

SERVICE MANUAL

Indoor unit	Outdoor unit
RCA25RATU	ROA25RATH

CONTENTS

SPECIFICATIONS.....	1
DIMENSIONS.....	2
REFRIGERANT SYSTEM DIAGRAM....	4
CIRCUIT DIAGRAM.....	5
INDOOR PCB CIRCUIT DIAGRAM.....	6
OUTDOOR PCB CIRCUIT DIAGRAM....	7
ERROR DETECTION.....	8
PARTS (INDOOR UNIT).....	10
PARTS (OUTDOOR UNIT).....	16
ACCESSORIES.....	19

SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cooling and heating
INDOOR UNIT		RCA25RATU
OUTDOOR UNIT		ROA25RATH
COOLING CAPACITY	T3 (cool)	5.80 kW
	T1 (cool)	7.10 kW
HEATING CAPACITY	H1 (heat)	7.60 kW
POWER SOURCE		220 V, 60 Hz
RUNNING CURRENT	T3 (cool)	13.5 A
	T1 (cool)	12.2 A
	H1 (heat)	11.2 A
INPUT WATTS	T3 (cool)	2.90 kW
	T1 (cool)	2.60 kW
	H1 (heat)	2.39 kW
E.E.R.	T3 (cool)	2.00 kW/kW
	T1 (cool)	2.73 kW/kW
	H1 (heat)	3.18 kW/kW
MOISTURE REMOVAL	T3 (cool)	1.1 L/h
	T1 (cool)	2.5 L/h
AIR CIRCULATION HIGH		1,100 m3/h

* Condition T3 : Indoor DB 29°C/WB 19°C, Outdoor DB 46°C/WB 24°C

Condition T1 : Indoor DB 27°C/WB 19°C, Outdoor DB 35°C/WB 24°C

Condition H1 : Indoor DB 20°C/WB -°C, Outdoor DB 7°C/WB 6°C

FAN MOTOR

POWER SOURCE		220 V
INDOOR UNIT	Discrimination	MFA-30JTT
	Cooling	High speed
		495 r.p.m.
		Middle speed
		430 r.p.m.
	Heating	Low speed
		360 r.p.m.
		Super low
		250 r.p.m.
OUTDOOR UNIT	Heating	High speed
		440 r.p.m.
		Middle speed
		380 r.p.m.
OUTDOOR UNIT	Heating	Low speed
		330 r.p.m.
		Super low
OUTDOOR UNIT	Heating	250 r.p.m.
		Discrimination
		MFB-24JSAT
OUTDOOR UNIT	Heating	High speed
		780 r.p.m.
OUTDOOR UNIT	Heating	Low speed
		380 r.p.m.

NOISE LEVEL

INDOOR UNIT (Cooling)	High speed	44.0 dB
	Middle speed	42.0 dB
	Low speed	39.0 dB
INDOOR UNIT (Heating)	High speed	41.0 dB
	Middle speed	37.0 dB
	Low speed	34.0 dB
OUTDOOR UNIT Cooling		54.0 dB
OUTDOOR UNIT Heating		55.0 dB

COMPRESSOR AND REFRIGERANT

TYPE		Hermetic type, 2 poles, Single phase, Rotary Induction Motor (PSC)
DISCRIMINATION		2JS350H5BA02
WEIGHT (with oil)		24.2 kg
POWER SOURCE		220 V, 60 Hz
REFRIGERANT TYPE		R-22
PRECHARGED REFRIGERANT		2,250 g
FULL CHARGE	Pipe length 7.5 m	2,250 g
	15 m	2,550 g
	25 m	2,950 g
ADDITIONAL CHARGE		40 g/m
MAXIMUM PIPE HEIGHT		15 m

DIMENSIONS

INDOOR UNIT	H x W x D	246 x 830 x 830 mm
OUTDOOR UNIT	H x W x D	650 x 830 x 320 mm
GRILLE	H x W x D	30 x 940 x 940 mm

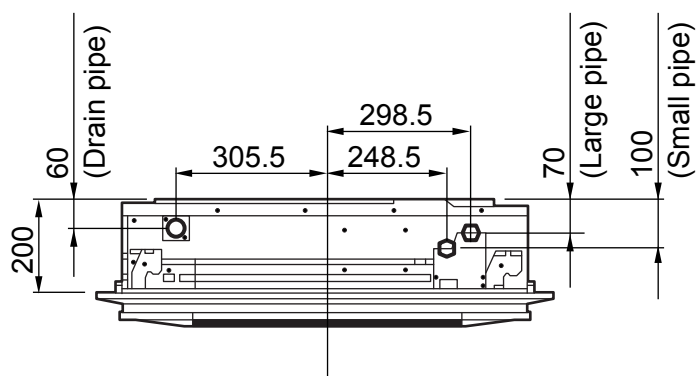
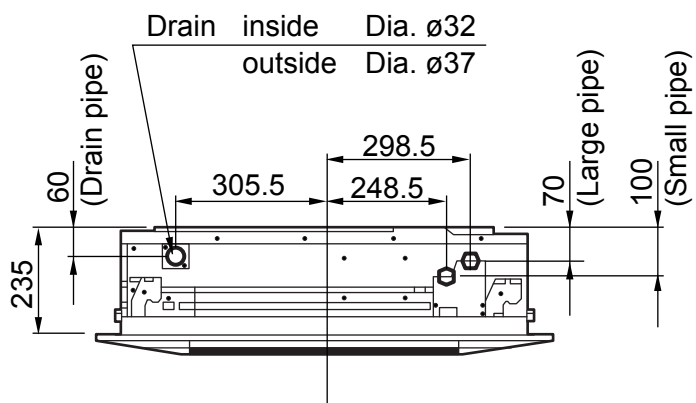
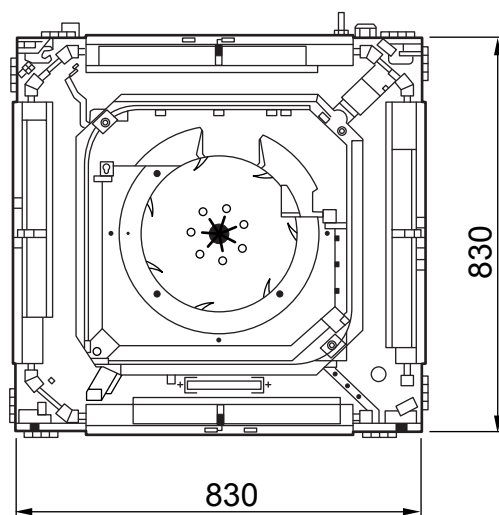
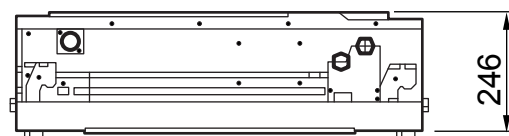
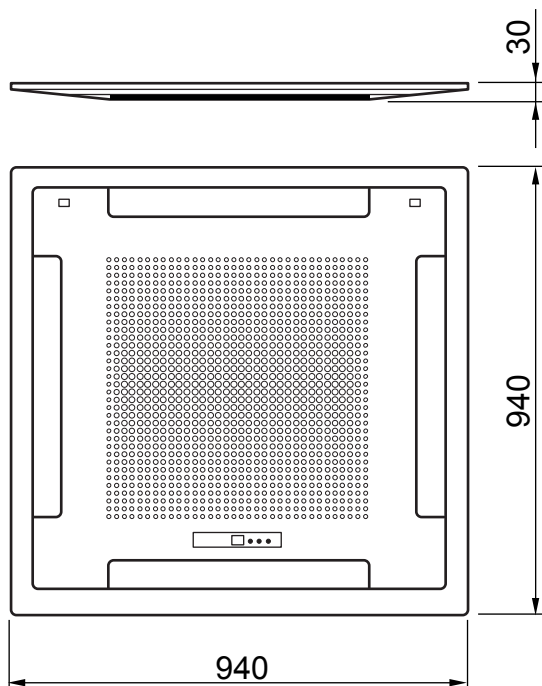
WEIGHT

INDOOR UNIT	Shipping / Net	44 kg / 34 kg
OUTDOOR UNIT	Shipping / Net	64 kg / 60 kg
GRILLE	Shipping / Net	4.3 kg / 2.2 kg

DIMENSIONS

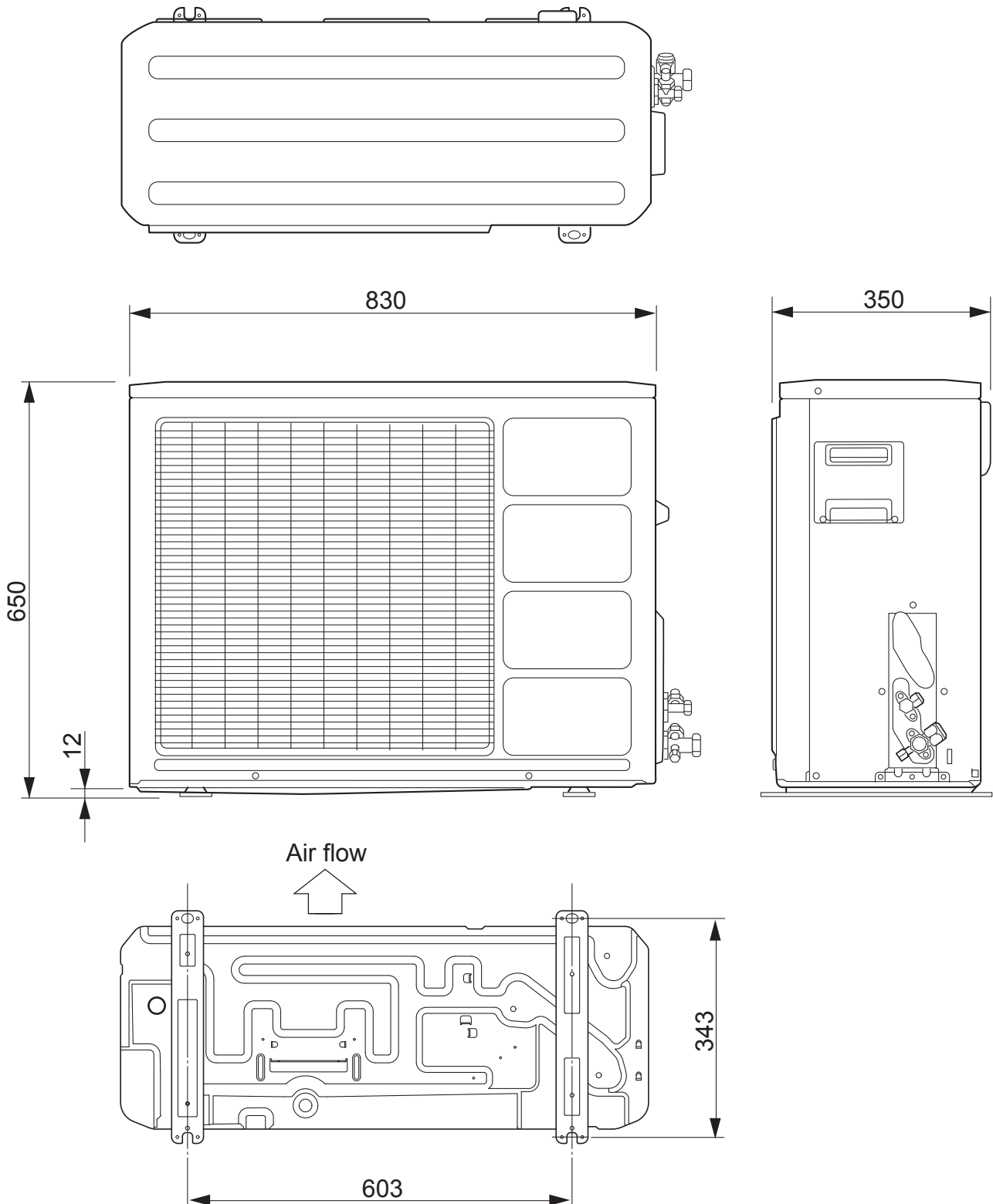
INDOOR UNIT

Unit : mm

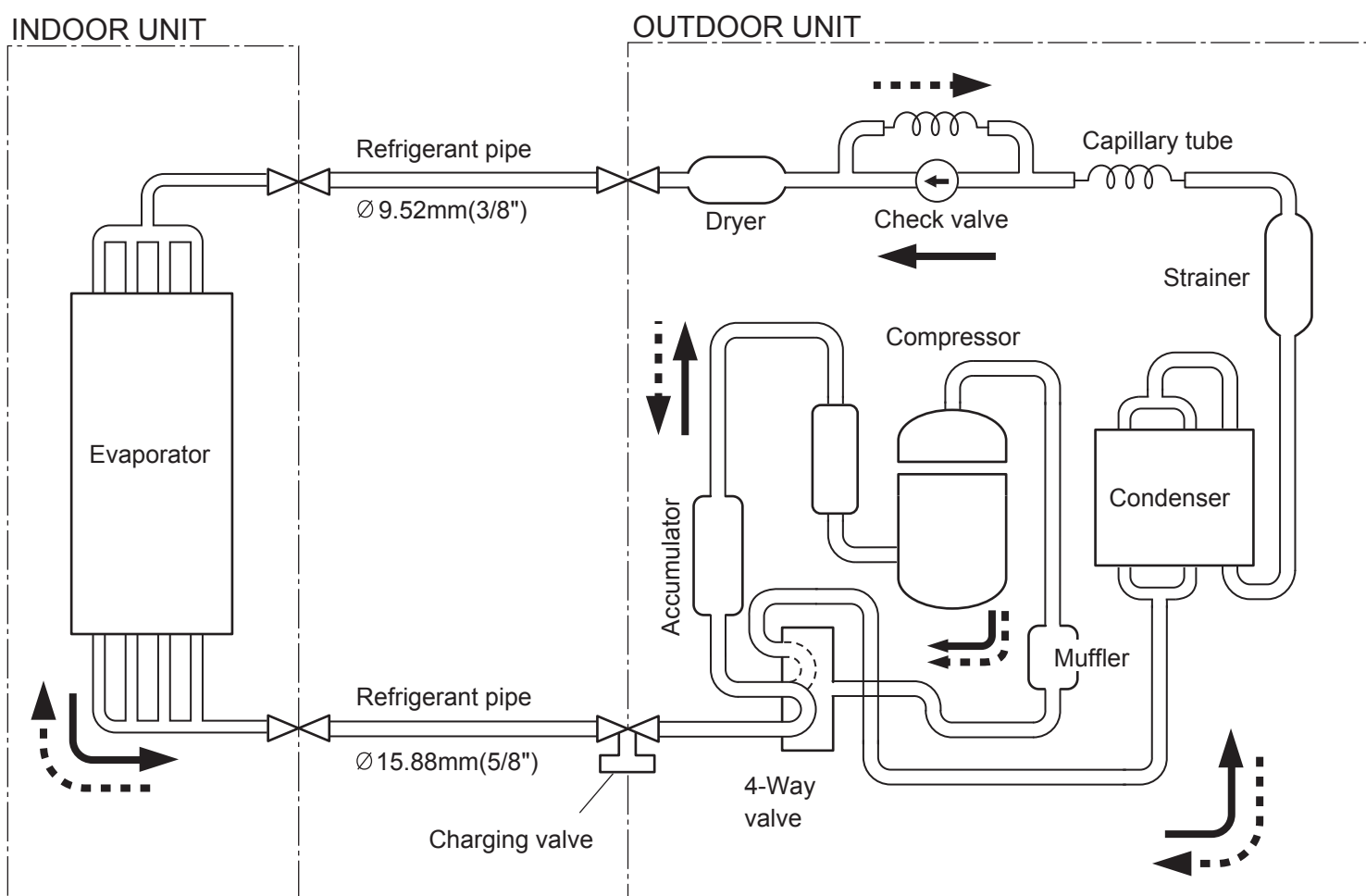
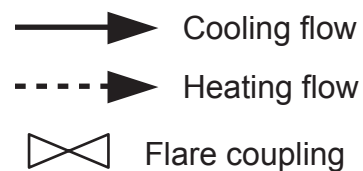


OUTDOOR UNIT

Unit : mm

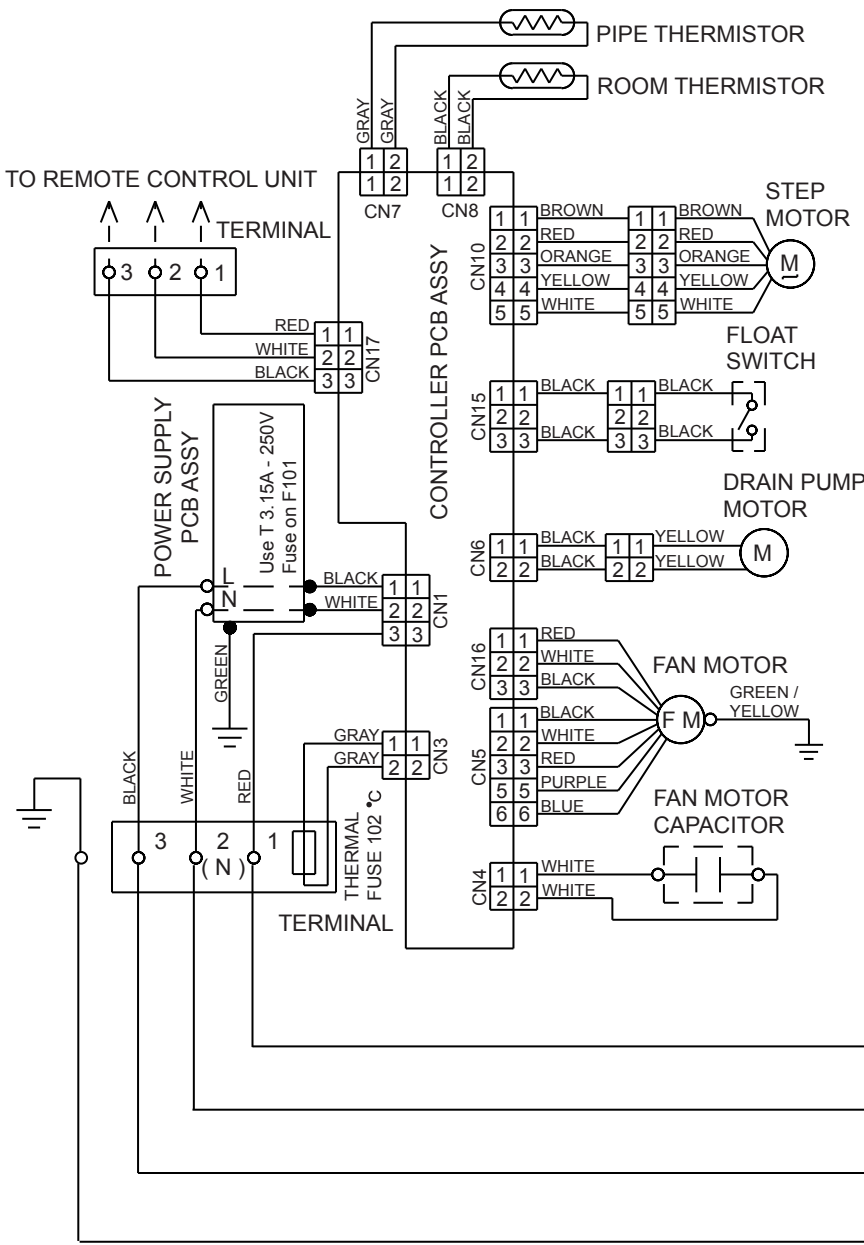


REFRIGERANT SYSTEM DIAGRAM

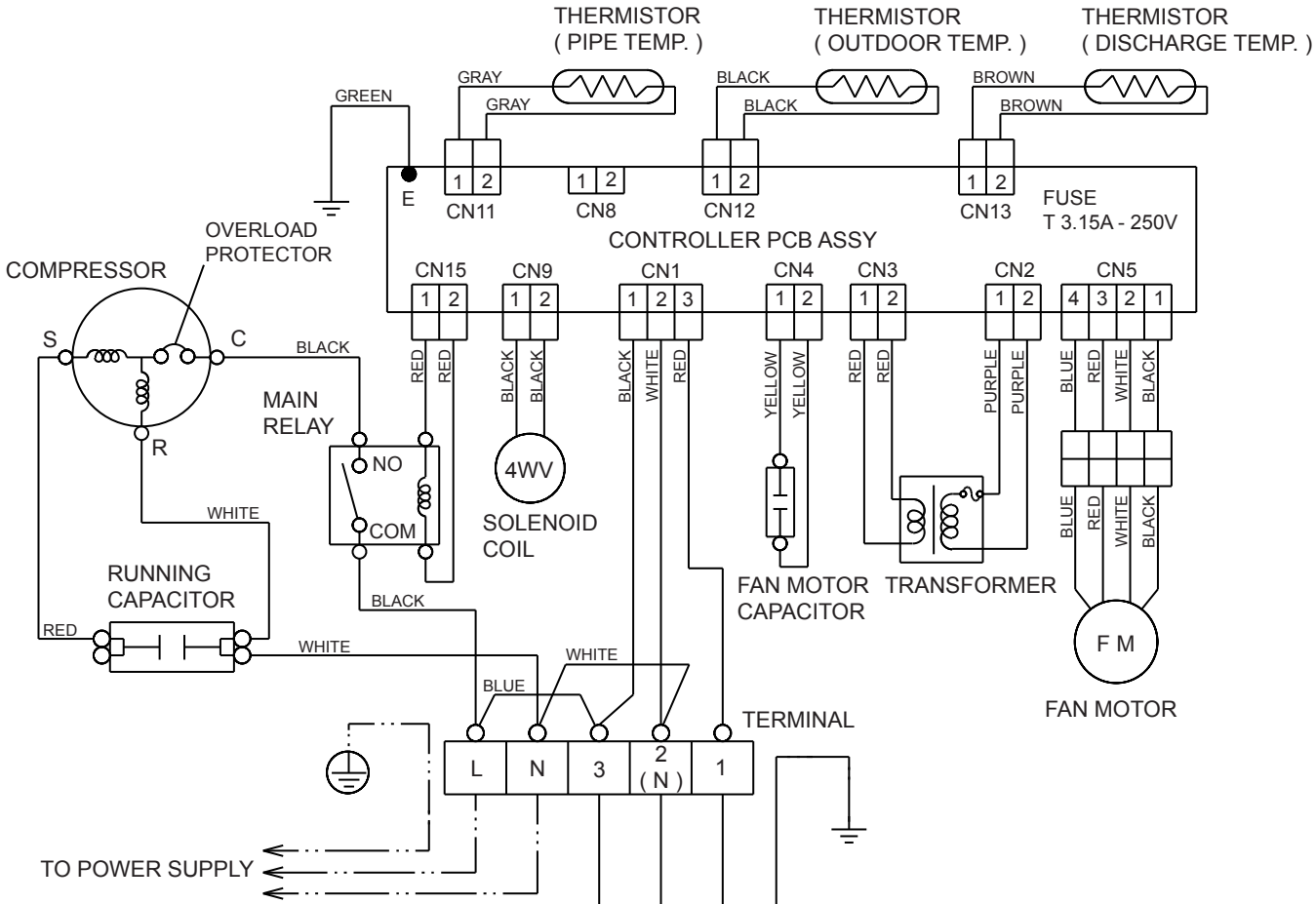


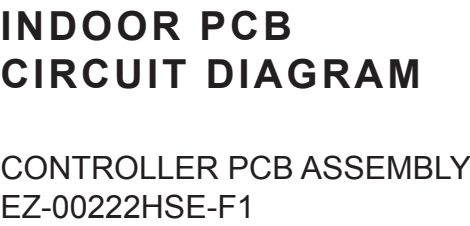
CIRCUIT DIAGRAM

INDOOR UNIT



OUTDOOR UNIT







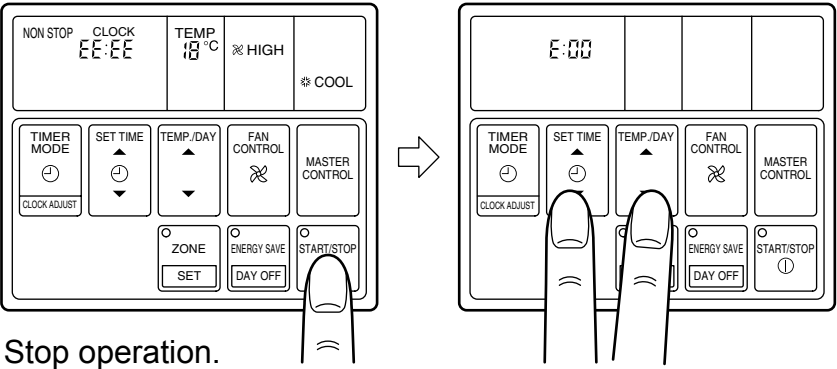
ERROR DETECTION

REMOTE CONTROL

If EE:EE blinks in the current time display, there is an error inside the unit.

When, press the down-arrow buttons of SET TIME and TEMP./DAY simultaneously for three seconds.

The self diagnosis check will start and the error contents will be displayed.

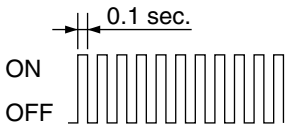
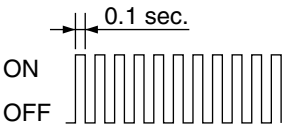
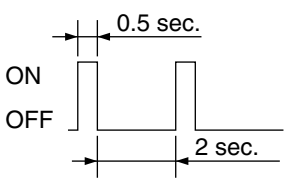
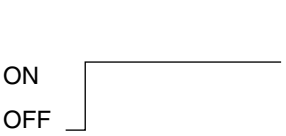
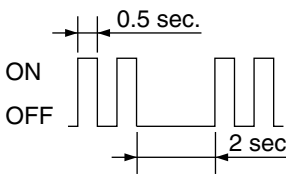
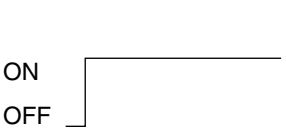
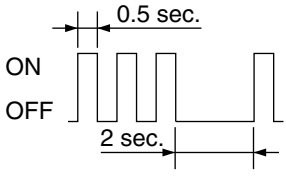
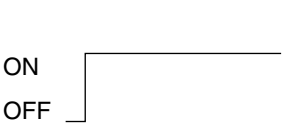


Stop operation.

Display	Error contents
E:00	Communication error (indoor unit ↔ remote controller)
E:01	Communication error (indoor unit ↔ outdoor unit)
E:02	Room thermistor open
E:03	Room thermistor short-circuited
E:04	Indoor heat exchanger thermistor open
E:05	Indoor heat exchanger thermistor short-circuited
E:06	Outdoor heat exchanger thermistor open
E:07	Outdoor heat exchanger thermistor short-circuited
E:08	Power source connection error
E:09	Float switch operated
E:0A	Outdoor thermistor open
E:0B	Outdoor thermistor short-circuited
E:0C	Discharge pipe thermistor open
E:0d	Discharge pipe thermistor short-circuited
E:0E	Outdoor high pressure abnormal
E:0F	Discharge pipe temperature abnormal
E:11	Model abnormal
E:12	Indoor fan abnormal
E:13	Outdoor signal abnormal
E:14	Outdoor EEPROM abnormal

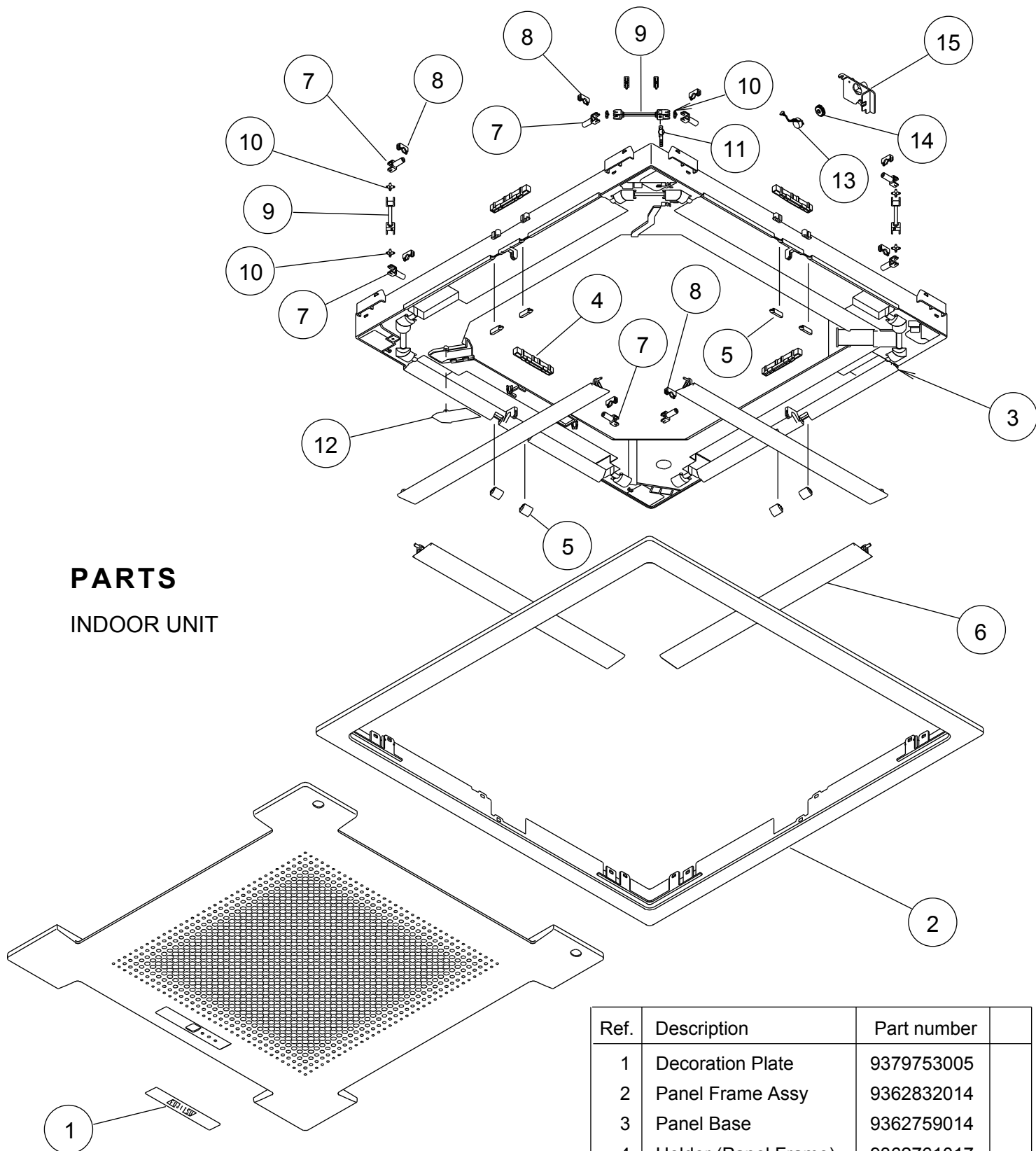
OUTDOOR UNIT

The LED lamps show the error as follows.

Error display		Error contents
LED 1	LED 2	
 Quick flash continued	 Quick flash continued	Model abnormal or EEPROM abnormal
 1 quick flash repeated	 Lighting continued	Power source connection error
 2 quick flashes repeated	 Lighting continued	Discharge temperature sensor error
 3 quick flashes repeated	 Lighting continued	Outdoor heat exchanger temperature sensor error
4 quick flashes repeated	Lighting continued	Outdoor temperature sensor error
5 quick flashes repeated	Lighting continued	Communication signal error
6 quick flashes repeated	Lighting continued	Indoor unit error
7 quick flashes repeated	Lighting continued	Discharge temperature abnormal
8 quick flashes repeated	Lighting continued	High pressure abnormal

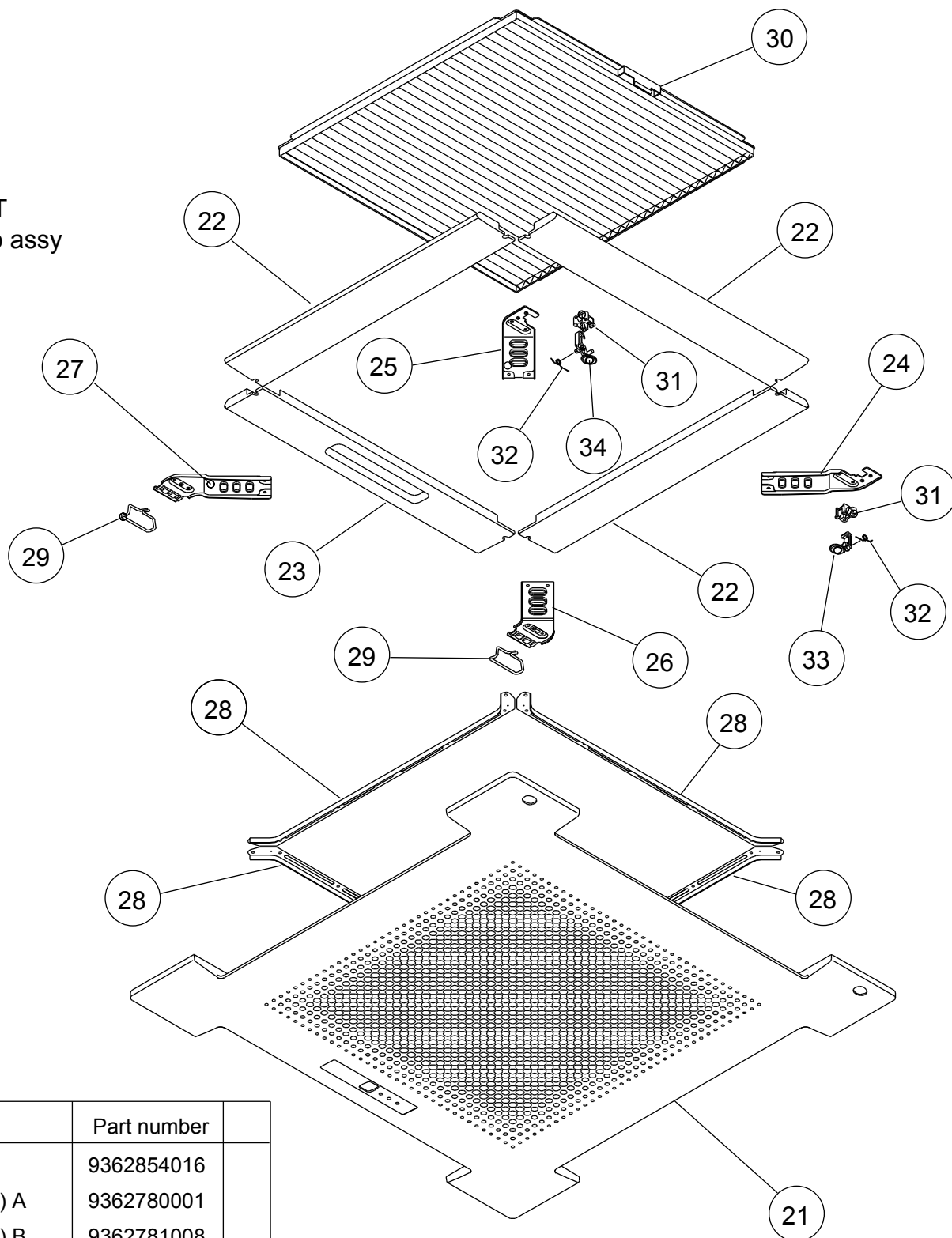
When the fault is cleared, the LED lamp goes off.

However, for discharge pipe temperature abnormal and high pressure abnormal, the LED lamp lights continuously for 24 hours, as long as the power is not turned off.



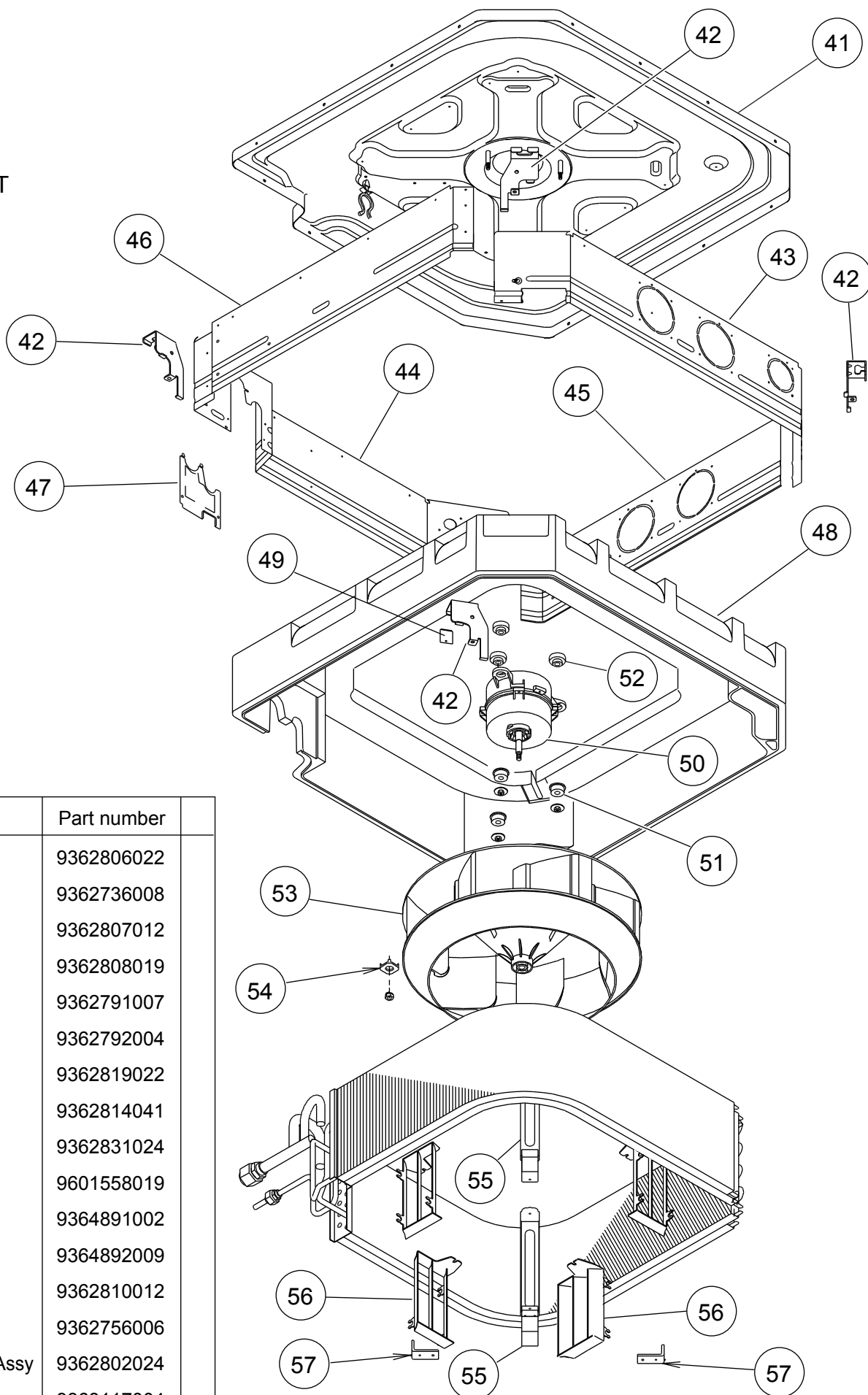
Ref.	Description	Part number	
1	Decoration Plate	9379753005	
2	Panel Frame Assy	9362832014	
3	Panel Base	9362759014	
4	Holder (Panel Frame)	9362761017	
5	Holder (Panel Base)	9362760010	
6	Louver Assy	9362836012	
7	Louver Supporter	9362770019	
8	Louver Support Holder	9362799003	
9	Joint A	9362773003	
10	Joint Shaft	9362771009	
11	Joint Gear	9362772006	
12	Wire Cover B	9362788007	
13	Step Motor	9900362027	
14	Motor Gear	9362764001	
15	Motor Holder	9362765008	

INDOOR UNIT
Intake grille sub assy



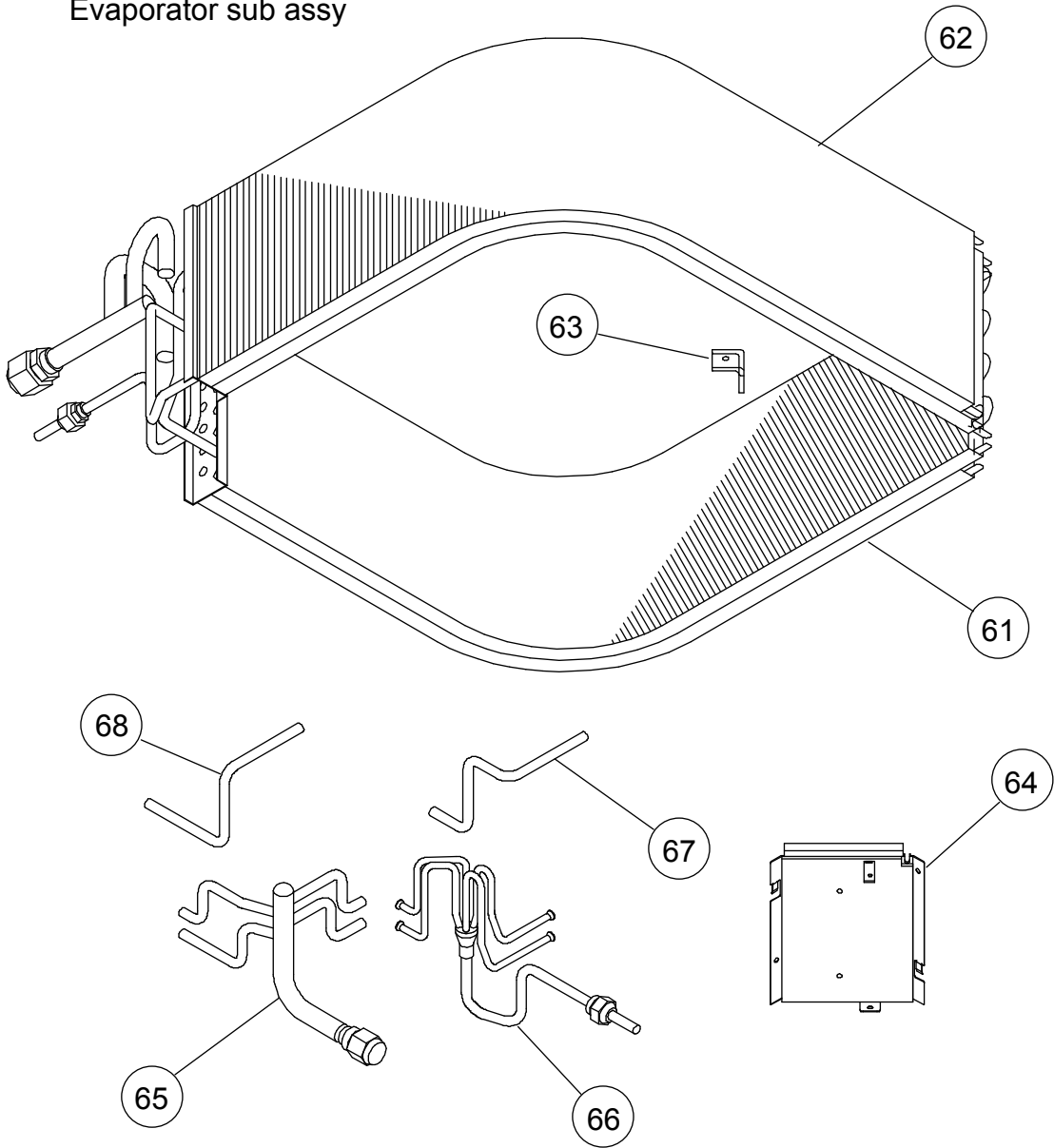
Ref.	Description	Part number
21	Intake Grille B	9362854016
22	Insulation (Grille) A	9362780001
23	Insulation (Grille) B	9362781008
24	Grille Reinforcement A	9362738002
25	Grille Reinforcement B	9362739009
26	Grille Reinforcement C	9362740005
27	Grille Reinforcement D	9362741002
28	Grille Reinforcement E	9362742009
29	Grille Hinge Wire	9362754002
30	Filter	9362766005
31	Grille Hook Holder	9362782005
32	Spring Grille	9362755009
33	Hook (Grille) A	9362779012
34	Hook (Grille) B	9362778015
--	Intake Grille Sub Assy	9362818148

INDOOR UNIT



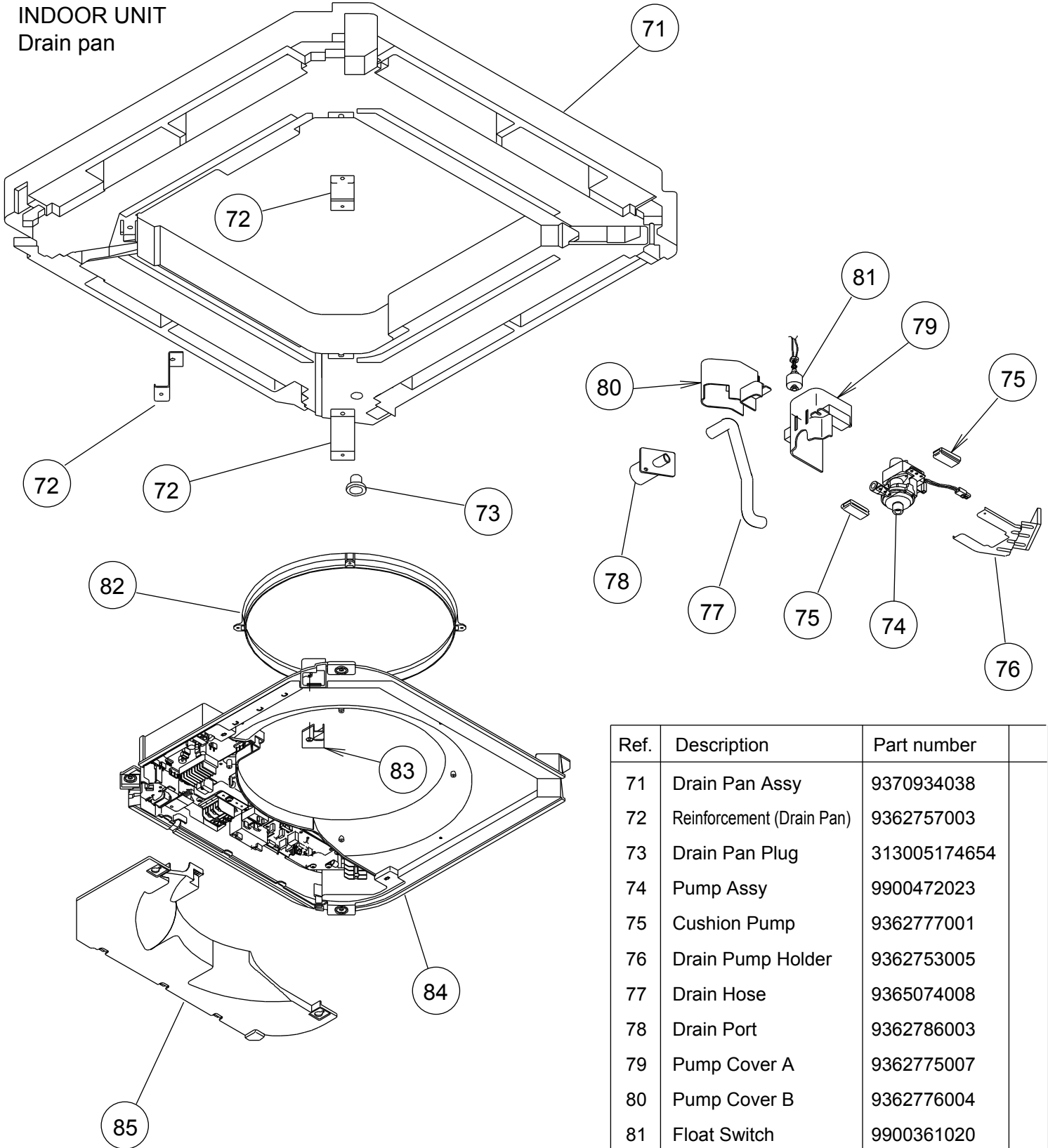
Ref.	Description	Part number
41	Top Panel Assy	9362806022
42	Hook	9362736008
43	Cabinet A Assy	9362807012
44	Cabinet B Assy	9362808019
45	Cabinet C	9362791007
46	Cabinet D	9362792004
47	Pipe Cover Assy	9362819022
48	Inner Box Assy	9362814041
49	Cabinet E Assy	9362831024
50	Fan Motor Assy	9601558019
51	Rubber (Motor) A	9364891002
52	Rubber (Motor) B	9364892009
53	Tubo Fan Assy	9362810012
54	Special Washer	9362756006
55	Evaporator Holder Assy	9362802024
56	Wind Guide Board	9363117004
57	Reinforcement (Eva) A	9362749008

INDOOR UNIT
Evaporator sub assy



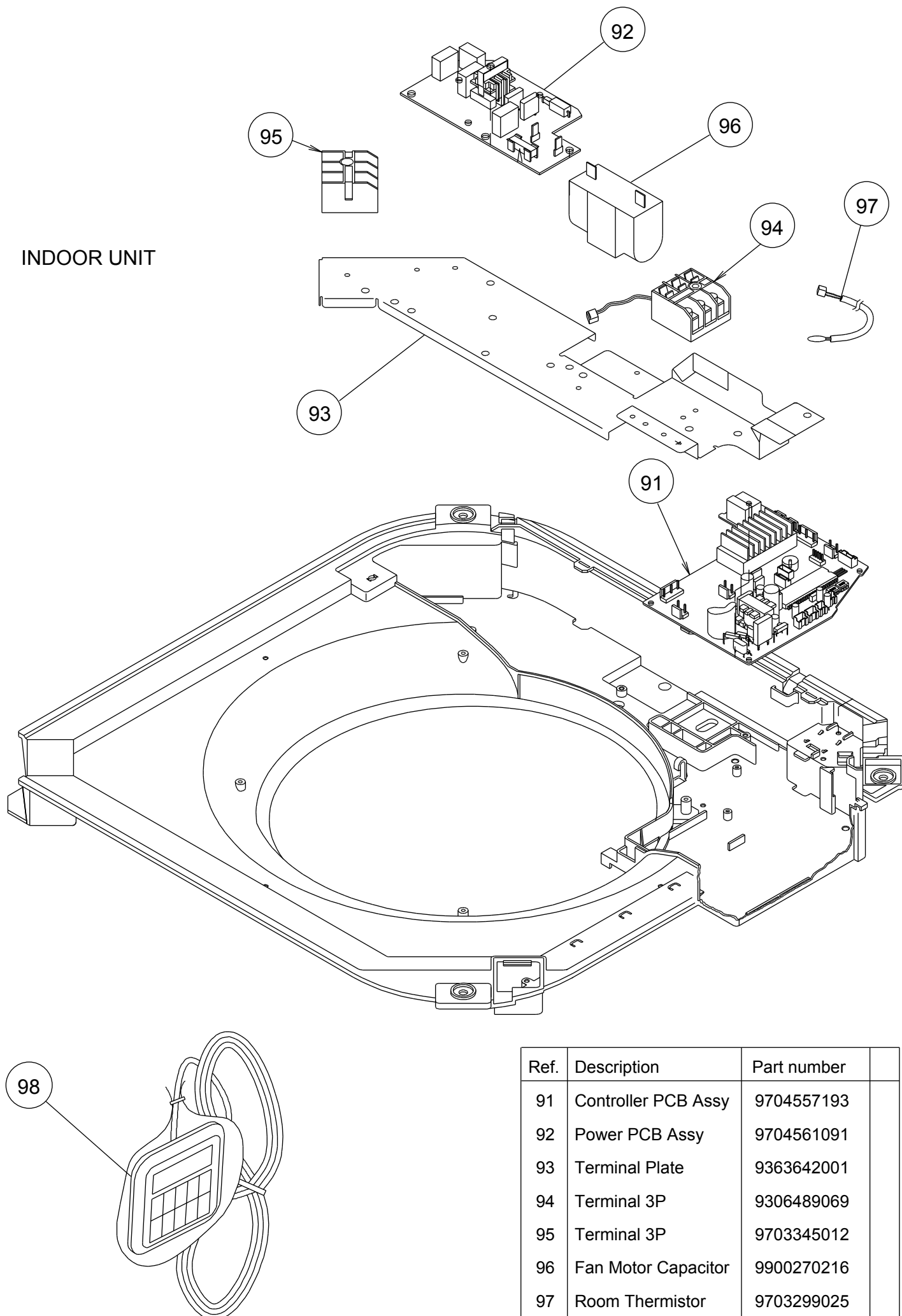
Ref.	Description	Part number	
61	Evaporator A Assy	9368196004	
62	Evaporator B Assy	9368197001	
63	Reinforcement (Eva) B	9362750004	
64	Separate Wall Assy	9362824026	
65	Coupling Pipe Assy	9368204006	
66	Distributor Assy	9368198008	
67	Bypass Pipe A	9368207007	
68	Bypass Pipe B	9368208004	
--	Pipe Thermistor	9703297014	
--	Evaporator Sub Assy	9362817141	

INDOOR UNIT
Drain pan



Ref.	Description	Part number	
71	Drain Pan Assy	9370934038	
72	Reinforcement (Drain Pan)	9362757003	
73	Drain Pan Plug	313005174654	
74	Pump Assy	9900472023	
75	Cushion Pump	9362777001	
76	Drain Pump Holder	9362753005	
77	Drain Hose	9365074008	
78	Drain Port	9362786003	
79	Pump Cover A	9362775007	
80	Pump Cover B	9362776004	
81	Float Switch	9900361020	
82	Bellmouth B	9362774000	
83	Wire Cover A	9362789004	
84	Control Box	9362762007	
85	Control Box Cover	9362763004	

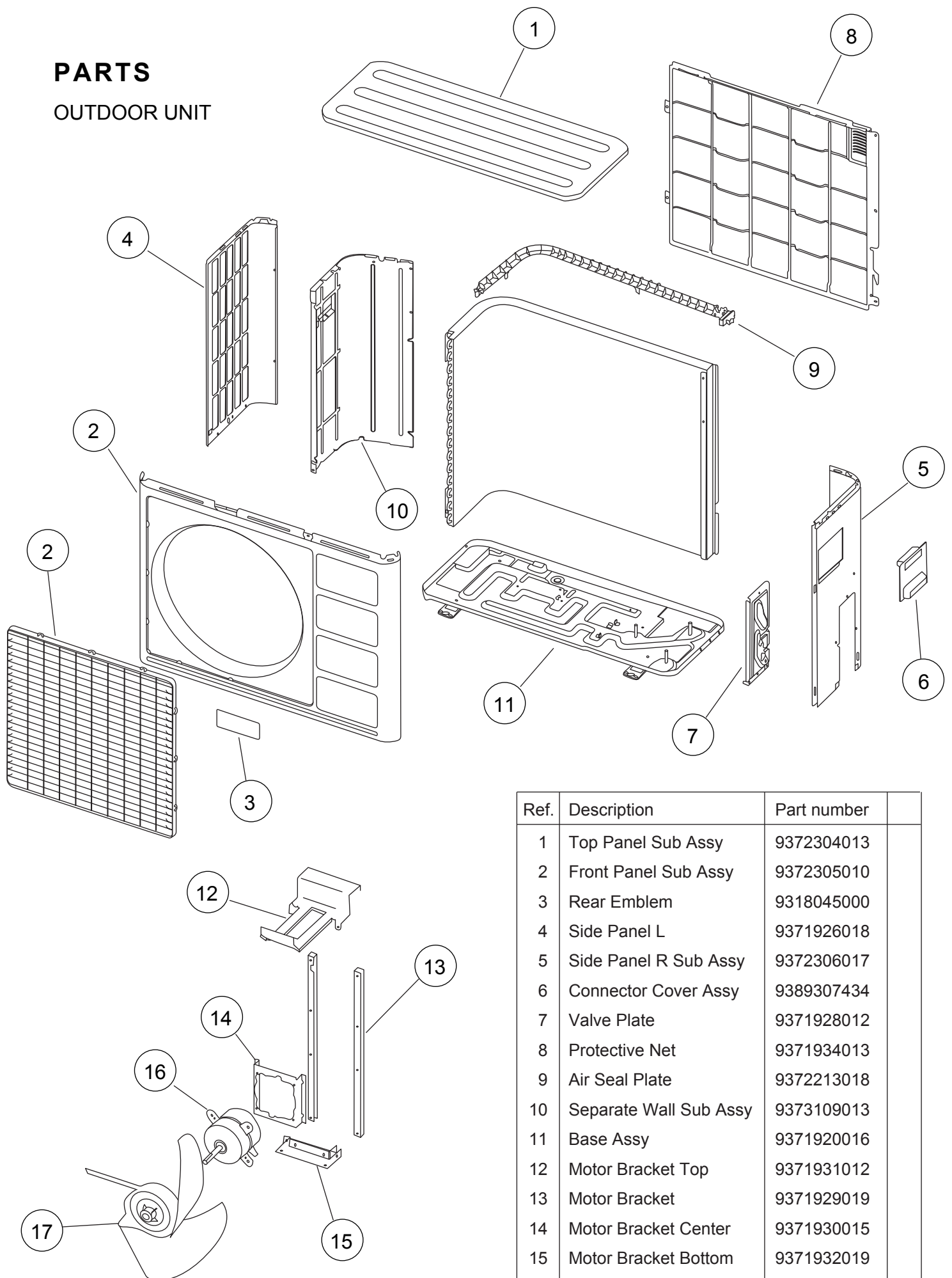
INDOOR UNIT



Ref.	Description	Part number
91	Controller PCB Assy	9704557193
92	Power PCB Assy	9704561091
93	Terminal Plate	9363642001
94	Terminal 3P	9306489069
95	Terminal 3P	9703345012
96	Fan Motor Capacitor	9900270216
97	Room Thermistor	9703299025
98	Remote Control	9371438016

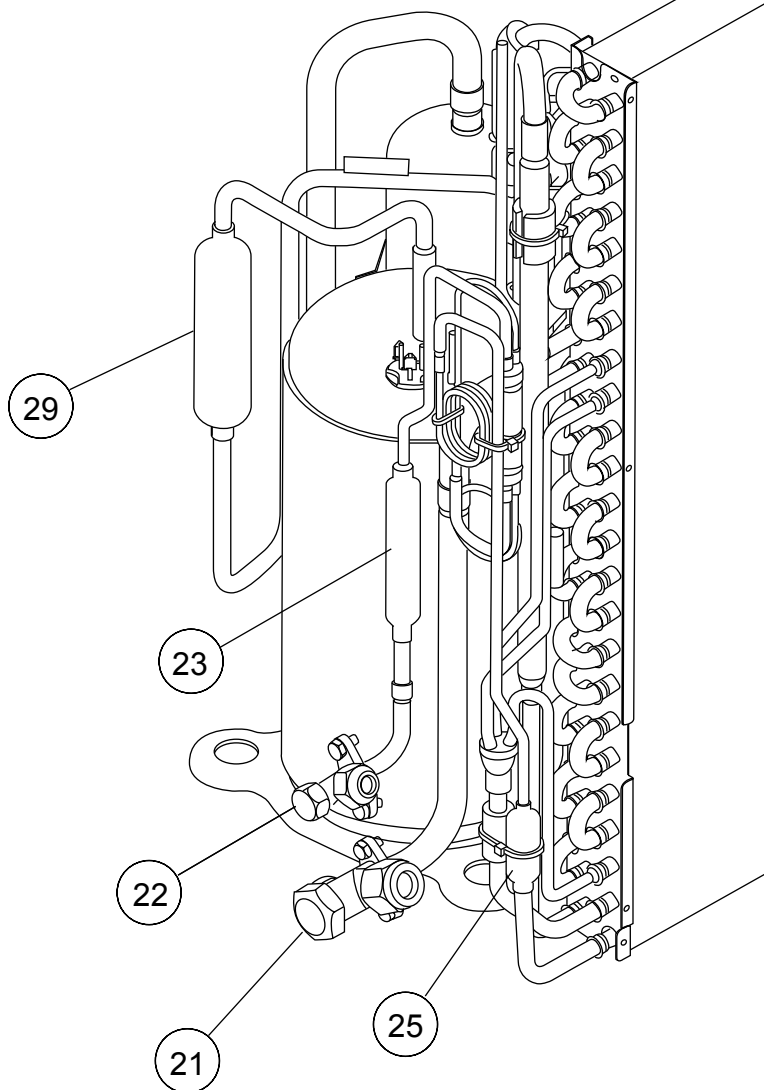
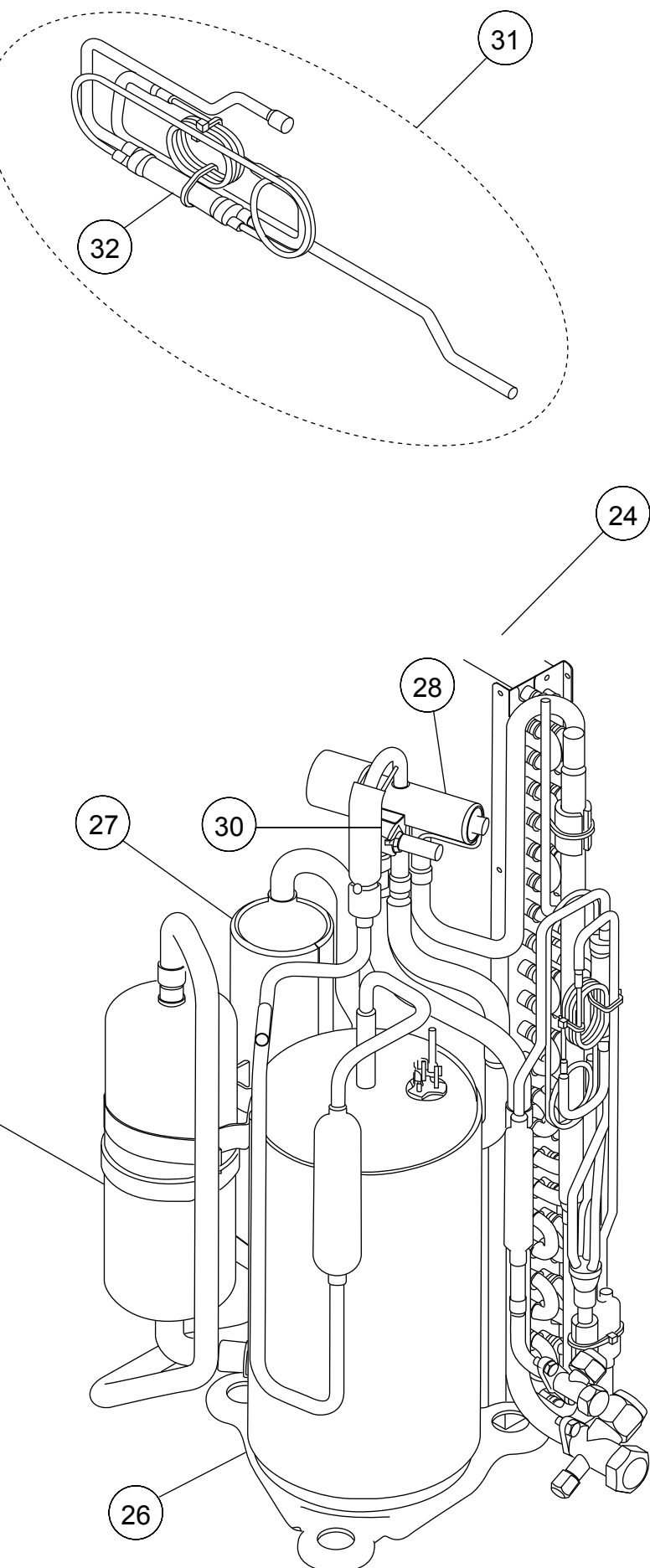
PARTS

OUTDOOR UNIT



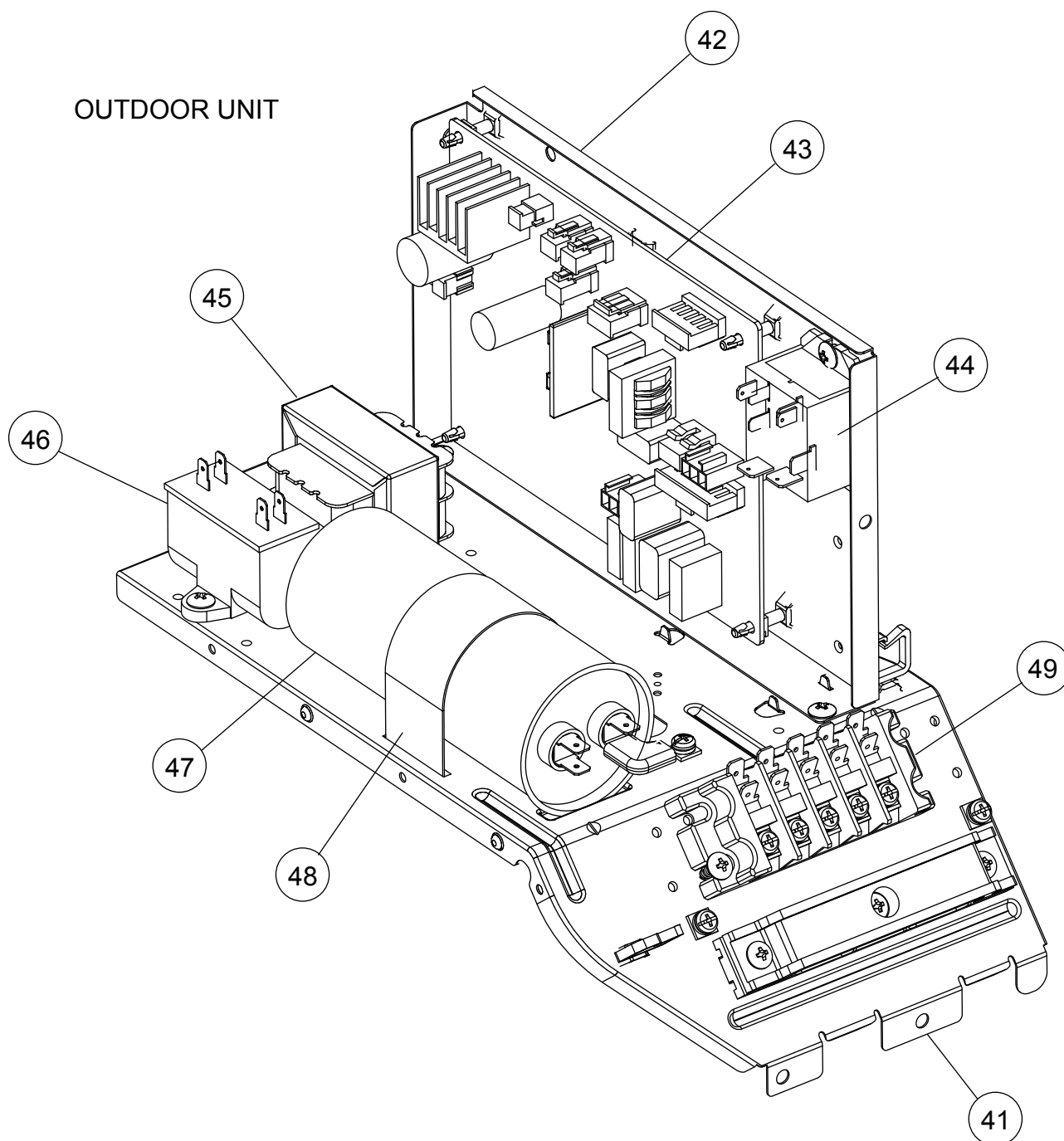
Ref.	Description	Part number
1	Top Panel Sub Assy	9372304013
2	Front Panel Sub Assy	9372305010
3	Rear Emblem	9318045000
4	Side Panel L	9371926018
5	Side Panel R Sub Assy	9372306017
6	Connector Cover Assy	9389307434
7	Valve Plate	9371928012
8	Protective Net	9371934013
9	Air Seal Plate	9372213018
10	Separate Wall Sub Assy	9373109013
11	Base Assy	9371920016
12	Motor Bracket Top	9371931012
13	Motor Bracket	9371929019
14	Motor Bracket Center	9371930015
15	Motor Bracket Bottom	9371932019
16	Fan Motor Assy	9601671053
17	Propeller Fan Assy	9366378013

OUTDOOR UNIT



Ref.	Description	Part number
21	3-way Valve	9374851058
22	2-way Valve	9374829057
23	Dryer	9368111014
24	Condenser Assy	9372181119
25	Strainer	9369287008
26	Compressor Sub Assy	9372322062
27	Accumulator Sub Assy	9372567012
28	4-way Valve	9900163013
29	Muffler	9372369012
30	Solenoid	9900165024
31	Capillary Assy	9372197219
32	Check Valve	9372198032
--	Accumulator Support Assy	9372252017

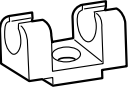
OUTDOOR UNIT



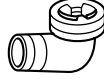
Ref.	Description	Part number	
41	Control Box A	9371935010	
42	Control Box B	9371936017	
43	PCB Assy	9704299055	
44	Main Relay	9900262013	
45	Transformer, Power	9900039011	
46	Capacitor, Plastic	9900270131	
47	Running Capacitor	9703107023	
48	Capacitor Clamp	313791061807	
49	Terminal5P	9900203023	
--	Outdoor Thermistor	9900037031	
--	Heat Exchanger Thermistor	9900043032	
--	Discharge Thermistor	9900038014	

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Coupler heat insulation 	9378173569 } 1 each 9378173521
Remote control cord clamp 	313714181904
Binder 	313035356905 (Large) 313361275805 (Small)
Screw 	(A) 0700019067 For installing the mounting bracket (B) 0700235016 For installing the cord clamp
Special nut A (large flange) 	313005446653
Special nut B (small flange) 	313005446759
Remote control 	9371438016
Template 	9363173000
Blower cover insulation 	9363265002
Hook wire 	9363168006

OUTDOOR UNIT

Name and Shape	Q'ty	Application	Parts number
Drain pipe 	1	For drain piping work	9303029015
Drain cap 	2		313166024302

1002G3742