

SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL

Indoor unit	Outdoor unit
ASU18RLB	AOU18RLB
ASU24RLB	AOU24RLB



under confirmation

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM.....	3
CIRCUIT DIAGRAM.....	4
INDOOR PCB CIRCUIT DIAGRAM.....	5
OUTDOOR PCB CIRCUIT DIAGRAM.....	6
ERROR DETECTION.....	7
PARTS (INDOOR UNIT).....	8
PARTS (OUTDOOR UNIT).....	13
ACCESSORIES.....	16

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		ARU18RLB	ARU24RLB
OUTDOOR UNIT		AOU18RLB	AOU24RLB
COOLING CAPACITY		18,000 Btu/h	18,000 Btu/h
HEATING CAPACITY		21,600 Btu/h	21,600 Btu/h
POWER SOURCE		208/230 V	208/230 V
FREQUENCY		60 Hz	60 Hz
RUNNING CURRENT	Cooling	6.6 A	6.6 A
	Heating	7.3 A	7.3 A
INPUT WATTS	Cooling	1.50 kW	1.50 kW
	Heating	1.67 kW	1.67 kW
EER	Cooling	12.0 Btu/Wh	12.0 Btu/Wh
COP	Heating	12.9 Btu/Wh	12.9 Btu/Wh
MOISTURE REMOVAL		4.2 Pts/h 2.0 L/h	4.2 Pts/h 2.0 L/h
AIR CIRCULATION HIGH		553 CFM, 940 m ³ /h	553 CFM, 940 m ³ /h
MAXIMUM CURRENT	Cooling	10.0 A	10.0 A
	Heating	14.0 A	14.0 A

FAN MOTOR

POWER SOURCE		208/230 V	208/230 V
INDOOR UNIT Cooling	High	1,380 r.p.m.	1,380 r.p.m.
	Medium	1,300 r.p.m.	1,300 r.p.m.
	Low	1,220 r.p.m.	1,220 r.p.m.
	Quiet	1,140 r.p.m.	1,140 r.p.m.
INDOOR UNIT Heating	High	1,380 r.p.m.	1,380 r.p.m.
	Medium	1,300 r.p.m.	1,300 r.p.m.
	Low	1,220 r.p.m.	1,220 r.p.m.
	Quiet	1,140 r.p.m.	1,140 r.p.m.
OUTDOOR UNIT Cooling		870 r.p.m.	870 r.p.m.
OUTDOOR UNIT Heating		1,000 r.p.m.	1,000 r.p.m.

NOISE LEVEL

INDOOR UNIT Cooling	High	32 dB	32 dB
	Medium	30 dB	30 dB
	Low	29 dB	29 dB
	Quiet	27 dB	27 dB
INDOOR UNIT Heating	High	32 dB	32 dB
	Medium	30 dB	30 dB
	Low	29 dB	29 dB
	Quiet	27 dB	27 dB
OUTDOOR UNIT Cooling		52 dB	52 dB
OUTDOOR UNIT Heating		55 dB	55 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE	Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary		
DISCRIMINATION	808-213-80		
WEIGHT (with oil)	21 lb. 6 oz.	9.7 kg	
PRECHARGED REFRIGERANT	3 lb. 1 oz.	1,400 g	
FULL CHARGE	Pipe length 49 ft., 15 m	2 lb. 13 oz.	1,300 g
	66 ft., 20 m	3 lb. 1 oz.	1,400 g
ADDITIONAL CHARGE	0.22 oz/ft	20 g/m	
MAXIMUM PIPING HEIGHT	49 feet	15 m	
REFRIGERANT TYPE	R410A		

DIMENSIONS

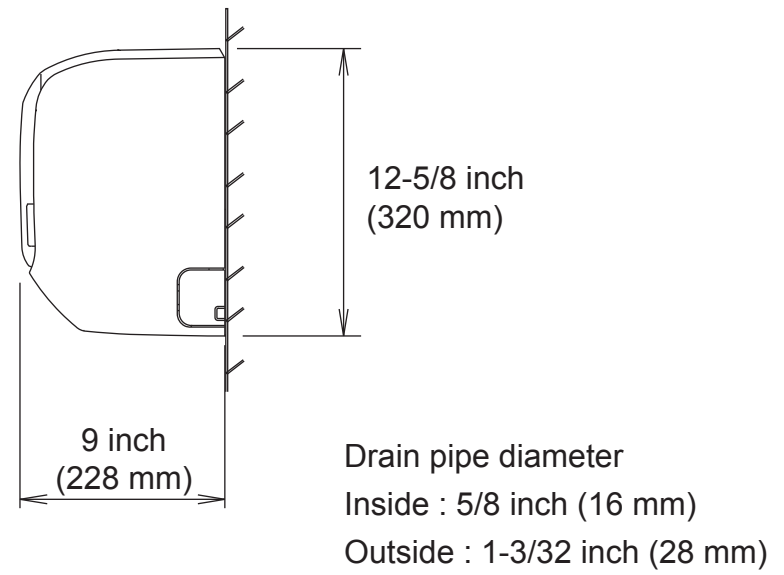
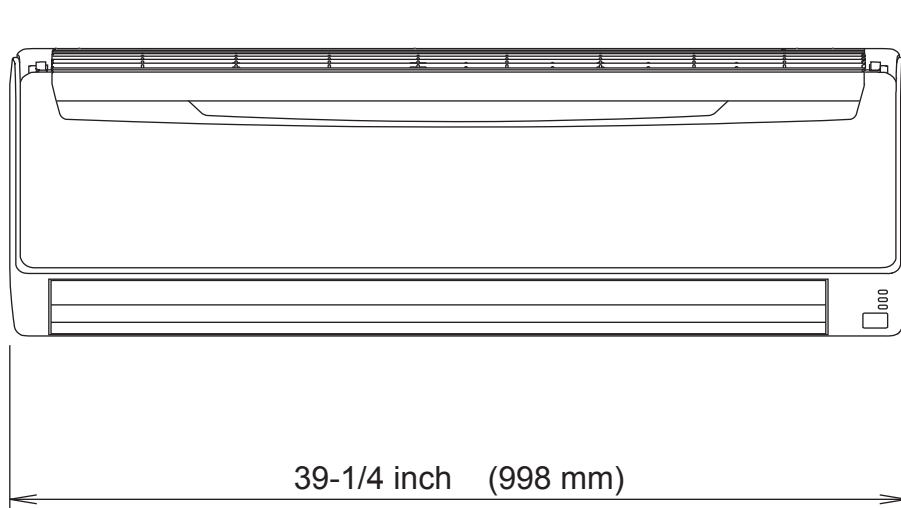
INDOOR UNIT	H x W x D	12-5/8 x 39-1/4 x 9 inch 320 x 998 x 228 mm
OUTDOOR UNIT	H x W x D	24-1/2 x 31-3/32 x 11-13/32 in. 620 x 790 x 290 mm

WEIGHT

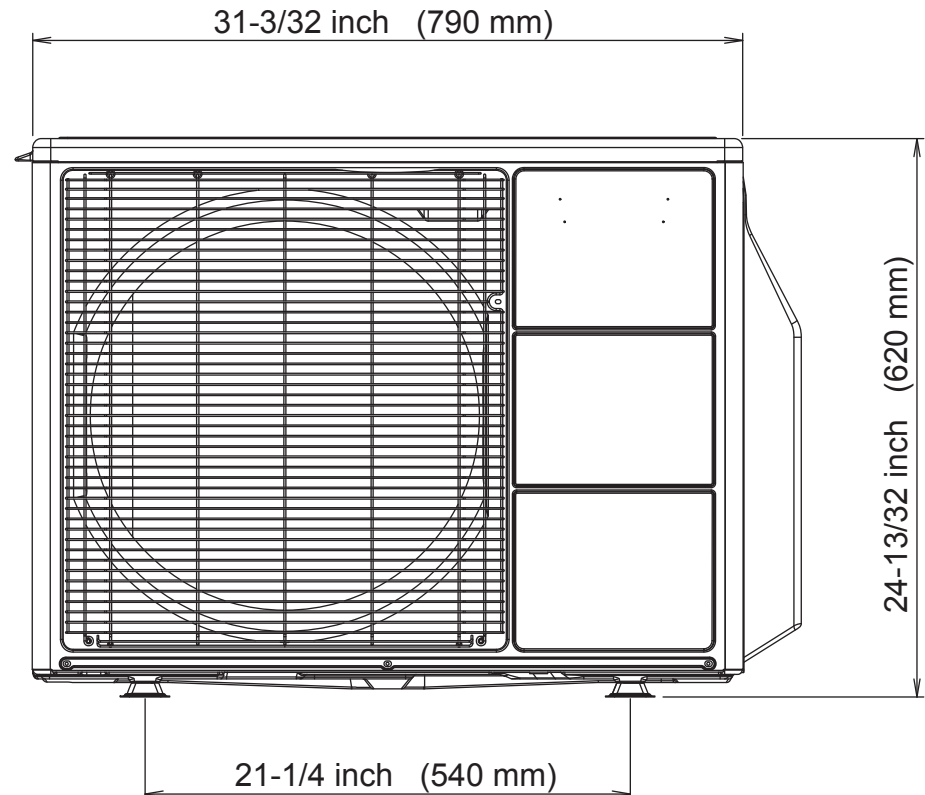
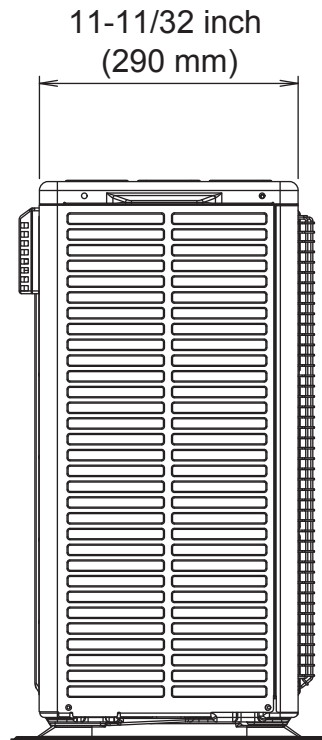
INDOOR UNIT	Net / Shipping	31 lbs / 40 lbs	14 kg / 18 kg
OUTDOOR UNIT	Net / Shipping	86 lb. / 95 lb.	39 kg / 43 kg

DIMENSIONS

INDOOR UNIT



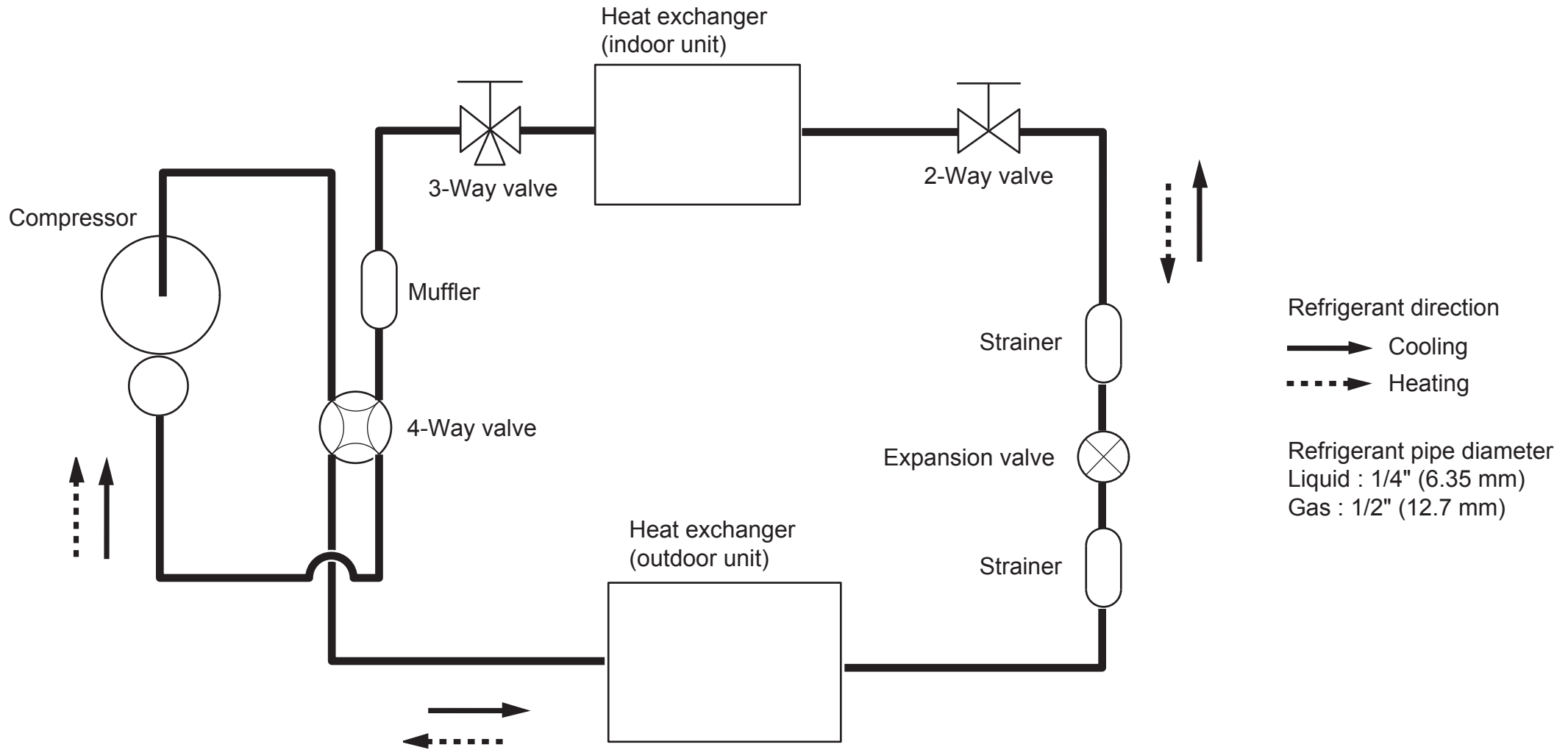
OUTDOOR UNIT



Liquid pipe diameter : 3/8 inch (9.52 mm)

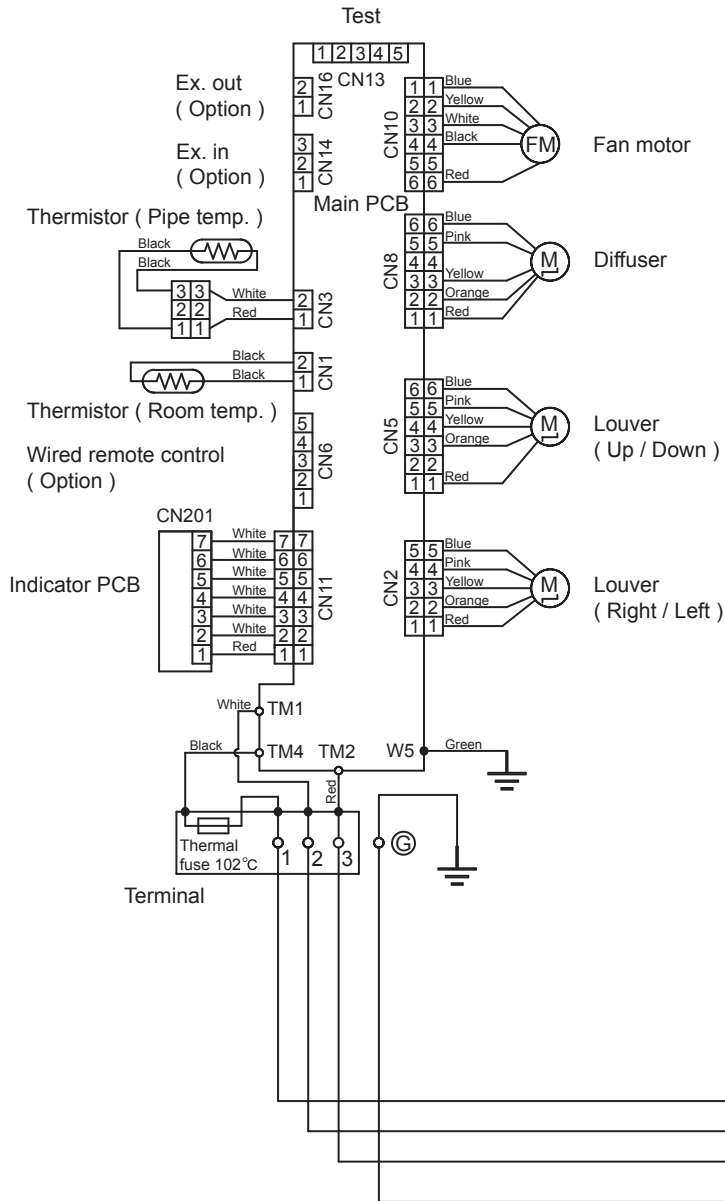
Gas pipe diameter : 5/8 inch (15.88 mm)

REFRIGERANT SYSTEM DIAGRAM

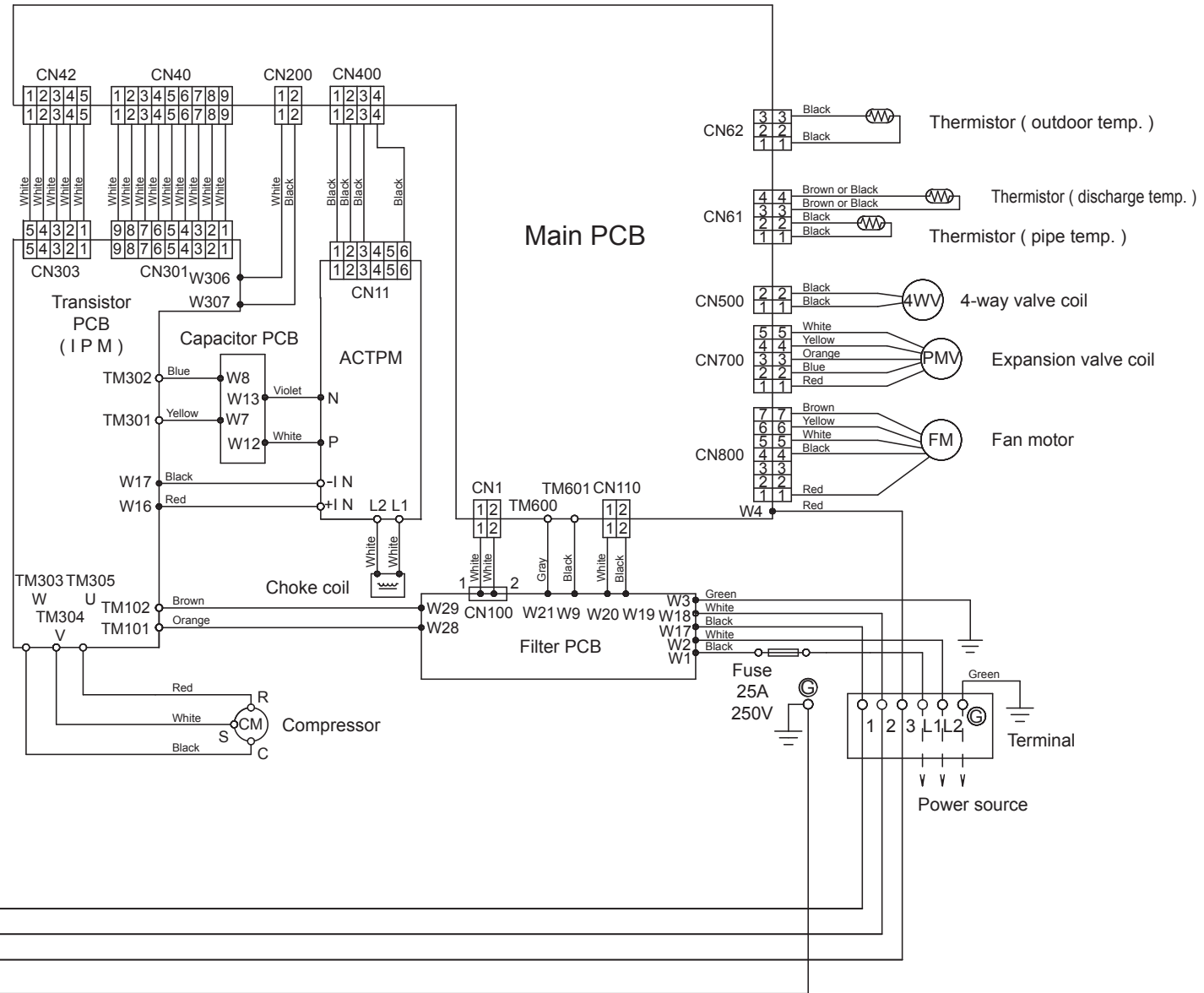


CIRCUIT DIAGRAM

INDOOR UNIT

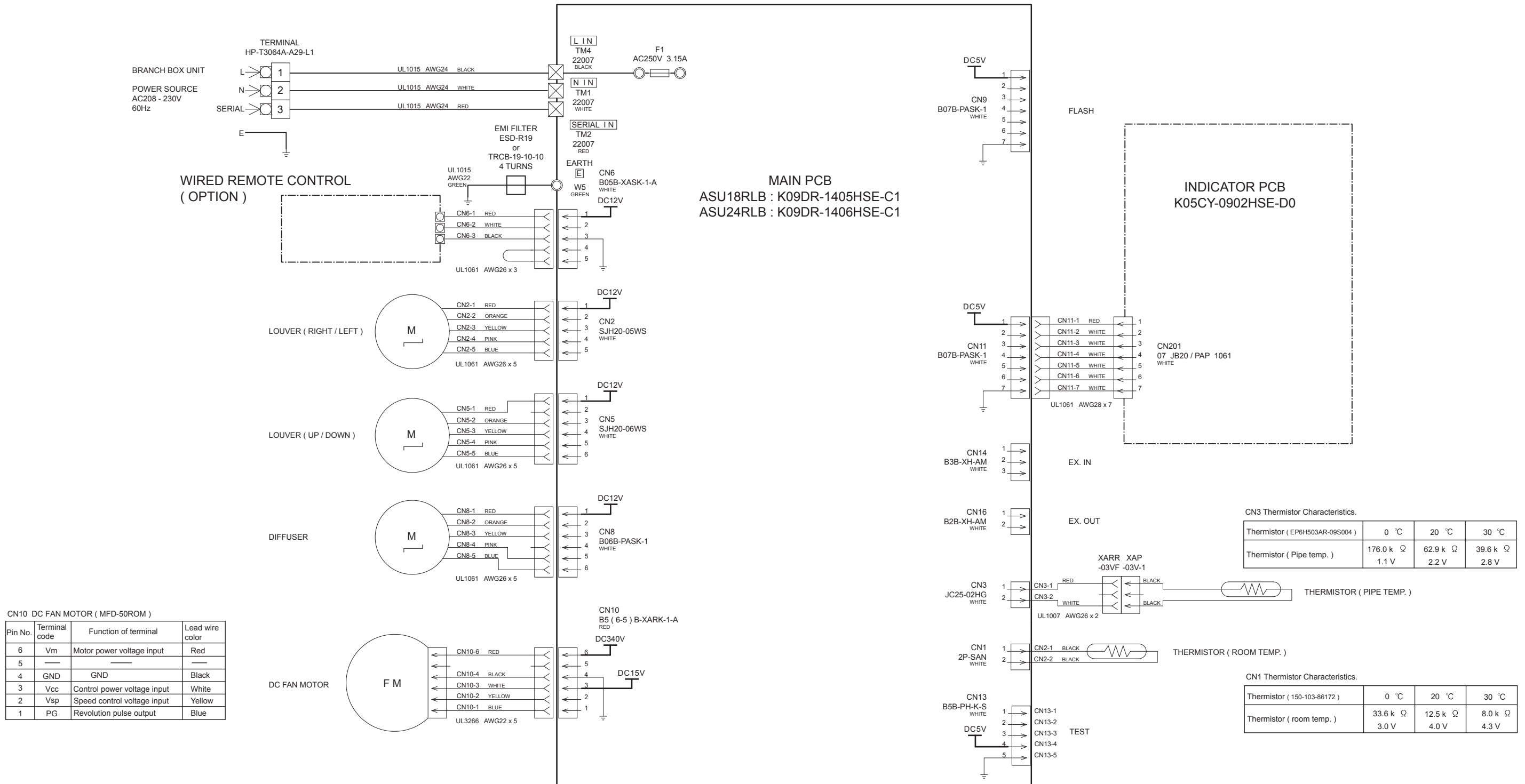


OUTDOOR UNIT



INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
 ASU18RLB : EZ-01402HSE
 ASU24RLB : EZ-01403HSE



CN10 DC FAN MOTOR (MFD-50ROM)

Pin No.	Terminal code	Function of terminal	Lead wire color
6	Vm	Motor power voltage input	Red
5	---	---	---
4	GND	GND	Black
3	Vcc	Control power voltage input	White
2	Vsp	Speed control voltage input	Yellow
1	PG	Revolution pulse output	Blue

CN3 Thermistor Characteristics.

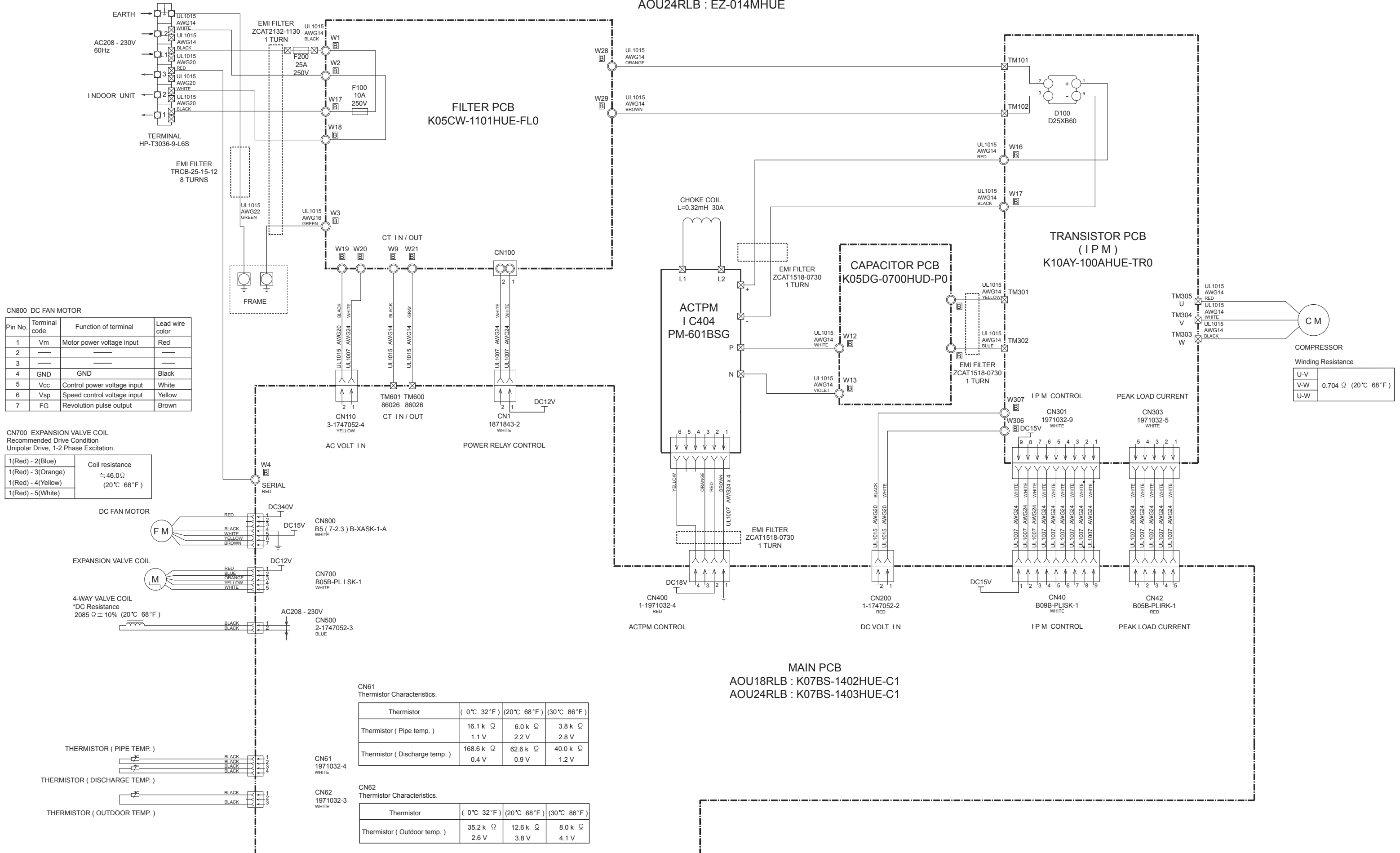
Thermistor (EP6H503AR-09S004)	0 °C	20 °C	30 °C
Thermistor (Pipe temp.)	176.0 k Ω	62.9 k Ω	39.6 k Ω
	1.1 V	2.2 V	2.8 V

CN1 Thermistor Characteristics.

Thermistor (150-103-86172)	0 °C	20 °C	30 °C
Thermistor (room temp.)	33.6 k Ω	12.5 k Ω	8.0 k Ω
	3.0 V	4.0 V	4.3 V

OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOU18RLB : EZ-014LHUE
 AOU24RLB : EZ-014MHUE



CN800 DC FAN MOTOR

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2			
3			
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Brown

CN700 EXPANSION VALVE COIL
 Recommended Drive Condition
 Unipolar Drive, 1-2 Phase Excitation.

1(Red) - 2(Blue)	Coil resistance ≈ 46.0 Ω (20°C 68°F)
1(Red) - 3(Orange)	
1(Red) - 4(Yellow)	
1(Red) - 5(White)	

COMPRESSOR
 Winding Resistance

U-V	0.704 Ω (20°C 68°F)
V-W	
U-W	

CN61 Thermistor Characteristics.

Thermistor	(0°C 32°F)	(20°C 68°F)	(30°C 86°F)
Thermistor (Pipe temp.)	16.1 k Ω 1.1 V	6.0 k Ω 2.2 V	3.8 k Ω 2.8 V
Thermistor (Discharge temp.)	168.6 k Ω 0.4 V	62.6 k Ω 0.9 V	40.0 k Ω 1.2 V

CN62 Thermistor Characteristics.

Thermistor	(0°C 32°F)	(20°C 68°F)	(30°C 86°F)
Thermistor (Outdoor temp.)	35.2 k Ω 2.6 V	12.6 k Ω 3.8 V	8.0 k Ω 4.1 V

ERROR DETECTION

● : 0.5s ON / 0.5s OFF

() : Number of flashing

◇ : 0.1s ON / 0.1s OFF

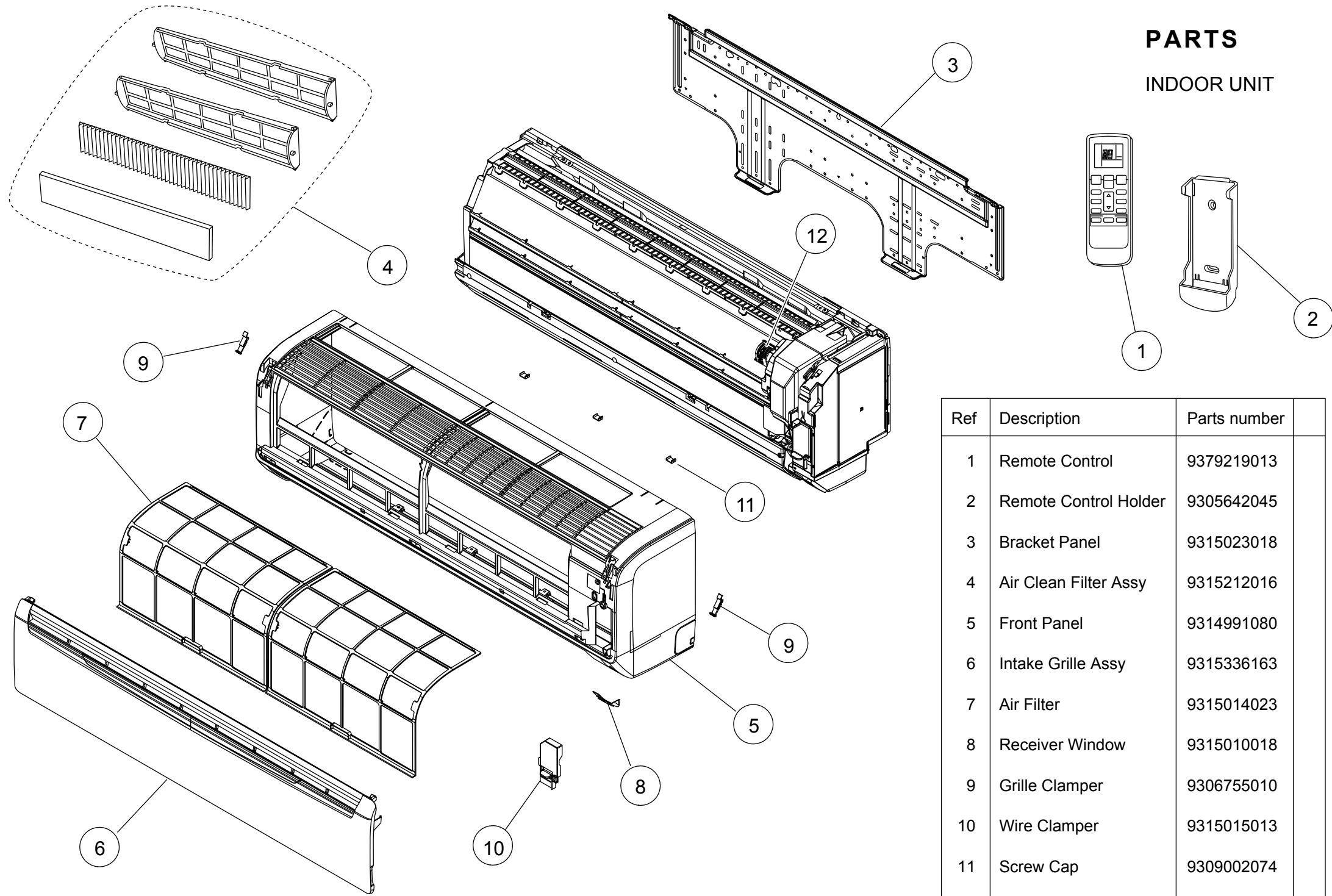
INDOOR UNIT

General section	Detail section	LED			Wired remote control error code
		OPERATION (Green)	TIMER (Orange)	ECONOMY (Green)	
Communication error System error	Serial communication error	● (1)	● (1)	◇	11
	Remote controller communication error	● (1)	● (2)	◇	12
	Scan error	● (1)	● (5)	◇	15
Field setting error	Initial setting error (for simultaneous multi)	● (2)	● (1)	◇	21
	Indoor unit capacity error	● (2)	● (2)	◇	22
	Connection disabled (series error)	● (2)	● (3)	◇	23
	Connection unit number error	● (2)	● (4)	◇	24
	Master unit and slave unit setting error	● (2)	● (7)	◇	27
	Indoor unit PCB, switch error	Indoor unit main PCB error	● (3)	● (2)	◇
Manual auto switch error		● (3)	● (5)	◇	35
Indoor unit sensor error	Indoor room thermistor error	● (4)	● (1)	◇	41
	Indoor heat Ex. thermistor error	● (4)	● (2)	◇	42
Indoor unit actuator error	Indoor unit fan motor error	● (5)	● (1)	◇	51
	Water drain error	● (5)	● (3)	◇	53
	Damper error	● (5)	● (7)	◇	57
	Indoor unit error	—	—	—	5U
Outdoor unit PCB error Circuit parts error Switch error	Outdoor unit main PCB error	● (6)	● (2)	◇	62
	Inverter PCB error	● (6)	● (3)	◇	63
	Active filter error, PFC circuit error	● (6)	● (4)	◇	64
	IPM error	● (6)	● (5)	◇	65
	Display panel error	● (6)	● (10)	◇	6A
Outdoor unit sensor error	Discharge thermistor error	● (7)	● (1)	◇	71
	Compressor thermistor error	● (7)	● (2)	◇	72
	Outdoor unit heat Ex. thermistor error	● (7)	● (3)	◇	73
	Outdoor thermistor error	● (7)	● (4)	◇	74
	Suction gas thermistor error	● (7)	● (5)	◇	75
	Operation valve thermistor error	● (7)	● (6)	◇	76
	Heat sink thermistor error	● (7)	● (7)	◇	77
Outdoor unit sensor 2 error	Sub-cool heat Ex.gas thermistor error	● (8)	● (2)	◇	82
	Liquid pipe thermistor error	● (8)	● (3)	◇	83
	Current sensor error	● (8)	● (4)	◇	84
	Pressure sensor error (Pressure sensor or switch error)	● (8)	● (6)	◇	86
Outdoor unit actuator error	Trip detection	● (9)	● (4)	◇	94
	Compressor motor control error	● (9)	● (5)	◇	95
	Outdoor unit fan motor 1 error	● (9)	● (7)	◇	97
	4-way valve error	● (9)	● (9)	◇	99
Refrigerant circuit error	Discharge temperature error	● (10)	● (1)	◇	A1
	Compressor temperature error	● (10)	● (3)	◇	A3
	Pressure error 1	● (10)	● (4)	◇	A4
	Pressure error 2	● (10)	● (5)	◇	A5

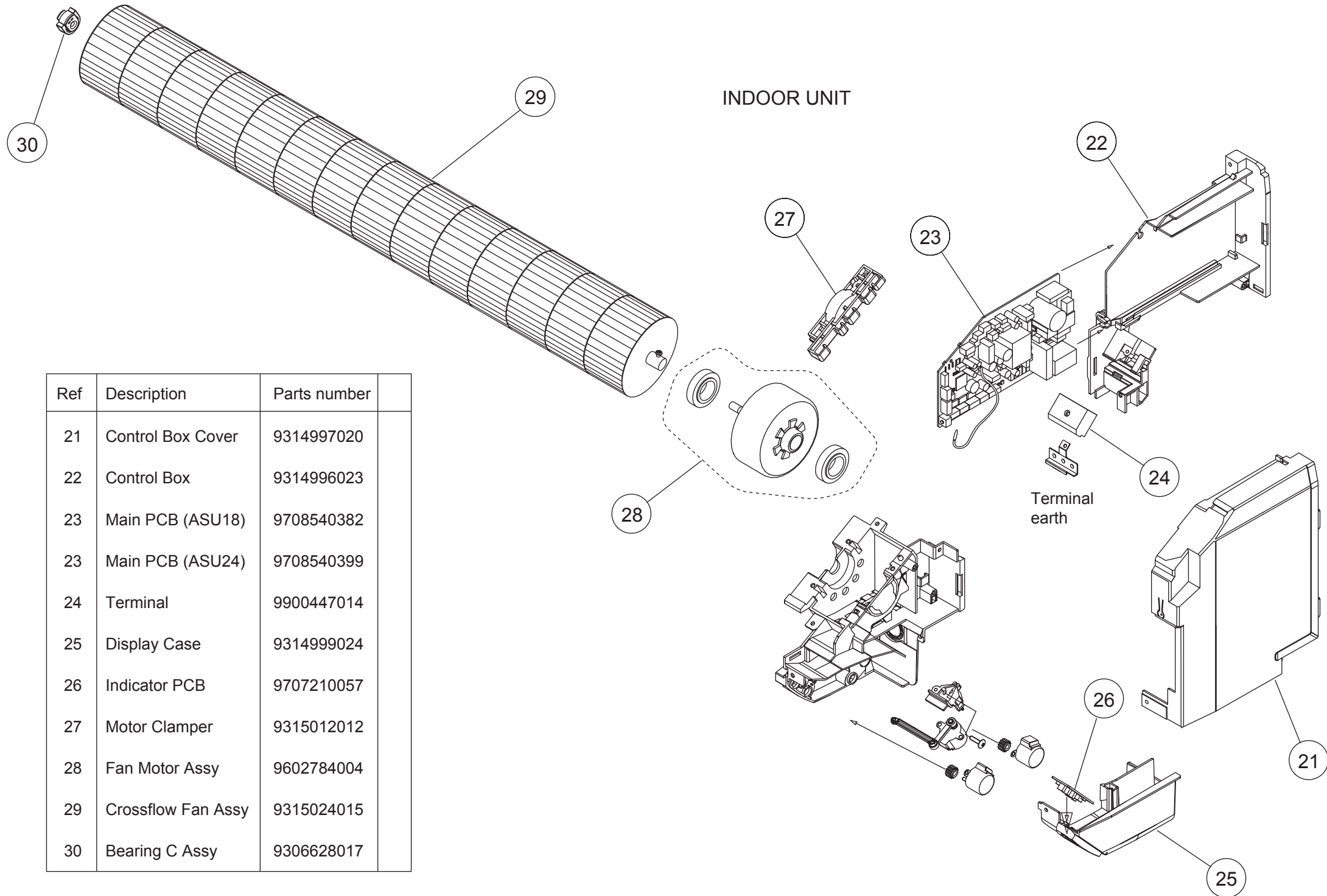
under confirmation need to refer to the installation manual

PARTS

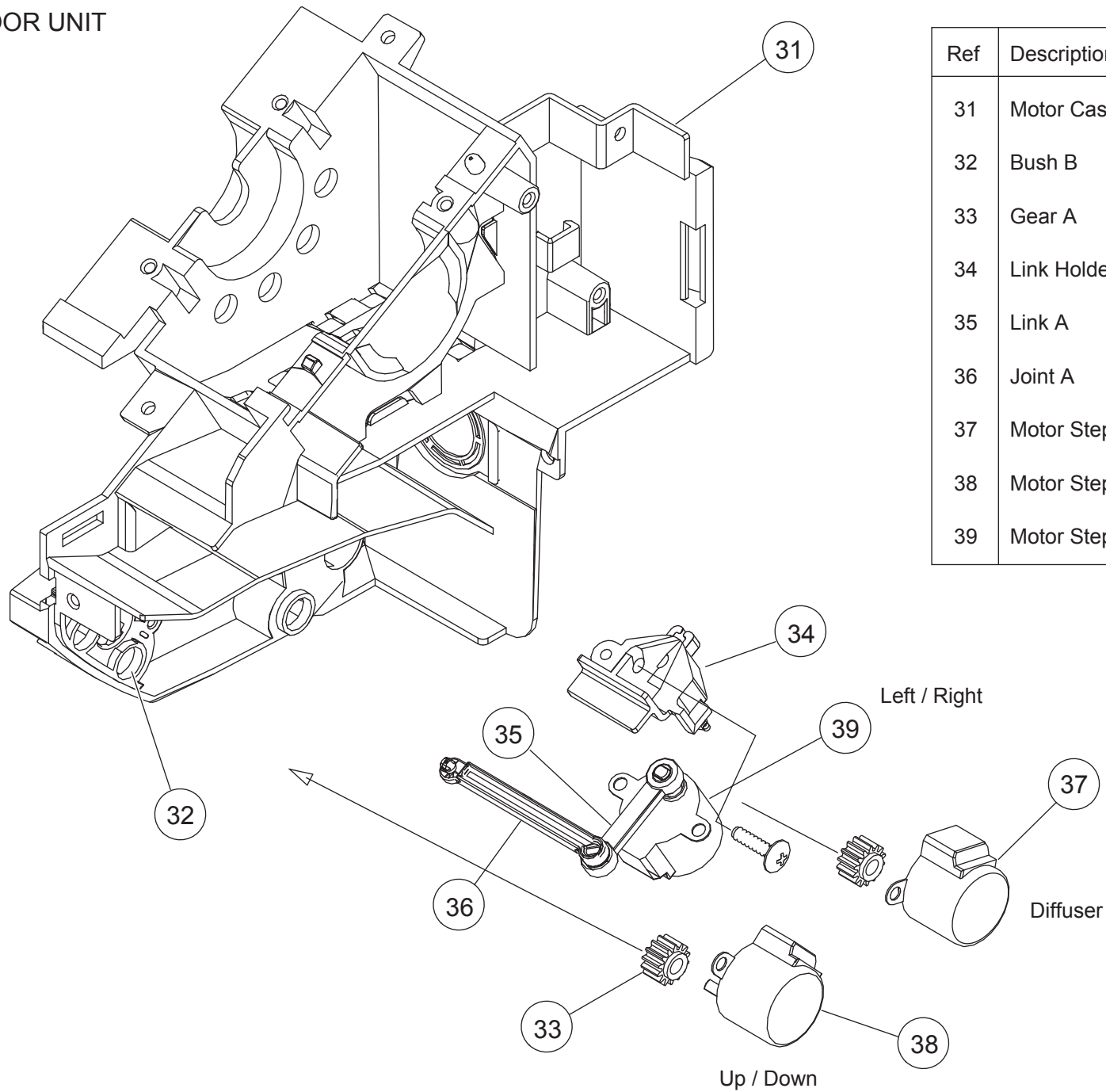
INDOOR UNIT



Ref	Description	Parts number
1	Remote Control	9379219013
2	Remote Control Holder	9305642045
3	Bracket Panel	9315023018
4	Air Clean Filter Assy	9315212016
5	Front Panel	9314991080
6	Intake Grille Assy	9315336163
7	Air Filter	9315014023
8	Receiver Window	9315010018
9	Grille Clamber	9306755010
10	Wire Clamber	9315015013
11	Screw Cap	9309002074
12	Room Thermistor Holder	9315252012

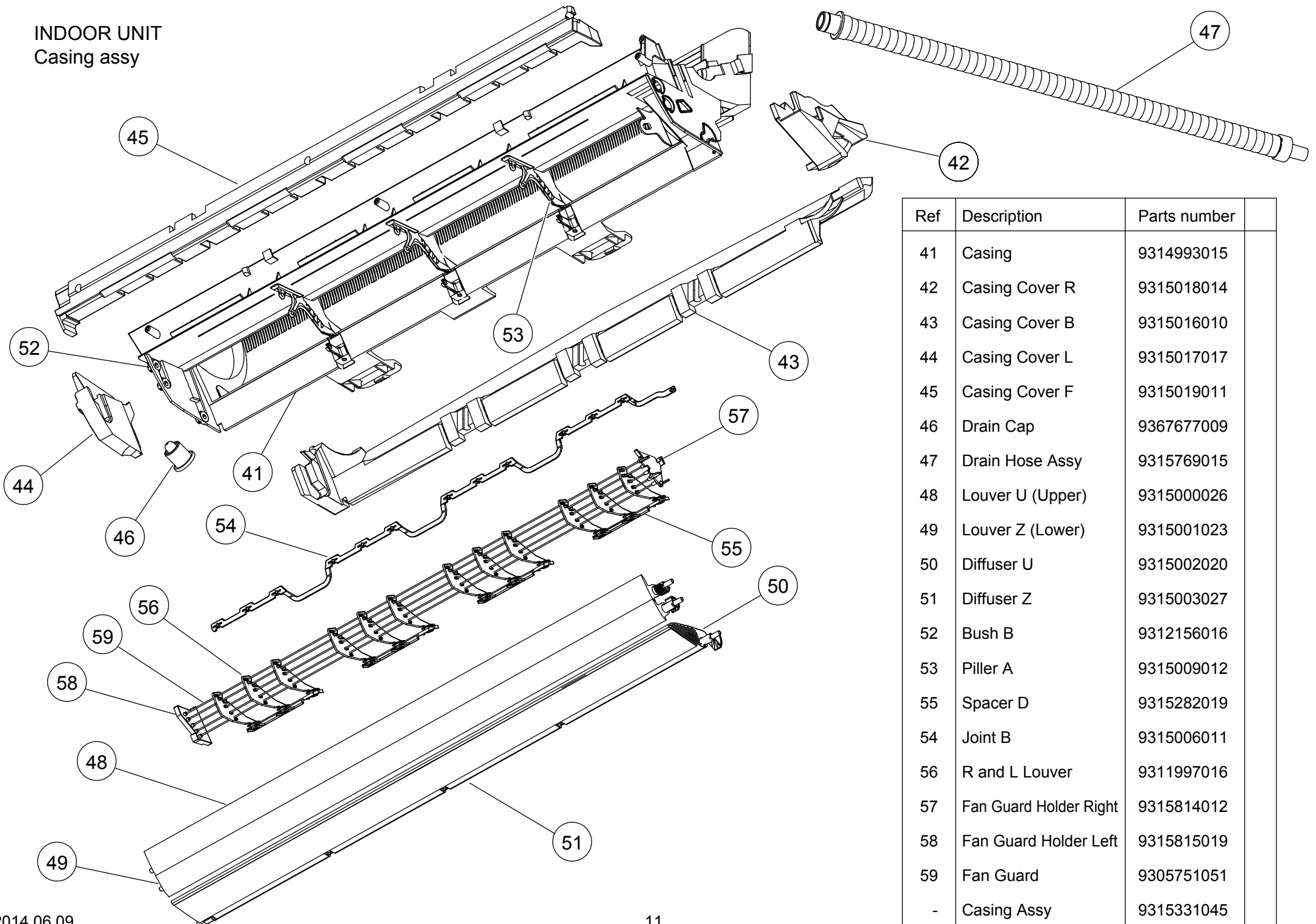


INDOOR UNIT



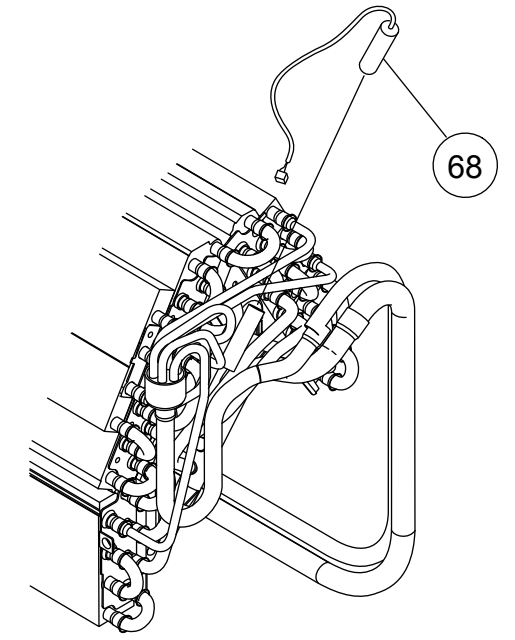
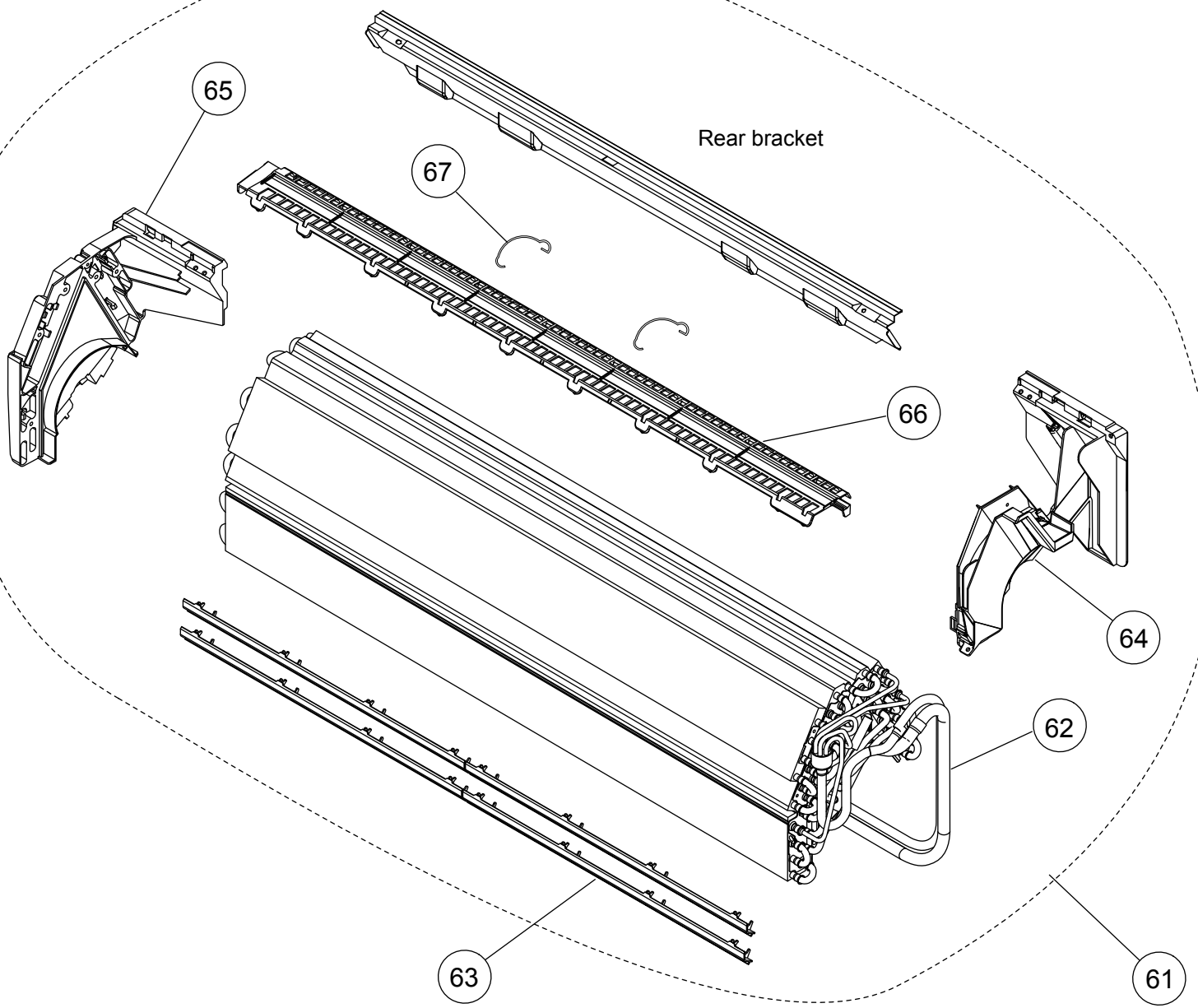
Ref	Description	Parts number
31	Motor Case	9314998027
32	Bush B	9312156016
33	Gear A	9309994003
34	Link Holder	9315007018
35	Link A	9315008015
36	Joint A	9315005014
37	Motor Step (Red)	9900384029
38	Motor Step (Green)	9900384036
39	Motor Step (Blue)	9900139063

INDOOR UNIT
Casing assy



Ref	Description	Parts number
41	Casing	9314993015
42	Casing Cover R	9315018014
43	Casing Cover B	9315016010
44	Casing Cover L	9315017017
45	Casing Cover F	9315019011
46	Drain Cap	9367677009
47	Drain Hose Assy	9315769015
48	Louver U (Upper)	9315000026
49	Louver Z (Lower)	9315001023
50	Diffuser U	9315002020
51	Diffuser Z	9315003027
52	Bush B	9312156016
53	Piller A	9315009012
55	Spacer D	9315282019
54	Joint B	9315006011
56	R and L Louver	9311997016
57	Fan Guard Holder Right	9315814012
58	Fan Guard Holder Left	9315815019
59	Fan Guard	9305751051
-	Casing Assy	9315331045

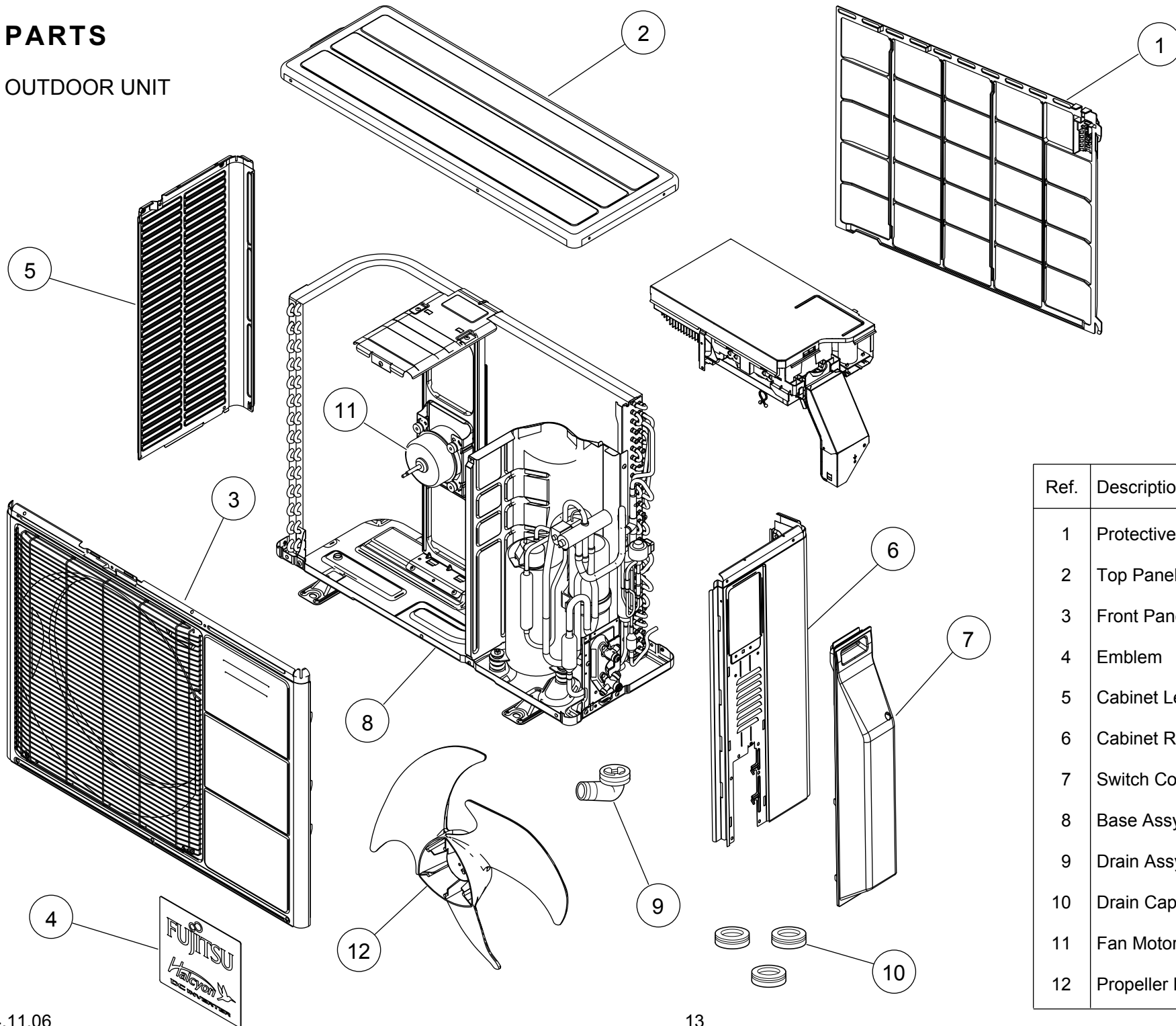
INDOOR UNIT
Evaporator



Ref	Description	Parts number
61	Evaporator Total Assy	9315338129
62	Connection Pipe Assy	9315355041
63	Water Seal	9315251015
64	Evaporator Holder R	9314994012
65	Evaporator Holder L	9314995019
66	Filter Guide	9315013019
67	Filter Guard	9315411013
68	Pipe Thermistor	9900551018

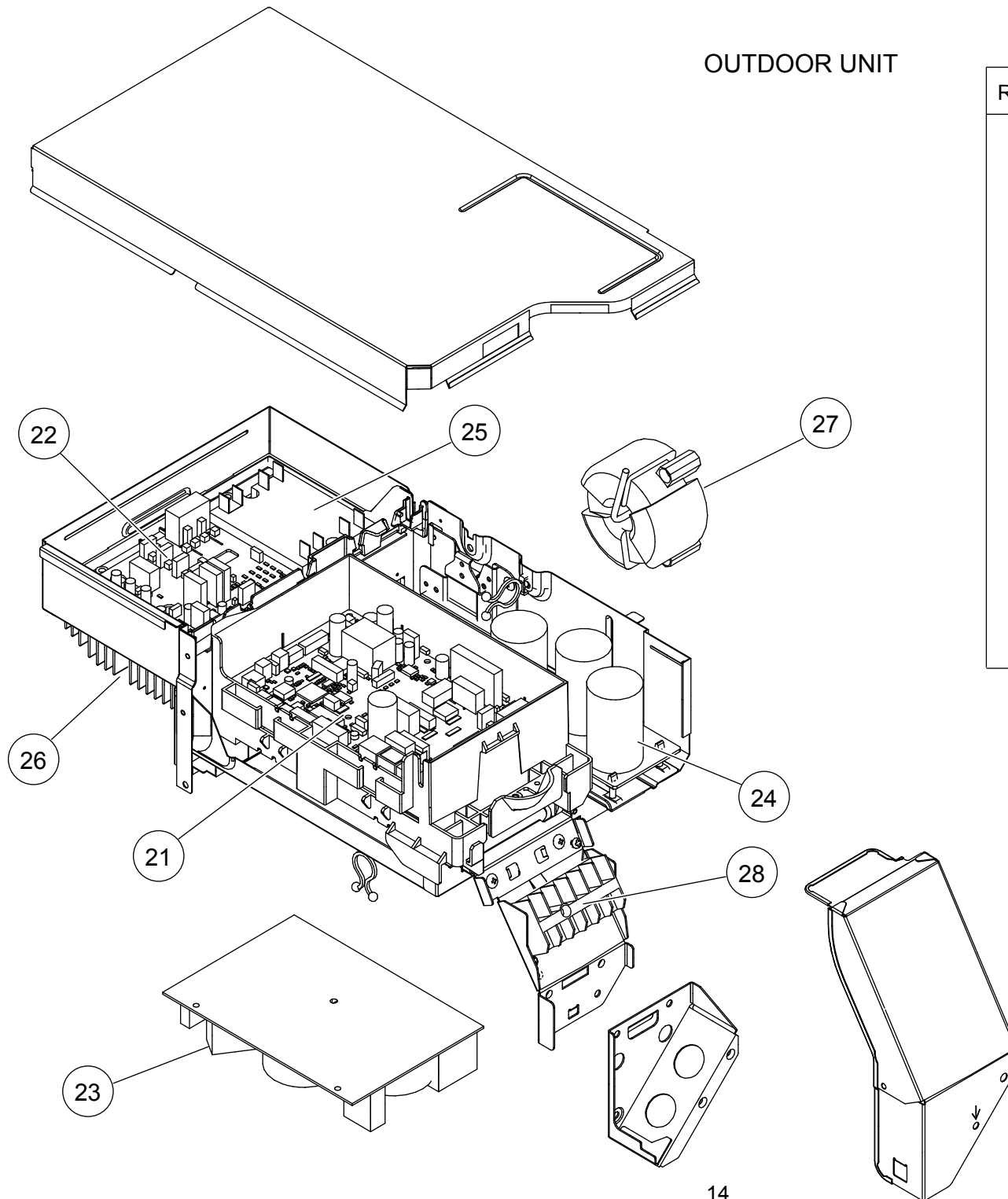
PARTS

OUTDOOR UNIT

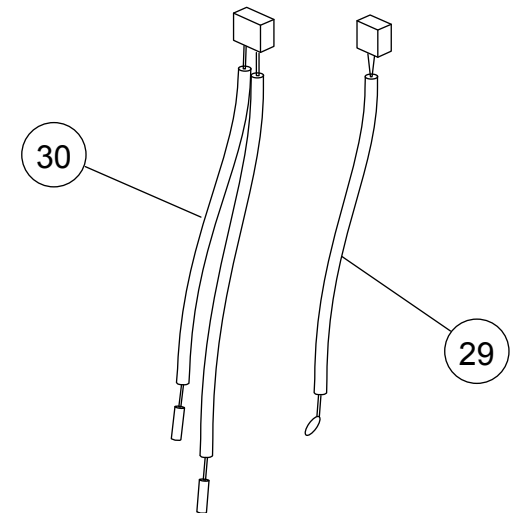


Ref.	Description	Part number
1	Protective Net	9331640008
2	Top Panel Assy	9318464023
3	Front Panel Assy	9318463033
4	Emblem	9317903011
5	Cabinet Left Assy	9318461015
6	Cabinet Right Assy	9316044050
7	Switch Cover	9317692021
8	Base Assy	9316885066
9	Drain Assy	9303029022
10	Drain Cap	31316624302
11	Fan Motor	9602724000
12	Propeller Fan	9313808013

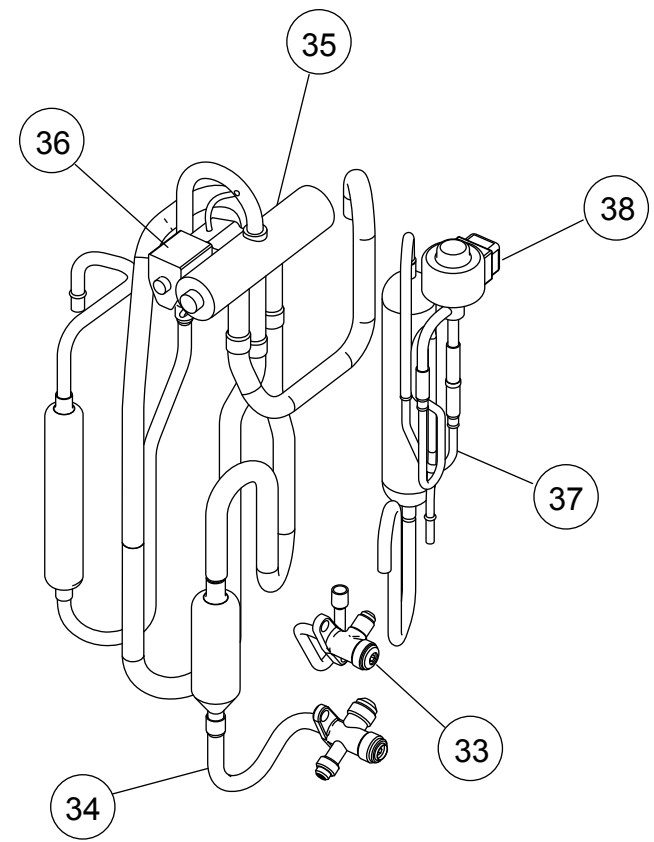
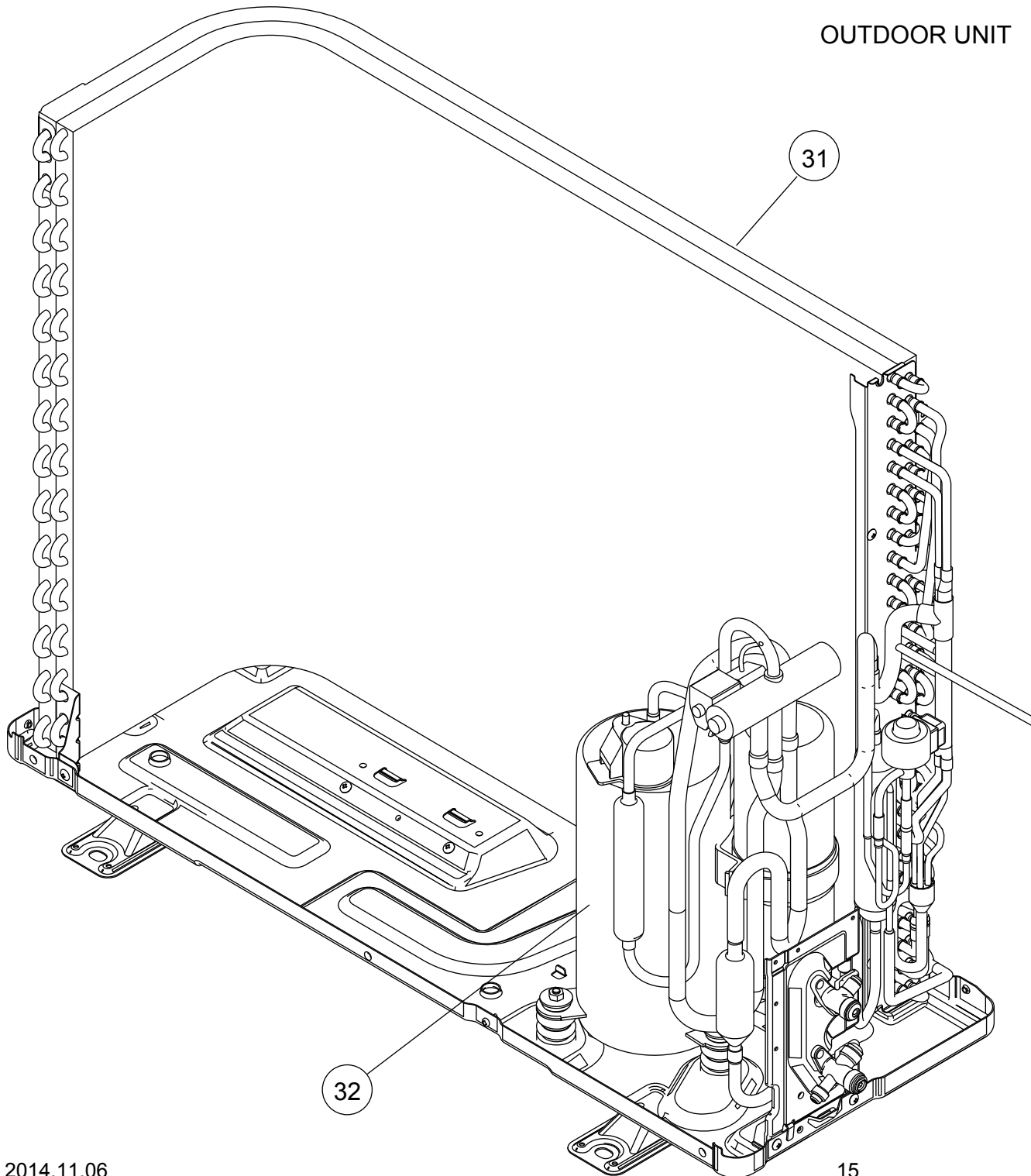
OUTDOOR UNIT



Ref.	Description	Part number
21	Main PCB (AOU18)	9708511689
21	Main PCB (AOU24)	9708511696
22	Transistor PCB	9708646077
23	Filter PCB	9709217122
24	Capacitor PCB	9708514017
25	ACTPM	9707592016
26	Heatsink	9318614015
27	Choke Coil	9900223014
28	Terminal 6P	9900016081
29	Outdoor Thermistor	9900544041
30	Thermistor Assy	9900648008



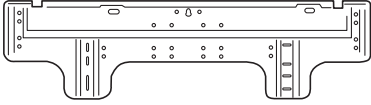
OUTDOOR UNIT

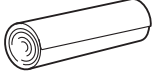
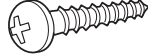

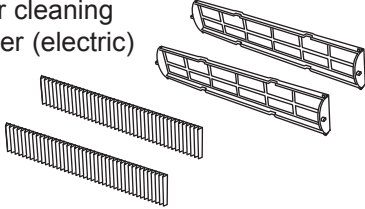
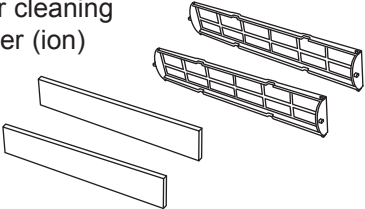


Ref.	Description	Part number
31	Condenser Total Assy	9317089128
32	Compressor Assy	9318334005
33	2-way Valve Sub Assy	9317345019
34	3-way Valve Sub Assy	9317109062
35	4-way Valve Assy	9318457018
36	Solenoid	9970110023
37	Pulse Motor Valve Assy	9315587046
38	Expansion Valve Coil	9970095030

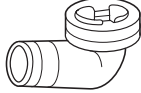
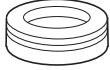
ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Wall hook bracket 	9315023018
Remote control 	9314990212
Remote control holder 	9305642045
Battery (penlight) 	0600185541
Insulation (Drain hose) 	9361756007

Name and Shape	Part number
Cloth tape 	9310519004
Tapping screw (big) 	0700076046
Tapping screw (small) 	0700019036
Air cleaning filter (electric) 	UTR-FA13-1
Air cleaning filter (ion) 	UTR-FA13-2

OUTDOOR UNIT

Name and Shape	Part number
Drain assy 	9303029022
Drain cap 	313166024302

under confirmation
refer to the installation manual

1410G4387