

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL

Indoor unit	Outdoor unit
ASU9RL2	AOU9RL2
ASU12RL2	AOU12RL2



CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM....	3
CIRCUIT DIAGRAM.....	4
INDOOR PCB CIRCUIT DIAGRAM.....	5
OUTDOOR PCB CIRCUIT DIAGRAM...	8
ERROR DETECTION.....	10
PARTS (INDOOR UNIT).....	11
PARTS (OUTDOOR UNIT).....	16
ACCESSORIES.....	20

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		ASU9RL2	ASU12RL2
OUTDOOR UNIT		AOU9RL2	AOU12RL2
POWER SOURCE		115 V	
FREQUENCY		60 Hz	
COOLING CAPACITY		9,000 Btu/h	12,000 Btu/h
HEATING CAPACITY		10,000 Btu/h	14,000 Btu/h
INPUT WATTS	Cooling	0.830 kW	1.200 kW
	Heating	0.770 kW	1.210 kW
E.E.R.	Cooling	10.85 Btu/Wh	10.00 Btu/Wh
COP	Heating	13.0 Btu/Wh	11.55 Btu/Wh
RUNNING CURRENT	Cooling	7.5 A	10.9 A
	Heating	7.0 A	11.0 A
MAXIMUM CURRENT	Cooling	13.0 A	13.0 A
	Heating	13.5 A	15.0 A
MOISTURE REMOVAL		2.7 Pts/h 1.3 L/h	3.8 Pts/h 1.8 L/h
AIR CIRCULATION HIGH	Cooling	424 CFM, 720 m ³ /h	
	Heating	435 CFM, 740 m ³ /h	

FAN MOTOR

POWER SOURCE		115 V	
INDOOR UNIT Cooling	High	1,320 r.p.m.	1,320 r.p.m.
	Medium	1,120 r.p.m.	1,120 r.p.m.
	Low	840 r.p.m.	860 r.p.m.
	Quiet	700 r.p.m.	700 r.p.m.
INDOOR UNIT Heating	High	1,360 r.p.m.	1,360 r.p.m.
	Medium	1,120 r.p.m.	1,120 r.p.m.
	Low	900 r.p.m.	900 r.p.m.
	Quiet	700 r.p.m.	700 r.p.m.
OUTDOOR UNIT Cooling		730 r.p.m.	860 r.p.m.
OUTDOOR UNIT Heating		650 r.p.m.	760 r.p.m.

NOISE LEVEL

INDOOR UNIT	High	43 dB	
	Medium	38 dB	
	Low	33 dB	
	Quiet	23 dB	
OUTDOOR UNIT Cooling		47 dB	51 dB
OUTDOOR UNIT Heating		48 dB	51 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION		ASM89D10UFZ	
WEIGHT (with oil)		19 lb. 10 oz., 8.9 kg	
PRECHARGED REFRIGERANT		23 oz., 650 g	28 oz., 800 g
REFRIGERANT TYPE		R410A	R410A
FULL CHARGE	Pipe length 49 ft., 15 m	23 oz., 650 g	28 oz., 800 g
	66 ft., 20 m	26 oz., 750 g	32 oz., 900 g
ADDITIONAL CHARGE		0.22 oz./ft., 20 g/m	
MAXIMUM PIPING HEIGHT		49 ft., 15 m	

DIMENSIONS

INDOOR UNIT H x W x D	10-5/16 x 32-9/32 x 8-1/8 in. 262 x 820 x 206 mm
OUTDOOR UNIT H x W x D	21-1/4 x 26 x 11-11/32 in. 540 x 660 x 290 mm

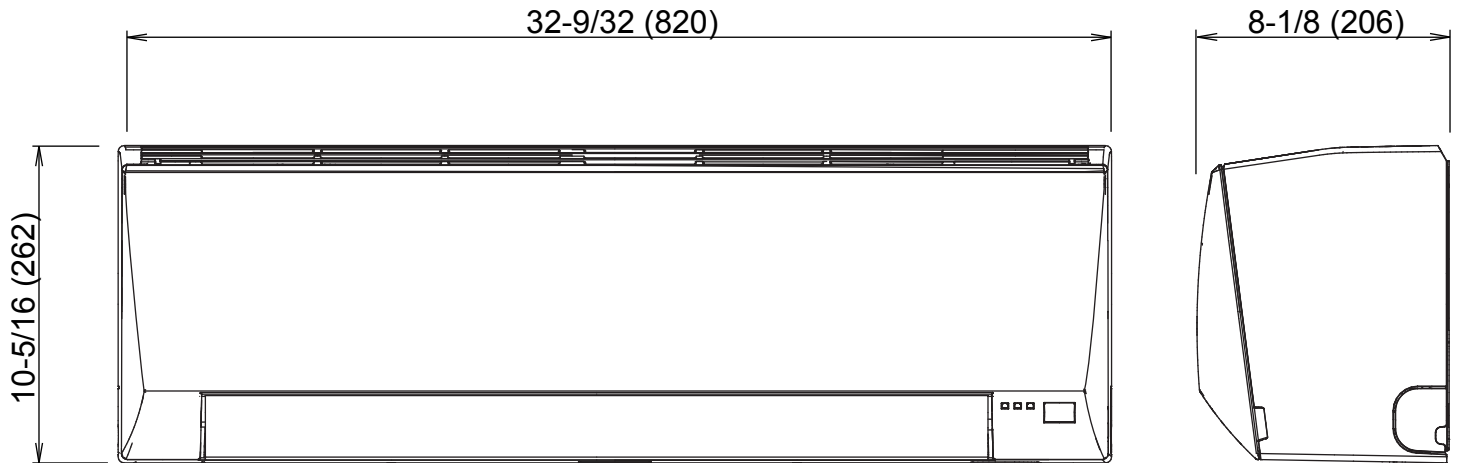
WEIGHT

INDOOR UNIT Net / Shipping	15 lb. / 20 lb. 7 kg / 9 kg	
OUTDOOR UNIT Net / Shipping	64 lb. / 68 lb. 29 kg / 31 kg	68 lb. / 73 lb. 31 kg / 33 kg

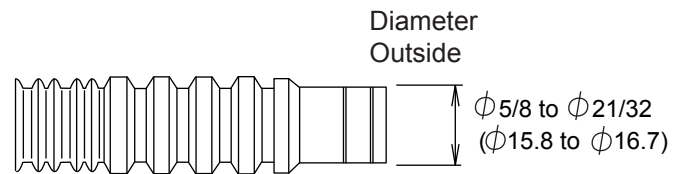
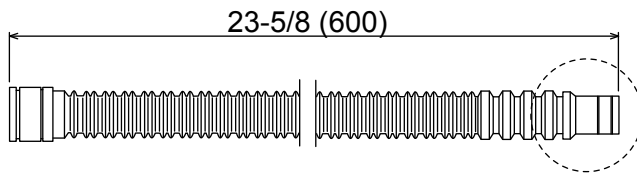
DIMENSIONS

unit : inch (mm)

INDOOR UNIT

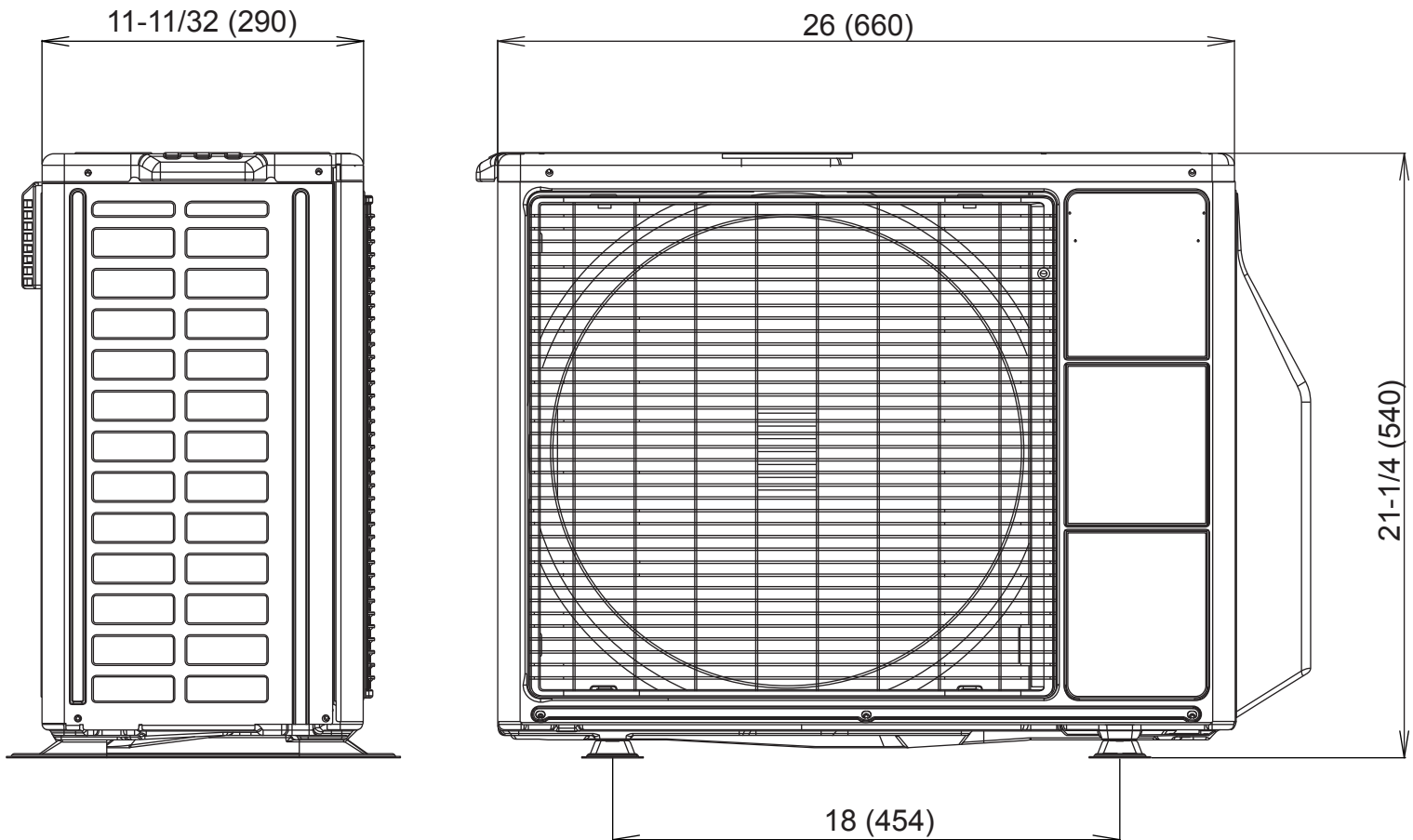


Drain hose

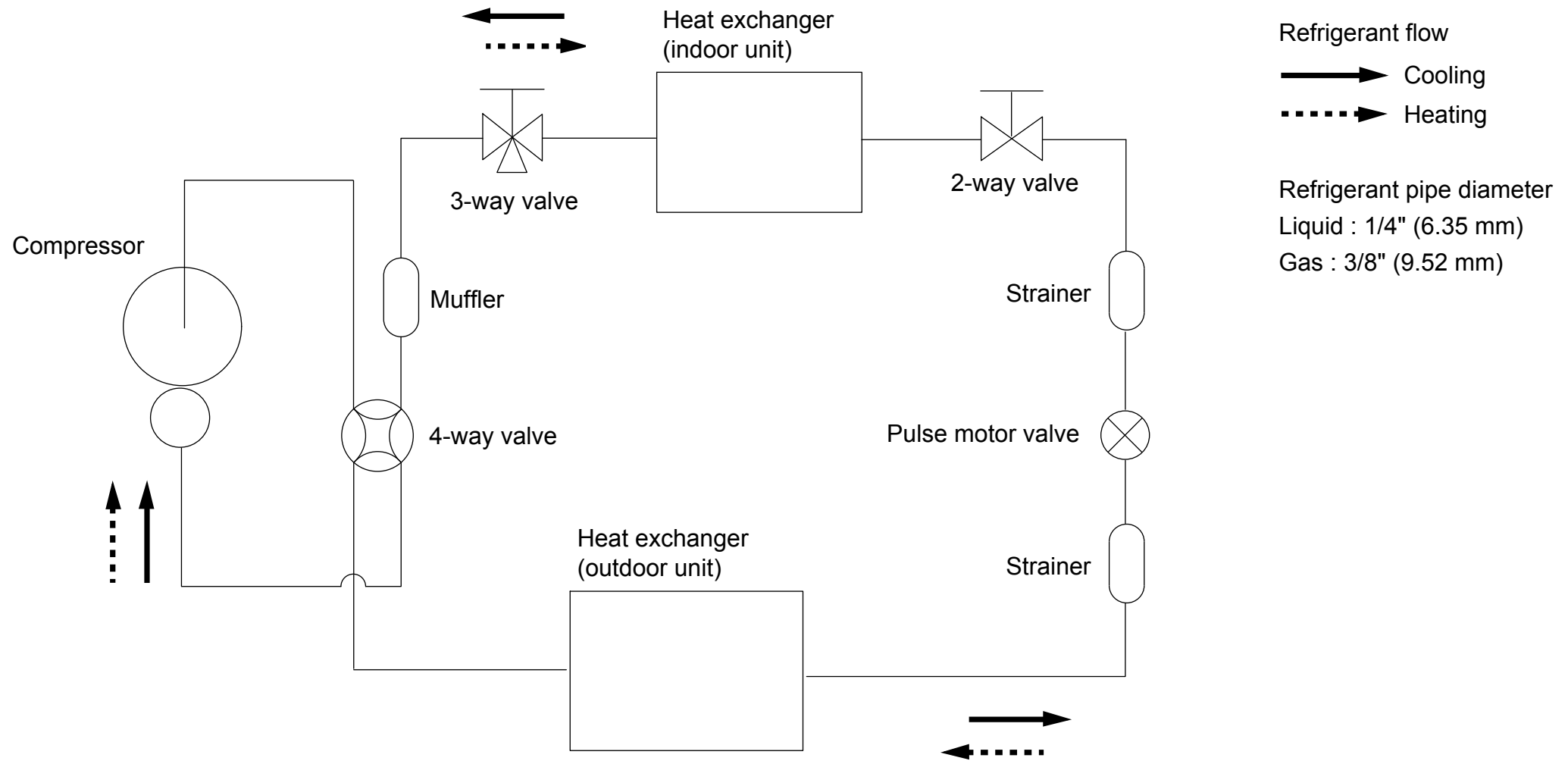


Inside : $\phi 17/32$ inch
($\phi 13.8$ mm)

OUTDOOR UNIT

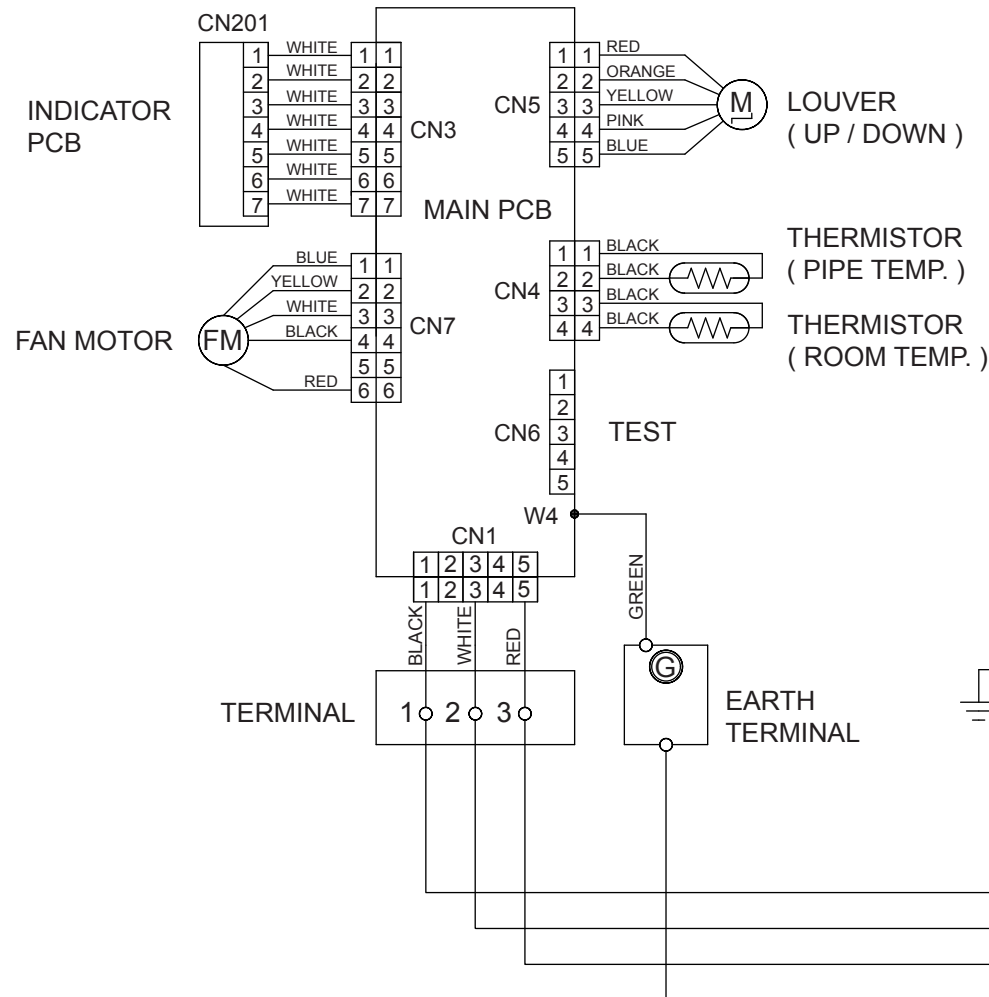


REFRIGERANT SYSTEM DIAGRAM

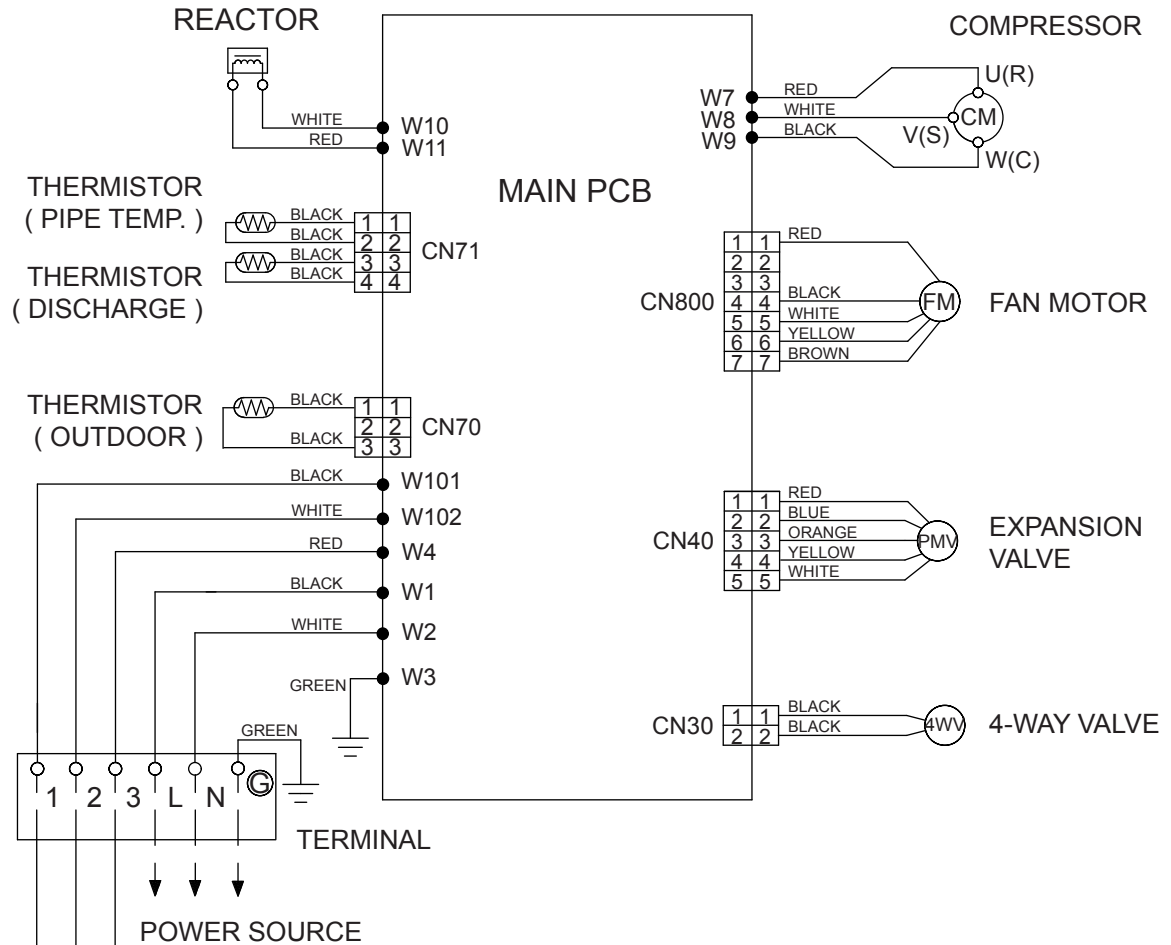


CIRCUIT DIAGRAM

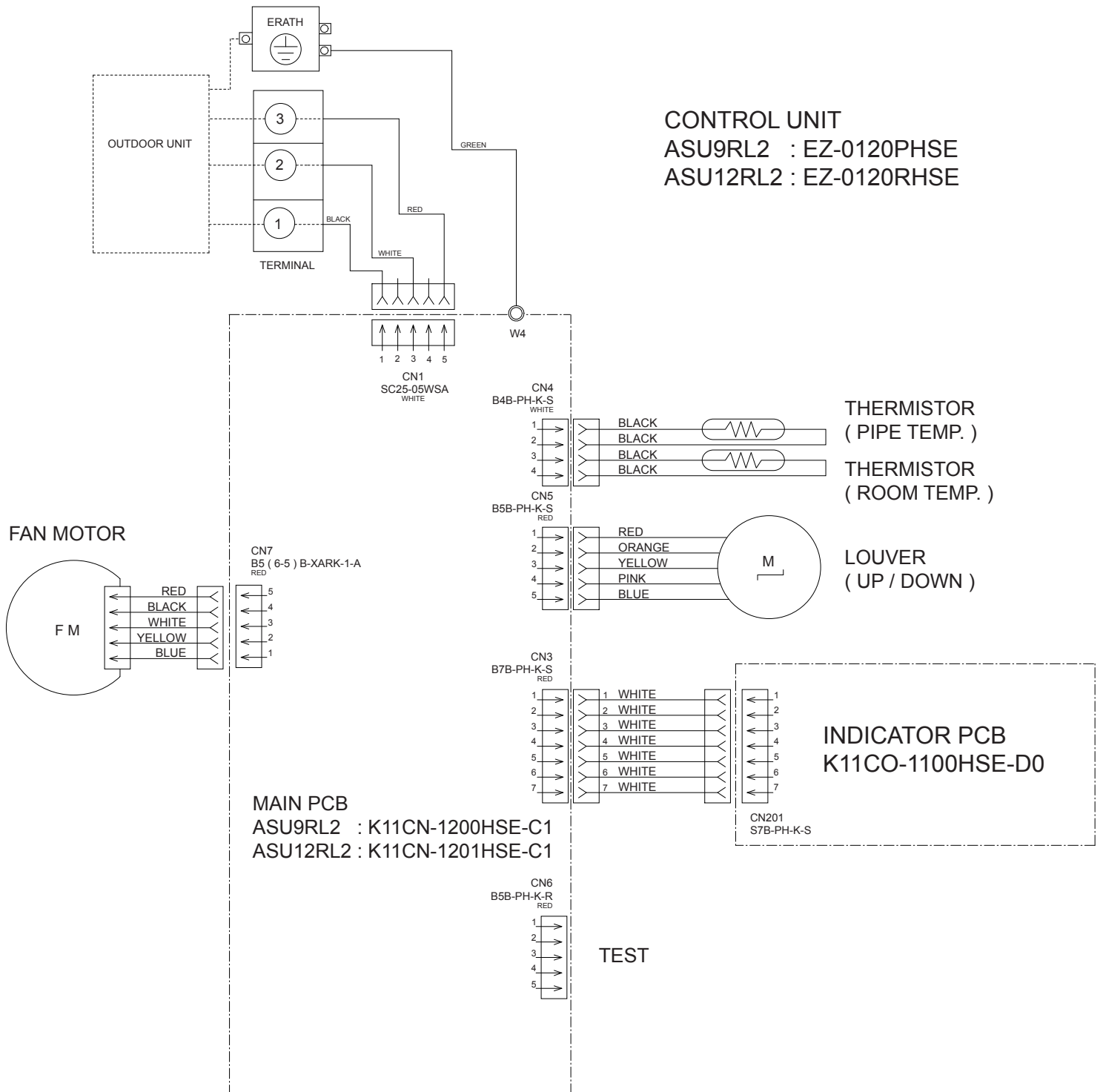
INDOOR UNIT

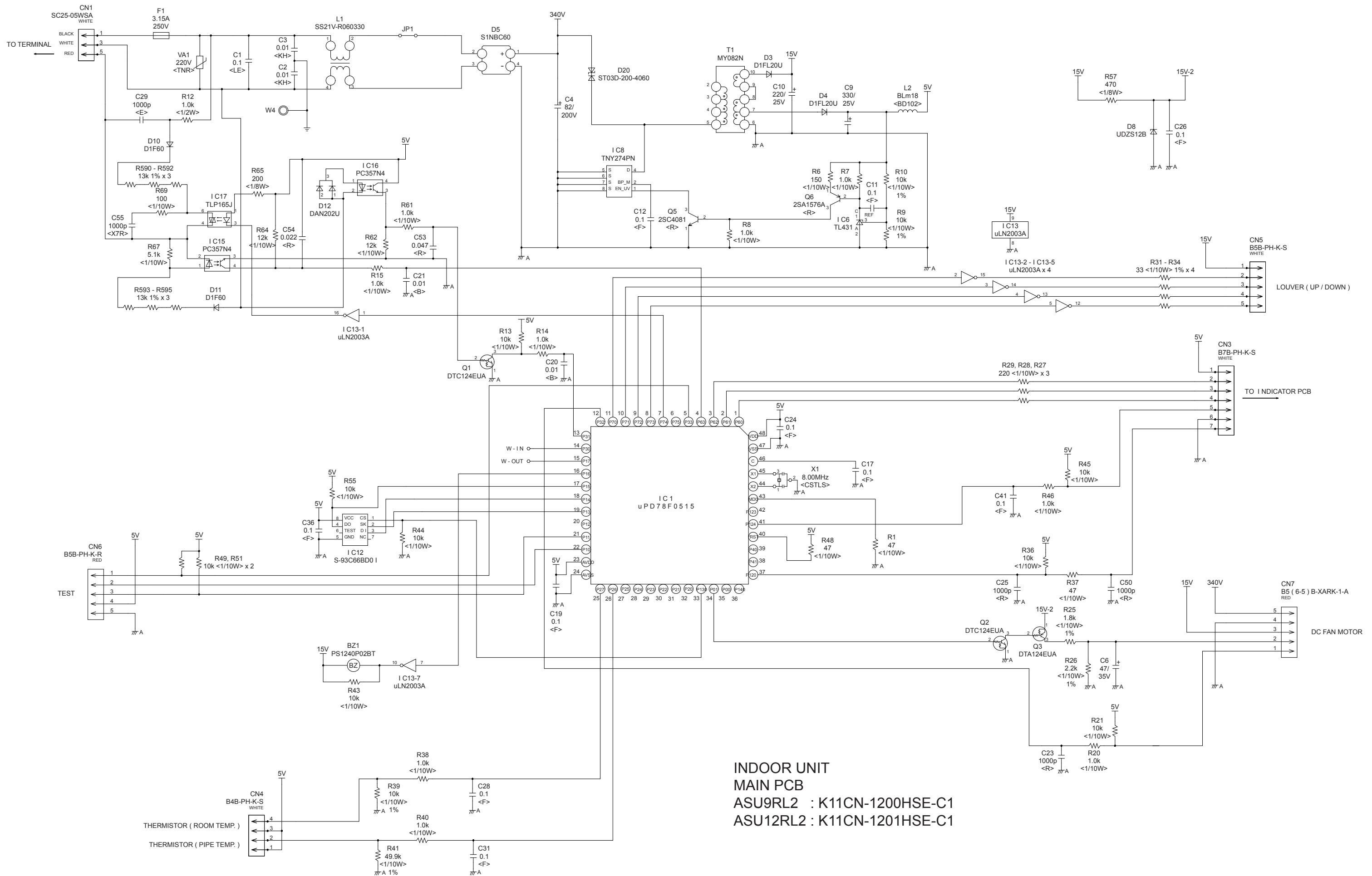


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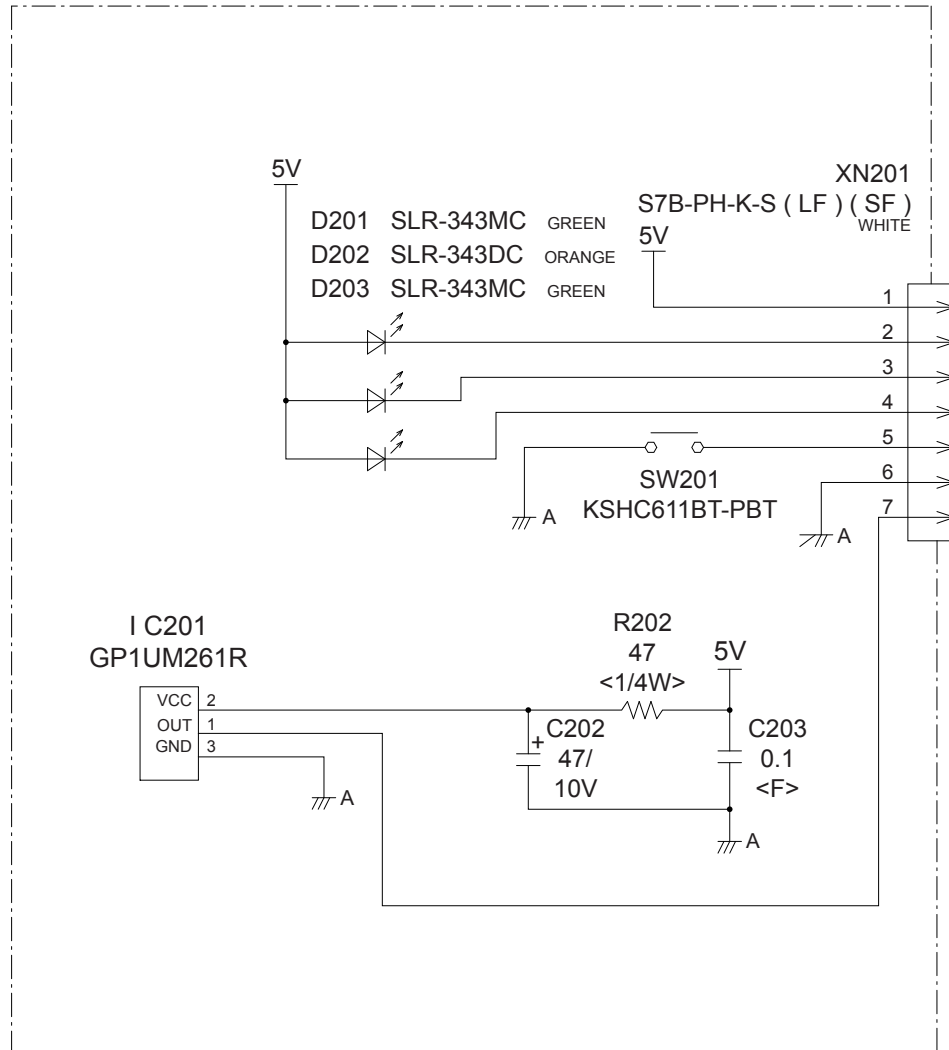


INDOOR PCB CIRCUIT DIAGRAM



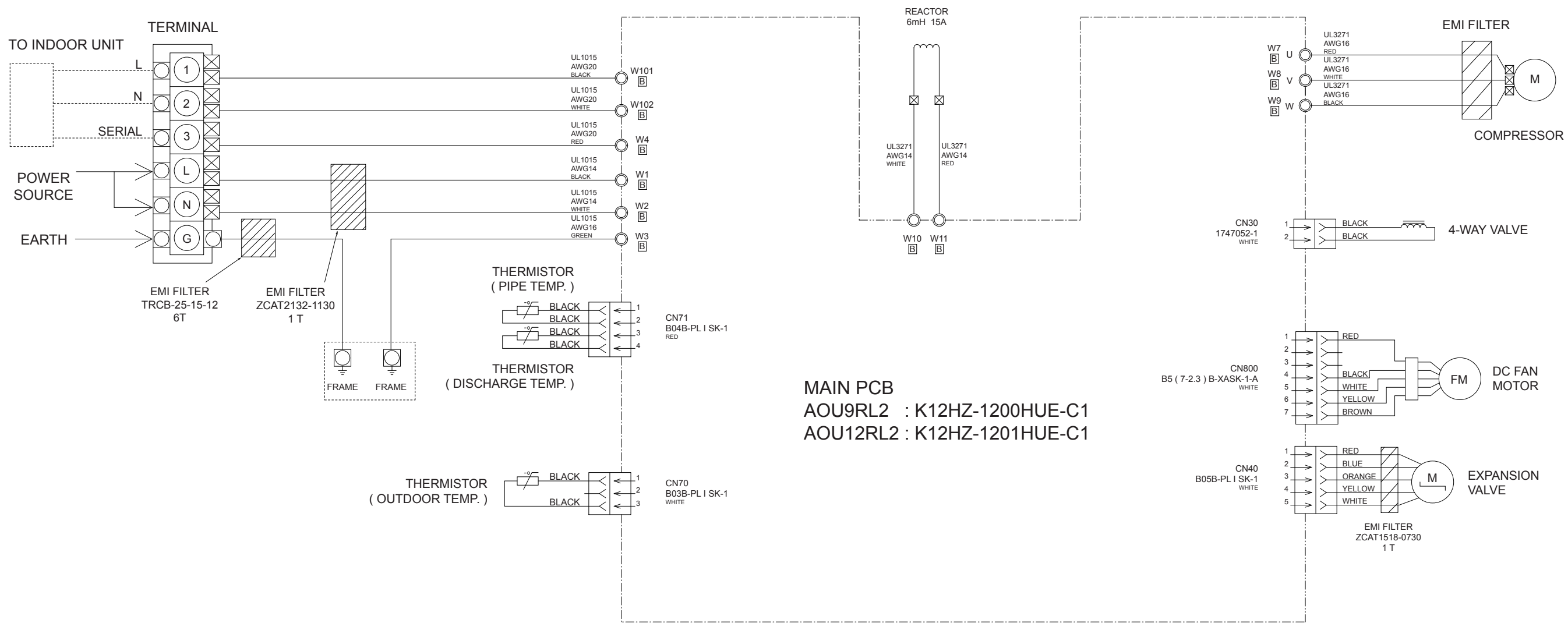


INDOOR UNIT
 INDICATOR PCB
 K11CO-1100HSE-D0



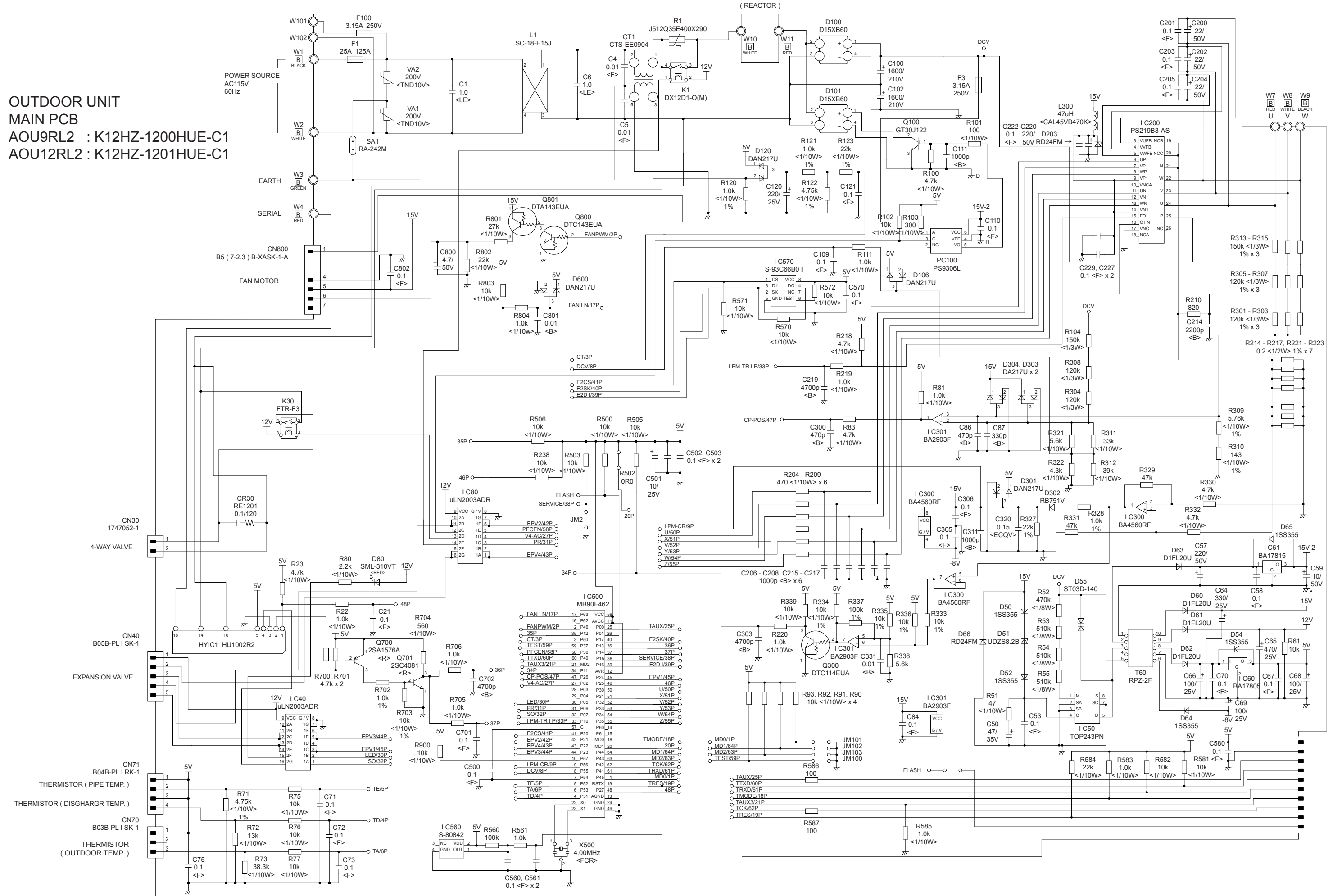
OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOU9RL2 : EZ-012FHUE
 AOU12RL2 : EZ-012LHUE



**OUTDOOR UNIT
MAIN PCB**

AOU9RL2 : K12HZ-1200HUE-C1
AOU12RL2 : K12HZ-1201HUE-C1



ERROR DETECTION



OPERATION lamp (green)

TIMER lamp (orange)

ECONOMY lamp (green)

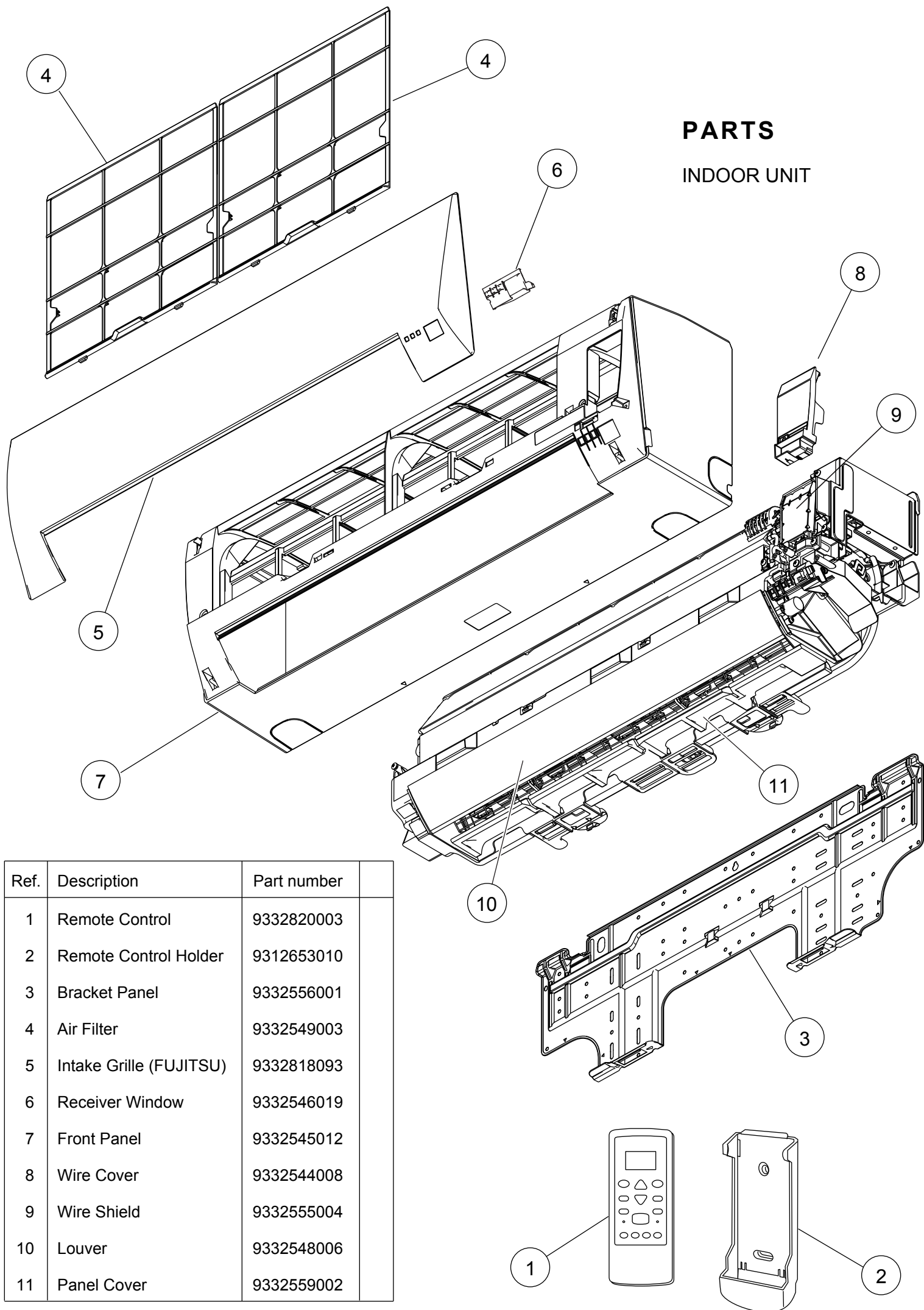
TROUBLESHOOTING
with the indoor unit display

Error	OPERATION	TIMER	ECONOMY
Serial communication error	1 flash	1 flash	Rapid flash (0.1s on / 0.1s off)
Indoor unit PCB model information error	3	2	
Manual auto switch error	3	5	
Room temp. sensor error	4	1	
Indoor unit Heat Ex. Middle temp.sensor error	4	2	
Indoor unit fan motor error	5	1	
Indoor unit error	5	15	
Outdoor unit main PCB model information error or communication error	6	2	
Inverter error	6	3	
Active filter error, PFC circuit error	6	4	
Trip terminal L error	6	5	
Display PCB microcomputers communication error	6	10	
Discharge temp. sensor error	7	1	
Outdoor unit Heat Ex. liquid temp. sensor error	7	3	
Outdoor temp. sensor error	7	4	
Current sensor error	8	4	
Trip detection	9	4	
Compressor rotor position detection error	9	5	
Outdoor unit fan motor error	9	7	
4-way valve error	9	9	
Discharge temp. error	10	1	

(0.5s on / 0.5s off)

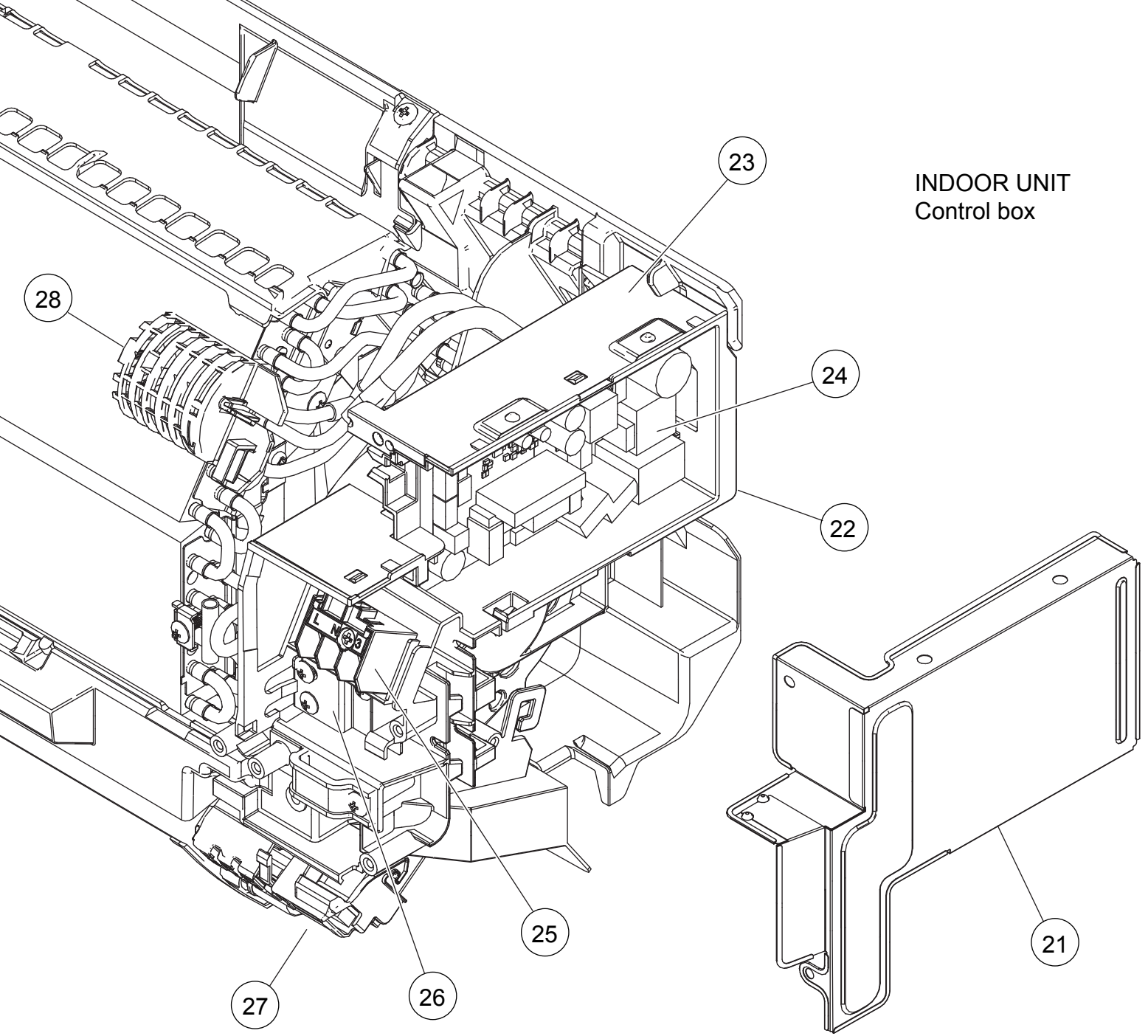
PARTS

INDOOR UNIT

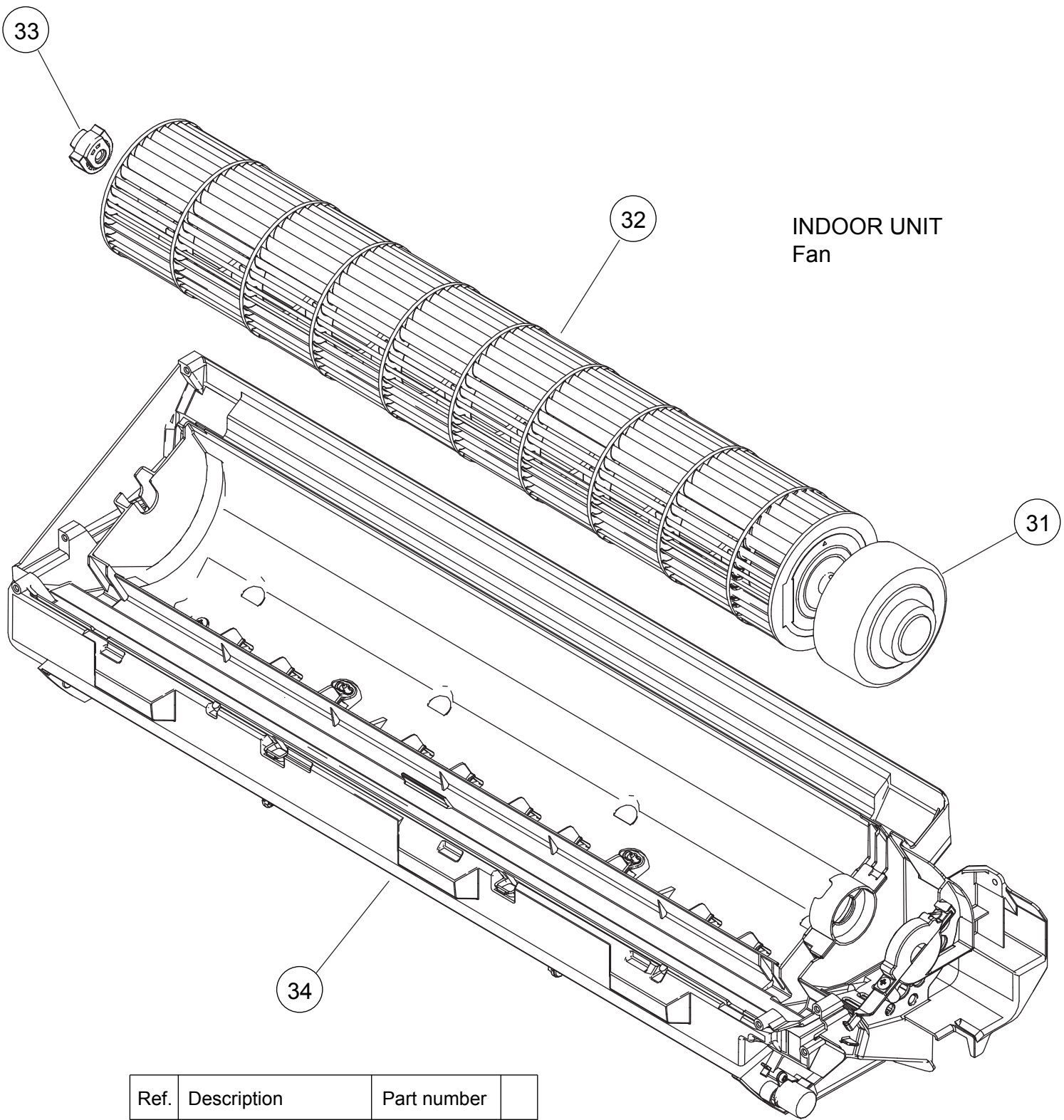


Ref.	Description	Part number
1	Remote Control	9332820003
2	Remote Control Holder	9312653010
3	Bracket Panel	9332556001
4	Air Filter	9332549003
5	Intake Grille (FUJITSU)	9332818093
6	Receiver Window	9332546019
7	Front Panel	9332545012
8	Wire Cover	9332544008
9	Wire Shield	9332555004
10	Louver	9332548006
11	Panel Cover	9332559002

INDOOR UNIT
Control box



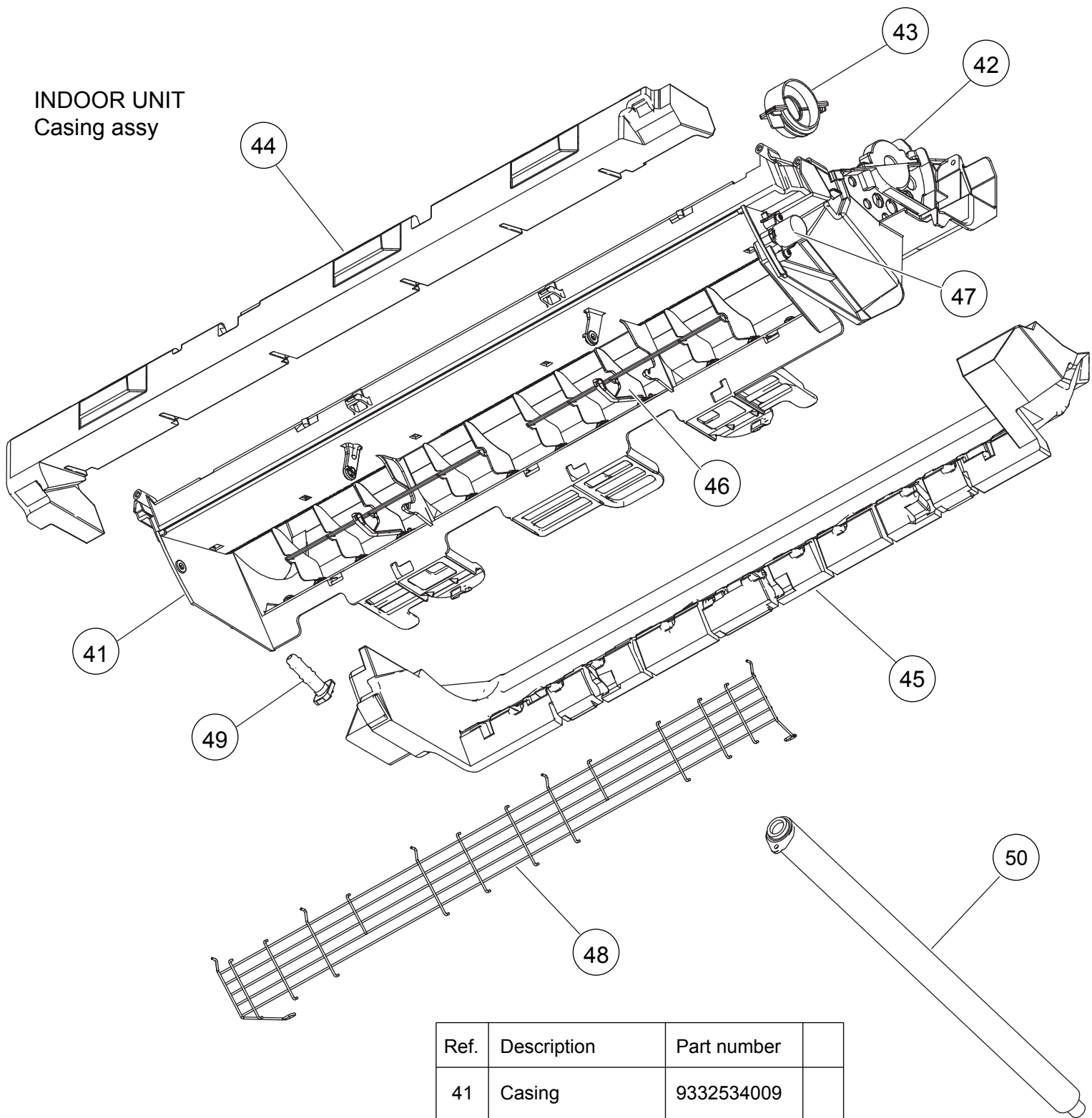
Ref.	Description	Part number
21	Cover Shield	9332554007
22	Control Box	9332542011
23	Box Shield Assy	9332561005
24	Main PCB (09)	9709170076
24	Main PCB (12)	9709170083
25	Terminal	9900720001
26	Earth Terminal	9332553024
27	Display Assy	9709173015
28	Room Thermistor Holder	9316895003
29	Thermistor Assy	9900714017



INDOOR UNIT
Fan

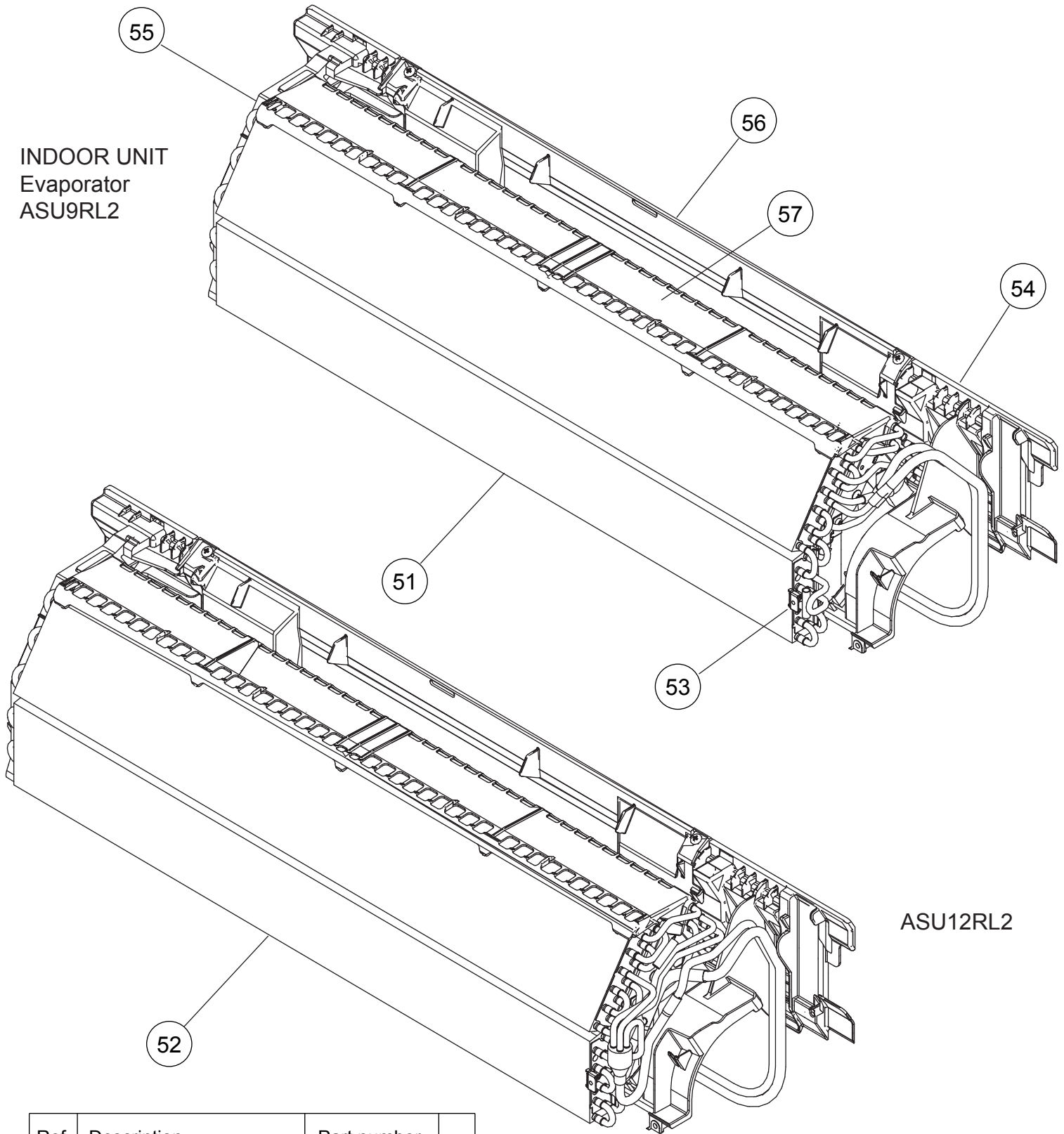
Ref.	Description	Part number
31	Fan Motor	9603249007
32	Crossflow Fan Assy	9316830004
33	Bearing C Assy	9306628017
34	Casing Assy	9332613018

INDOOR UNIT
Casing assy



Ref.	Description	Part number	
41	Casing	9332534009	
42	Motor Cover	9316601000	
43	Motor Cover	9316568006	
44	Casing Cover F	9332558005	
45	Casing Cover B	9332557008	
46	R and L Louver	9332535006	
47	Step Motor	9900725006	
48	Fan Guard	9332551006	
49	Drain Cap	9316177017	
50	Drain Hose Assy	9316904002	

INDOOR UNIT
Evaporator
ASU9RL2

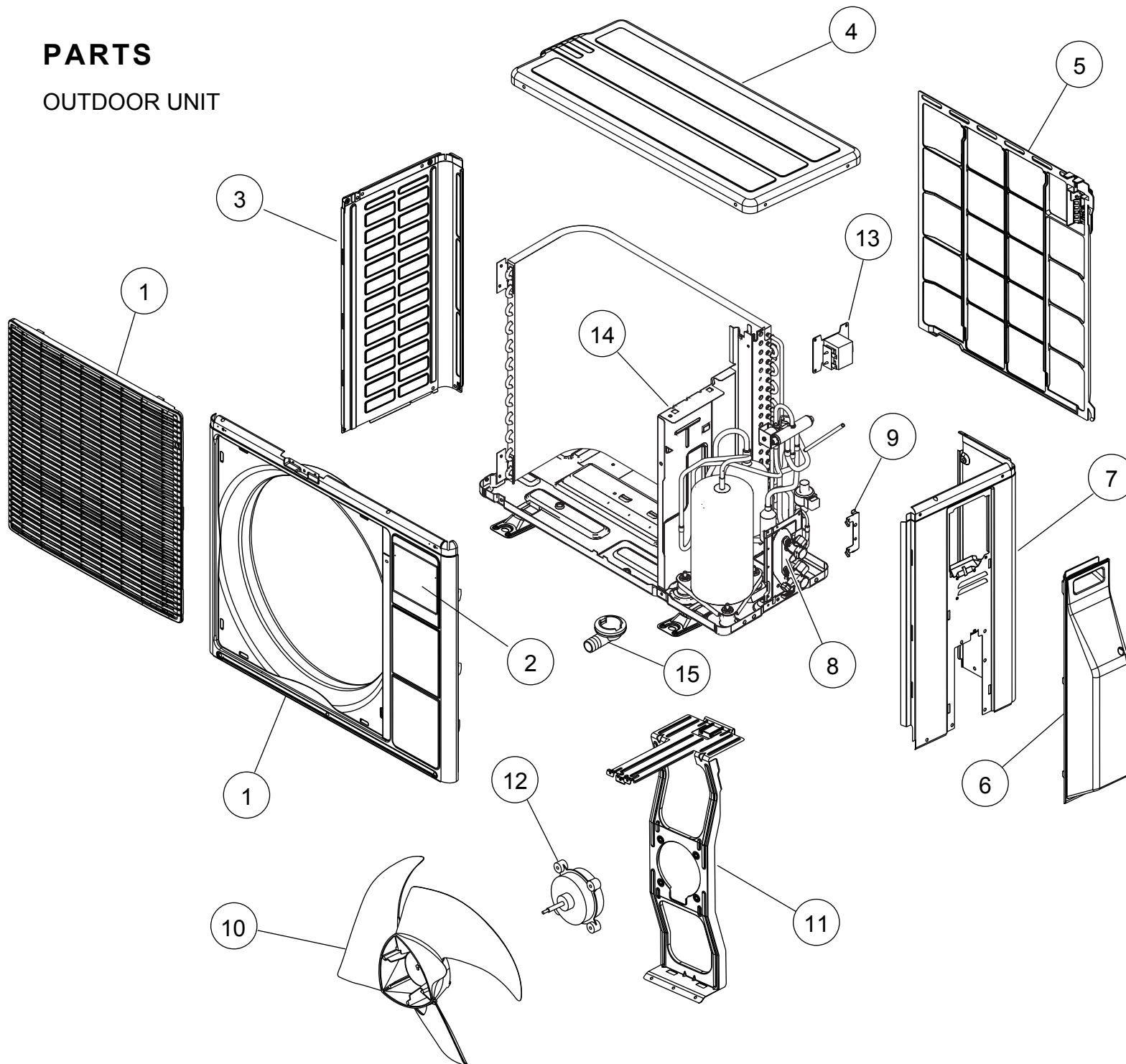


ASU12RL2

Ref.	Description	Part number
51	Evaporator Total Assy (09)	9316893085
52	Evaporator Total Assy (12)	9316893092
53	Earth Terminal	9316579002
54	Evaporator Holder R	9332538007
55	Evaporator Holder L	9332539004
56	Rear Bracket	9332540017
57	Filter Guide	9332541007

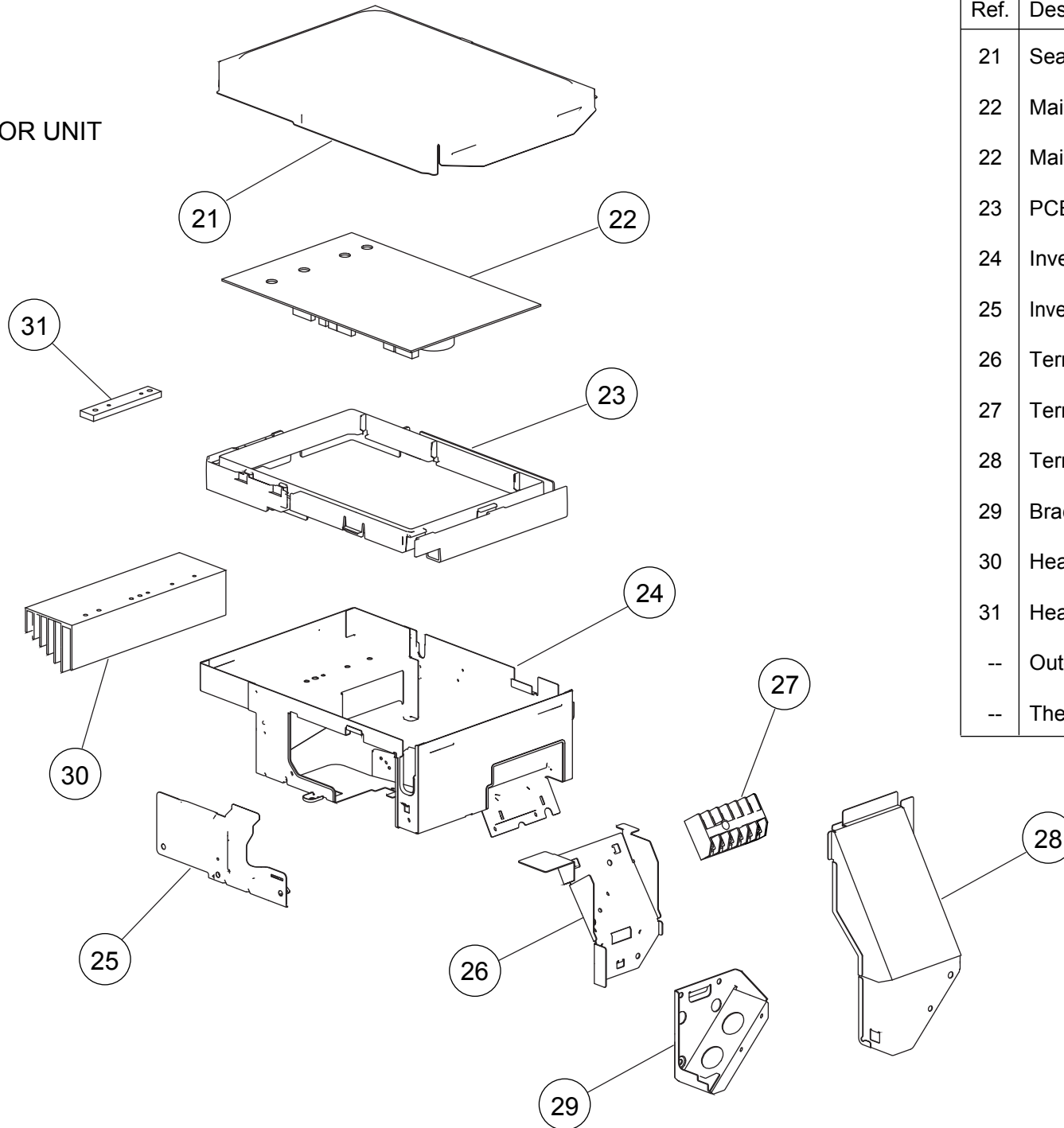
PARTS

OUTDOOR UNIT



Ref.	Description	Part number
1	Front Panel Assy	9317789035
2	Emblem	9317903011
3	Cabinet Left Assy	9317813006
4	Top Panel Assy	9317939034
5	Protective Net	9331262019
6	Switch Cover	9313940027
7	Cabinet Right Assy	9331336079
8	Valve Bracket	9316523012
9	Valve Bracket Cover	9331683005
10	Propeller Fan	9309909014
11	Motor Bracket (9)	9332289022
11	Motor Bracket (12)	9332289039
12	Fan Motor	9603074005
13	Reactor Assy	9900419011
14	Separator Assy	9317927017
15	Drain Pipe Assy	9303029022

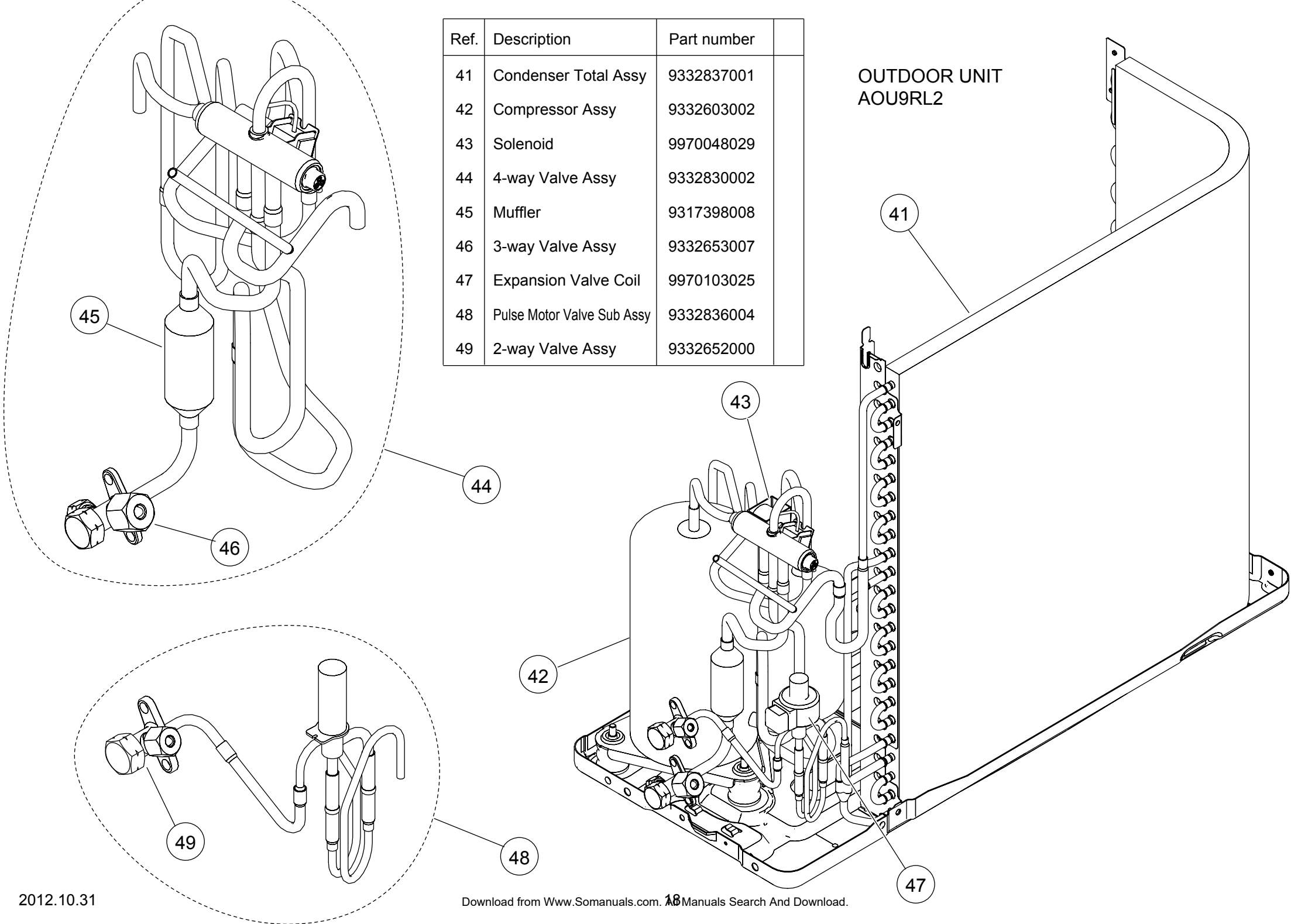
OUTDOOR UNIT



Ref.	Description	Part number
21	Sealed Panel	9331256025
22	Main PCB (09)	9709369005
22	Main PCB (12)	9709369012
23	PCB Holder	9331261012
24	Inverter Case Assy	9331279086
25	Inverter Case Cover	9331258012
26	Terminal Bracket	9317689021
27	Terminal 6P	9900016098
28	Terminal Cover Assy	9317898041
29	Bracket Conduit	9313938017
30	Heat Sink A	9331263030
31	Heat Sink B	9314090028
--	Outdoor Thermistor	9900565008
--	Thermistor Assy	9900628000

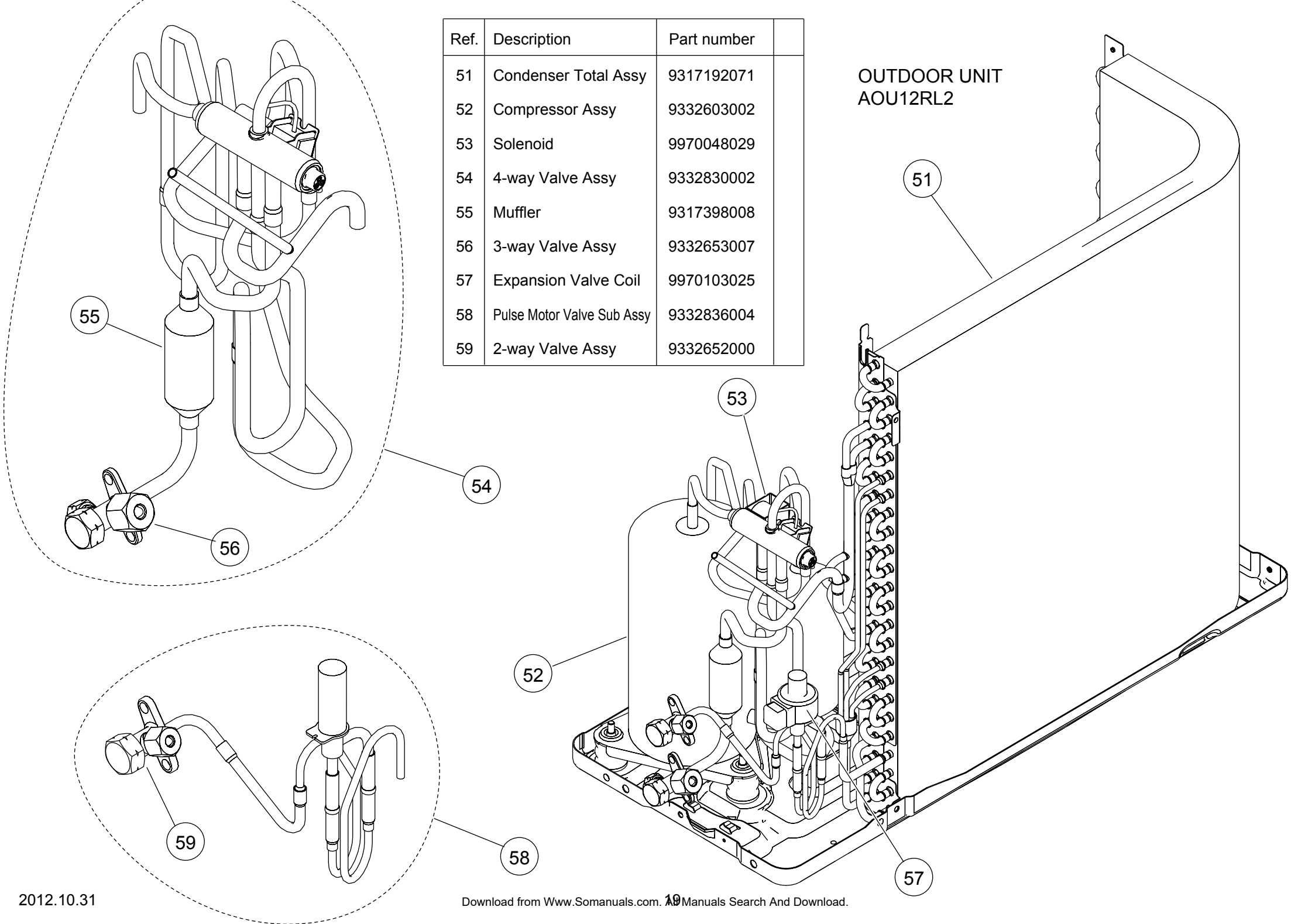
Ref.	Description	Part number
41	Condenser Total Assy	9332837001
42	Compressor Assy	9332603002
43	Solenoid	9970048029
44	4-way Valve Assy	9332830002
45	Muffler	9317398008
46	3-way Valve Assy	9332653007
47	Expansion Valve Coil	9970103025
48	Pulse Motor Valve Sub Assy	9332836004
49	2-way Valve Assy	9332652000

OUTDOOR UNIT
AOU9RL2



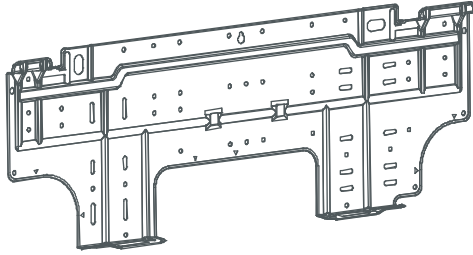
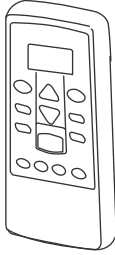

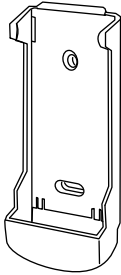
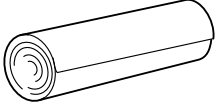

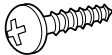
Ref.	Description	Part number
51	Condenser Total Assy	9317192071
52	Compressor Assy	9332603002
53	Solenoid	9970048029
54	4-way Valve Assy	9332830002
55	Muffler	9317398008
56	3-way Valve Assy	9332653007
57	Expansion Valve Coil	9970103025
58	Pulse Motor Valve Sub Assy	9332836004
59	2-way Valve Assy	9332652000

OUTDOOR UNIT
AOU12RL2

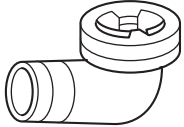


ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Wall hook bracket 	9332556001
Remote control 	9332820003
Battery (penlight) 	0600185541
Remote control holder 	9312653010
Cloth tape 	9310519004
Tapping screw (big) (ϕ 4 x 25) 	0700076046
Tapping screw (small) (ϕ 3 x 12) 	0700019036

OUTDOOR UNIT

Name and Shape	Part number
Drain pipe assy 	9303029022

1210G4122

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