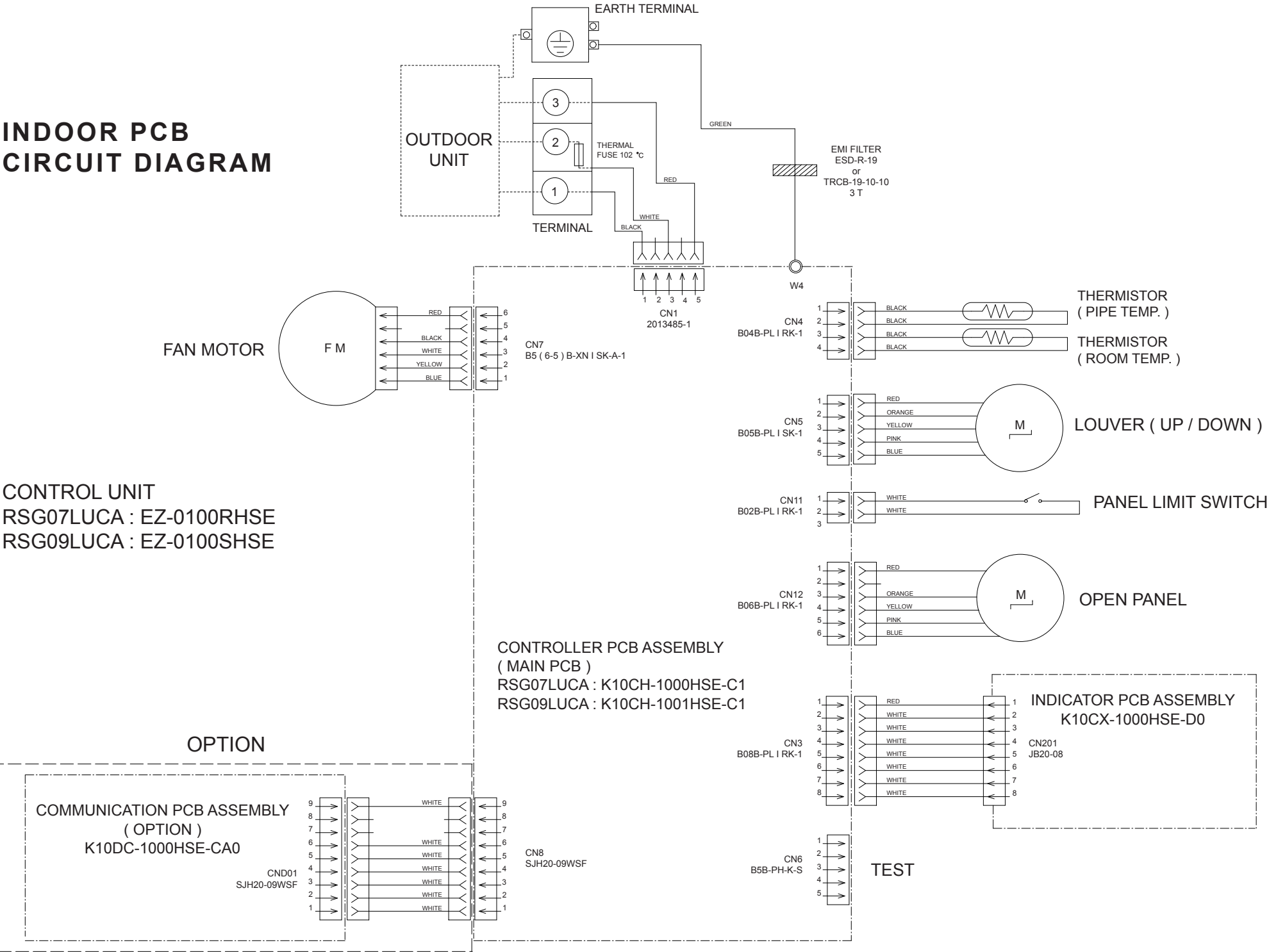
Refrigerant pipe diameter

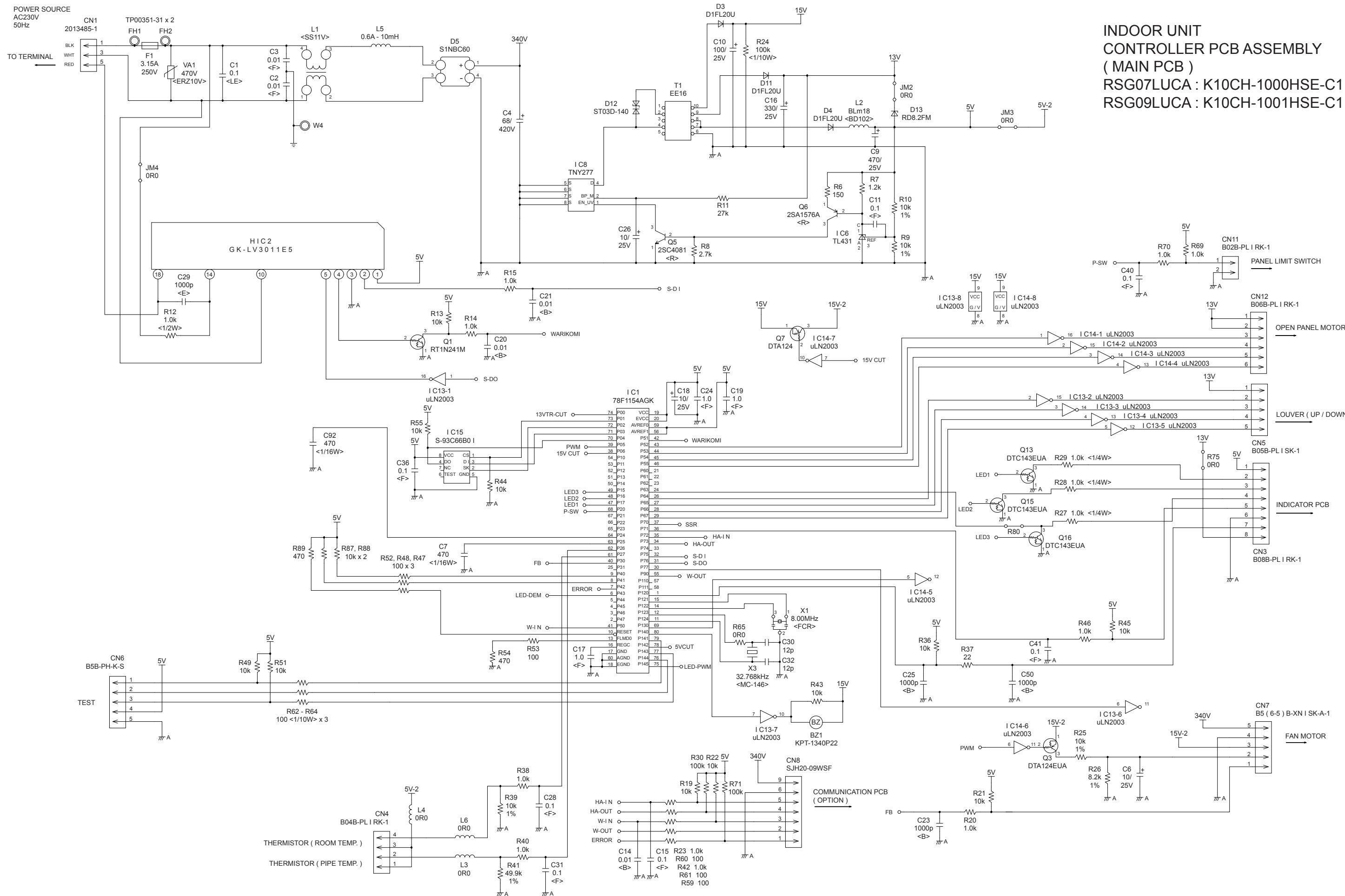
Liquid : 1/4" (6.35 mm)

Gas : 3/8" (9.52 mm)



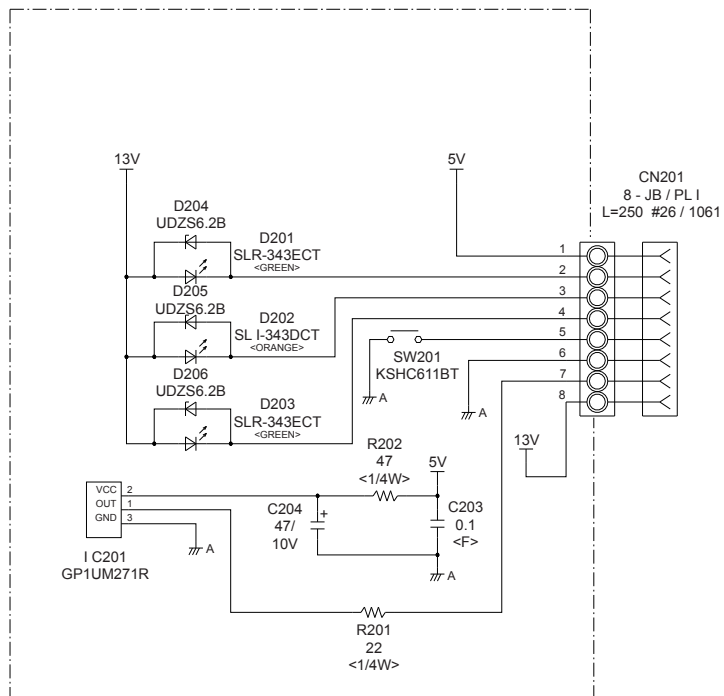
INDOOR PCB
CIRCUIT DIAGRAM





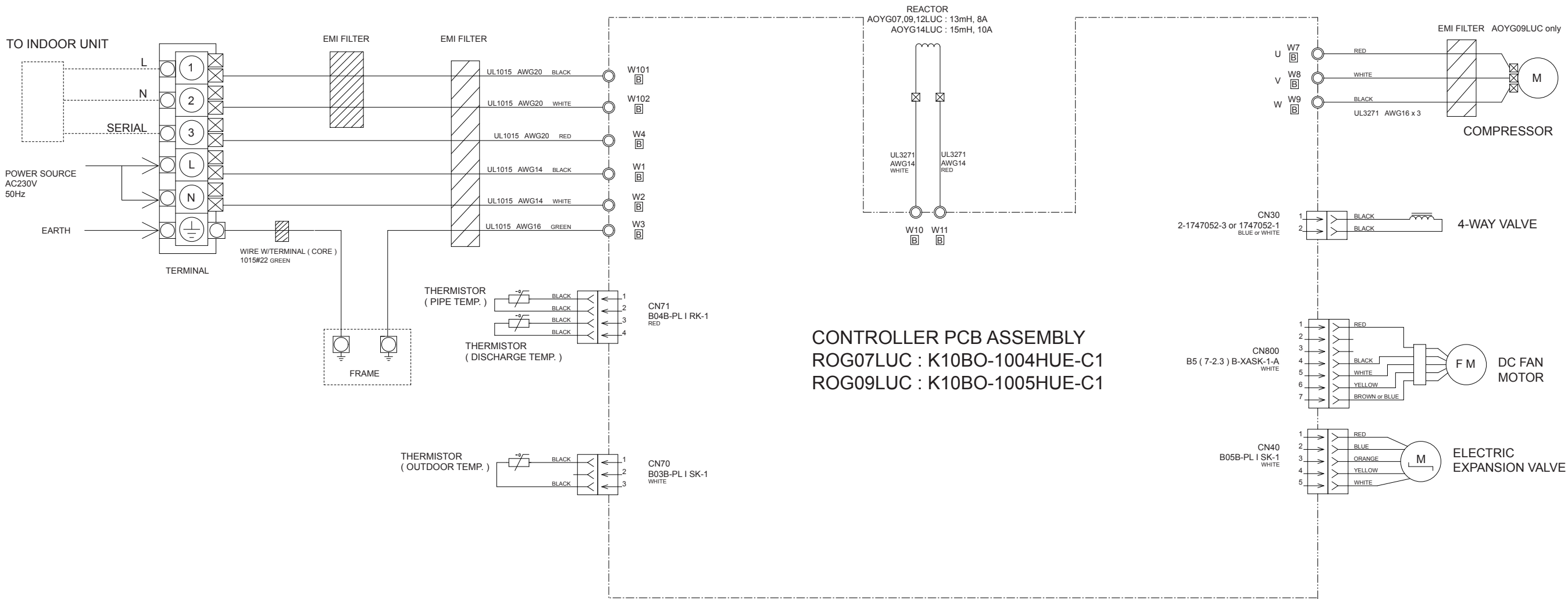
INDOOR UNIT
CONTROLLER PCB ASSEMBLY
(MAIN PCB)
RSG07LUCA : K10CH-1000HSE-C1
RSG09LUCA : K10CH-1001HSE-C1

INDOOR UNIT
INDICATOR PCB ASSEMBLY
K10CX-1000HSE-D0

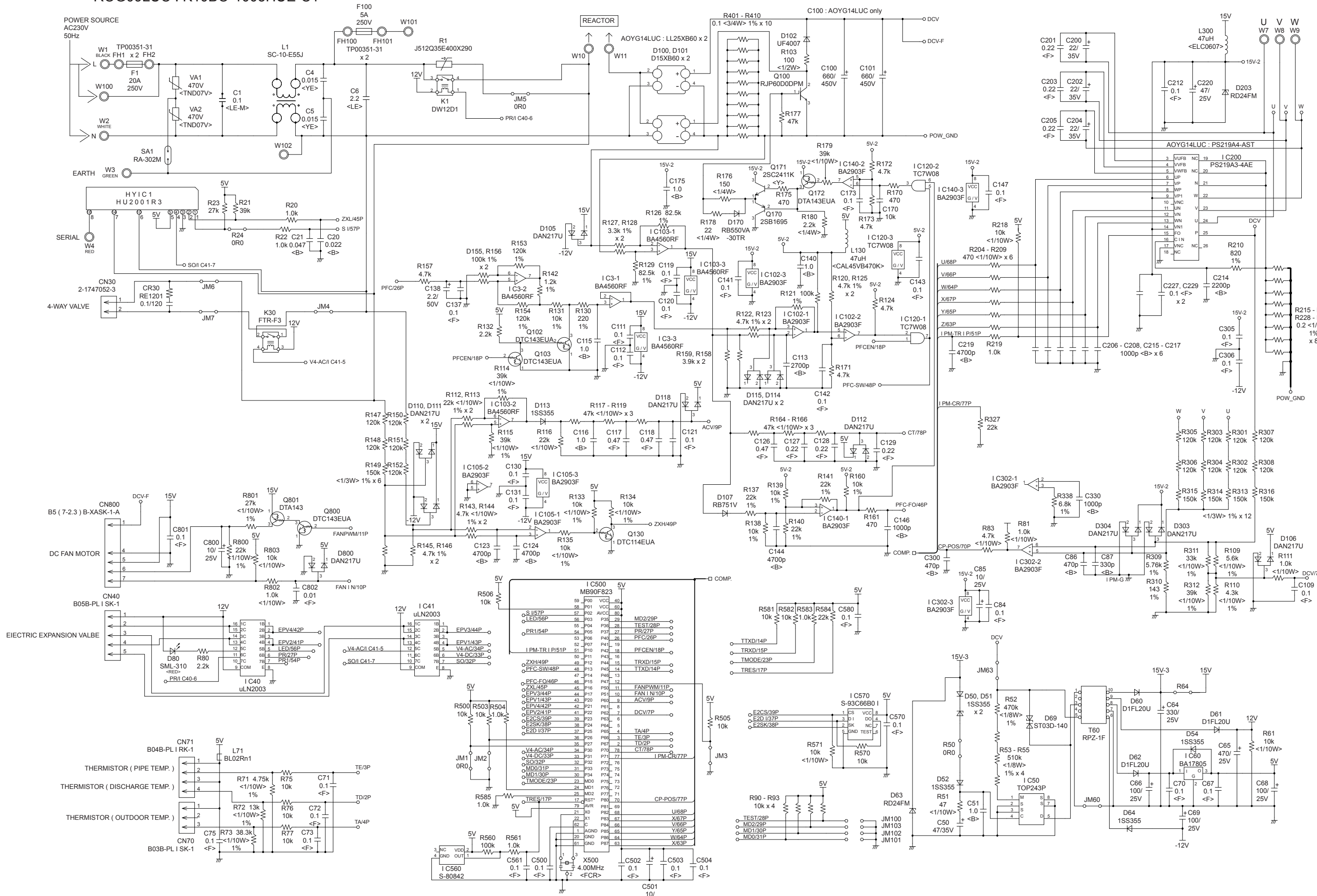


OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
ROG07LUC : EZ-01011HUE
ROG09LUC : EZ-01012HUE



OUTDOOR UNIT
CONTROLLER PCB ASSEMBLY
ROG07LUC : K10BO-1004HUE-C1
ROG09LUC : K10BO-1005HUE-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.

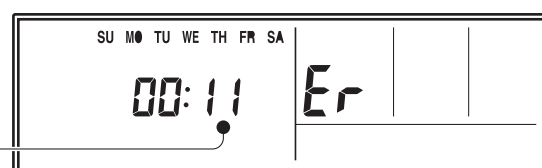
An error display is displayed only during operation.



OPERATION indicator lamp (green) —
TIMER indicator lamp (orange) —
ECONOMY indicator 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.)



Error code

● : 0.5s ON / 0.5s OFF

◇ : 0.1s ON / 0.1s OFF

() : Number of flashing

Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (1)	● (5)	◇	15	Check run unfinished
● (2)	● (2)	◇	22	Indoor unit capacity error
● (2)	● (3)	◇	23	Combination error
● (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)	● (15)	◇	50	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
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error

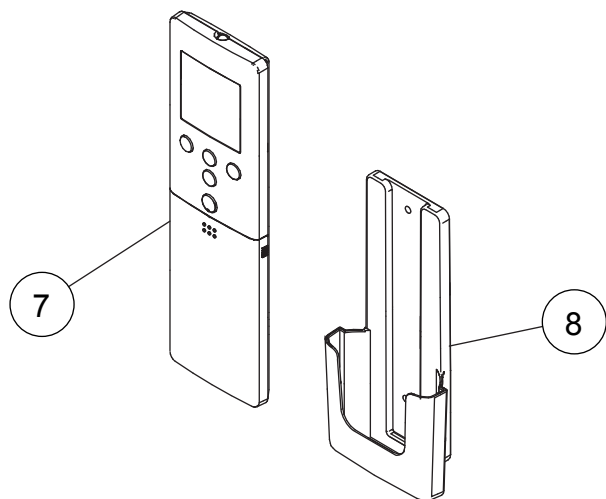
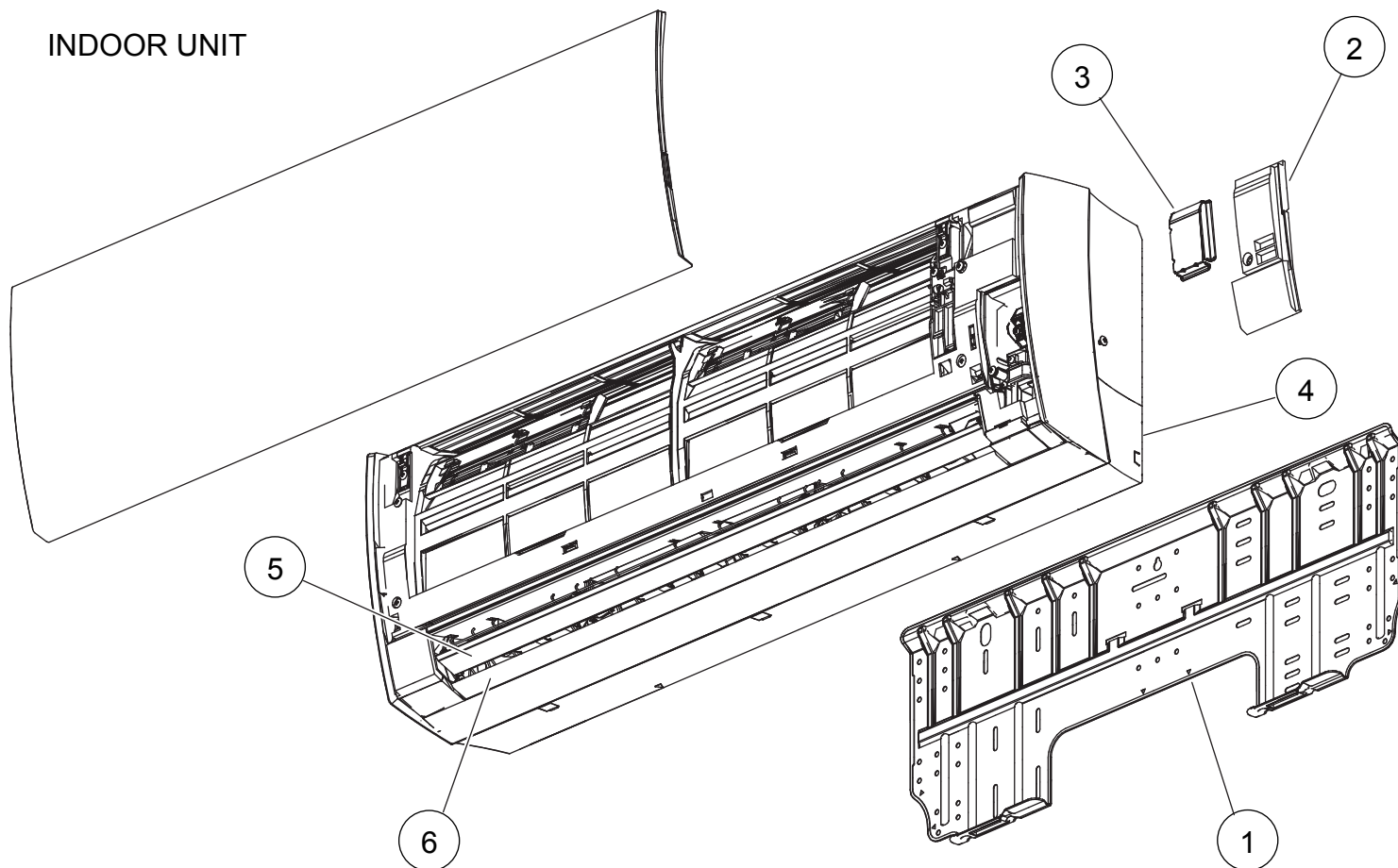
Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (7)	● (5)	◇	75	Suction Gas temp. 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

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

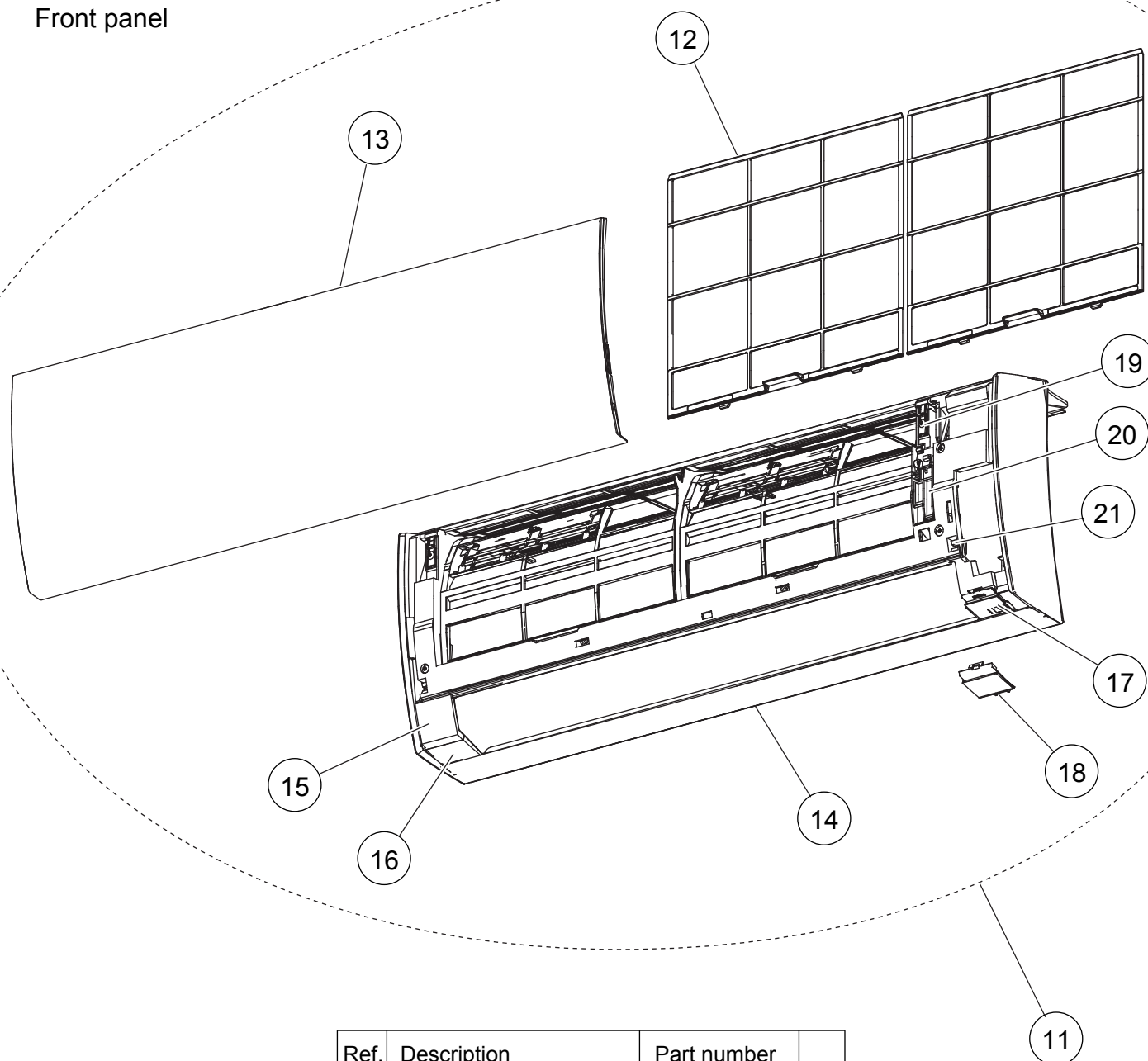
PARTS

INDOOR UNIT



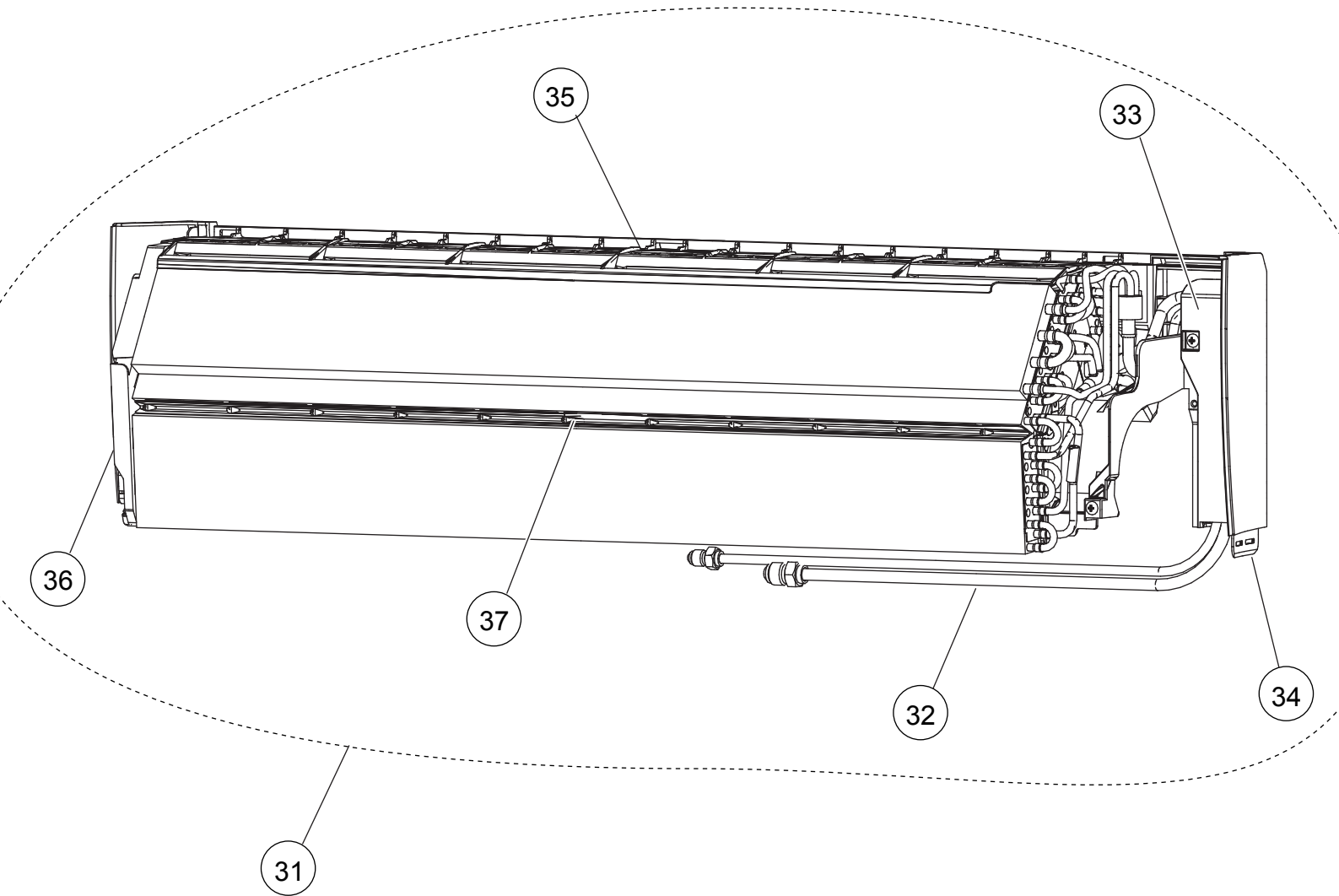
Ref.	Description	Part number	
1	Bracket Panel	9318913002	
2	Wire Cover	9318911008	
3	Wire Shield	9318919004	
4	Under Cover	9318879001	
5	Louver U	9318880007	
6	Louver Z	9318881004	
7	Remote Control	9319207018	
8	Remote Control Holder	9318912005	
--	Air Clean Filter Assy	9317250009	

INDOOR UNIT
Front panel

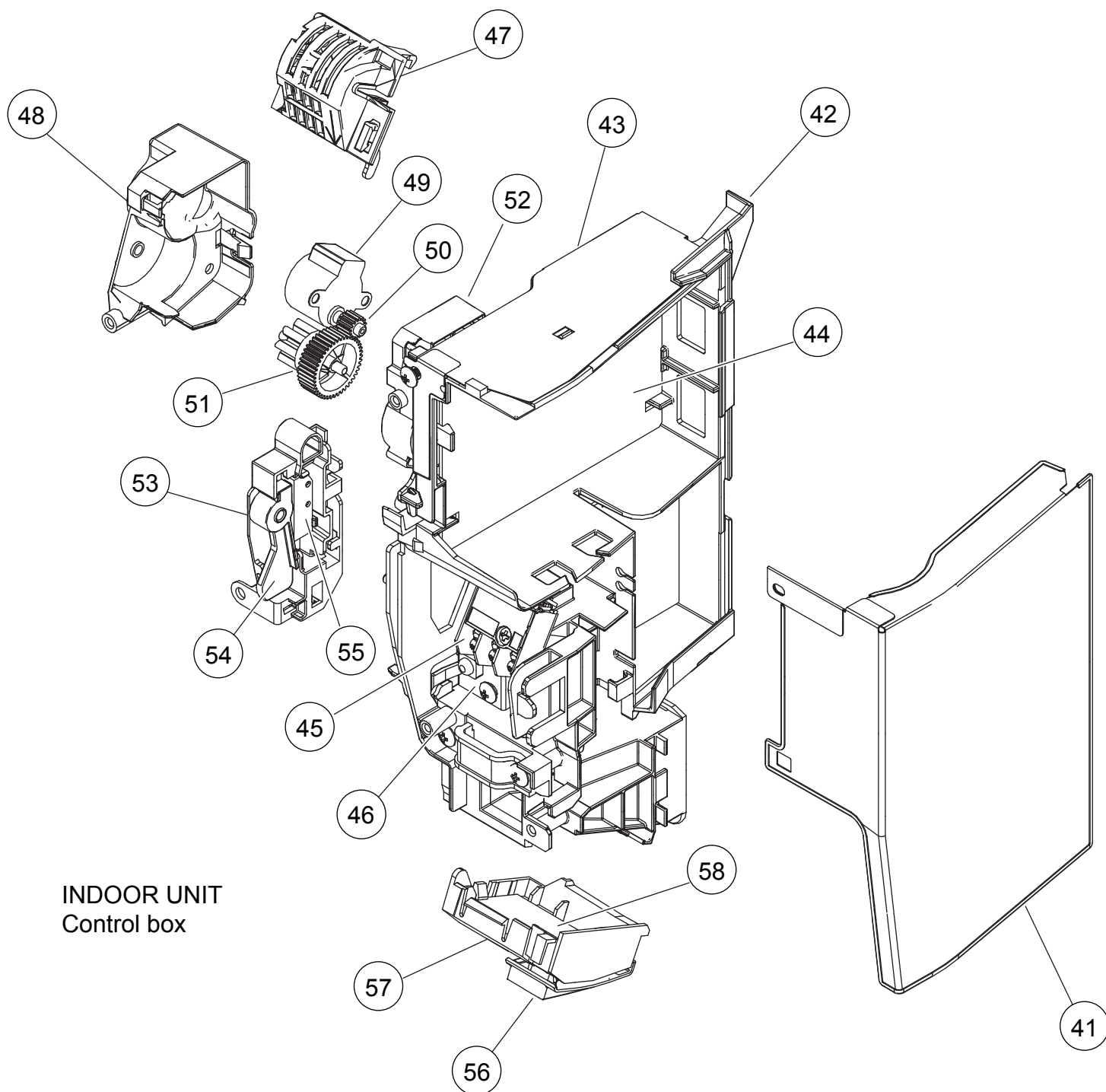


Ref.	Description	Part number	
11	Front Panel Total Assy	9319348124	
12	Air Filter	9318883008	
13	Intake Grille Assy	9319351100	
14	Front Panel	9318876000	
15	Front Panel Cover U	9318910001	
16	Display Plate Holder L	9318894004	
17	Display Plate Holder R	9318895001	
18	Display Plate R	9318893007	
19	Arm Cover	9318900002	
20	Grille Stay	9318899009	
21	Grille Clamper B	9316951006	

INDOOR UNIT
Evaporator



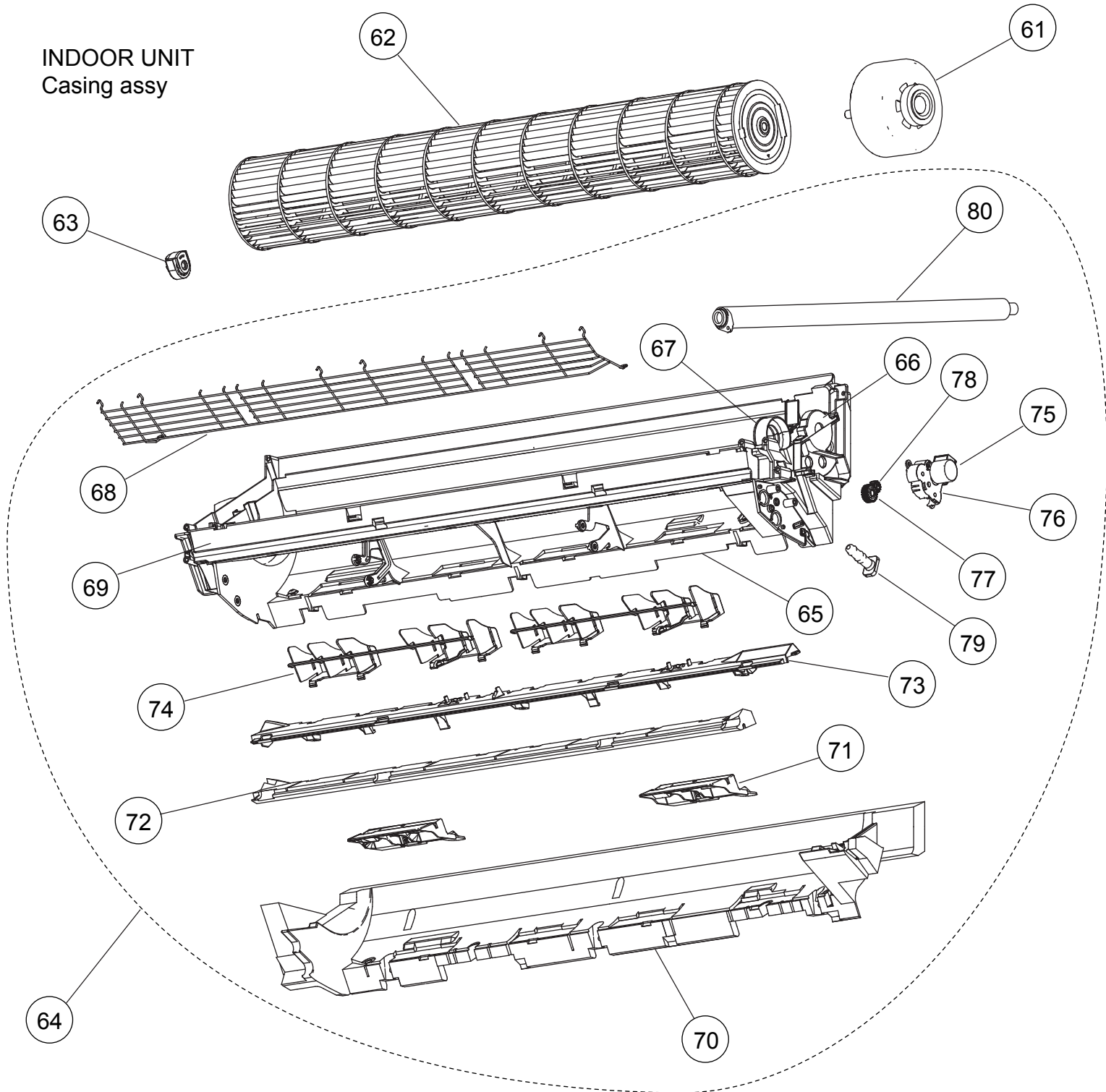
Ref.	Description	Part number	
31	Evaporator Total Assy	9319327006	
32	Joint Pipe Assy	9319322001	
33	Joint Pipe Holder	9318901009	
34	Base	9318874006	
35	Filter Guide	9318887006	
36	Evaporator Holder L	9318875003	
37	Air Seal	9319295008	



Ref.	Description	Part number	
41	Cover Shield A	9318916003	
42	Control Box	9318882001	
43	Box Shield Assy	9319344003	
44	Controller PCB Assy (07)	9708713014	
44	Controller PCB Assy (09)	9708713021	
45	Terminal	9900638009	
46	Earth Terminal	9318918007	
47	Room Thermistor Holder	9319068008	
48	Gear Cover	9318902006	
49	Step Motor	9900384166	

Ref.	Description	Part number	
50	Gear B	9319294001	
51	Panel Gear	9319293004	
52	Gear Case	9318903003	
53	Switch Case	9319332000	
54	Grille Key Top	9319334004	
55	Micro Switch	9900625009	
56	Receiver Window	9318891003	
57	Display Case	9318906004	
58	Display PCB Assy	9708824017	
--	Thermistor Assy	9900627003	

INDOOR UNIT
Casing assy

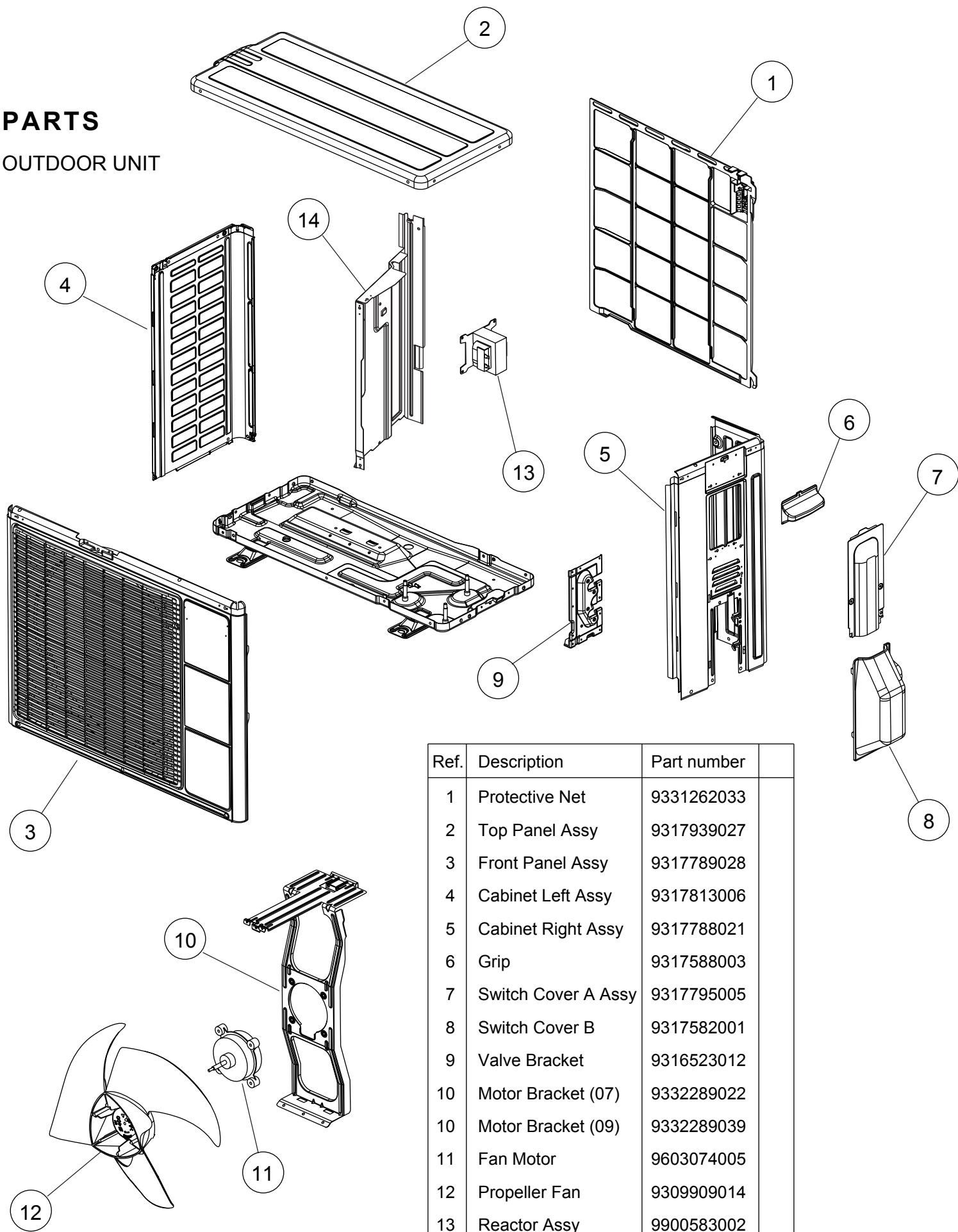


Ref.	Description	Part number
61	Fan Motor	9602947003
62	Crossflow Fan Assy	9319361000
63	Bearing C Assy	9306628017
64	Casing Assy	9319342009
65	Casing	9318873009
66	Motor Cover	9316601000
67	Motor Cover	9318888003
68	Fan Guard	9318924008
69	Casing Cover F	9318923001
70	Casing Cover B	9318920000

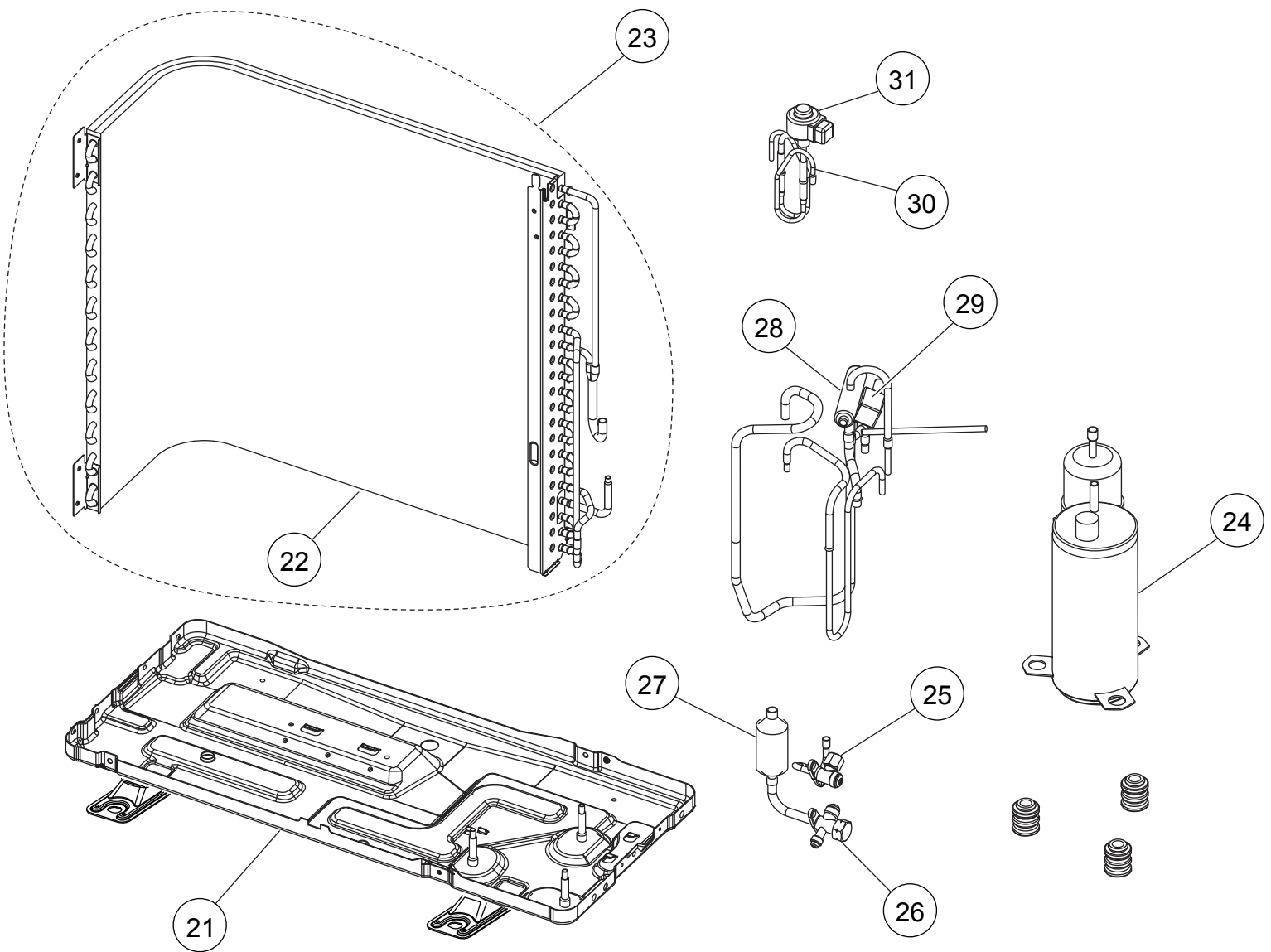
Ref.	Description	Part number
71	Pipe Bracket	9318889000
72	Panel Cover	9319296005
73	Louver Holder	9318886009
74	R and L Louver B	9318885002
75	Motor Step	9900384128
76	Louver Gear Holder	9318905007
77	Louver Gear	9318904000
78	Gear A	9309994003
79	Drain Cap	9316177017
80	Drain Hose Assy	9316904002

PARTS

OUTDOOR UNIT

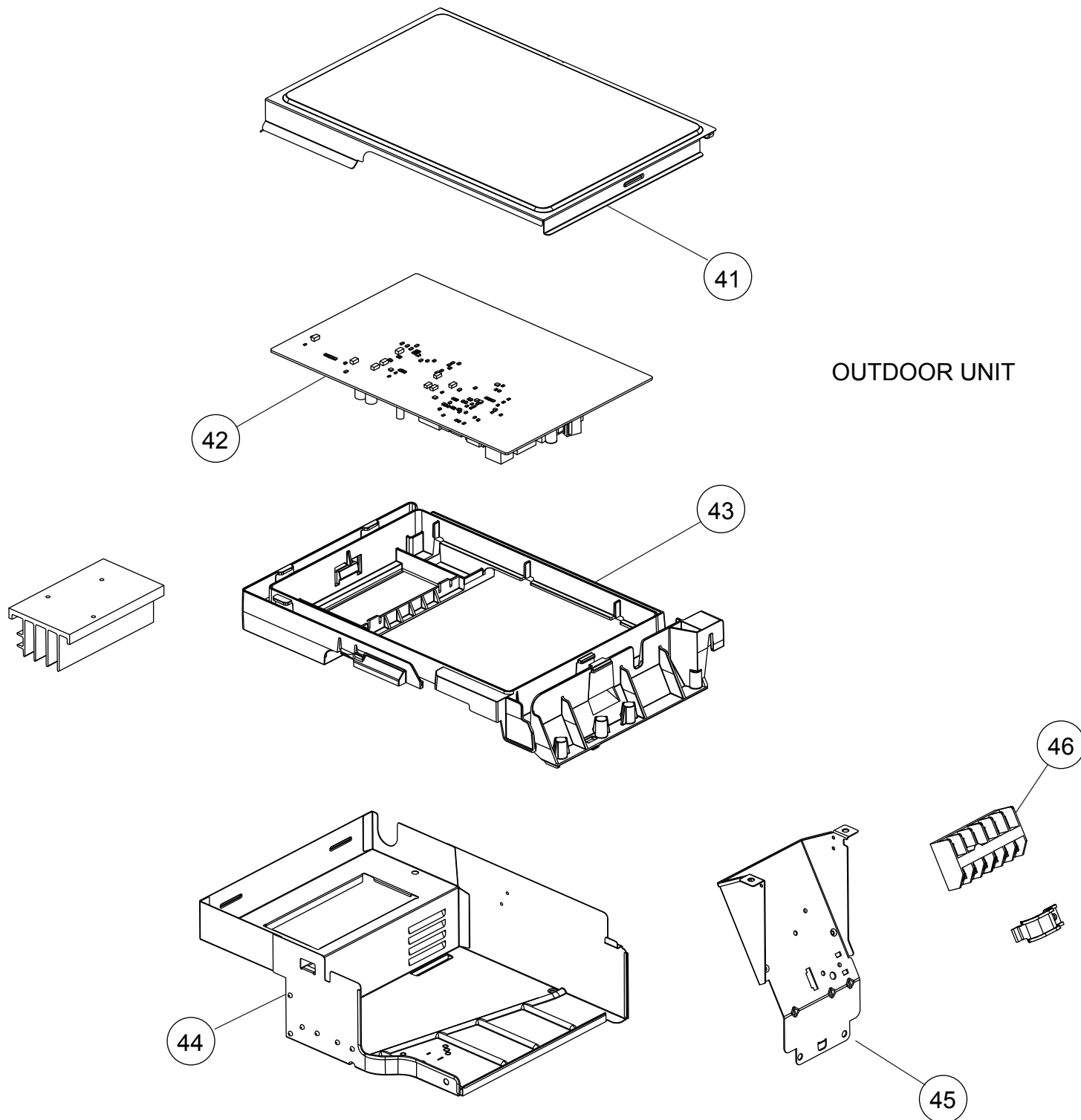


Ref.	Description	Part number
1	Protective Net	9331262033
2	Top Panel Assy	9317939027
3	Front Panel Assy	9317789028
4	Cabinet Left Assy	9317813006
5	Cabinet Right Assy	9317788021
6	Grip	9317588003
7	Switch Cover A Assy	9317795005
8	Switch Cover B	9317582001
9	Valve Bracket	9316523012
10	Motor Bracket (07)	9332289022
10	Motor Bracket (09)	9332289039
11	Fan Motor	9603074005
12	Propeller Fan	9309909014
13	Reactor Assy	9900583002
14	Separator Assy	9317786010
--	Emblem	9319158006
--	Drain Assy	9303029022



OUTDOOR UNIT

Ref.	Description	Part number	
21	Base Assy	9316916029	
22	Condenser Assy (07)	9317286008	
22	Condenser Assy (09)	9317193016	
23	Condenser Total Assy (07)	9317287012	
23	Condenser Total Assy (09)	9317367103	
24	Compressor Assy	9317083010	
25	2 way Valve Assy	9318252002	
26	3 way Valve Assy	9318254006	
27	Muffler	9317394000	
28	4 way Valve Assy	9317890021	
29	Solenoid	9970079023	
30	Pulse Motor Valve Assy	9317216036	
31	Expansion Valve Coil	9970103025	

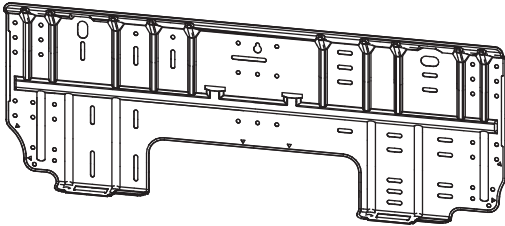
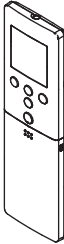
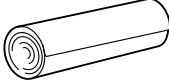
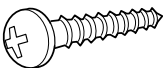
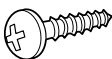


OUTDOOR UNIT

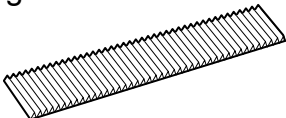
Ref.	Description	Part number	
41	Sealed Panel	9318181012	
42	Controller PCB Assy (07)	9708683058	
42	Controller PCB Assy (09)	9708683065	
43	PCB Holder	9318182002	
44	Inverter Case Assy	9332247008	
45	Terminal Bracket	9317816038	
46	Terminal	9900435028	
--	Outdoor Thermistor	9900565008	
--	Thermistor Assy	9900628000	

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Bracket panel 	9318913002
Remote control 	9319207018
Remote control holder 	9318912005
Battery (penlight) 	0600185046
Cloth tape 	9308117007
Tapping screw (big) (φ 4 x 25) 	0700076046
Tapping screw (small) (φ 3 x 12) 	0700019036

OPTION

Name and Shape	Part number
Air cleaning filter 	UTR-FA16 UTR-FA16-2

