

SERVICE MANUAL

Indoor unit	Outdoor unit
RCA40SATU	ROA40SAT
RCA50SATU	ROA50SATV

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cooling	
INDOOR UNIT		RCA40SATU	RCA50SATU
OUTDOOR UNIT		ROA40SAT	ROA50SATV
COOLING CAPACITY	Condition T3	9.00 kW	10.5 kW
	Condition T1	10.5 kW	12.5kW
POWER SOURCE		Single phase, 220 V	Three phase, 3W, 220 V
FREQUENCY		60 Hz	60 Hz
RUNNING CURRENT	Condition T3	22.0 A	17.4 A
	Condition T1	18.9 A	15.4 A
INPUT WATTS	Condition T3	4.70 kW	5.80 kW
	Condition T1	3.98 kW	5.03 kW
E.E.R.	Condition T3	1.91 kW/kW	1.81 kW/kW
	Condition T1	2.64 kW/kW	2.49 kW/kW
MOISTURE REMOVAL	Condition T3	2.2 L/hr	2.8 L/hr
	Condition T1	5.0 L/hr	6.0 L/hr
AIR CIRCULATION		1,500 m3/h	1,650 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

FAN SPEED

INDOOR UNIT	HIGH	580 r.p.m.	620 r.p.m.
	MED	500 r.p.m.	550 r.p.m.
	LOW	420 r.p.m.	470 r.p.m.
OUTDOOR UNIT		750 r.p.m.	770 r.p.m.

NOISE LEVEL

INDOOR UNIT	HIGH	48.0 dB	49.0 dB
	MED	44.0 dB	47.0 dB
	LOW	41.0 dB	43.0 dB
OUTDOOR UNIT		58.0 dB	57.5 dB

COMPRESSOR AND REFRIGERANT

TYPE		Hermetic type, 2 poles, Single phase, Induction motor (PSC)	Hermetic type, 2 poles, 3 phase, Induction motor
DISCRIMINATION		ZR40K3-PFV-501	ZR54KC-TF5-559
WIGHT (with oil)		27.2 kg	36.0 kg
REFRIGERANT TYPE		R-22	R-22
PRECHARGED REFRIGERANT		2,100 g	3,800 g
FULL CHARGE	Pipe length 7.5 m	2,100 g	3,800 g
	20 m	2,537.5 g	
	50 m	3,587.5 g	5,000 g
ADDITIONAL CHARGE		35 g/m	40 g/m
MAX PIPE HEIGHT		30 m	

DIMENSIONS

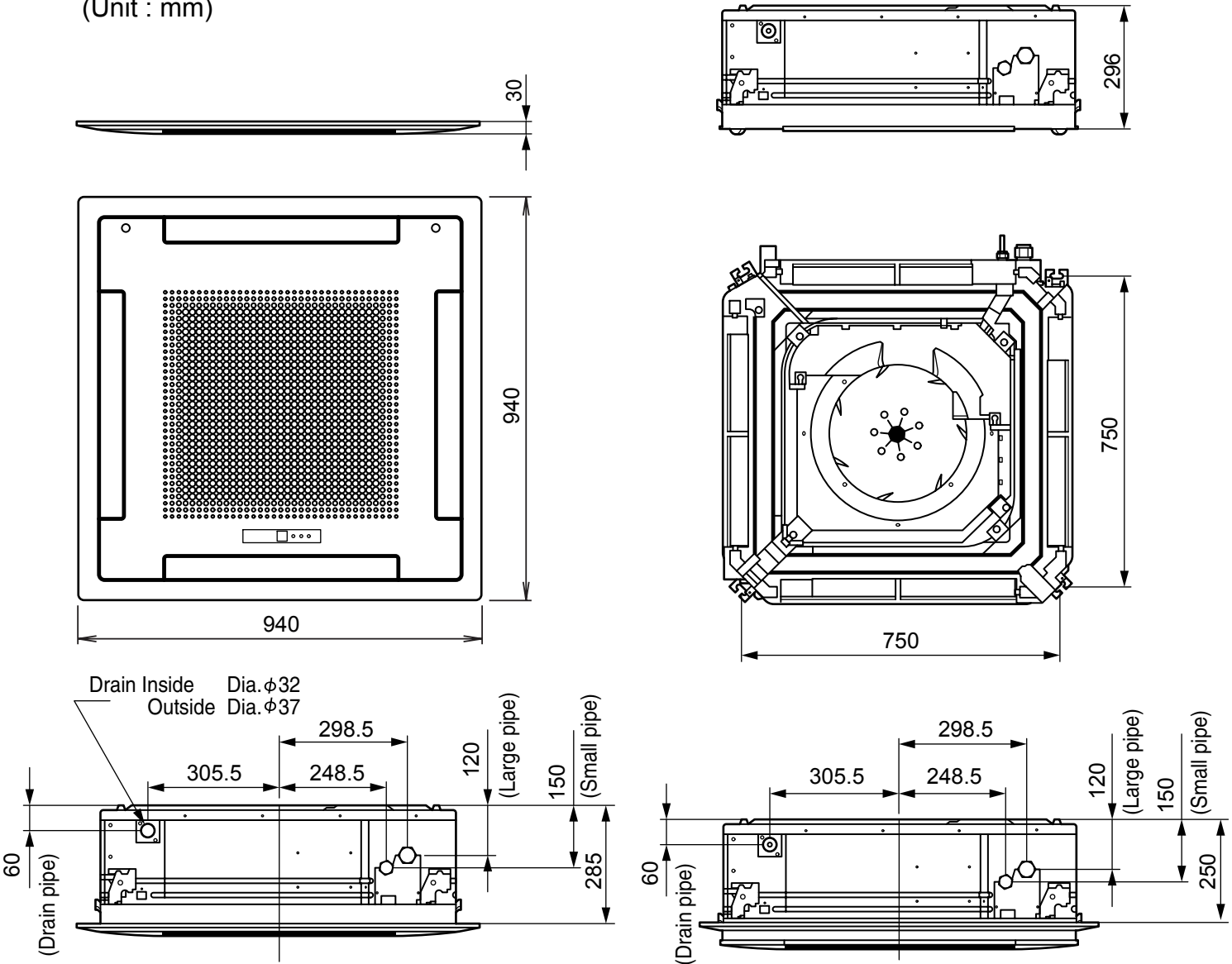
INDOOR UNIT	H x W x D	296 x 830 x 830 mm
GRILLE	H x W x D	30 x 940 x 940 mm
OUTDOOR UNIT	H x W x D	1,152 x 940 x 370 mm

WEIGHT

INDOOR UNIT	Net / Shipping	40 kg / 53 kg
OUTDOOR UNIT	Net / Shipping	89 kg / 103 kg 107 kg / 121 kg

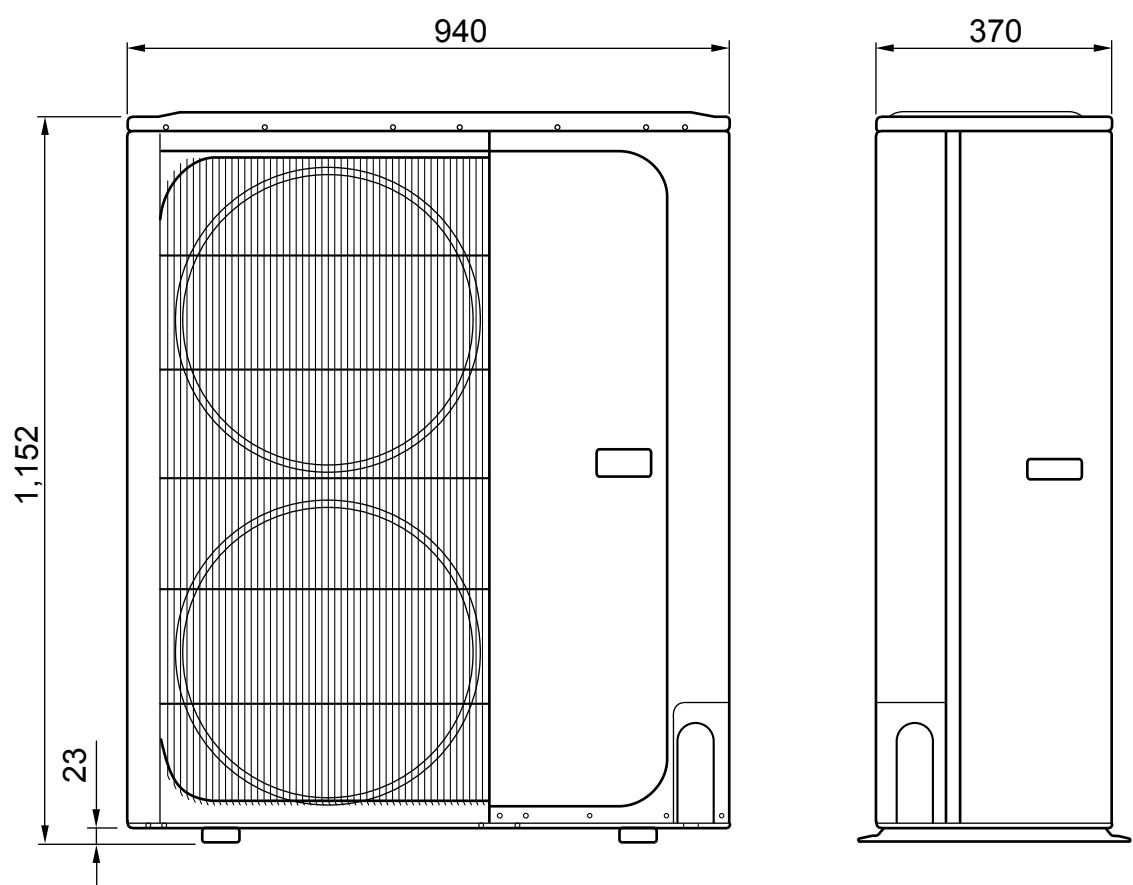
DIMENSIONS

INDOOR UNIT (Unit : mm)



OUTDOOR UNIT

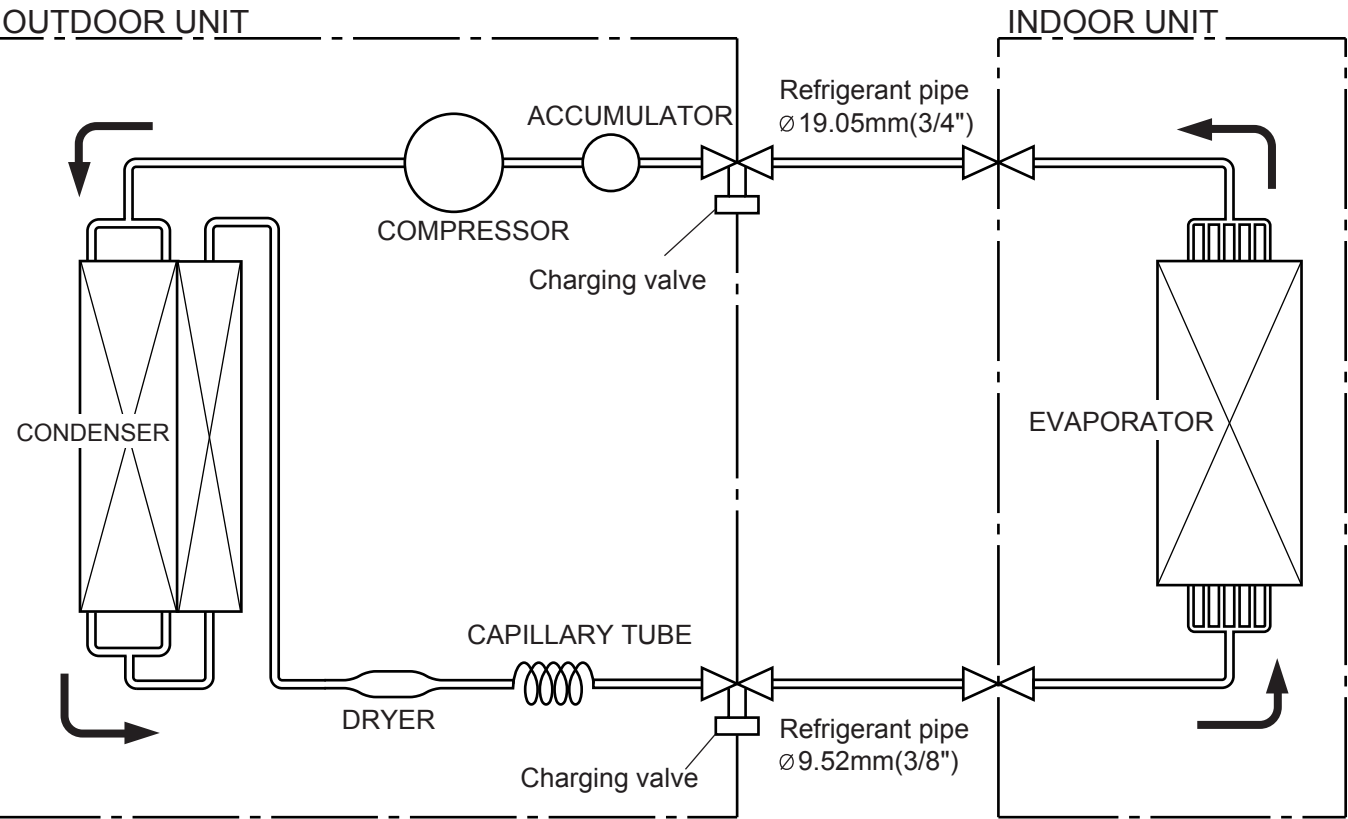
(Unit : mm)



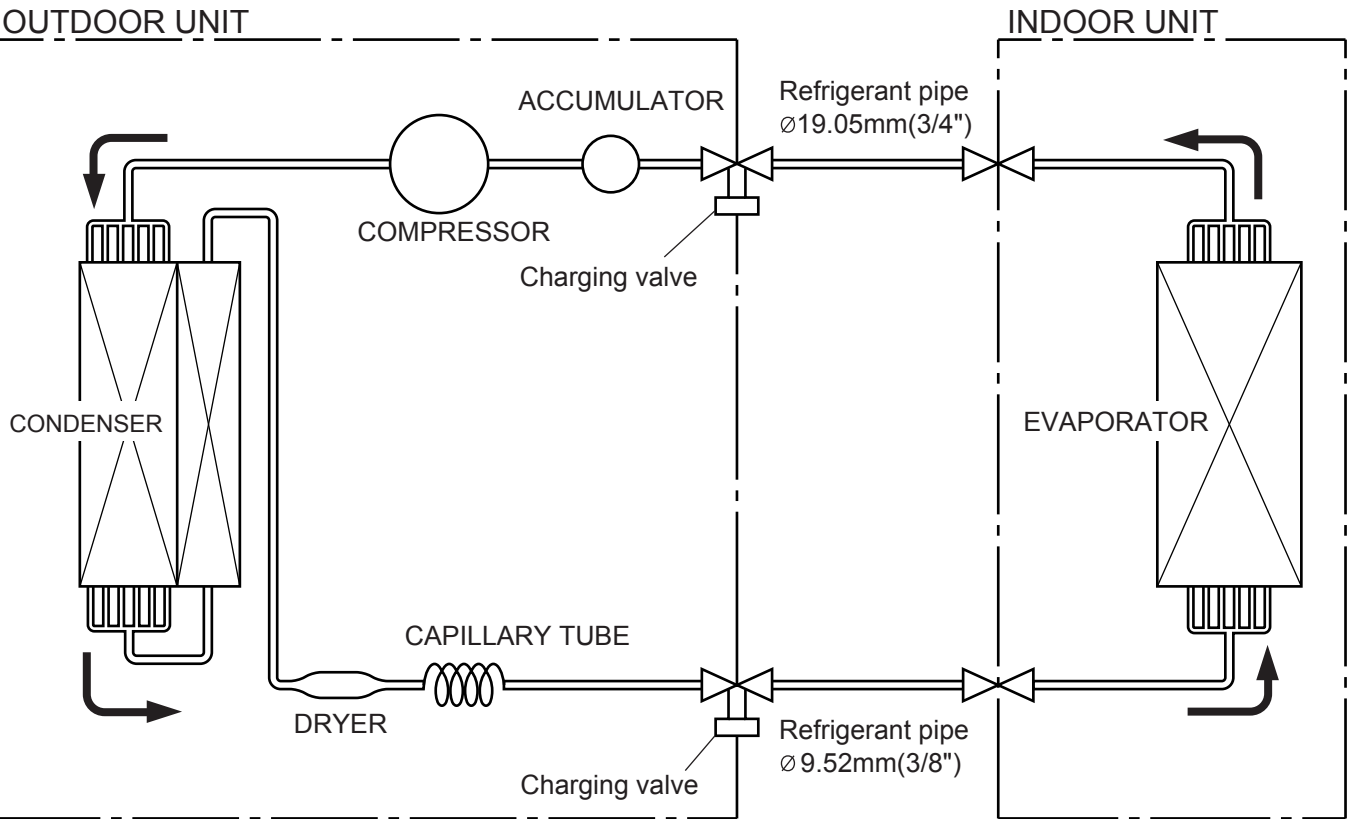
REFRIGERANT
SYSTEM DIAGRAM

➔ Refrigerant flow

40



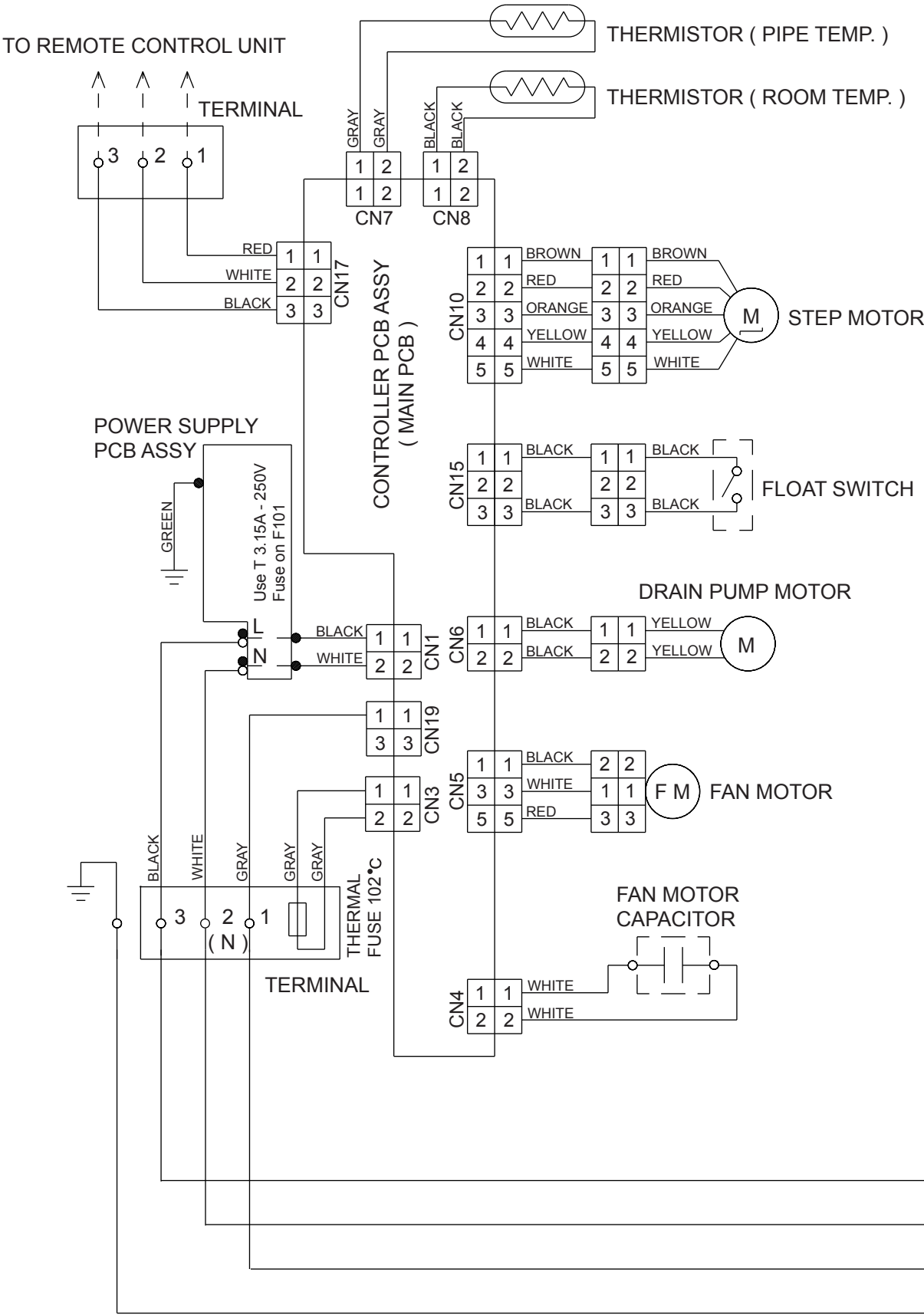
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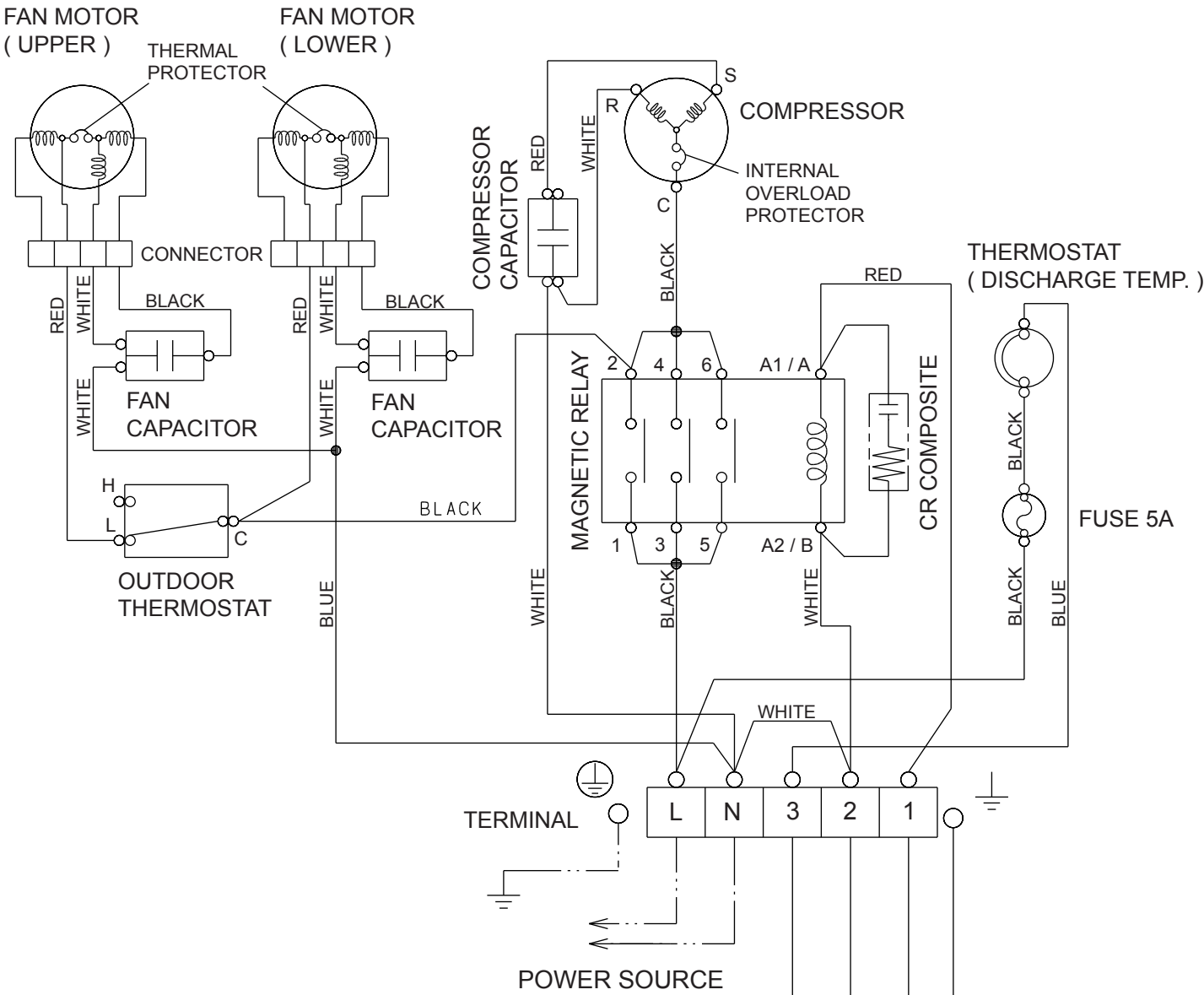
CIRCUIT DIAGRAM

RCA40SATU / ROA40SAT

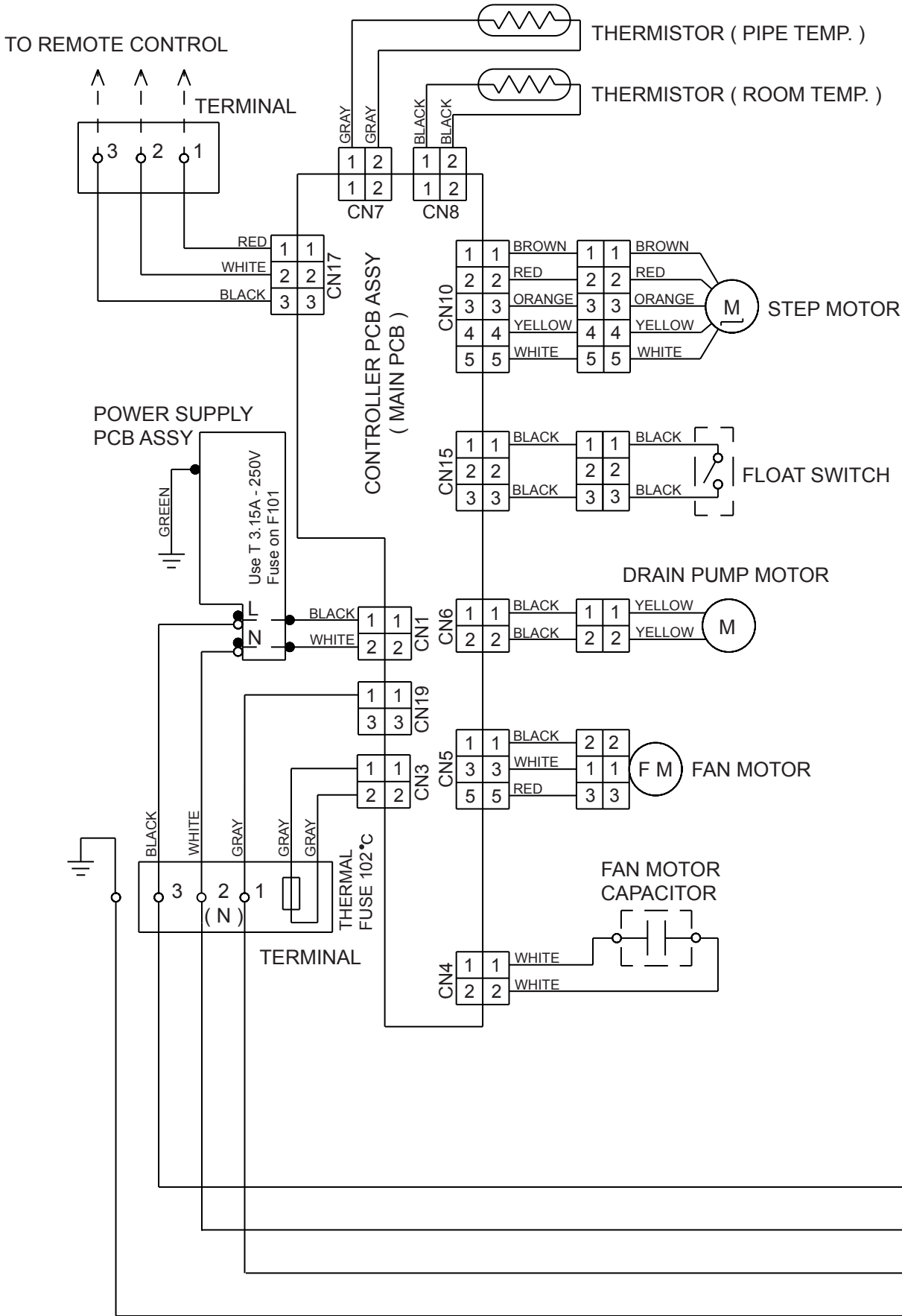
INDOOR UNIT



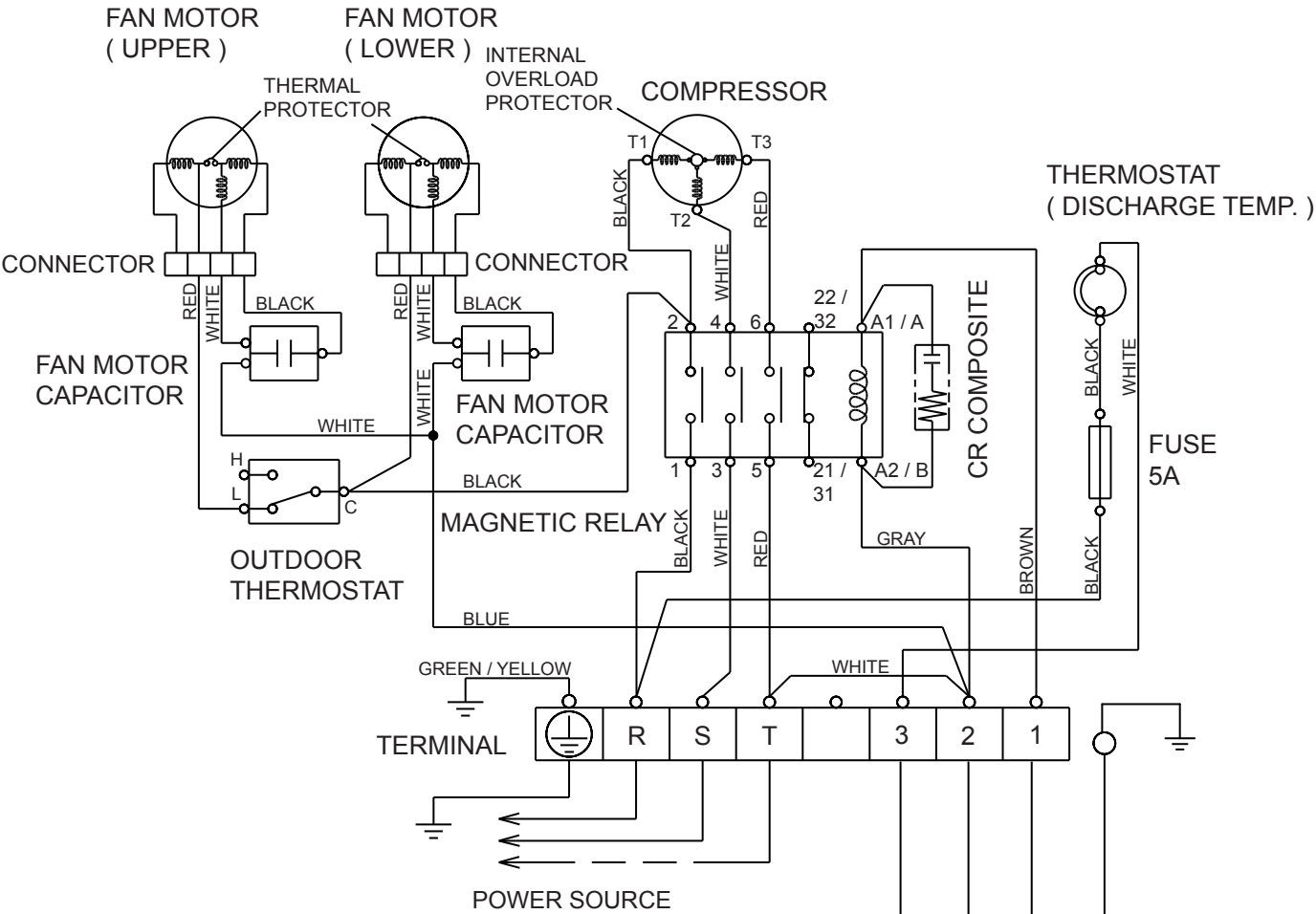
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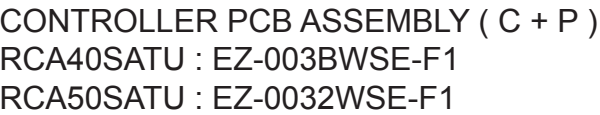


INDOOR UNIT



OUTDOOR UNIT

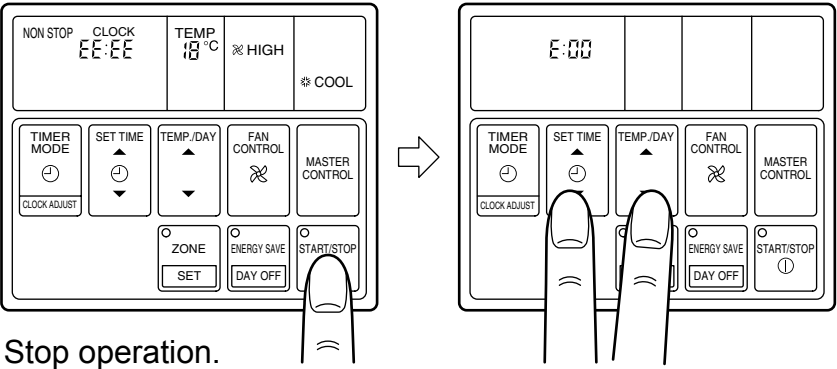




ERROR DETECTION

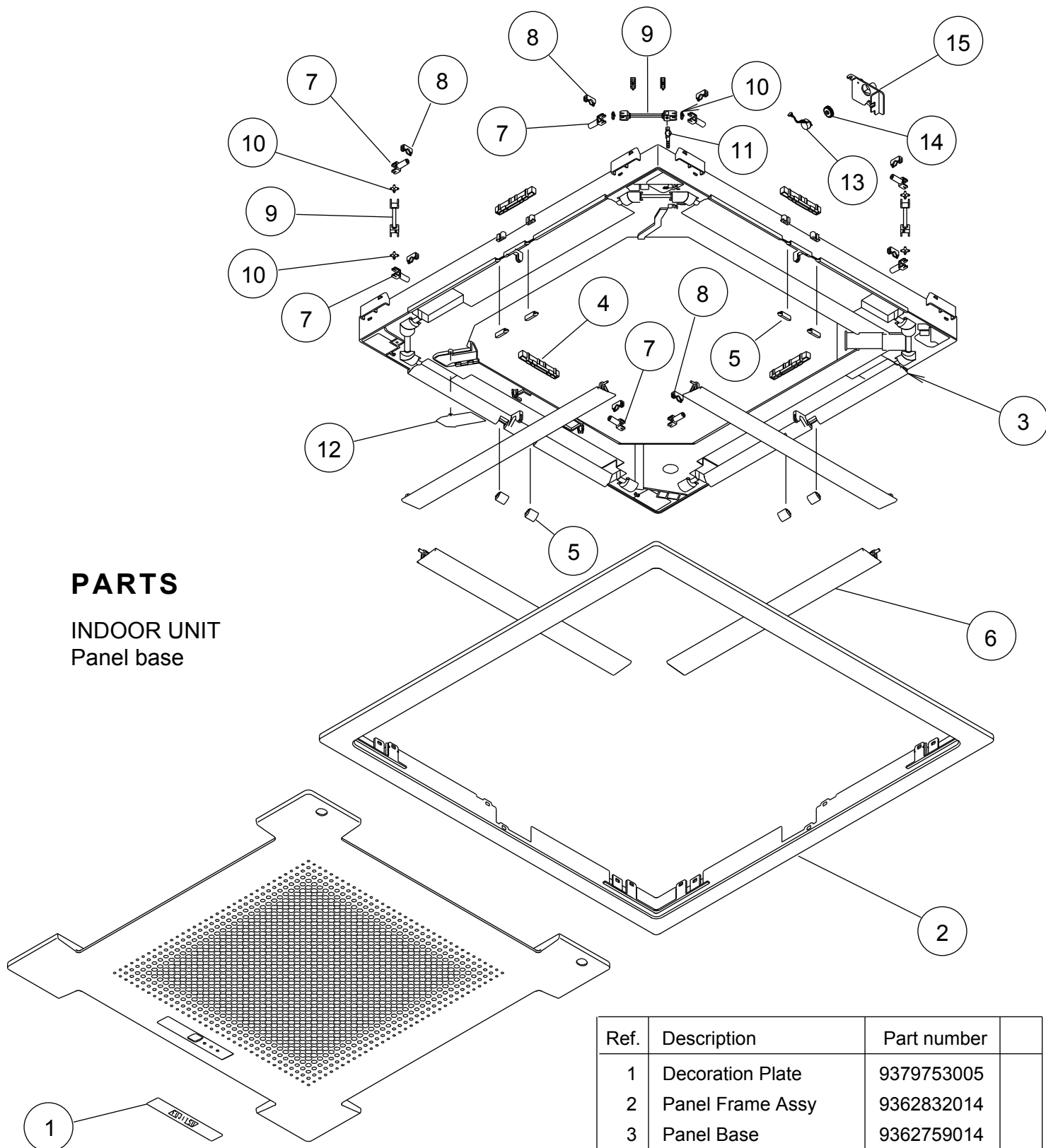
REMOTE CONTROL

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

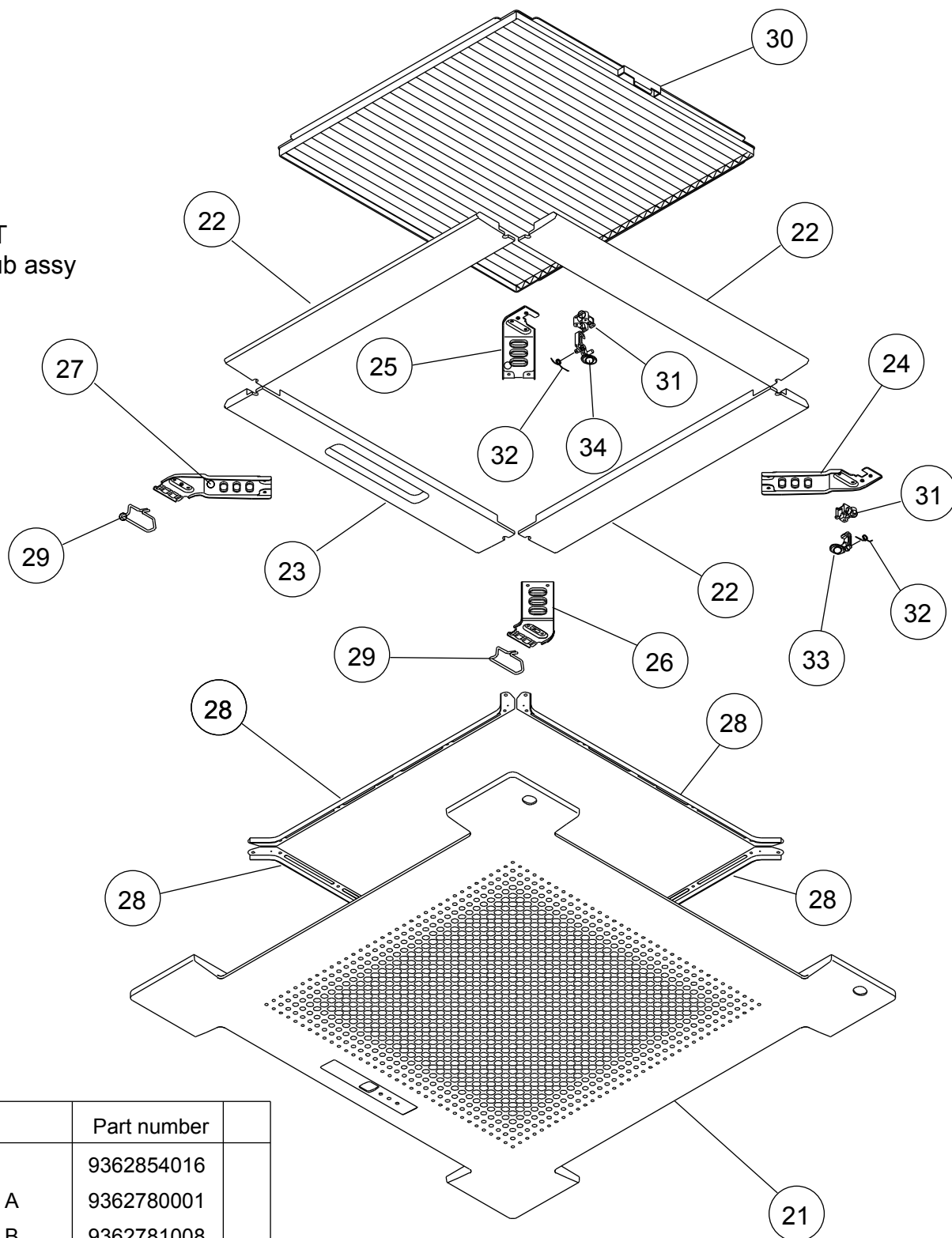


PARTS

INDOOR UNIT
Panel base

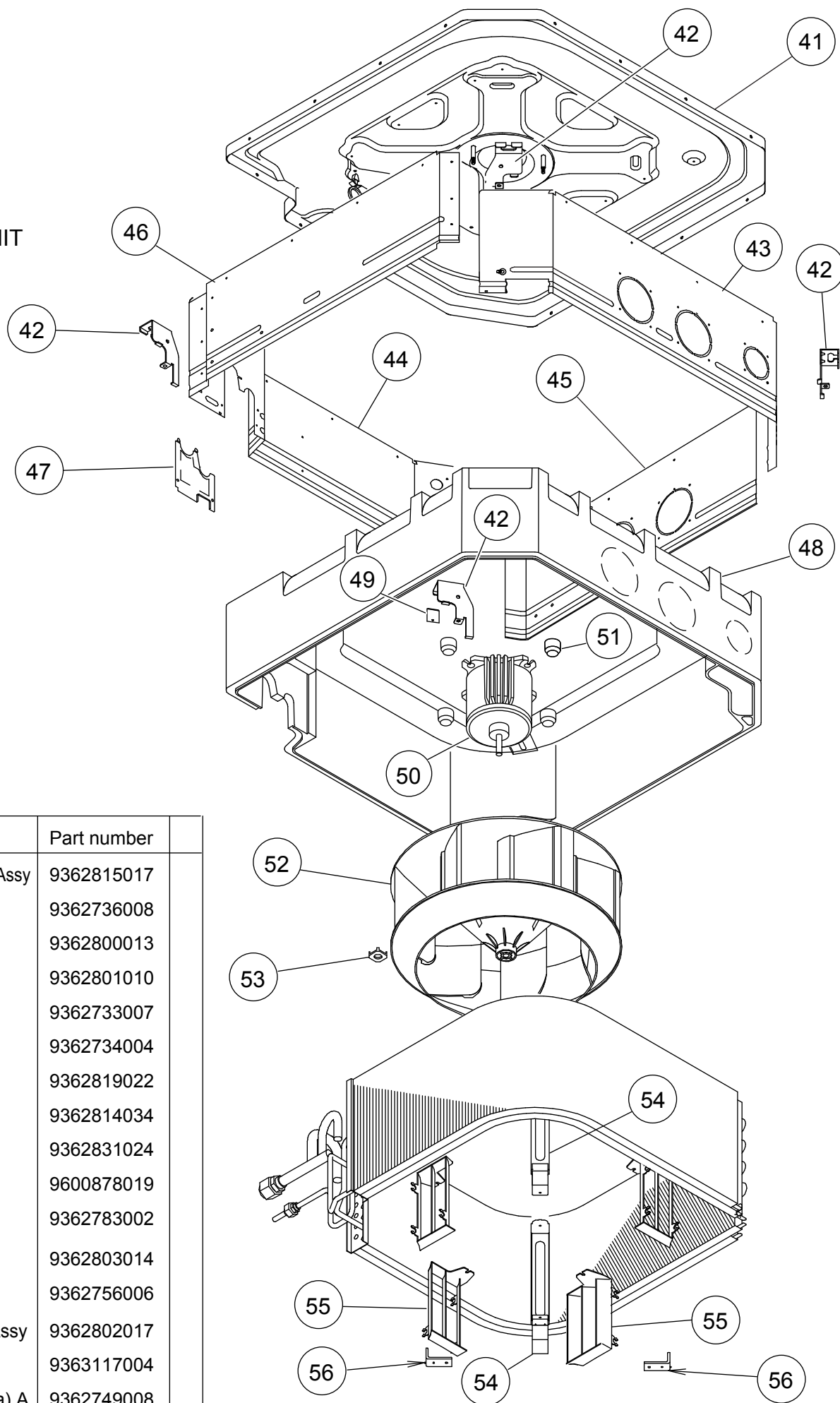
Ref.	Description	Part number	
1	Decoration Plate	9379753005	
2	Panel Frame Assy	9362832014	
3	Panel Base	9362759014	
4	Holder (Panel Frame)	9362761017	
5	Holder (Panel Base)	9362760010	
6	Louver Assy	9362836012	
7	Louver Supporter	9362770019	
8	Louver Support Holder	9362799003	
9	Joint A	9362773003	
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



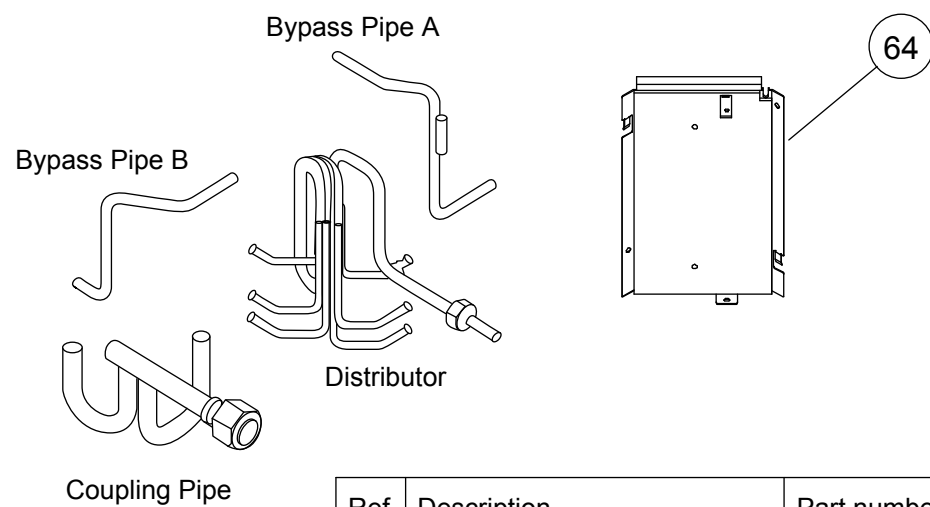
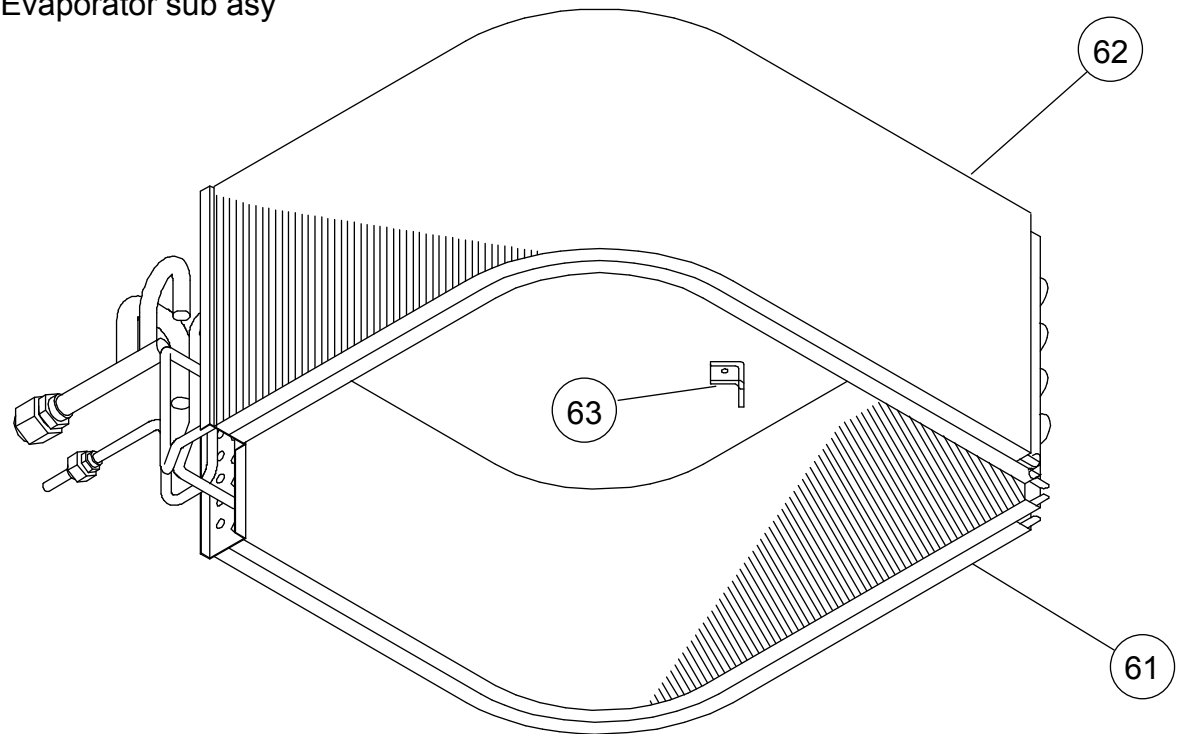
Ref.	Description	Part number
21	Intake Grille B	9362854016
22	Insulation (Grille) A	9362780001
23	Insulation (Grille) B	9362781008
24	Grille Reinforcement A	9362738002
25	Grille Reinforcement B	9362739009
26	Grille Reinforcement C	9362740005
27	Grille Reinforcement D	9362741002
28	Grille Reinforcement 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



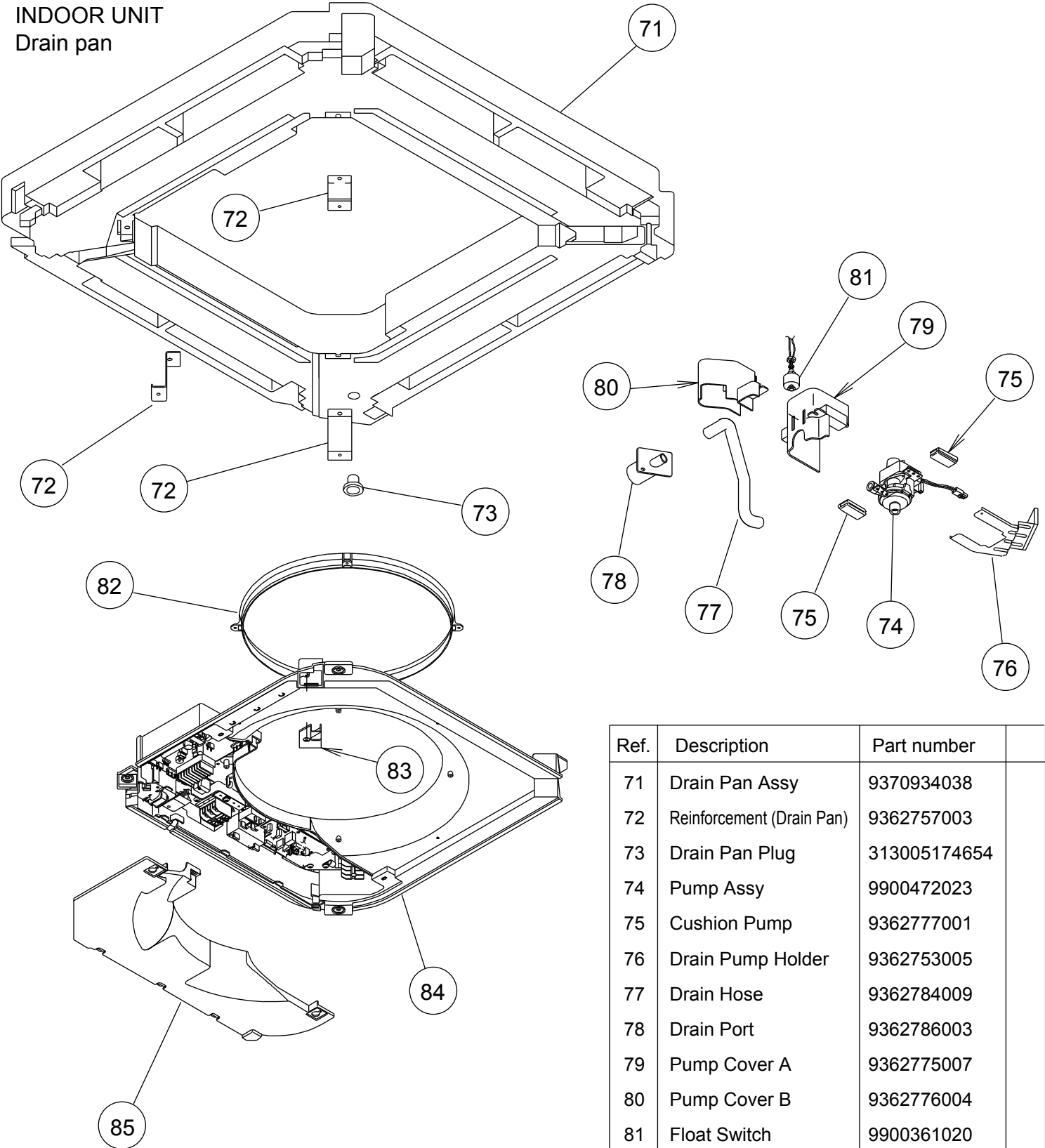
Ref.	Description	Part number	
41	Top Cover Plate Sub Assy	9362815017	
42	Hook	9362736008	
43	Cabinet A Assy	9362800013	
44	Cabinet B Assy	9362801010	
45	Cabinet C	9362733007	
46	Cabinet D	9362734004	
47	Pipe Cover Assy	9362819022	
48	Inner Box Assy	9362814034	
49	Cabinet E Assy	9362831024	
50	Fan Motor Assy	9600878019	
51	Rubber (Motor)	9362783002	
52	Turbo Fan Assy	9362803014	
53	Special Washer	9362756006	
54	Evaporator Holder Assy	9362802017	
55	Wind Guide Board	9363117004	
56	Reinforcement (Eva) A	9362749008	

INDOOR UNIT
Evaporator sub asy



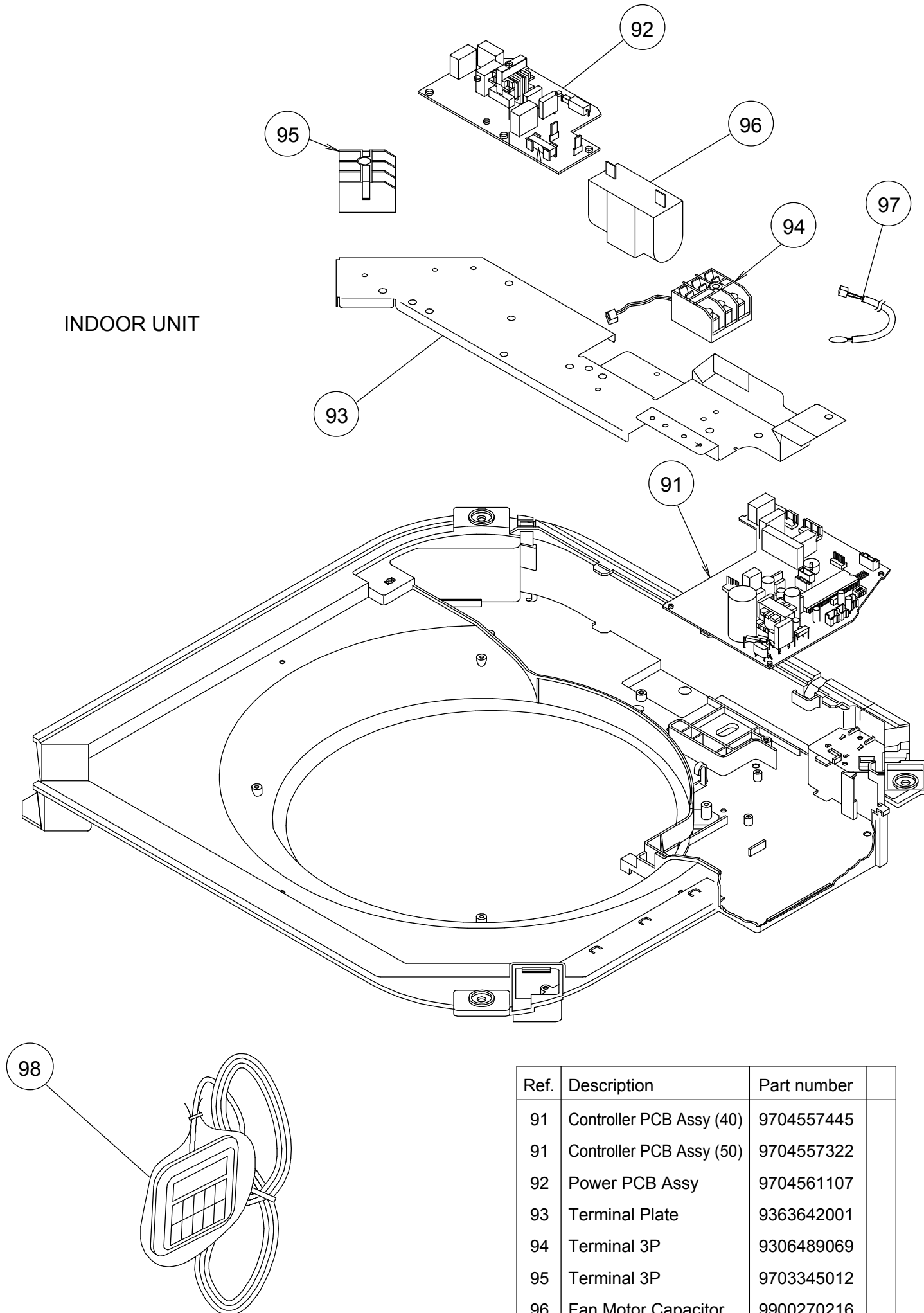
Ref.	Description	Part number	
61	Evaporator A Sub Assy(40)	9362834032	
61	Evaporator A Sub Assy(50)	9362834018	
62	Evaporator B Sub Assy(40)	9362835039	
62	Evaporator B Sub Assy(50)	9362835015	
63	Reinforcement (Eva) B	9362750004	
64	Separate Wall Assy	9362824019	
--	Pipe Thermistor	9703297014	
--	Evaporator Sub Assy(40)	9362817219	
--	Evaporator Sub Assy(50)	9362817011	

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	9362784009	
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	

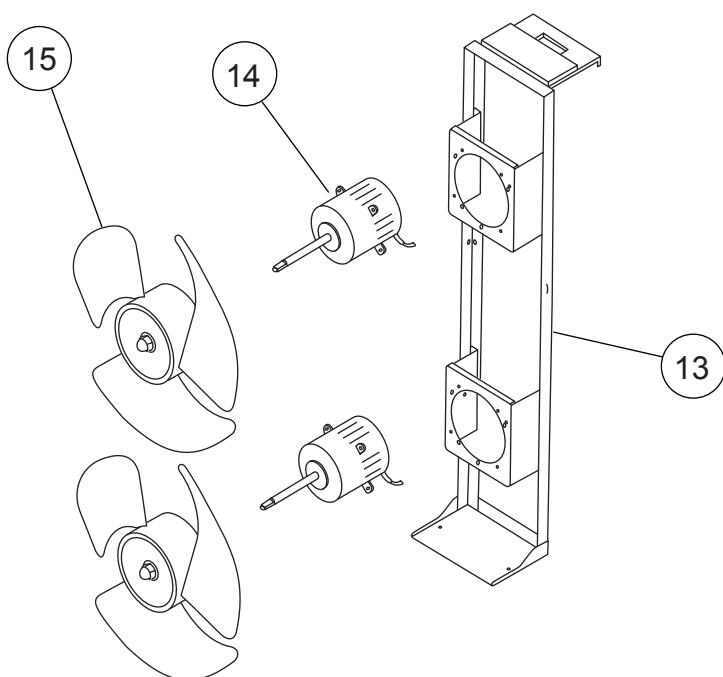
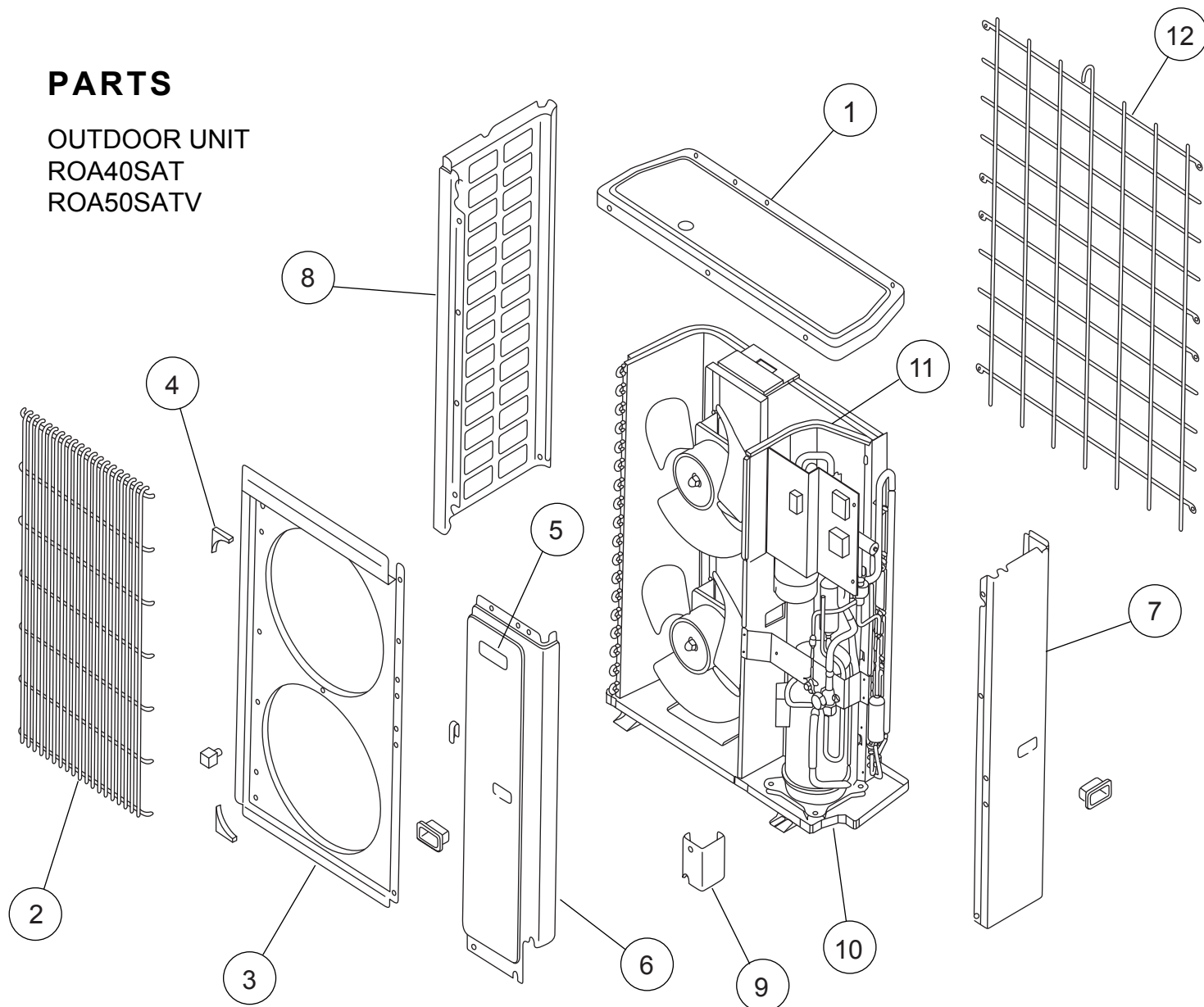
INDOOR UNIT



Ref.	Description	Part number	
91	Controller PCB Assy (40)	9704557445	
91	Controller PCB Assy (50)	9704557322	
92	Power PCB Assy	9704561107	
93	Terminal Plate	9363642001	
94	Terminal 3P	9306489069	
95	Terminal 3P	9703345012	
96	Fan Motor Capacitor	9900270216	
97	Room Thermistor	9703299025	
98	Remote Control	9371438023	

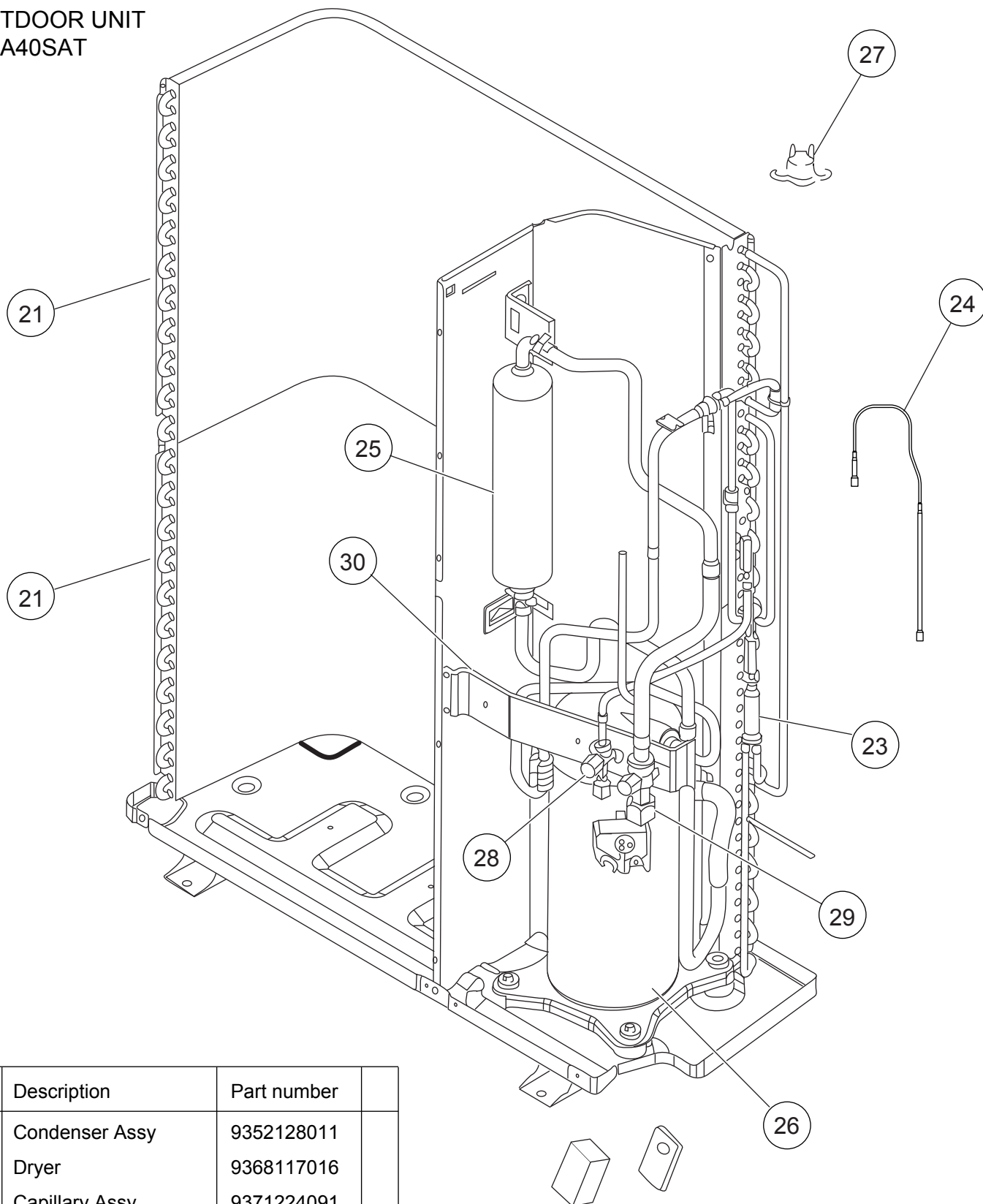
PARTS

OUTDOOR UNIT
ROA40SAT
ROA50SATV

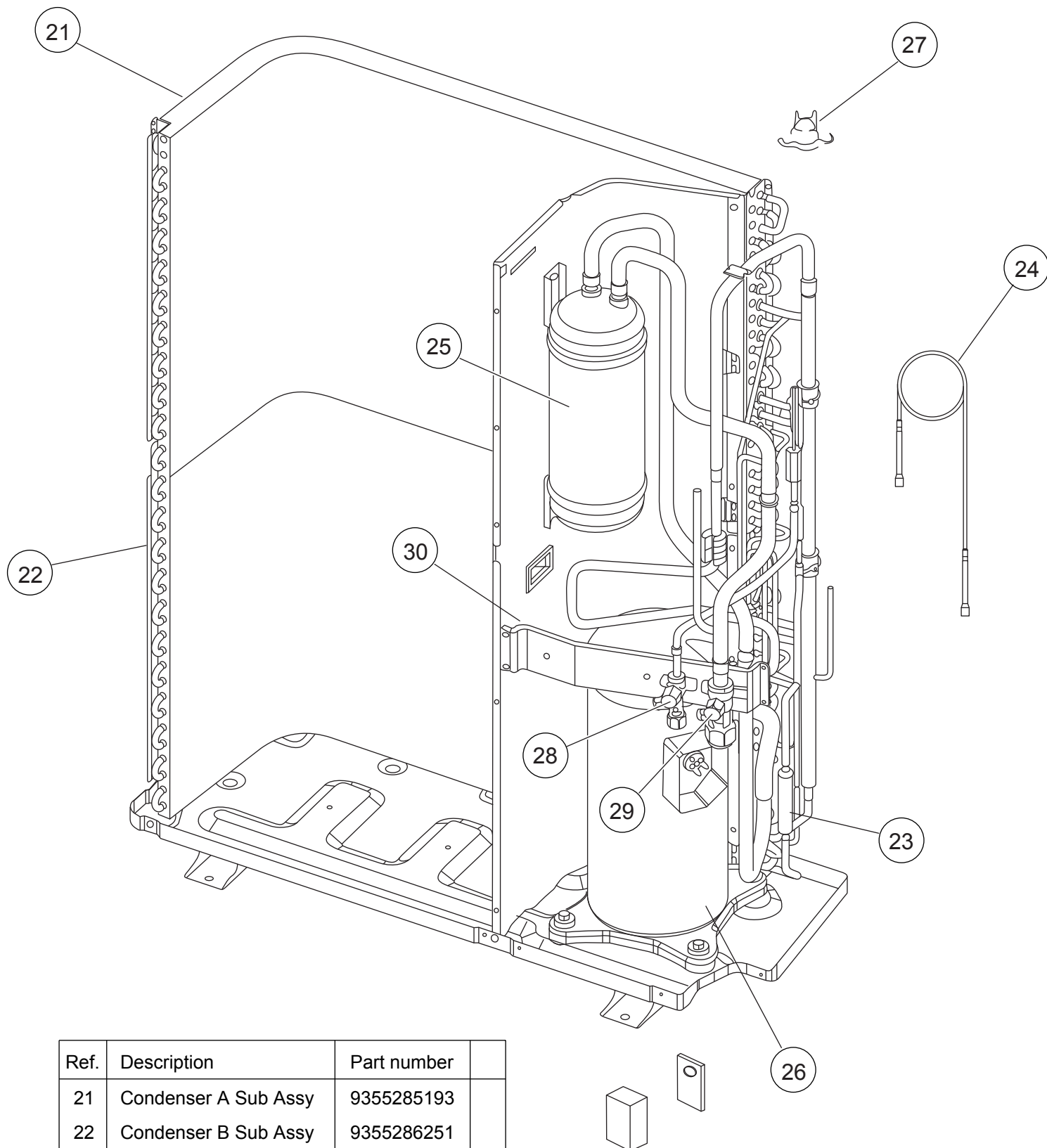


Ref.	Description	Part number	
1	Cabinet Top Plate	9355290012	
2	Fan Cover	9352159015	
3	Blower Cover	9352151019	
4	Blower Cover Corner	9352160011	
5	Rear Emblem	9318045000	
6	Cabinet A Assy	9360641717	
7	Cabinet B Assy (40)	9355289030	
7	Cabinet B Assy (50)	9355289016	
8	Cabinet C	9352149016	
9	Cabinet D	9352150012	
10	Base Assy	9352136016	
11	Separate Wall Assy	9355276016	
12	Protective Net	9375611002	
13	Motor Bracket Assy	9368108007	
14	Fan Motor	9600832028	
15	Propeller Fan Assy	9366378013	

OUTDOOR UNIT ROA40SAT



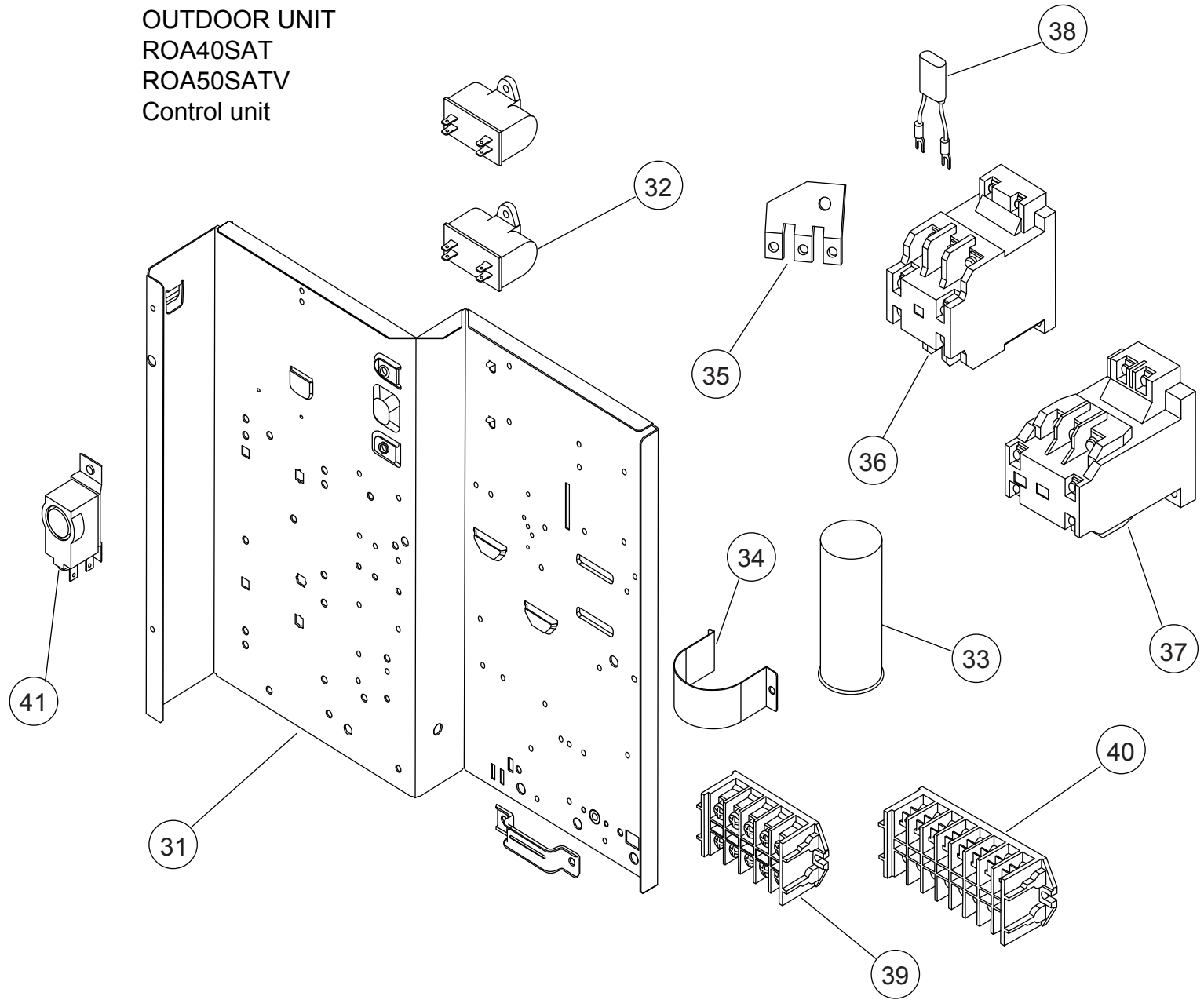
Ref.	Description	Part number	
21	Condenser Assy	9352128011	
23	Dryer	9368117016	
24	Capillary Assy	9371224091	
25	Accumulator Assy	9355279178	
26	Compressor Assy	9370863000	
27	Thermostat Overheat	9900342012	
28	Ball Valve A Assy	9352407307	
29	Ball Valve B Assy	9352408014	
30	Coupler Bracket Assy	9355281010	
--	Evaporator Sub Assy	9355313070	



OUTDOOR UNIT
ROA50SATV

Ref.	Description	Part number
21	Condenser A Sub Assy	9355285193
22	Condenser B Sub Assy	9355286251
23	Dryer	9368111014
24	Capillary Assy	9371224084
25	Accumulator Assy	9371615011
26	Compressor Assy	9371396057
27	Thermostat Overheat	9900342012
28	Ball Valve A Assy	9352407307
29	Ball Valve B Assy	9352408014
30	Coupler Bracket Assy	9355281010

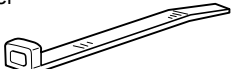
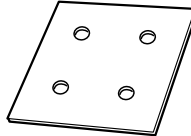
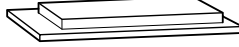
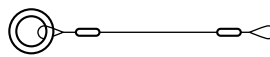
OUTDOOR UNIT
ROA40SAT
ROA50SATV
Control unit



Ref.	Description	Part number	
31	Control Box	9352134012	
32	Fan Motor Capacitor	9900270049	
33	Running Capacitor (40)	9703107153	
34	Capacitor Clamp (40)	9351770013	
35	Three Phase Terminal (40)	9900137014	
36	Magnetic Relay (40)	9900115012	
37	Magnetic Relay (50)	9900227012	
38	Network	9700987017	
39	Terminal 5P (40)	9900428037	
40	Terminal 8P (50)	9363276022	
41	Thermostat Outdoor	9900526023	

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Coupler heat insulation 	9378173569 } 1 each 9378173521 }
Remote control unit 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 unit 	9371438023
Template 	9363173000
Blower cover insulation 	9363265002
Hook wire 	9363168006

OUTDOOR UNIT

Name and Shape	Part number
Power cap 	9352173011
Edge cover 	9352436000
Tapping screw 	0700238017
Binder 	313035356905
Putty 	303020200114

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