

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASU9RLS2	AOU9RLS2
ASU12RLS2	AOU12RLS2

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		ASU9RLS2	ASU12RLS2
OUTDOOR UNIT		AOU9RLS2	AOU12RLS2
COOLING CAPACITY		9,000 Btu/h	12,000 Btu/h
HEATING CAPACITY		12,000 Btu/h	16,000 Btu/h
POWER SOURCE		208/230 V	
FREQUENCY		60 Hz	
RUNNING CURRENT	Cooling	2.7 A	4.0 A
	Heating	3.7 A	5.5 A
INPUT WATTS	Cooling	0.560 kW	0.870 kW
	Heating	0.800 kW	1.200 kW
E.E.R.	Cooling	16.1 Btu/Wh	13.8 Btu/Wh
COP	Heating	15.0 Btu/Wh	13.3 Btu/Wh
MOISTURE REMOVAL		2.75 Pts/h 1.3 L/h	3.80 Pts/h 1.8 L/h
AIR CIRCULATION HIGH		500 cfm, 850 m ³ /h	
MAXIMUM CURRENT	Cooling	9.0 A	
	Heating	10.5 A	

FAN MOTOR

POWER SOURCE		208/230 V
INDOOR UNIT Cooling	High speed	1,370 r.p.m.
	Medium speed	1,120 r.p.m.
	Low speed	960 r.p.m.
	Quiet	650 r.p.m.
INDOOR UNIT Heating	High speed	1,370 r.p.m.
	Medium speed	1,120 r.p.m.
	Low speed	960 r.p.m.
	Quiet	650 r.p.m.
OUTDOOR UNIT Cooling		870 r.p.m.
OUTDOOR UNIT Heating		780 r.p.m.

NOISE LEVEL

INDOOR UNIT Cooling	High speed	43 dB	
	Medium speed	37 dB	
	Low speed	32 dB	
	Quiet	21 dB	
INDOOR UNIT Heating	High speed	43 dB	
	Medium speed	38 dB	
	Low speed	32 dB	
	Quiet	21 dB	
OUTDOOR UNIT Cooling		48 dB	49 dB
OUTDOOR UNIT Heating		49 dB	50 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE	Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION	808-884-80	
WEIGHT (with oil)	20-1/2 lb., 9.3 kg	
PRECHARGED REFRIGERANT	42-5/16 oz., 1,200 g	
REFRIGERANT TYPE	R410A	
FULL CHARGE	Pipe length 15 m	42-5/16 oz., 1,200 g
	20 m	48-27/32 oz., 1,300 g
ADDITIONAL CHARGE	20 g/m	
MAXIMUM PIPING HEIGHT	49-7/32 ft., 15m	

DIMENSIONS

INDOOR UNIT	H x W x D	11-3/32 x 34-1/4 x 7-9/32 inch 282 x 870 x 185 mm
OUTDOOR UNIT	H x W x D	24-13/32 x 31-3/32 x 11-13/32 inch 620 x 790 x 290 mm

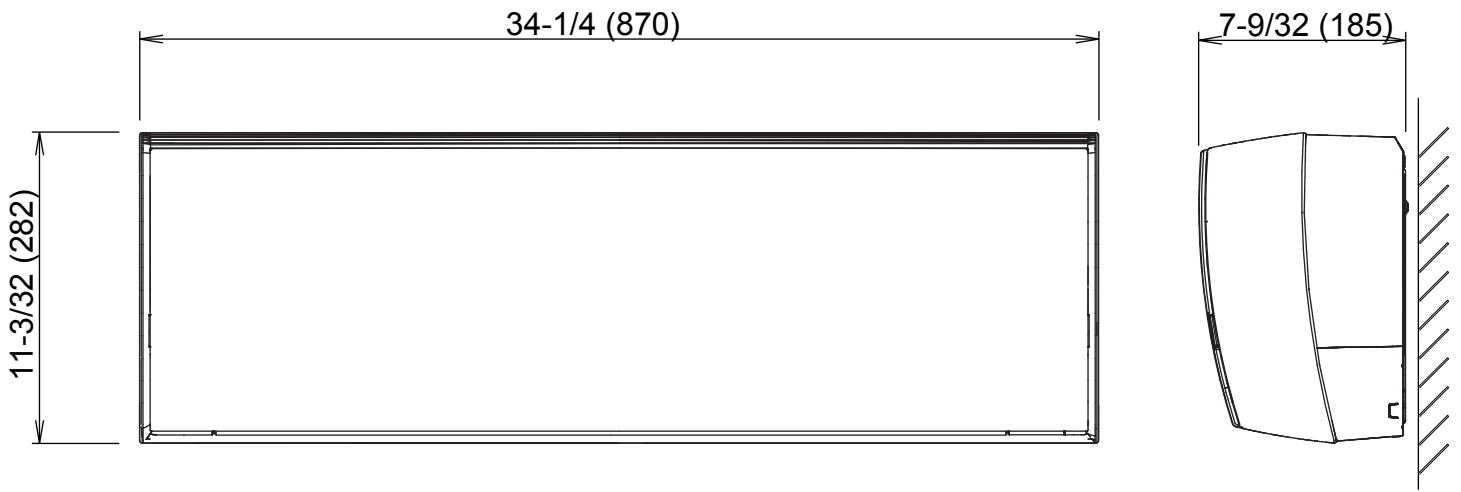
WEIGHT

INDOOR UNIT	Net / Shipping	20-15/16 lb. / 26-15/32 lb. 9.5 kg / 12 kg
OUTDOOR UNIT	Net / Shipping	83-25/32 lb. / 92-5/8 lb. 38 kg / 42 kg

DIMENSIONS

unit : inch (mm)

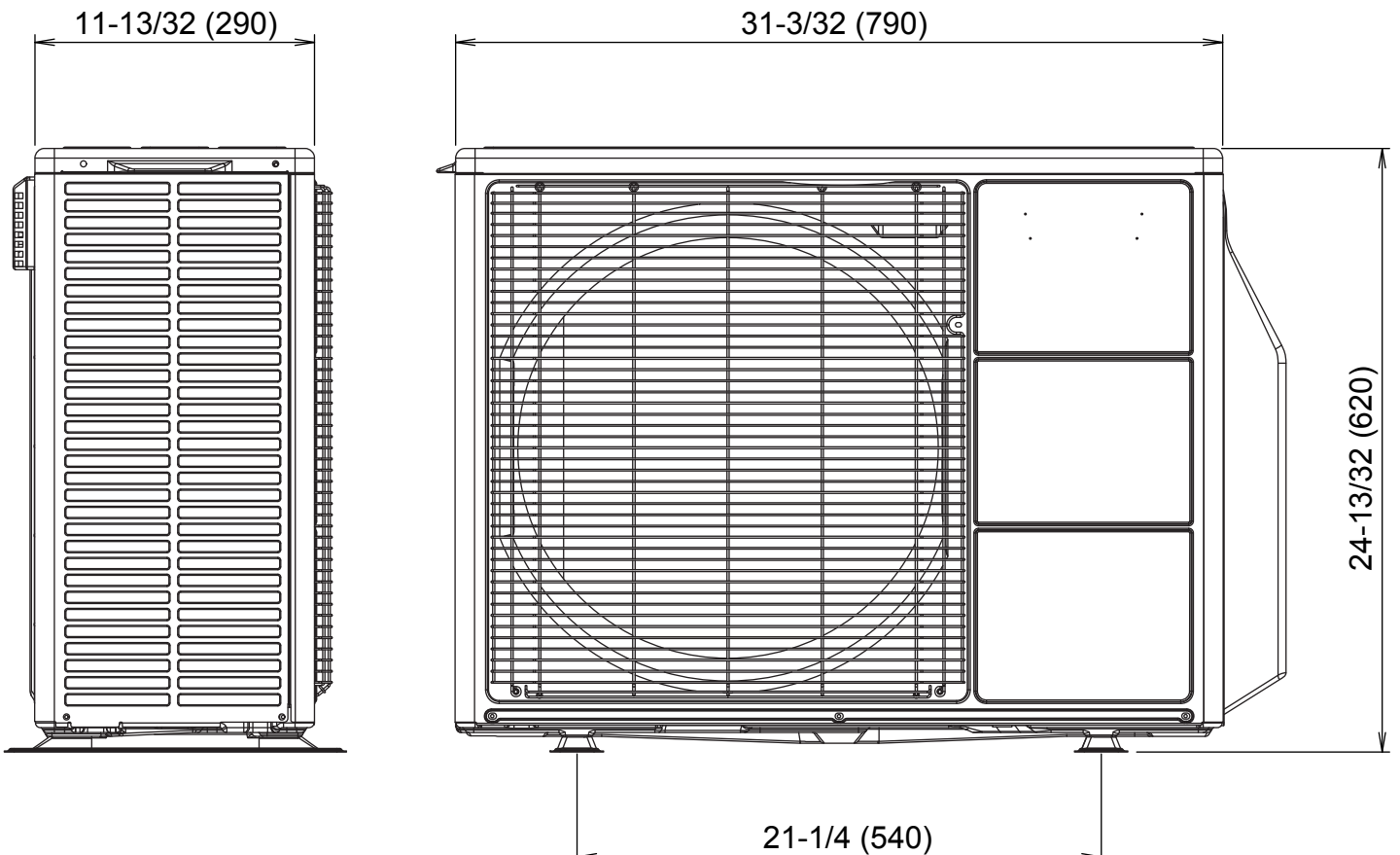
INDOOR UNIT



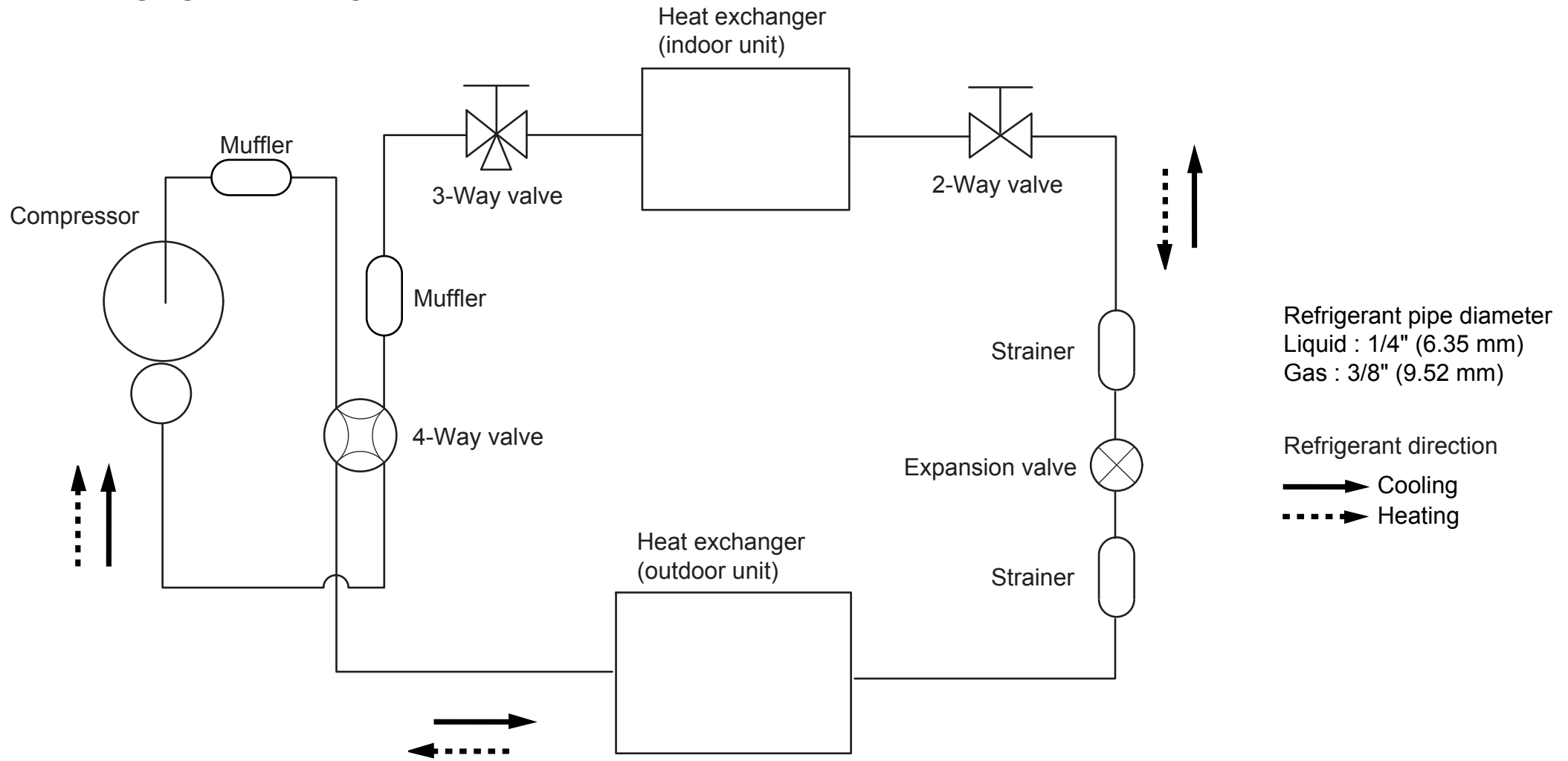
Drain pipe diameter
16.2 mm

Liquid pipe diameter : $\frac{1}{4}$ inch (6.35 mm)
Gas pipe diameter : $\frac{3}{8}$ inch (9.52 mm)

OUTDOOR UNIT



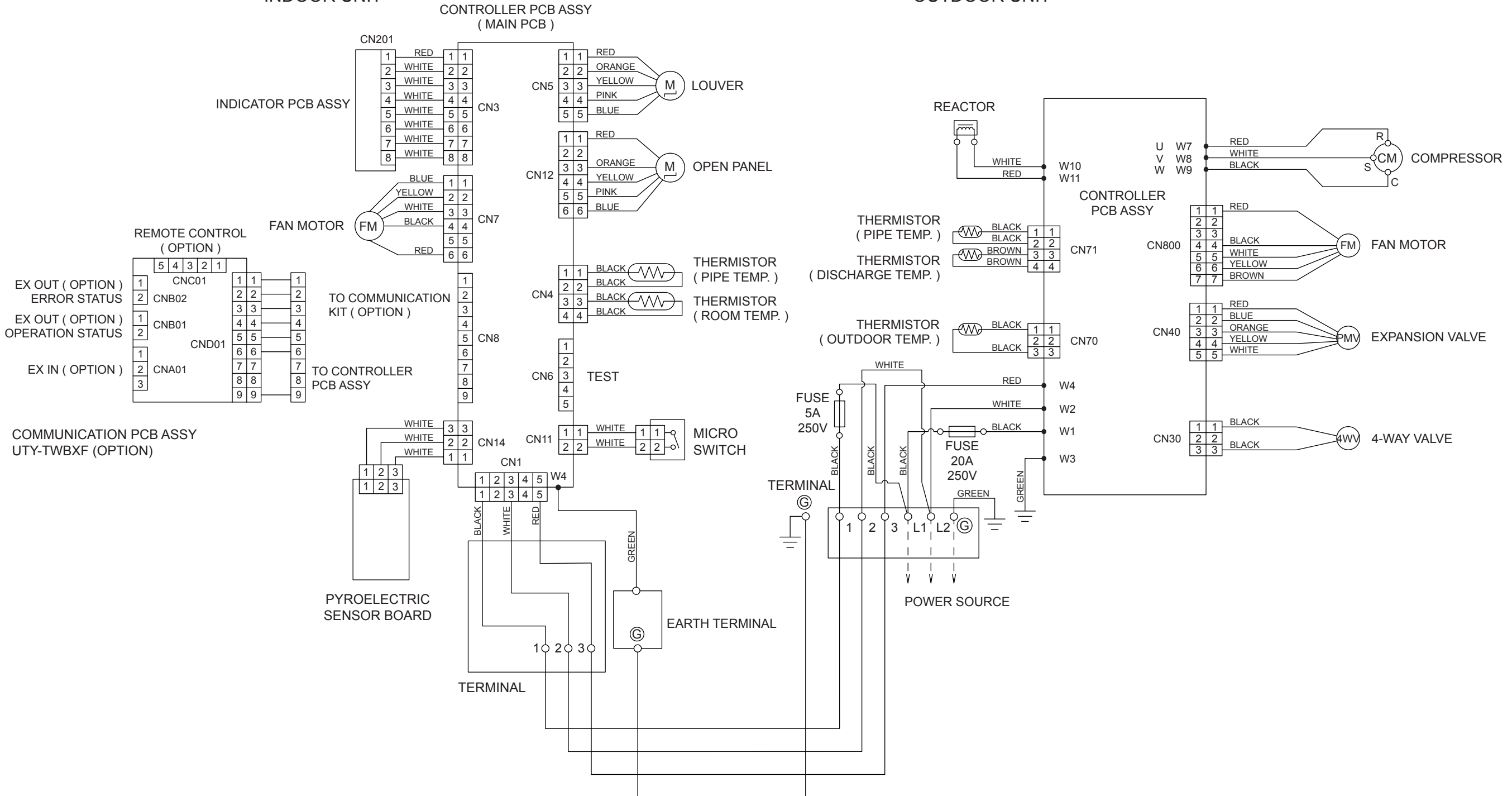
REFRIGERANT SYSTEM DIAGRAM



CIRCUIT DIAGRAM

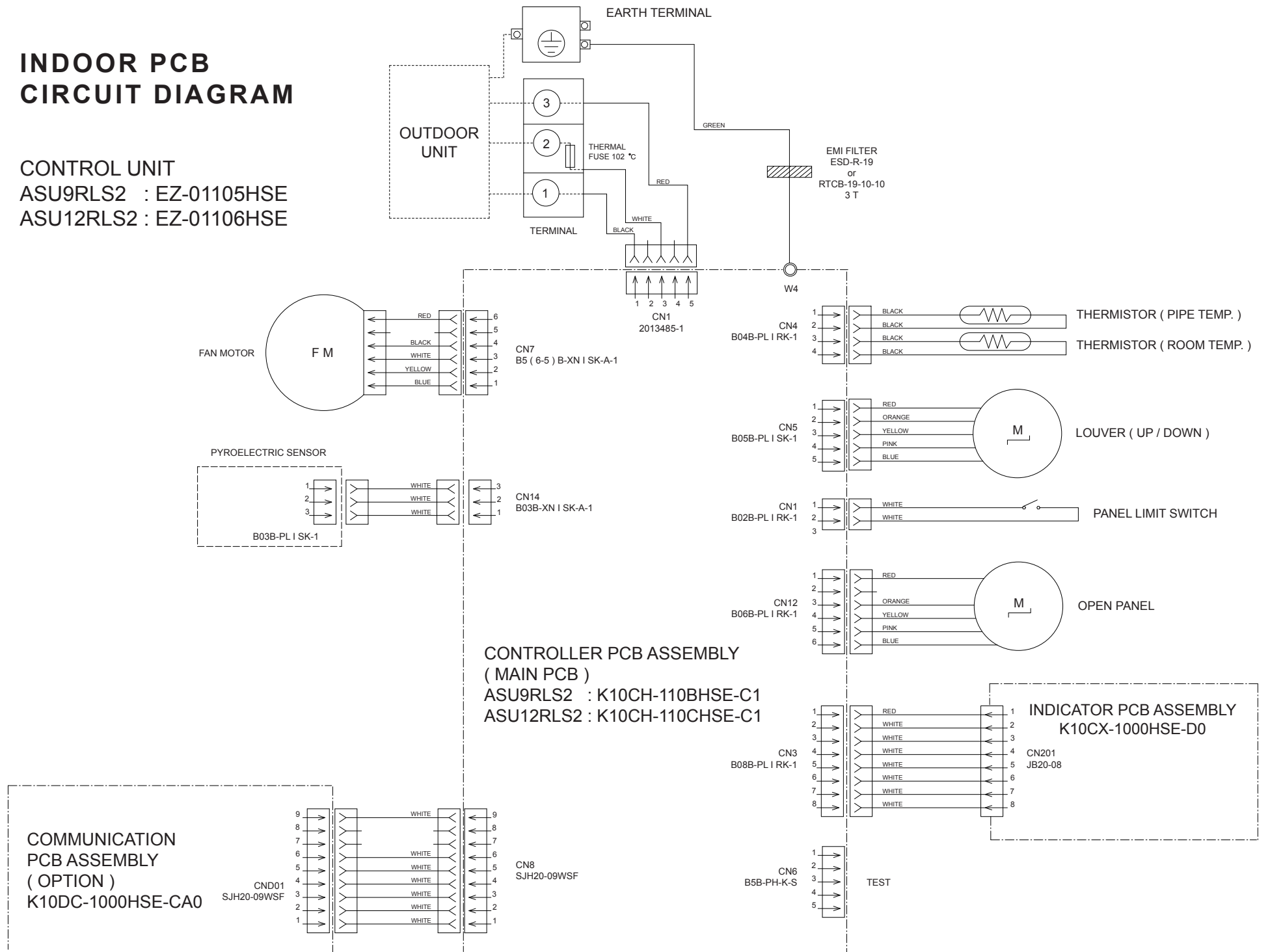
INDOOR UNIT

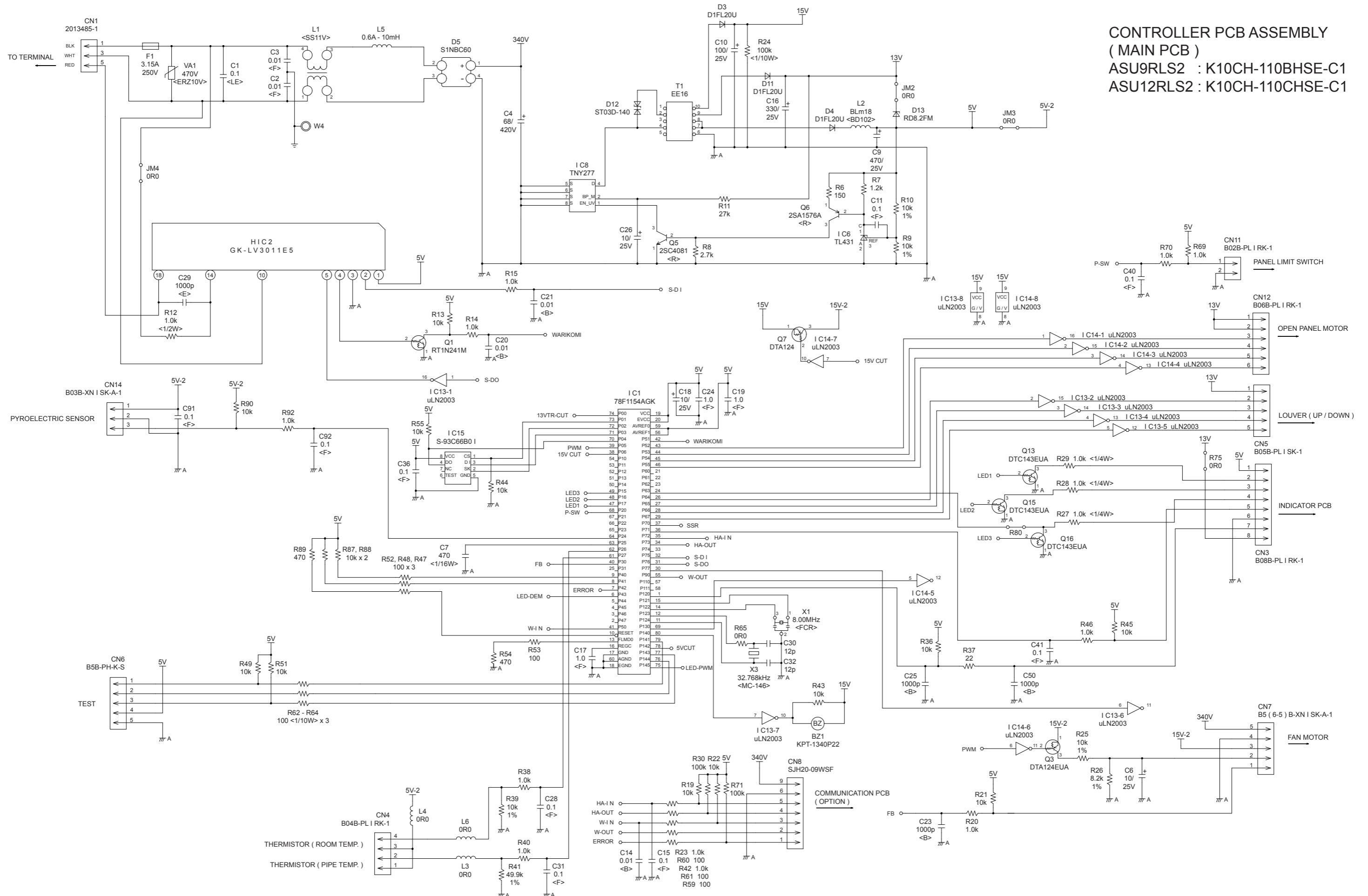
OUTDOOR UNIT



INDOOR PCB CIRCUIT DIAGRAM

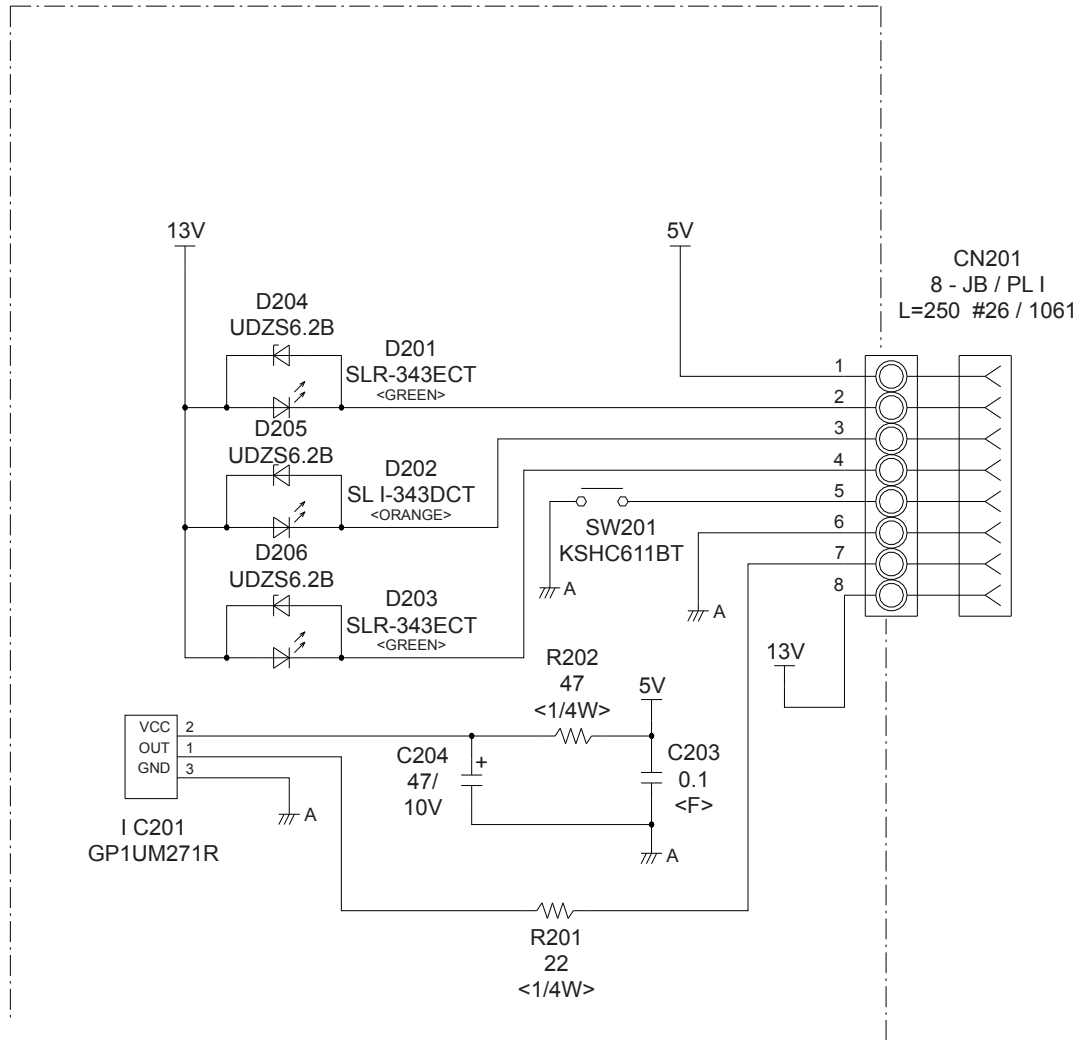
CONTROL UNIT
 ASU9RLS2 : EZ-01105HSE
 ASU12RLS2 : EZ-01106HSE



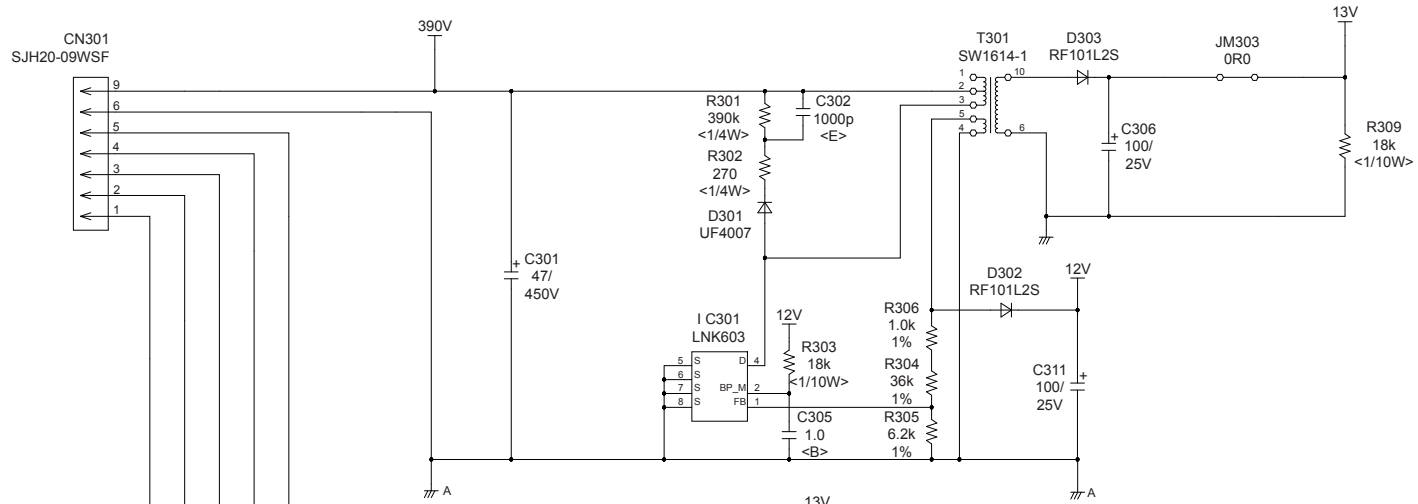


CONTROLLER PCB ASSEMBLY
(MAIN PCB)
 ASU9RLS2 : K10CH-110BHSE-C1
 ASU12RLS2 : K10CH-110CHSE-C1

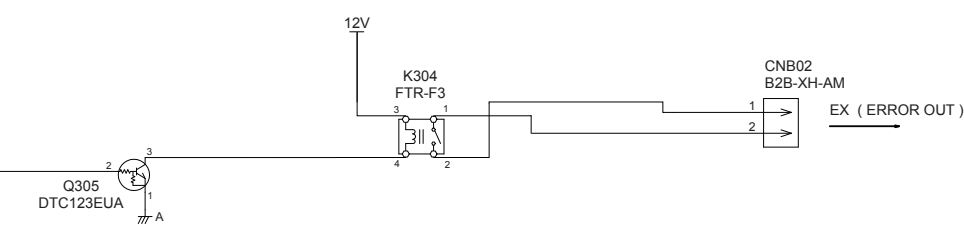
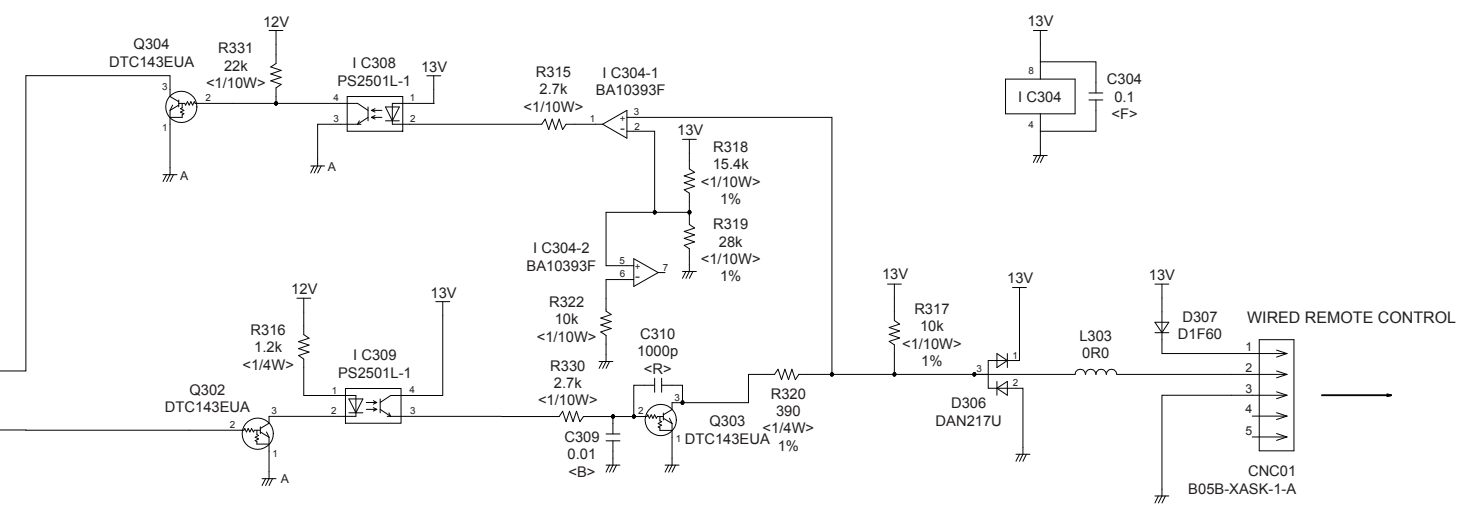
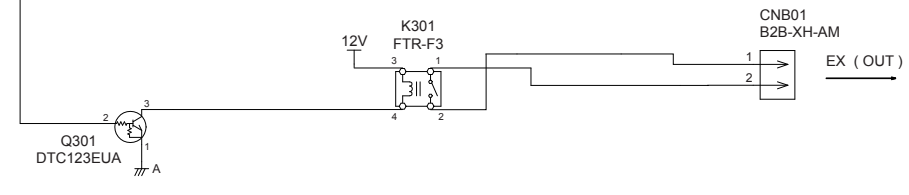
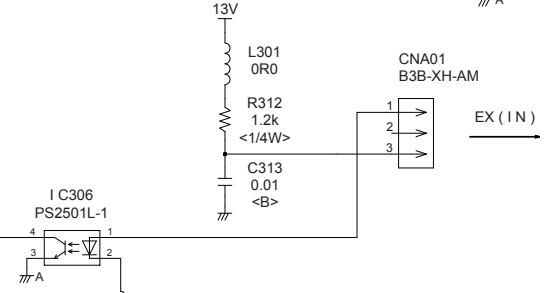
INDOOR UNIT
 INDICATOR PCB ASSEMBLY
 K10CX-1000HSE-D0



TO CONTROLLER PCB ASSEMBLY

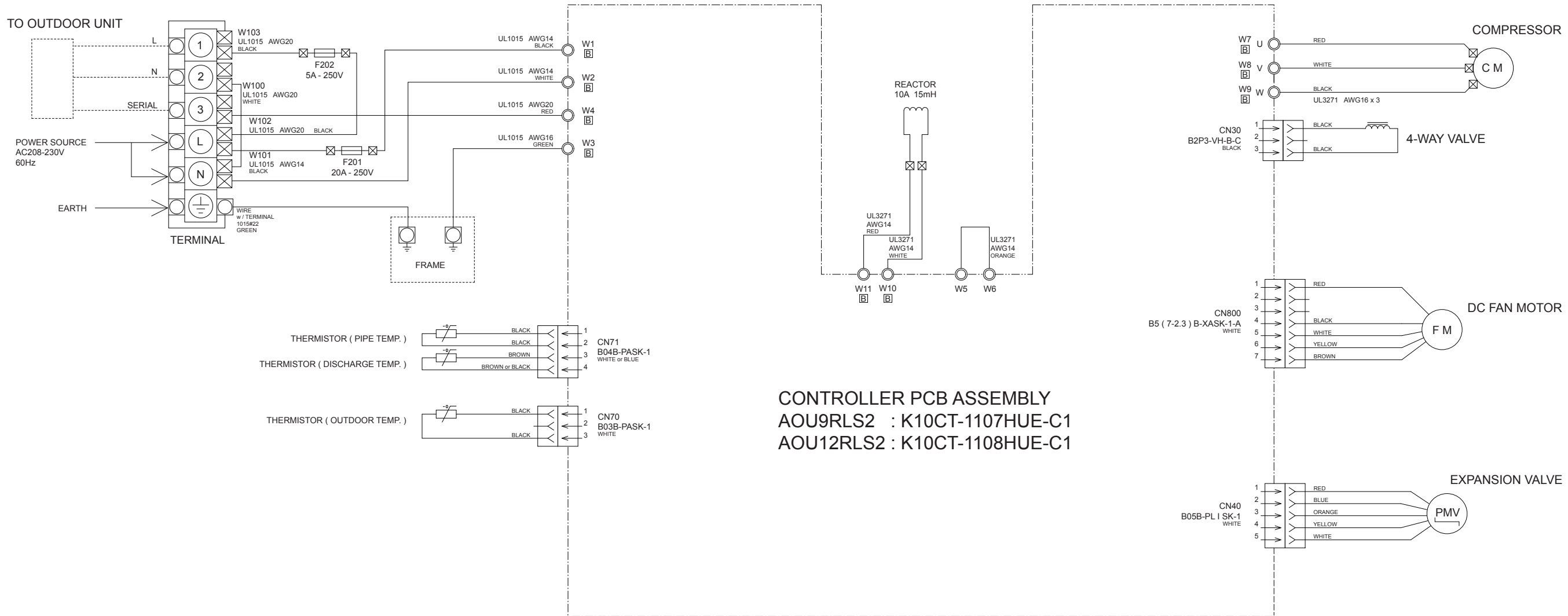


(OPTION)
UTY-TWBXF
COMMUNICATION PCB ASSEMBLY
K10DC-1000HSE-CA0

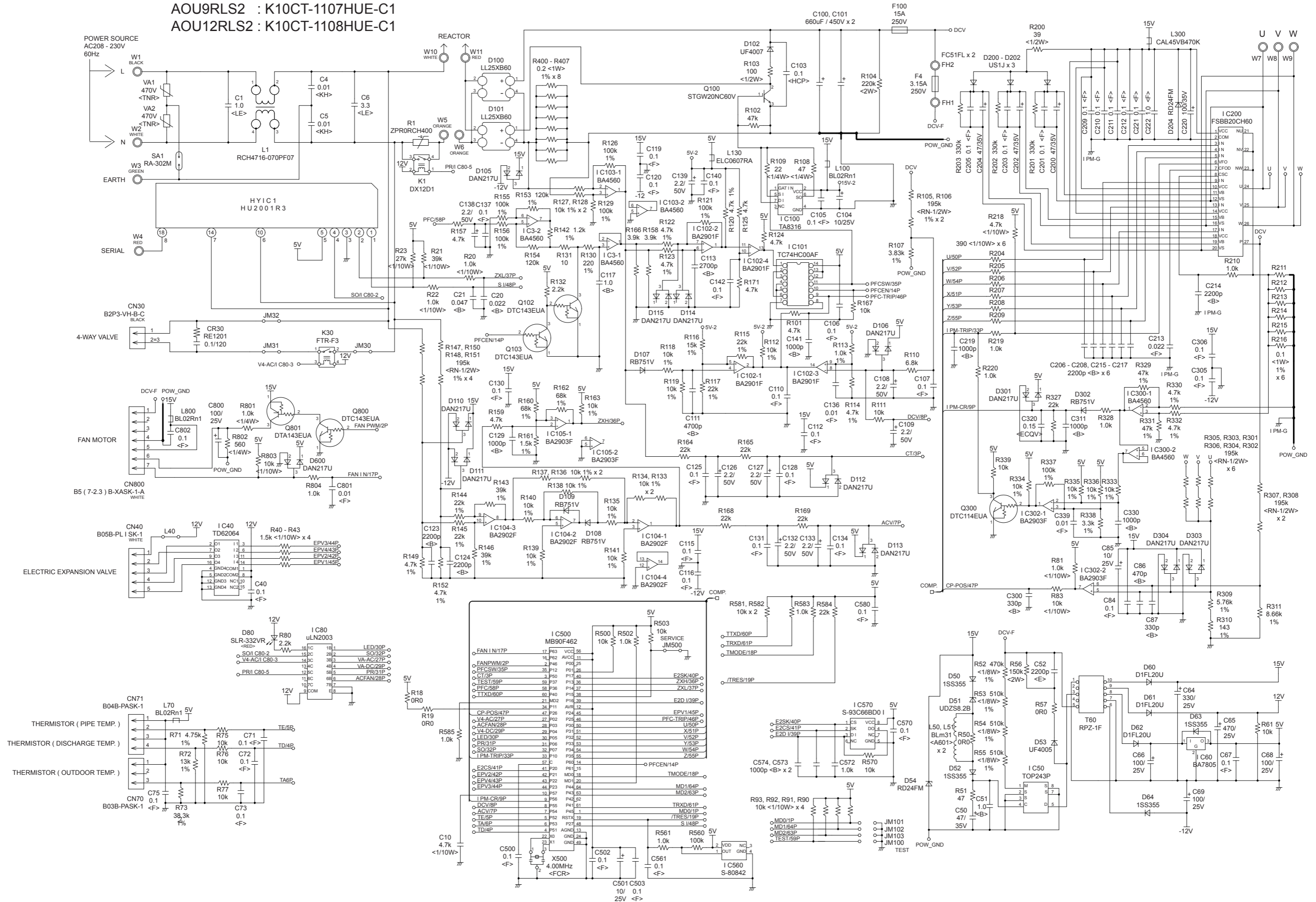


OUTDOOR PCB CIRCUIT DIAGRAM

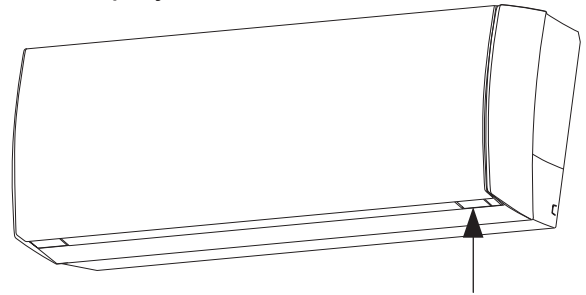
INVERTER ASSEMBLY
 AOU9RLS2 : EZ-01119HUE
 AOU12RLS2 : EZ-0111AHUE



OUTDOOR UNIT
 CONTROLLER PCB ASSEMBLY
 AOU9RLS2 : K10CT-1107HUE-C1
 AOU12RLS2 : K10CT-1108HUE-C1



Indoor unit display



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

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.

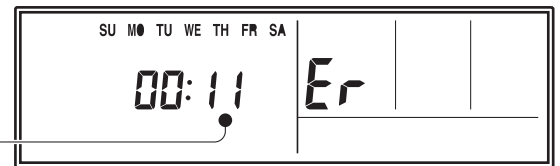
If you use a wired remote control, error codes will appear on the remote control display.

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

An error display is displayed only during operation.

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)	◇	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
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error
● (7)	● (1)	◇	71	Discharge temp. sensor error

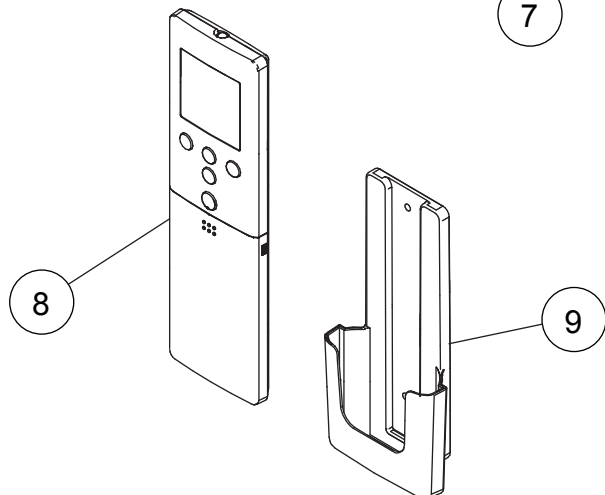
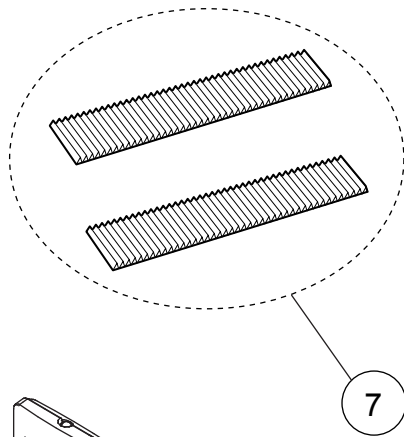
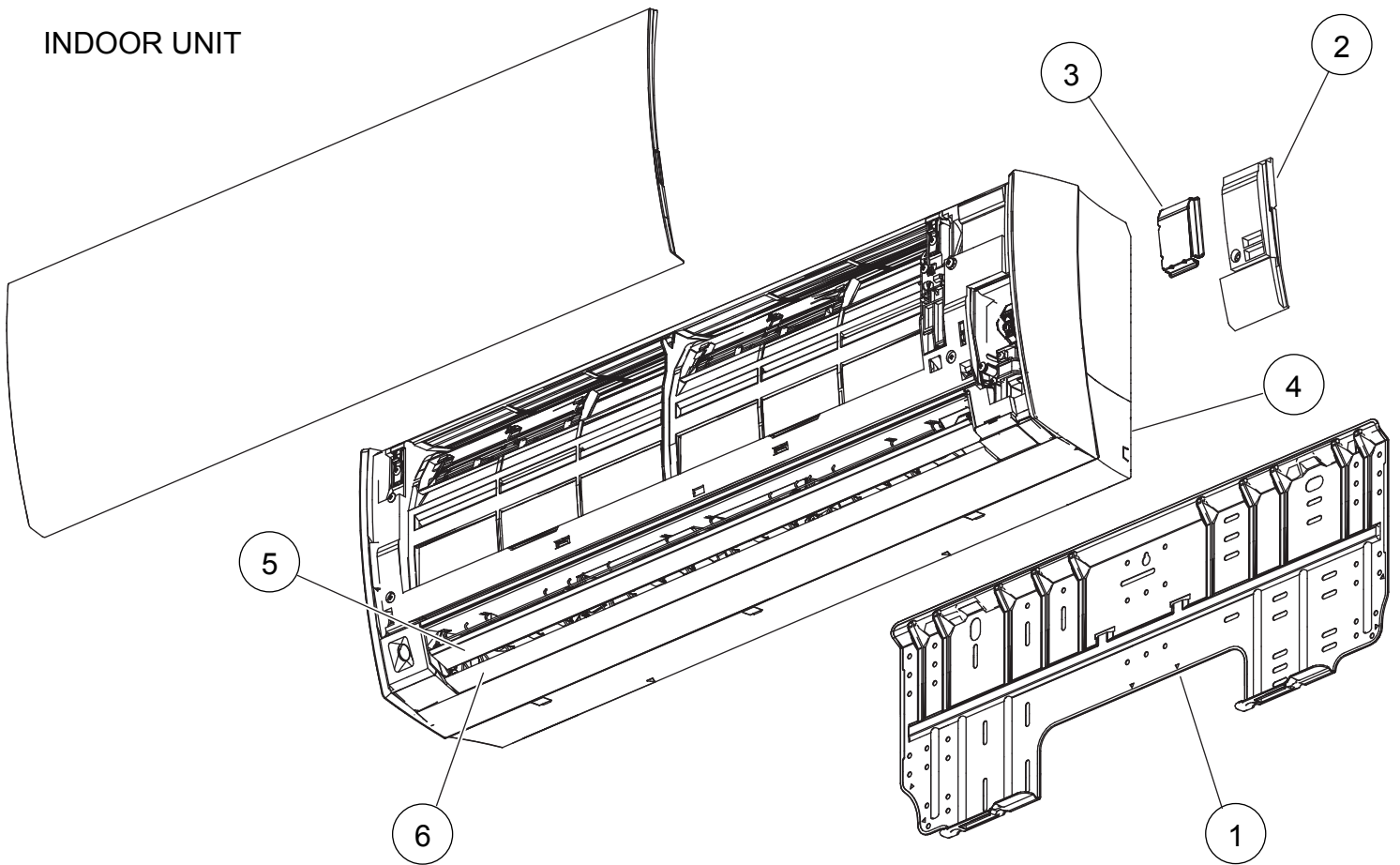
Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (7)	● (2)	◇	72	Compressor temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (7)	● (5)	◇	75	Suction Gas temp.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

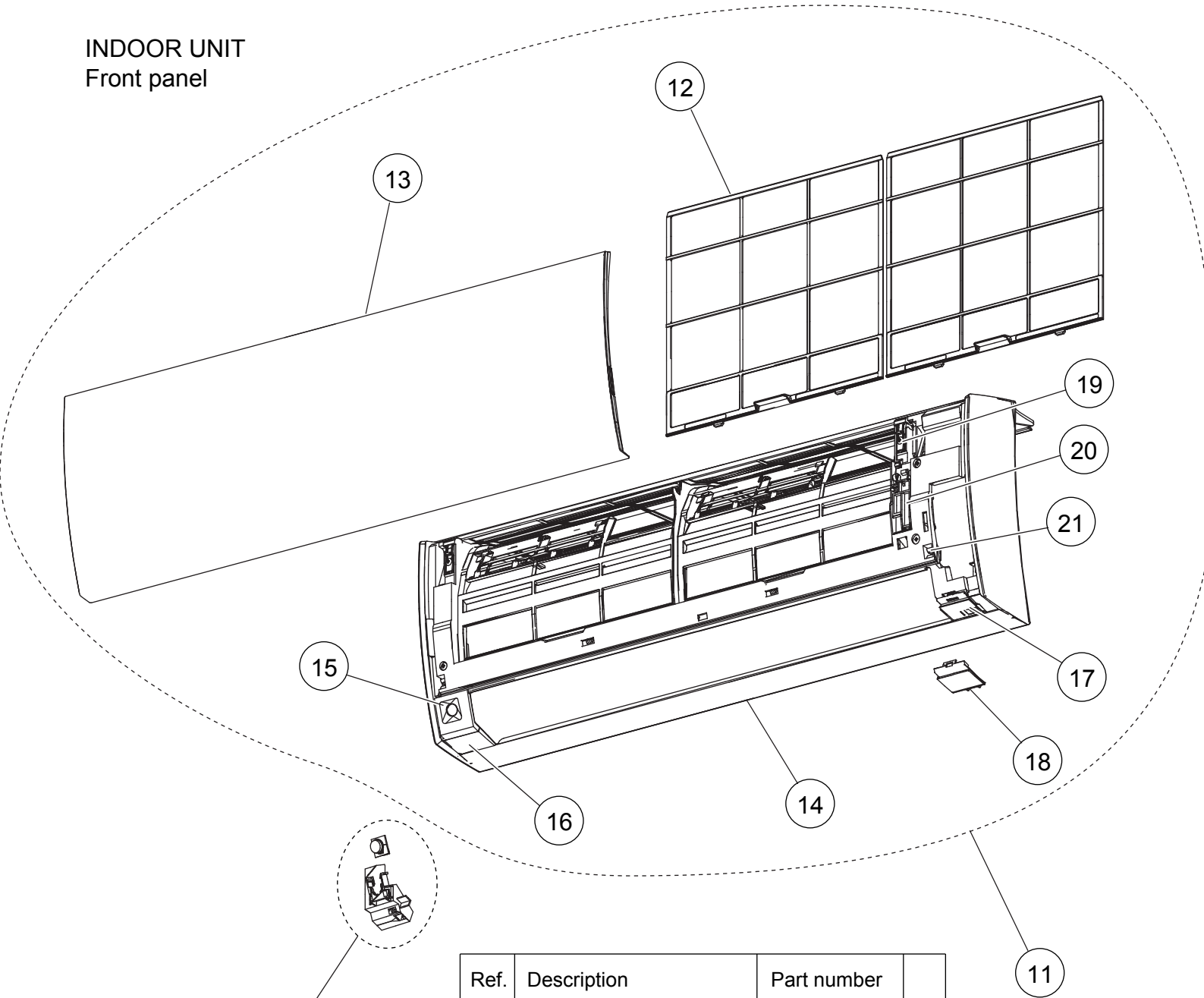
PARTS

INDOOR UNIT



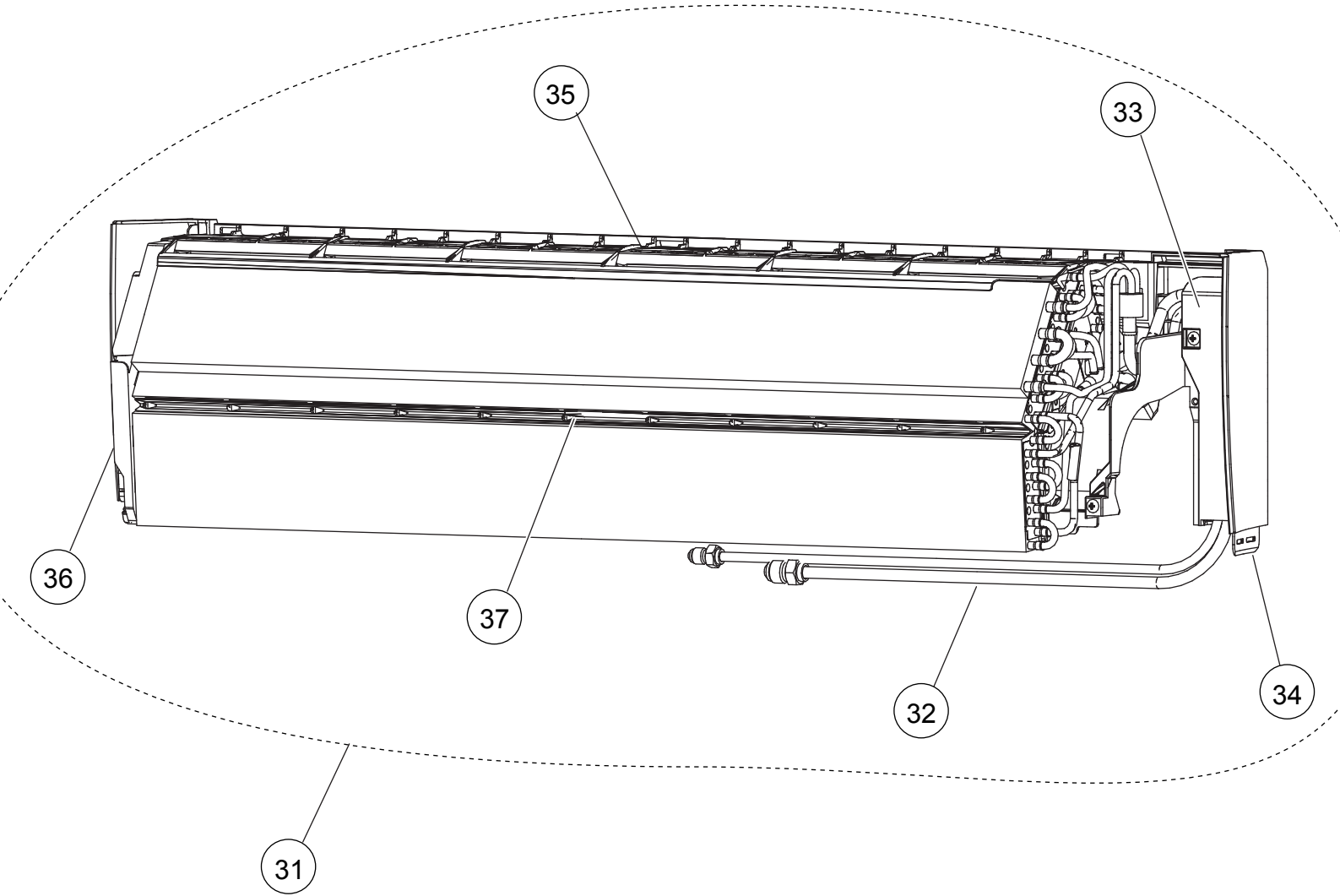
Ref.	Description	Part number
1	Bracket Panel	9318913002
2	Wire Cover	9318911008
3	Wire Shield	9318919004
4	Under Cover	9318879001
5	Louver (Upper)	9318880007
6	Louver (Lower)	9318881004
7	Air Clean Filter Assy	9317250009
8	Remote Control	9319634005
9	Remote Control Holder	9318912005

INDOOR UNIT
Front panel

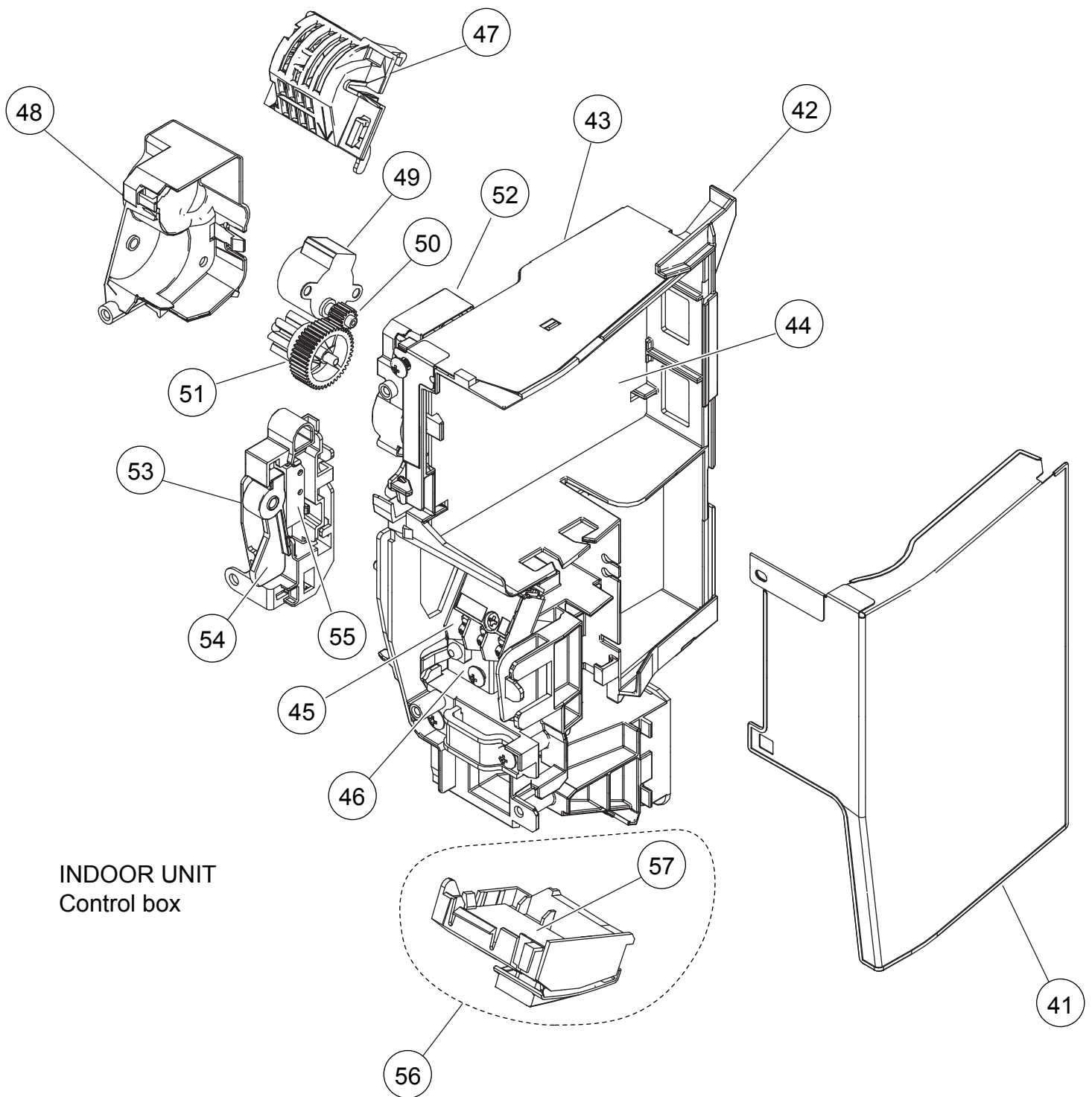


Ref.	Description	Part number	
11	Front Panel Total Assy	9319348209	
12	Air Filter	9318883008	
13	Intake Grille Assy	9319351186	
14	Front Panel	9318876000	
15	Front Panel Cover T	9318909005	
16	Display Plate Holder L	9318894004	
17	Display Plate Holder R	9318895001	
18	Display Plate R	9318893007	
19	Arm Cover	9318900002	
20	Grille Stay	9318899009	
21	Grille Clamper B	9316951006	
22	Pyroelectric Sensor Assy	9319346007	

INDOOR UNIT
Evaporator



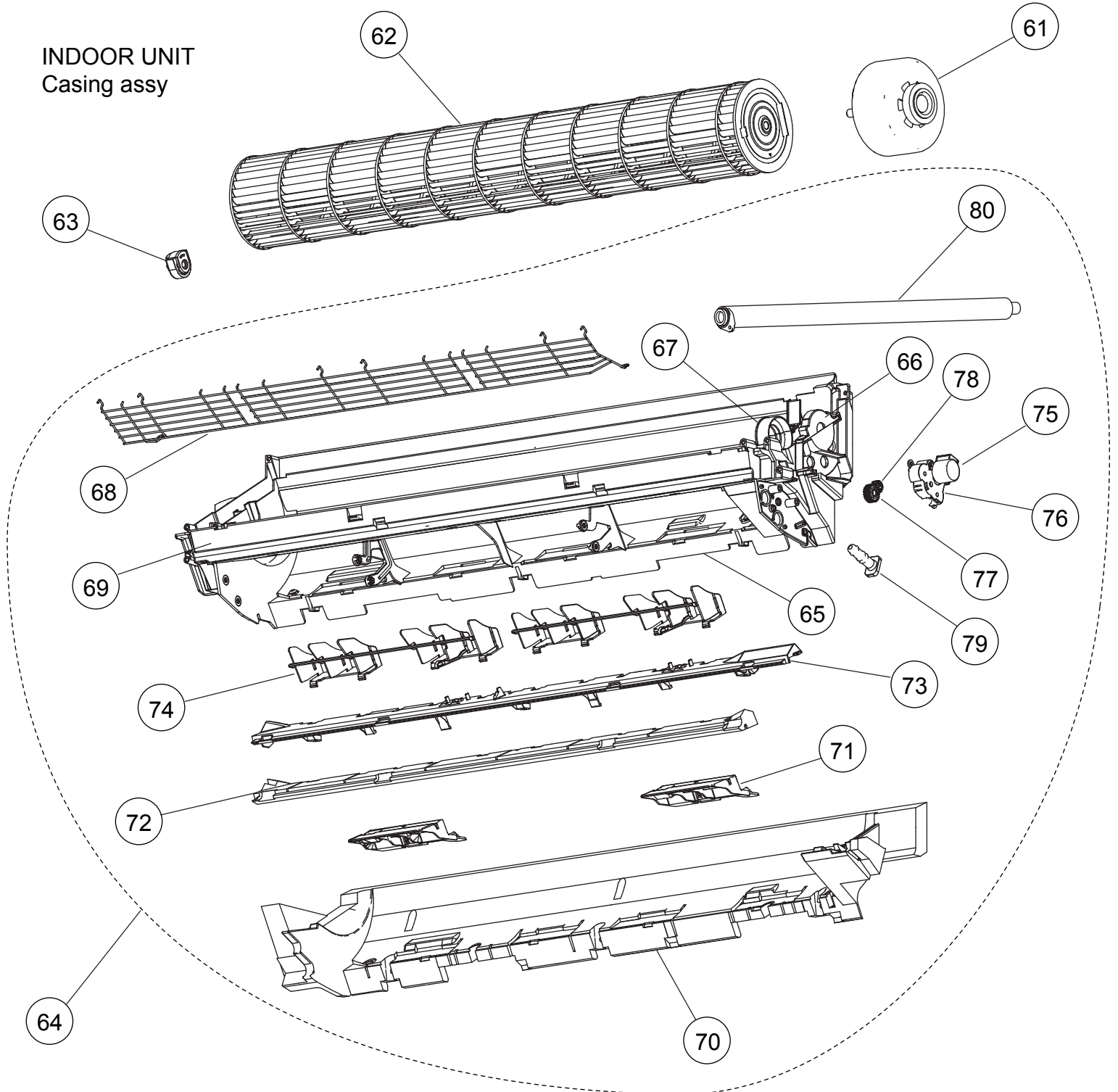
Ref.	Description	Part number
31	Evaporator Total Assy	9319327006
32	Joint Pipe Assy	9319322001
33	Joint Pipe Holder	9318901009
34	Base	9318874006
35	Filter Guide	9318887006
36	Evaporator Holder L	9318875003
37	Air Seal	9319295008



Ref.	Description	Part number
41	Cover Shield A	9318916003
42	Control Box	9318882018
43	Box Shield Assy	9319344003
44	Controller PCB Assy (9)	9708713205
44	Controller PCB Assy (12)	9708713212
45	Terminal	9900638016
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	Display Assy	9708823010
57	Display PCB Assy	9708824017
--	Thermistor Assy	9900627003

INDOOR UNIT
Casing assy

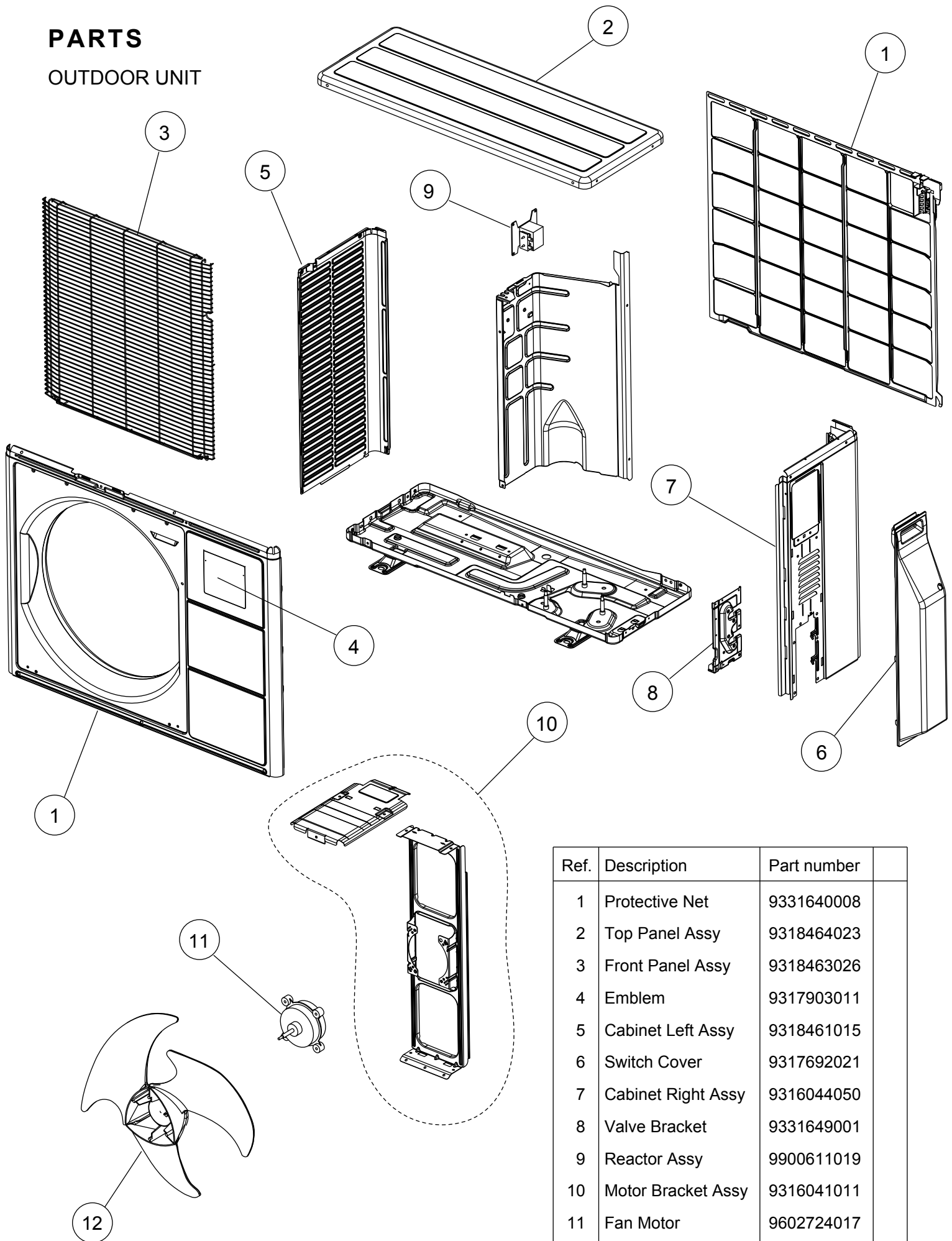


Ref.	Description	Part number
61	Fan Motor	9602947010
62	Crossflow Fan Assy	9319361000
63	Bearing C Assy	9306628017
64	Casing Assy	9319342009
65	Casing	9318873009
66	Motor Cover	9316601000
67	Motor Cover	9318888003
68	Fan Guard	9318924008
69	Casing Cover F	9318923001
70	Casing Cover B	9318920000

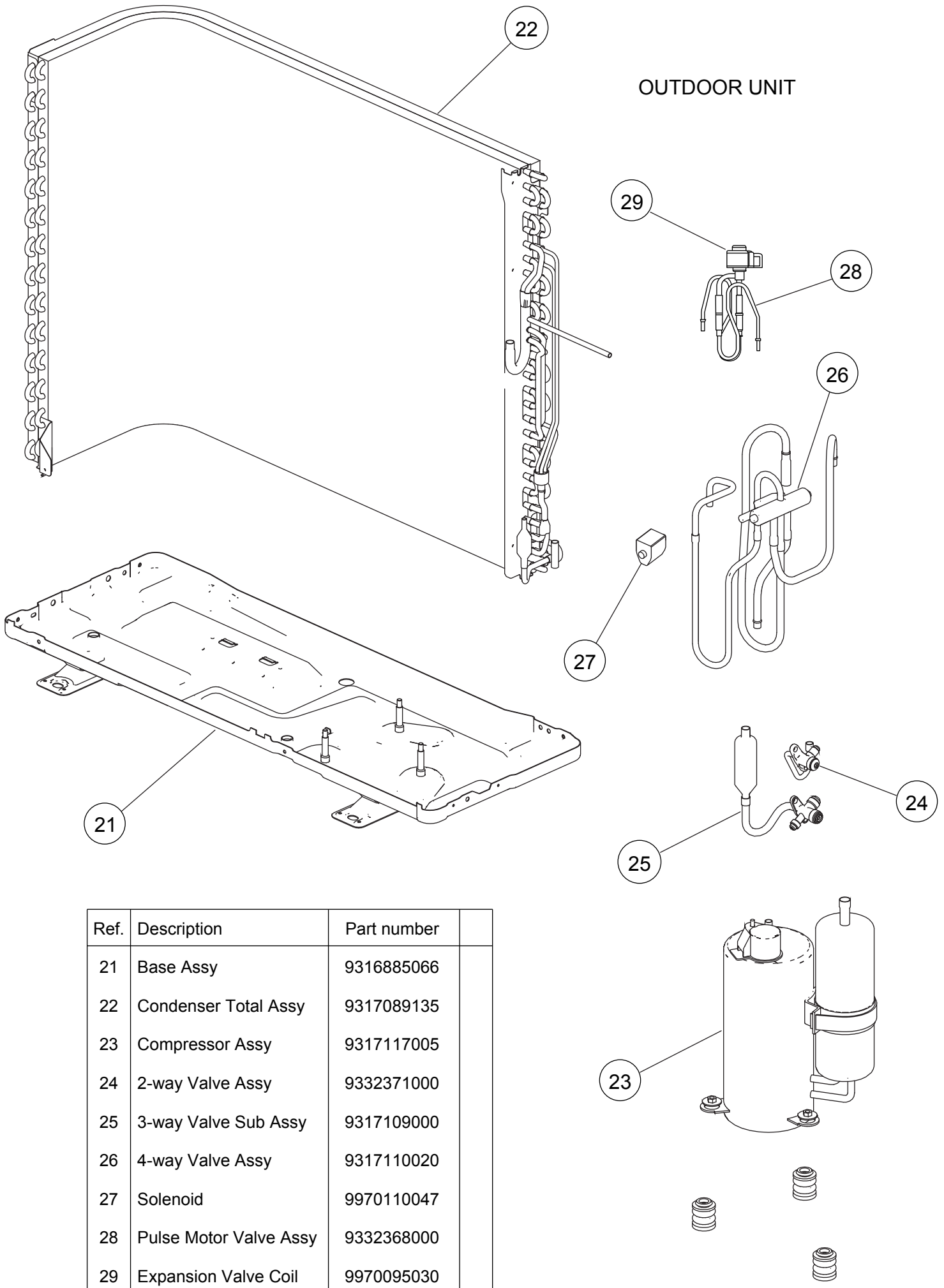
Ref.	Description	Part number
71	Pipe Bracket	9318889000
72	Panel Cover	9319296005
73	Louver Holder	9318886009
74	R and L Louver	9318885002
75	Motor Step	9900384128
76	Louver Gear Holder	9318905007
77	Louver Gear	9318904000
78	Gear A	9309994003
79	Drain Cap	9316177017
80	Drain Hose Assy	9316904002

PARTS

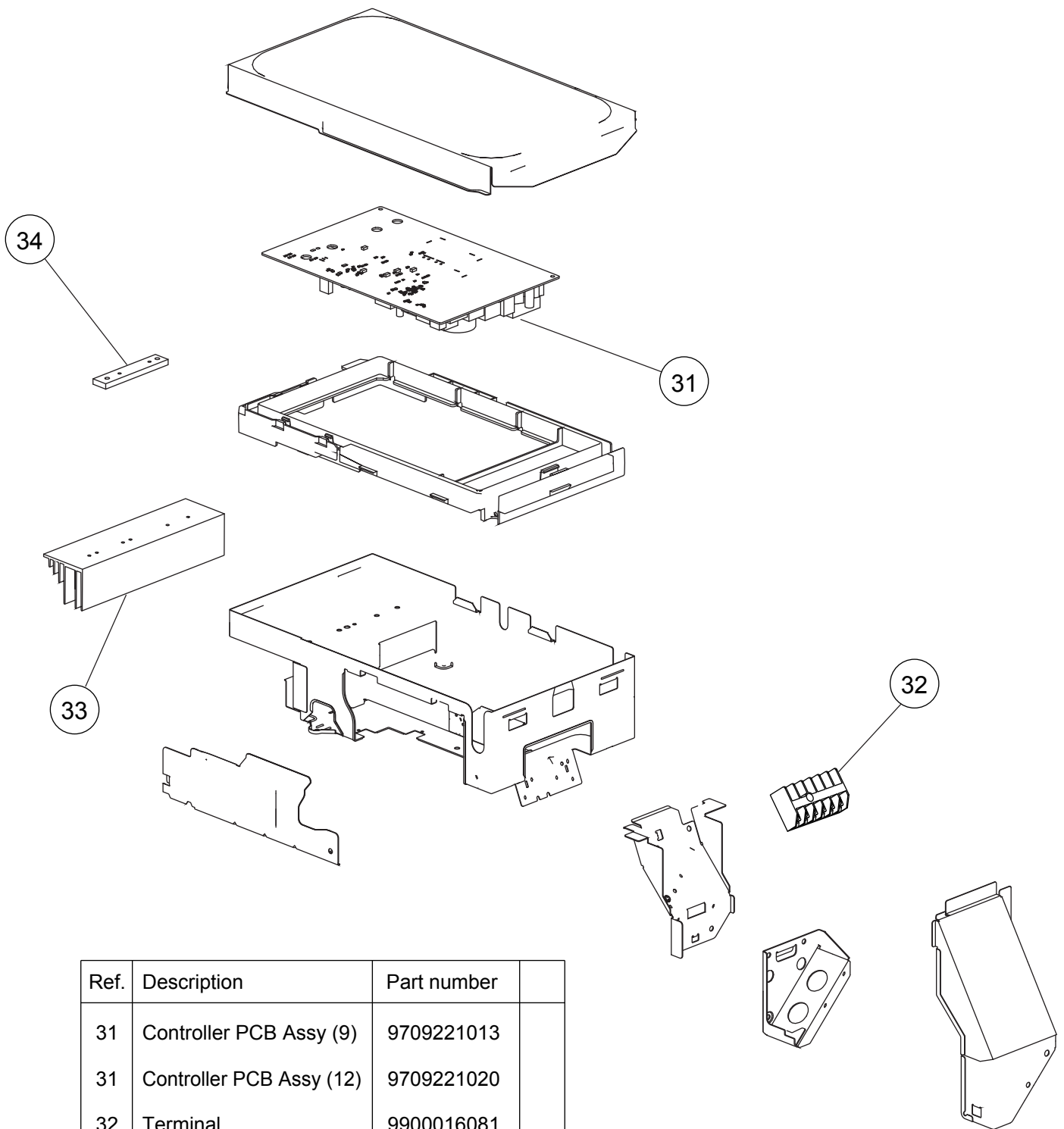
OUTDOOR UNIT



Ref.	Description	Part number
1	Protective Net	9331640008
2	Top Panel Assy	9318464023
3	Front Panel Assy	9318463026
4	Emblem	9317903011
5	Cabinet Left Assy	9318461015
6	Switch Cover	9317692021
7	Cabinet Right Assy	9316044050
8	Valve Bracket	9331649001
9	Reactor Assy	9900611019
10	Motor Bracket Assy	9316041011
11	Fan Motor	9602724017
12	Propeller Fan	9313808013
--	Drain Assy	9303029022



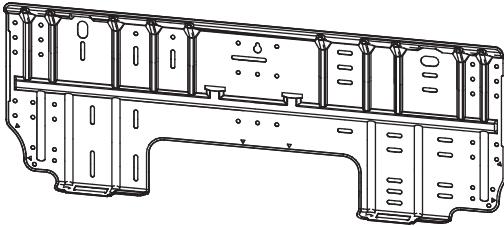
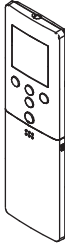


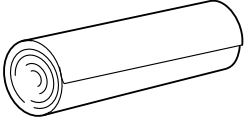
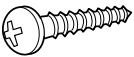

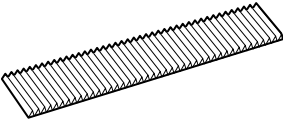
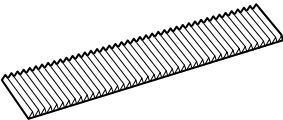
OUTDOOR UNIT



Ref.	Description	Part number
31	Controller PCB Assy (9)	9709221013
31	Controller PCB Assy (12)	9709221020
32	Terminal	9900016081
33	Heatsink A	9314410017
34	Heatsink B	9314090011
--	Outdoor Thermistor	9900544010
--	Thermistor Assy	9900614027

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
<p>Bracket panel</p> 	<p>9318913002</p>
<p>Remote control</p> 	<p>9319634005</p>
<p>Remote control holder</p> 	<p>9318912005</p>
<p>Battery (penlight)</p> 	<p>0600185046</p>
<p>Cloth tape</p> 	<p>9308117007</p>
<p>Tapping screw (big) (ϕ 4 x 25)</p> 	<p>0700076046</p>
<p>Tapping screw (small) (ϕ 3 x 12)</p> 	<p>0700019036</p>
<p>Air cleaning filter (Ion deodrant)</p> 	<p>9311925088</p>
<p>Air cleaning filter (Electric)</p> 	<p>9312153077</p>

1112G4001