

SERVICE MANUAL



Indoor unit	Outdoor unit
RYG18LVTB	ROG18LALL

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Inverter cool & heat
INDOOR UNIT		RYG18LVTB
OUTDOOR UNIT		ROG18LALL
COOLING CAPACITY		5.20 kW
HEATING CAPACITY		6.00 kW
POWER SOURCE		230 V, 50 Hz
RUNNING CURRENT	Cooling	7.2 A
	Heating	7.4 A
INPUT WATTS	Cooling	1.62 kW
	Heating	1.66 kW
E.E.R.	Cooling	3.21 kW/kW
COP	Heating	3.61 kW/kW
MOISTURE REMOVAL		2.0 L/hr
AIR CIRCULATION (HIGH)		780 m3/hr
MAXIMUM CURRENT	Cooling	9.0 A
	Heating	12.5 A

FAN MOTOR

INDOOR UNIT, Discrimination		MFH-24RVL
INDOOR UNIT	High	1,040 r.p.m.
	Medium	950 r.p.m.
	Low	800 r.p.m.
	Quiet	740 r.p.m.
OUTDOOR UNIT, Discrimination		MFE-63NOM
OUTDOOR UNIT (cool)		860 r.p.m.
OUTDOOR UNIT (heat)		820 r.p.m.

NOISE LEVEL

INDOOR UNIT	High	43 dB
	Medium	40 dB
	Low	34 dB
	Quiet	31 dB
OUTDOOR UNIT (cool)		50 dB
OUTDOOR UNIT (heat)		50 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR		DA130A1F-25NA
WEIGHT (with oil)		9.6 kg
REFRIGERANT TYPE		R410A
PRECHARGED		1,250 g
FULL CHARGE	Pipe length 15 m	1,250 g
	20 m	1,350 g
	25 m	1,450 g
ADDITIONAL CHARGE		20 g/m
MAXIMUM PIPING HEIGHT		15 m

DIMENSIONS

INDOOR UNIT H x W x D	199 x 990 x 655 mm
OUTDOOR UNIT H x W x D	578 x 790 x 300 mm

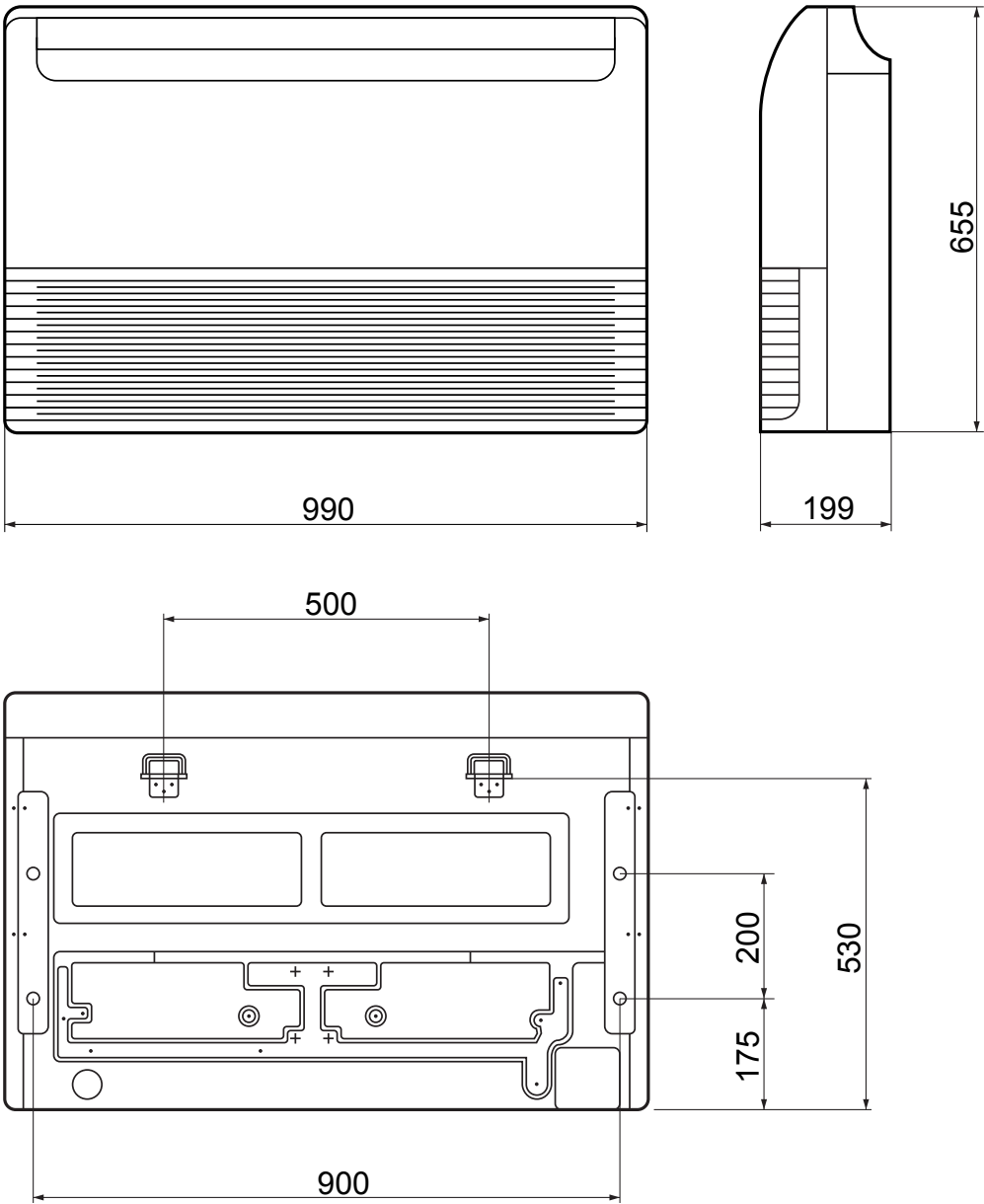
WEIGHT

INDOOR UNIT Net / Shipping	27 kg / 36 kg
OUTDOOR UNIT Net / Shipping	40 kg / 44 kg

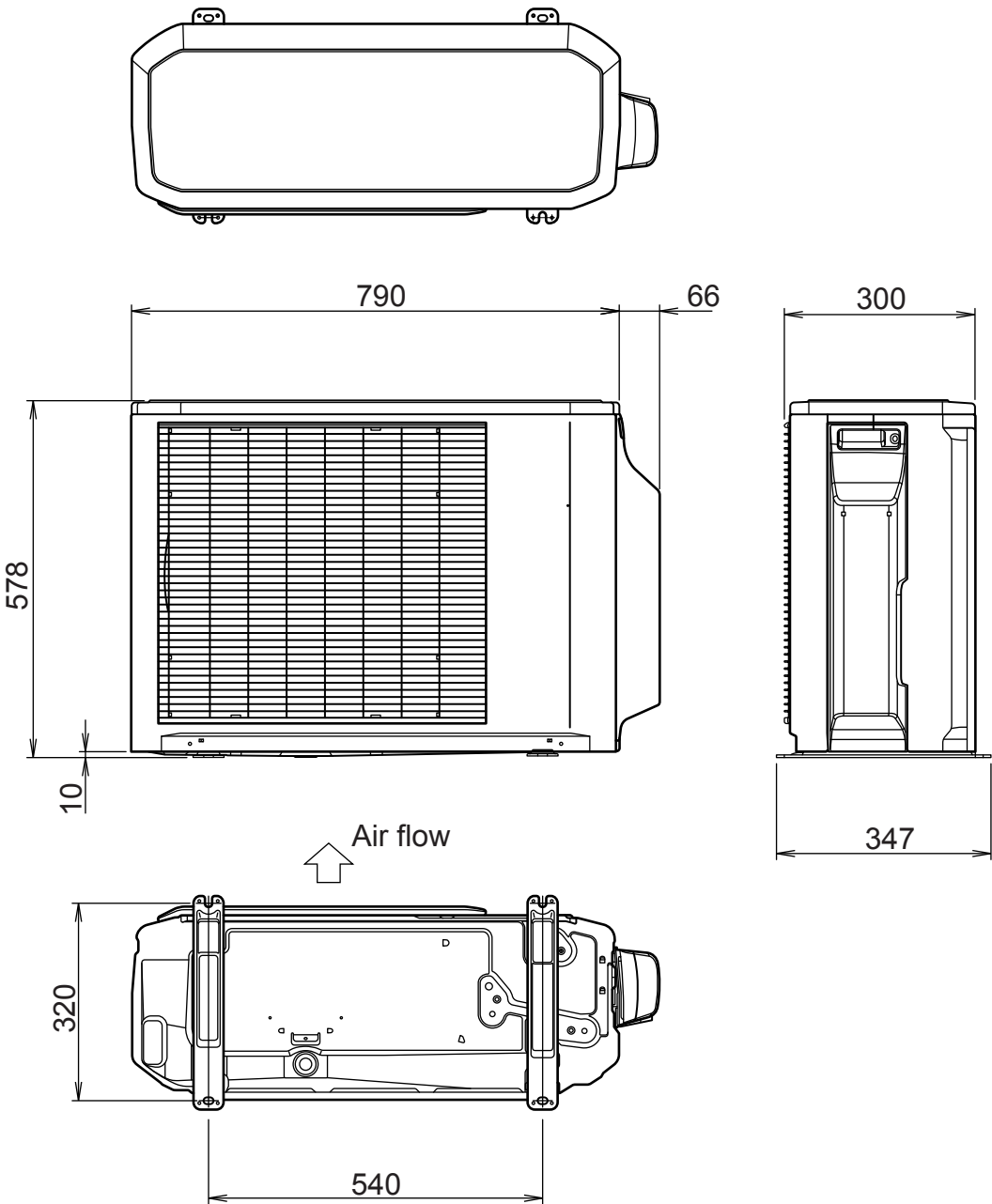
DIMENSIONS

Unit : mm

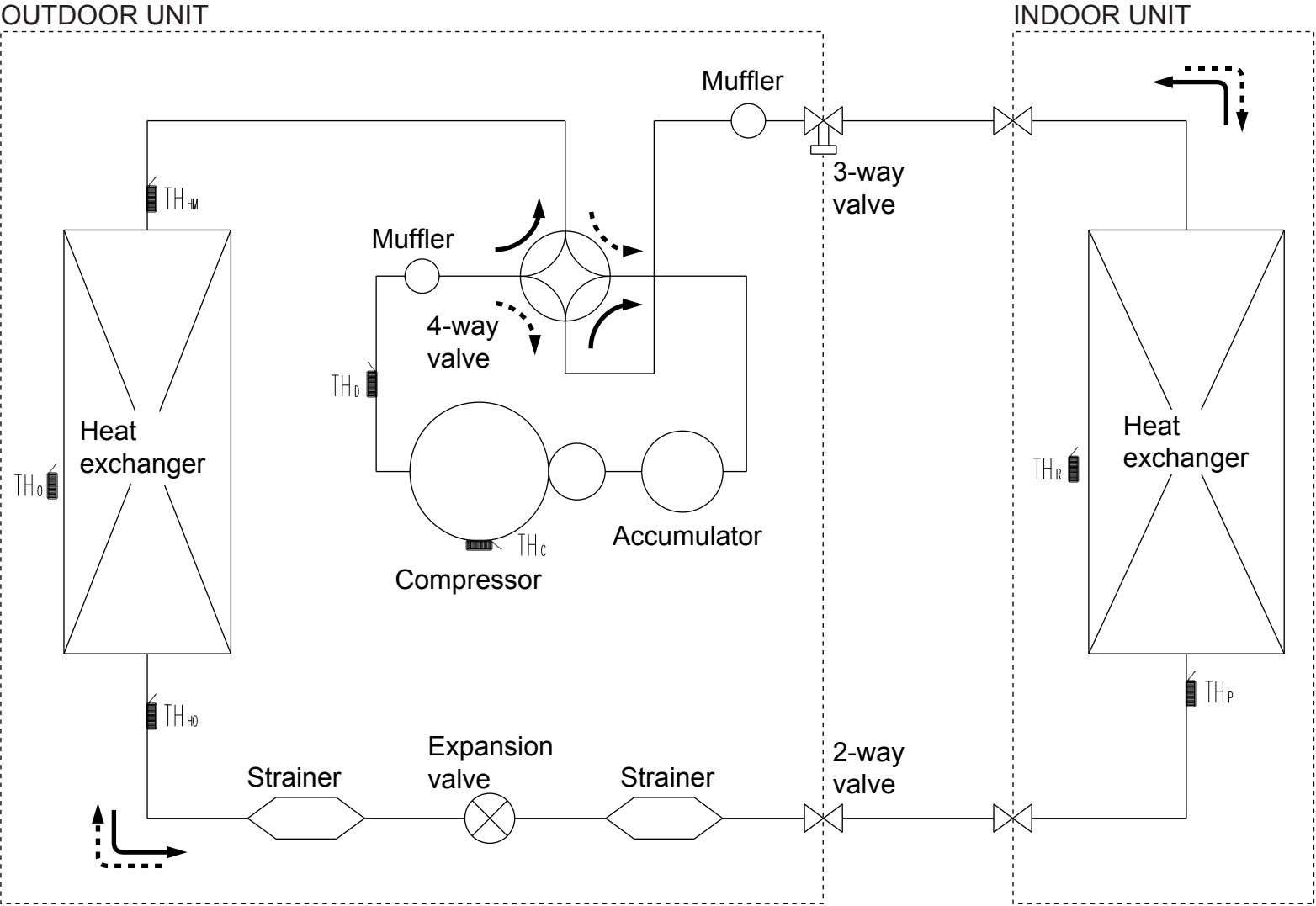
INDOOR UNIT



OUTDOOR UNIT



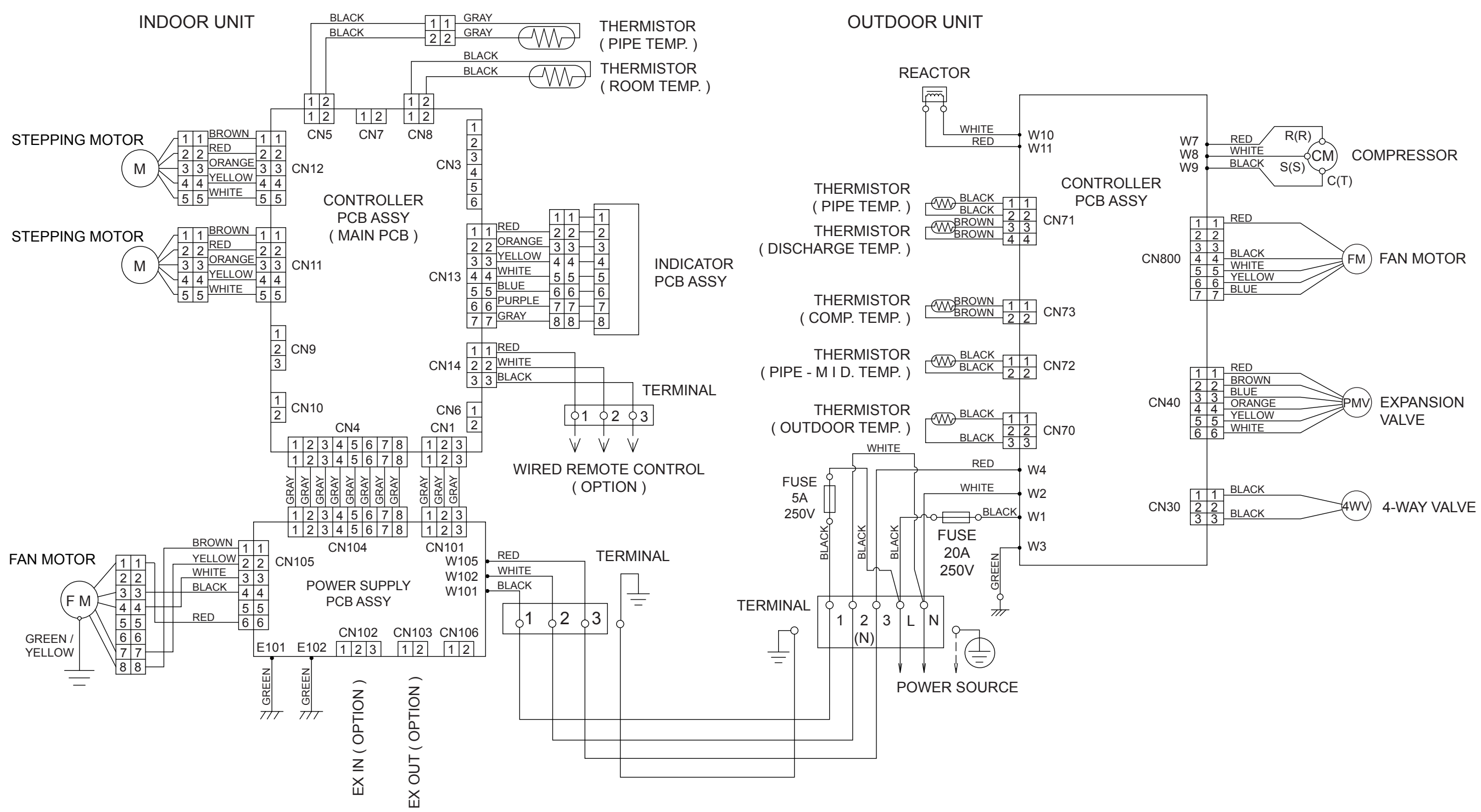
REFRIGERANT SYSTEM DIAGRAM



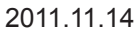
TH_C : Compressor thermistor
 TH_D : Discharge pipe thermistor
 TH_{HM} : Heat exchanger thermistor (Middle)
 TH_{HO} : Heat exchanger thermistor (Out)
 TH_O : Outdoor thermistor

TH_P : Pipe thermistor
 TH_R : Room thermistor

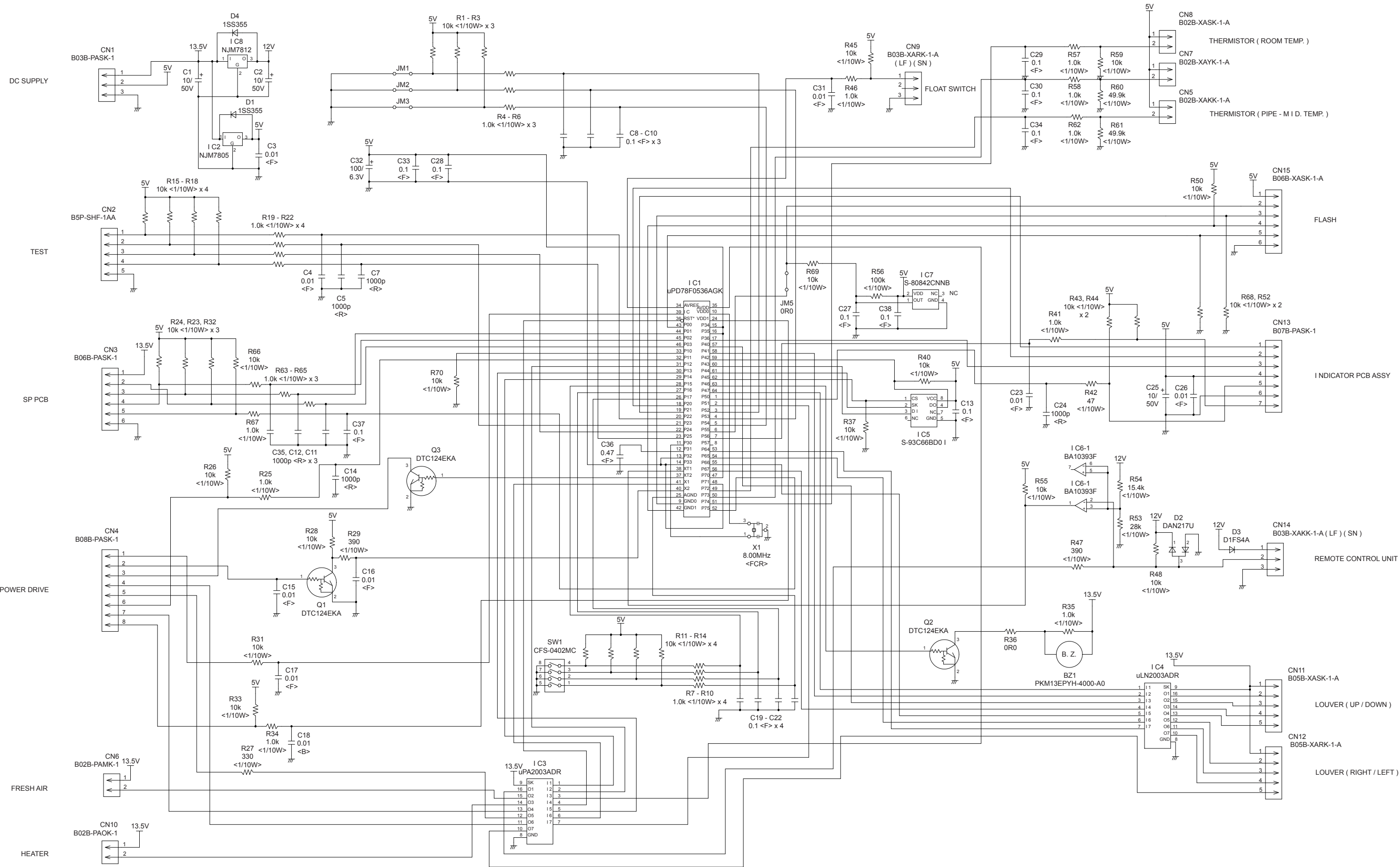
CIRCUIT DIAGRAM

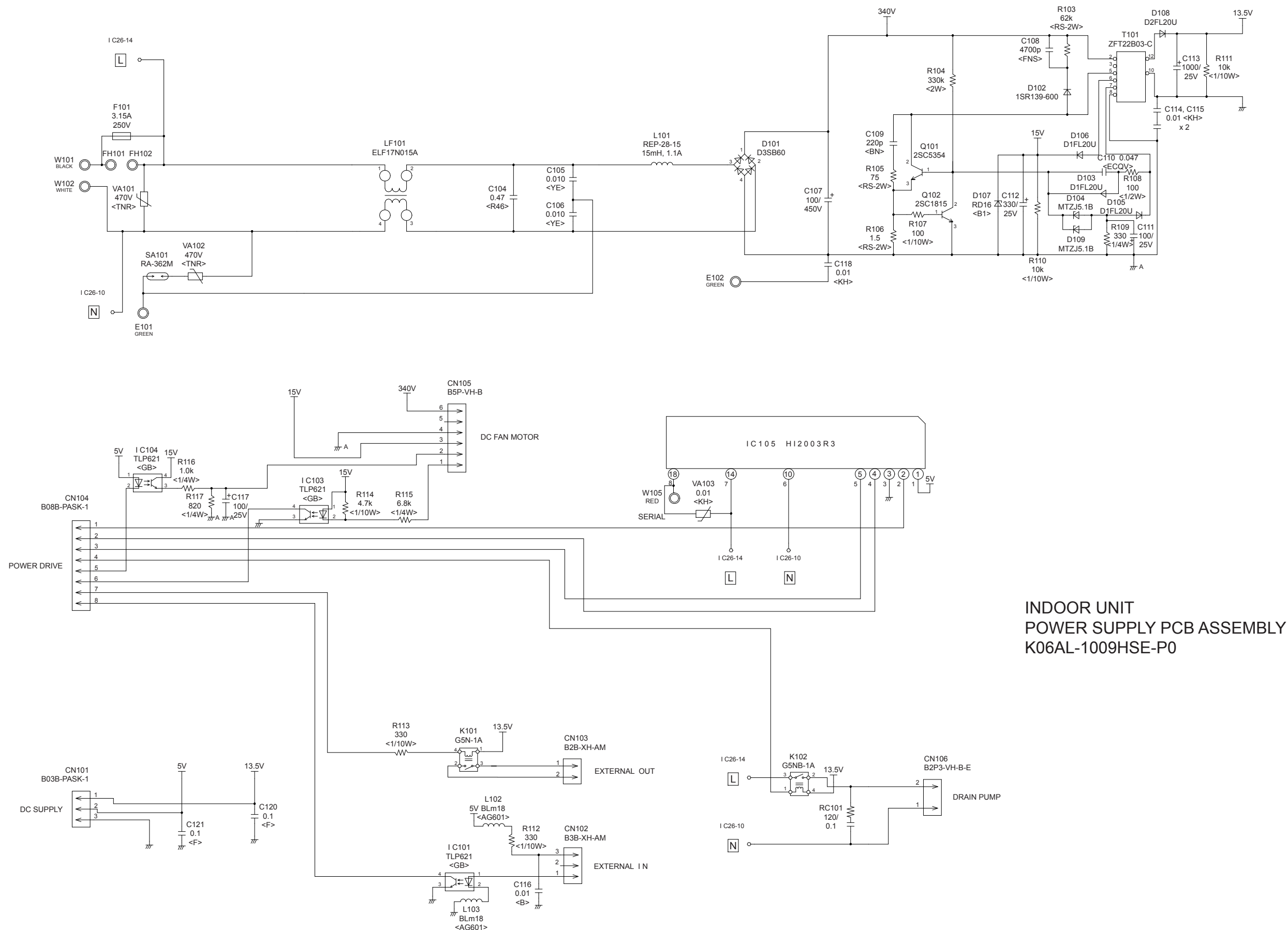


CONTROL UNIT
EZ-01116HSE

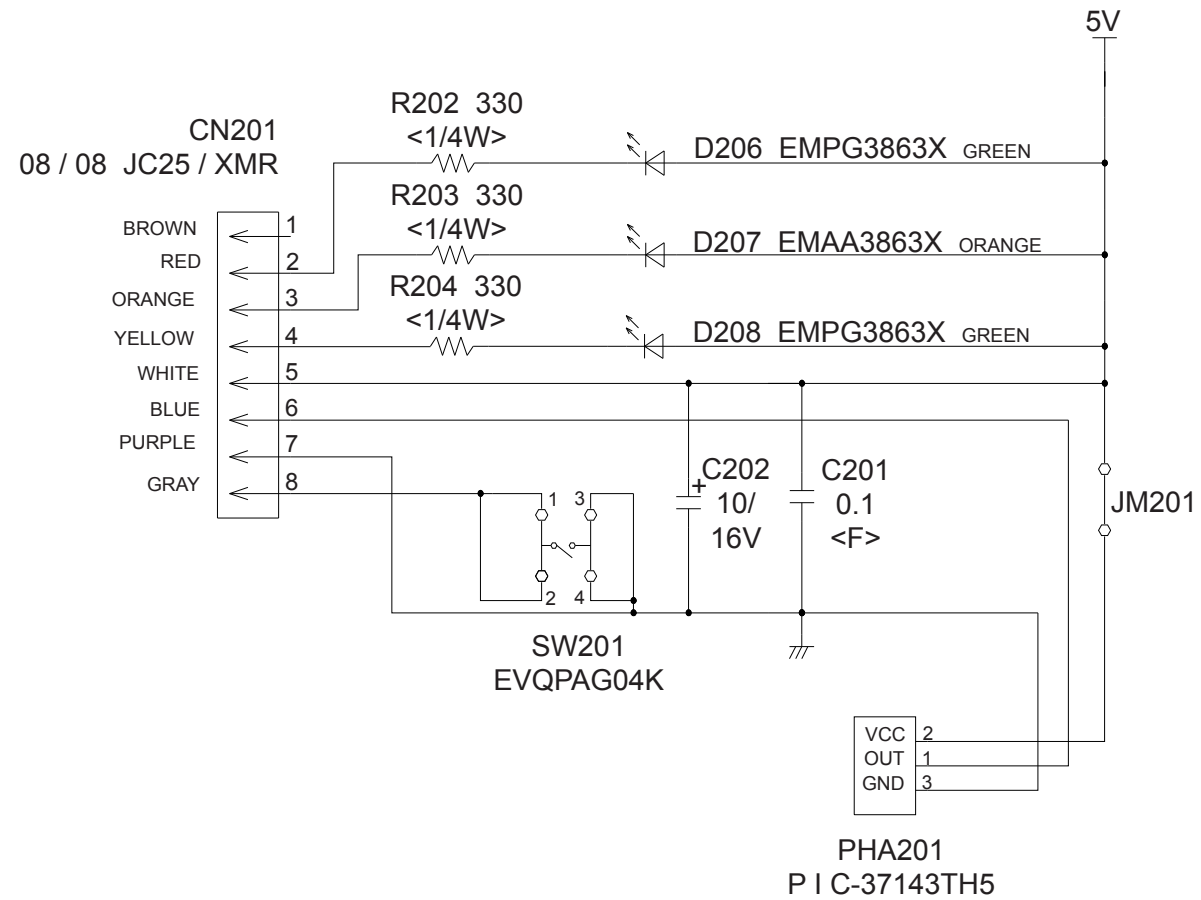


INDOOR UNIT
CONTROLLER PCB ASSEMBLY
(MAIN PCB)
K06AK-1107HSE-C1





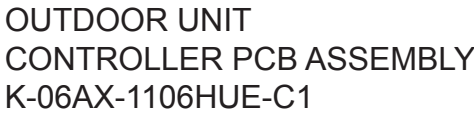
INDOOR UNIT
INDICATOR PCB ASSEMBLY
(OPTION)
K04EI-1001HSE-D0



INVERTER ASSEMBLY

EZ-0111HHUE





- : 0.5s on / 0.5s off
- ◇ : 0.1s on / 0.1s off
- () : Number of flashing

ERROR DETECTION

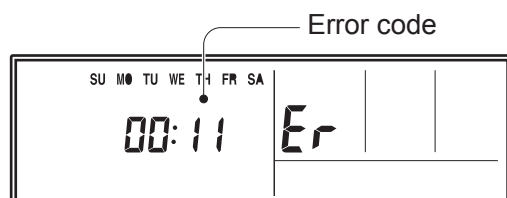
INDOOR UNIT and WIRED REMOTE CONTROL

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 type 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 running.

This is possible only on a wired remote control.

If an error occurs, the following display will be shown. ("Er" will appear in the set room temperature display.)

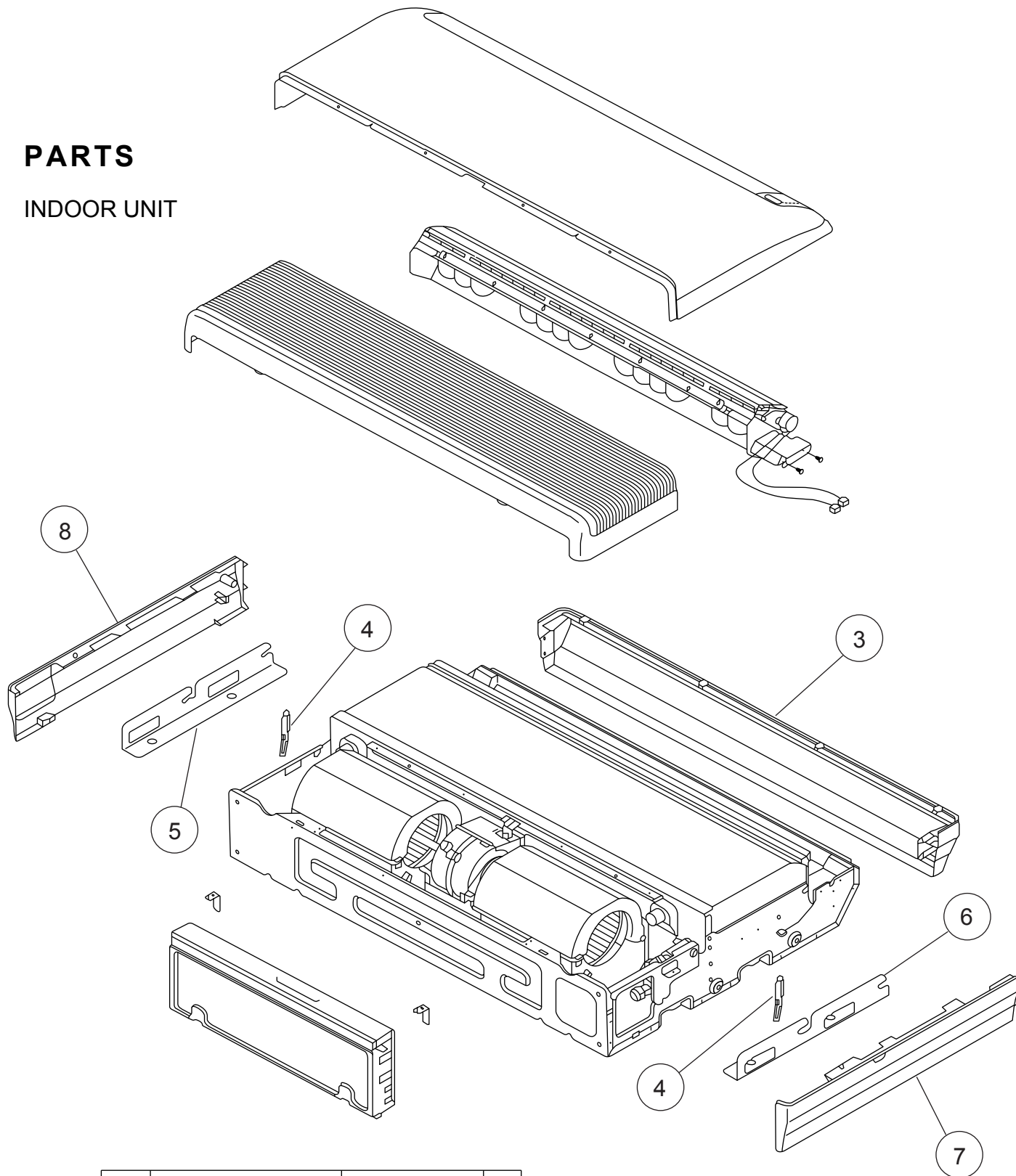


EX. Self-diagnosis

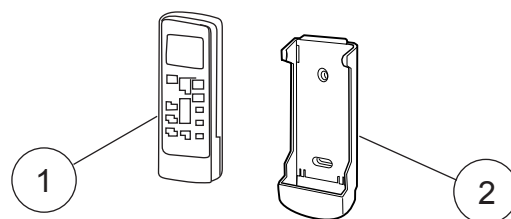
Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (1)	● (5)	◇	15	Check run unfinished
● (2)	● (1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
● (2)	● (2)	◇	22	Indoor unit capacity error
● (2)	● (3)	◇	23	Combination error
● (2)	● (4)	◇	24	• Connection unit number error (indoor slave unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
● (2)	● (7)	◇	27	Master unit, slave unit set-up error [Simultaneous Multi]
● (3)	● (2)	◇	32	Indoor unit PCB model information error
● (3)	● (5)	◇	35	Manual auto switch error
● (4)	● (1)	◇	41	Inlet air temp. sensor error
● (4)	● (2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
● (5)	● (1)	◇	51	Indoor unit fan motor error
● (5)	● (3)	◇	53	Drain pump error
● (5)	● (7)	◇	57	Damper 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
● (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
● (13)	● (2)	◇	J2	Branch boxes error [Flexible Multi]

PARTS

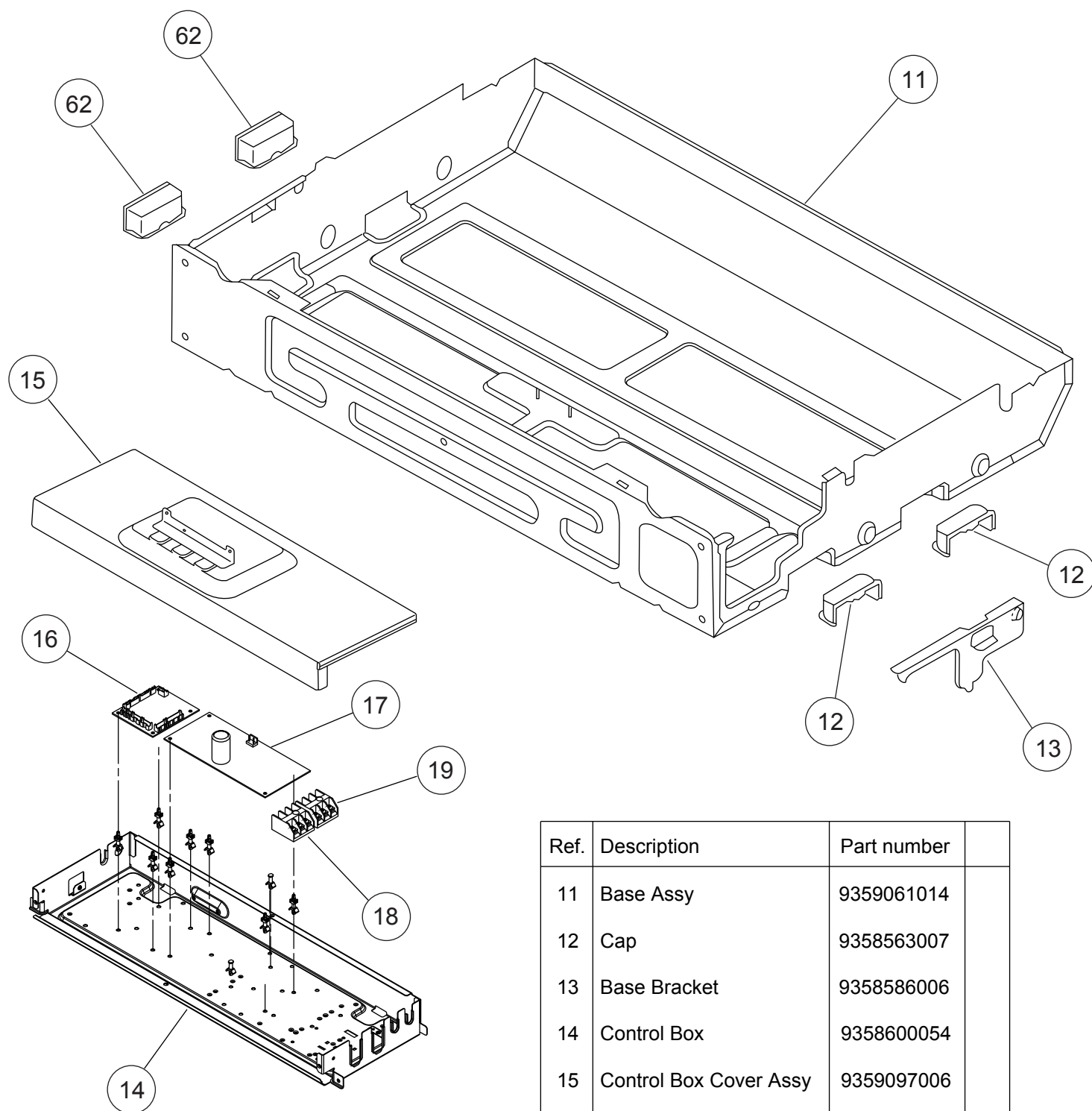
INDOOR UNIT



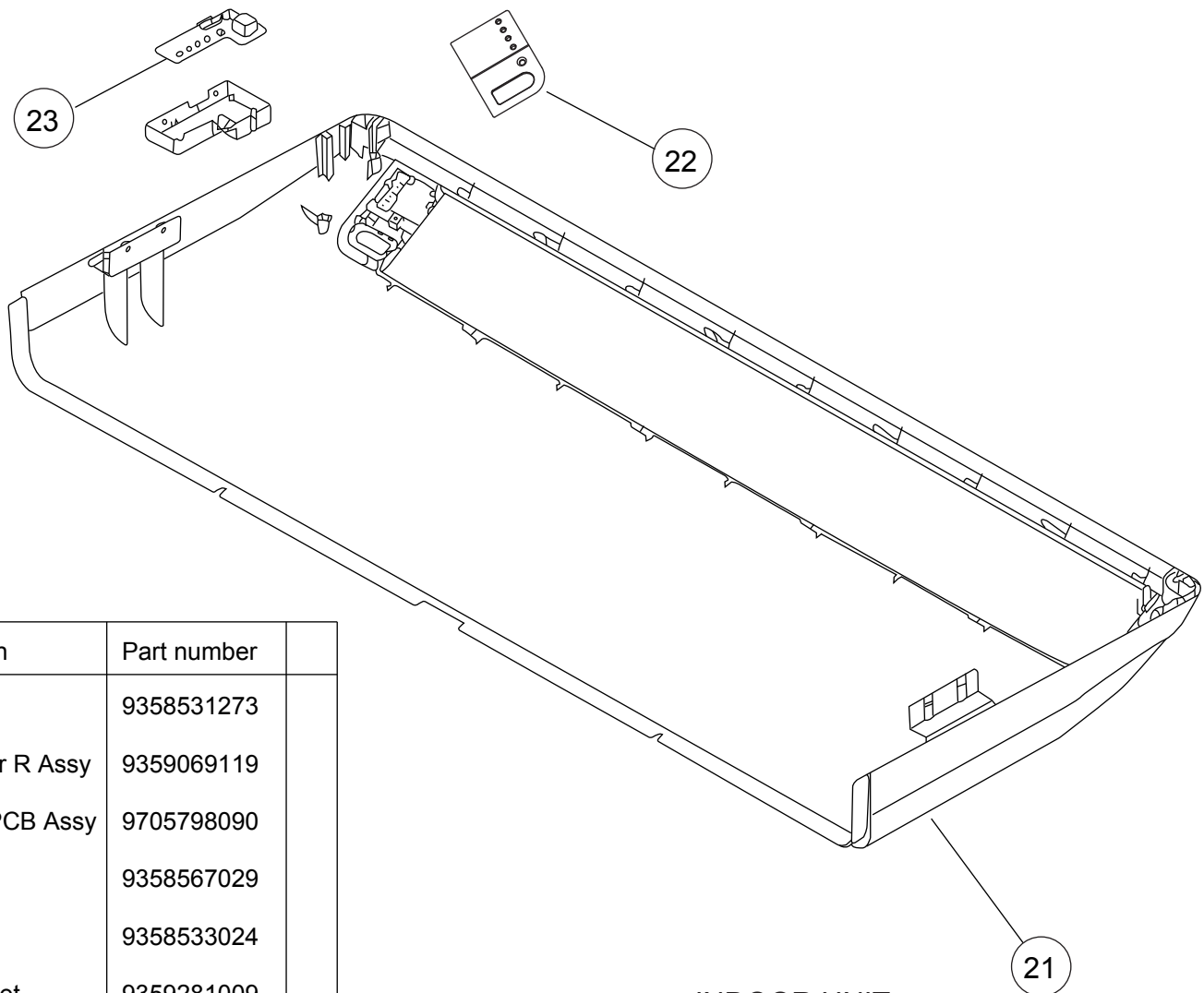
Ref.	Description	Part number
1	Remote Control	9379219037
2	Remote Control Holder	9305642045
3	Top Cover	9358534021
4	Arm	9358565001
5	Hanger Bracket L	9358596005
6	Hanger Bracket R	9358595008
7	Cosmetic Panel R	9358535028
8	Cosmetic Panel L	9358536025



INDOOR UNIT
Base assy
Control unit

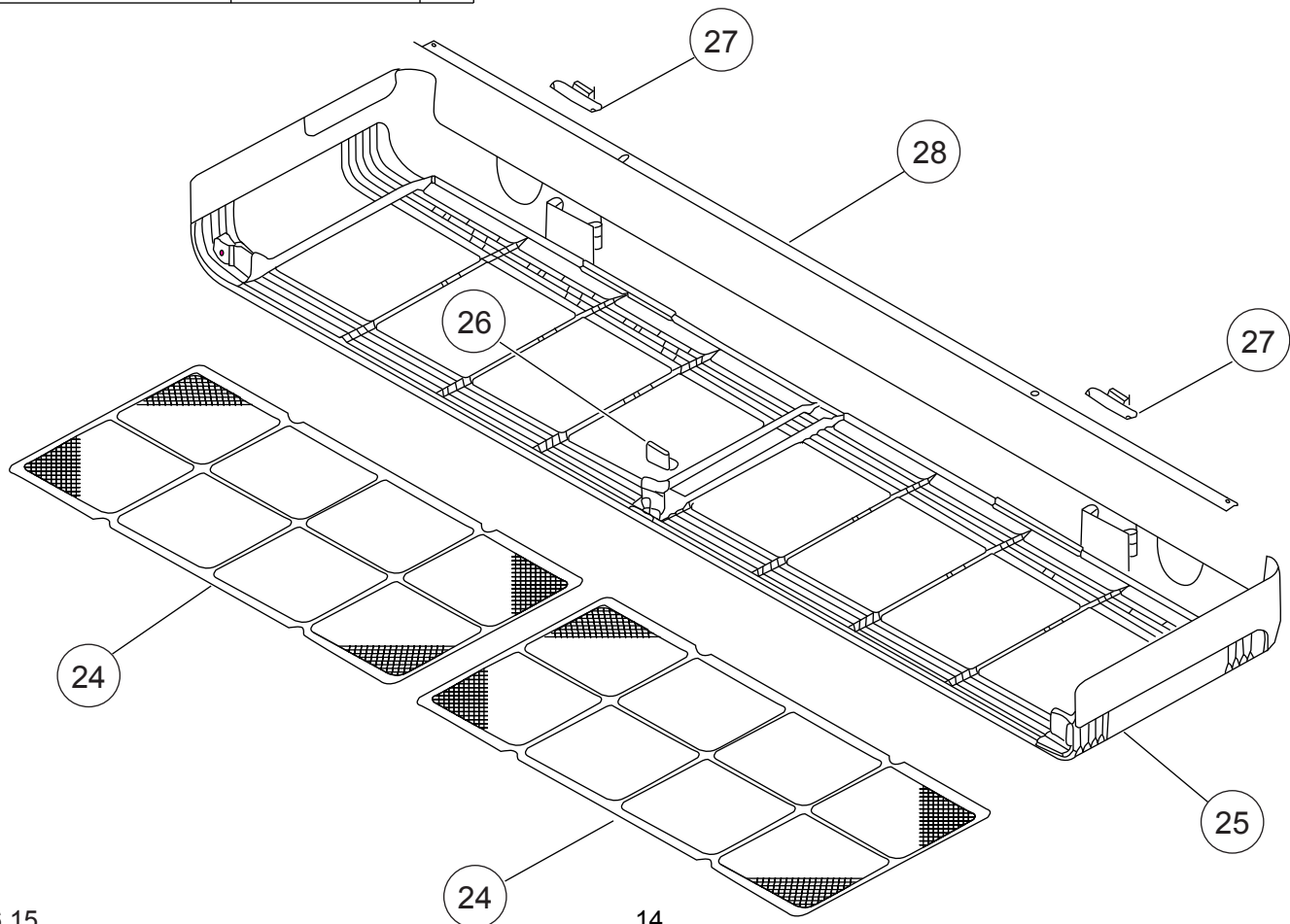


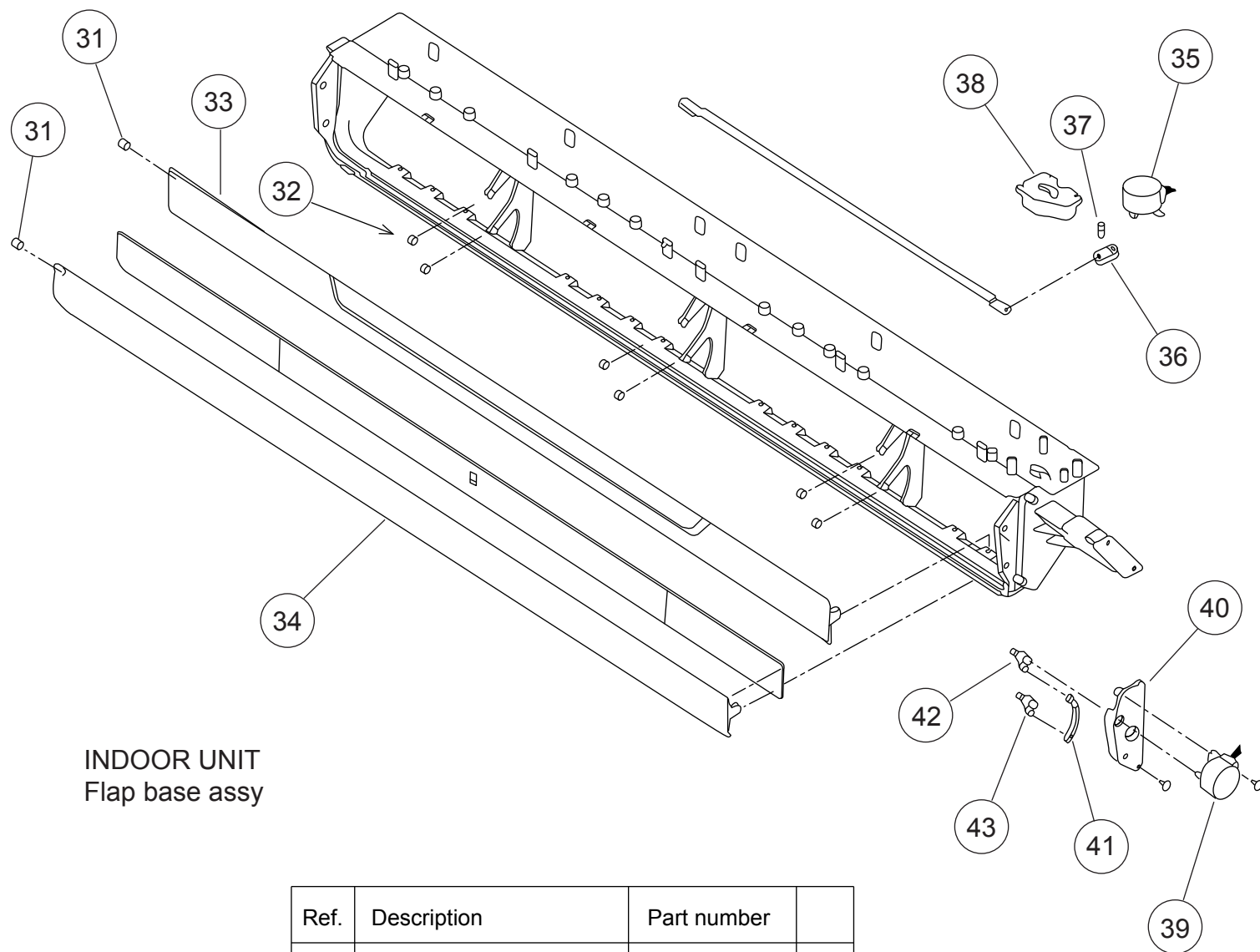
Ref.	Description	Part number	
11	Base Assy	9359061014	
12	Cap	9358563007	
13	Base Bracket	9358586006	
14	Control Box	9358600054	
15	Control Box Cover Assy	9359097006	
16	Controller PCB Assy	9707393958	
17	Power Supply PCB Assy	9707398274	
18	Terminal 3P	9306489045	
19	Terminal 3P	9703345012	
--	Room Thermistor	9703299087	



Ref.	Description	Part number	
21	Panel	9358531273	
22	Side Cover R Assy	9359069119	
23	Indicator PCB Assy	9705798090	
24	Air Filter	9358567029	
25	Grill G	9358533024	
26	Arm Bracket	9359281009	
27	Grille Support	9358602003	
28	Filter Bracket	9358607008	

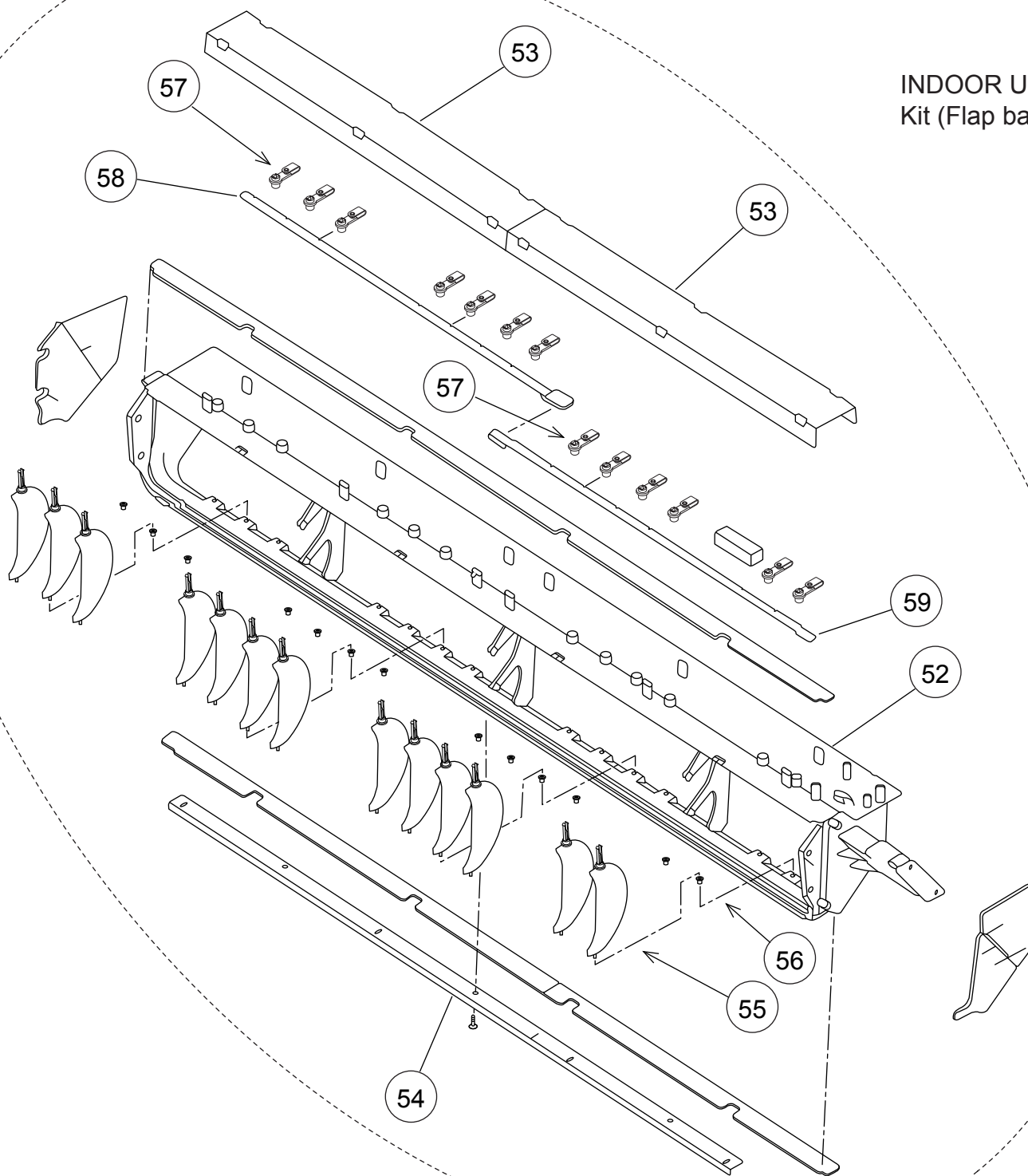
INDOOR UNIT
Panel
Grille



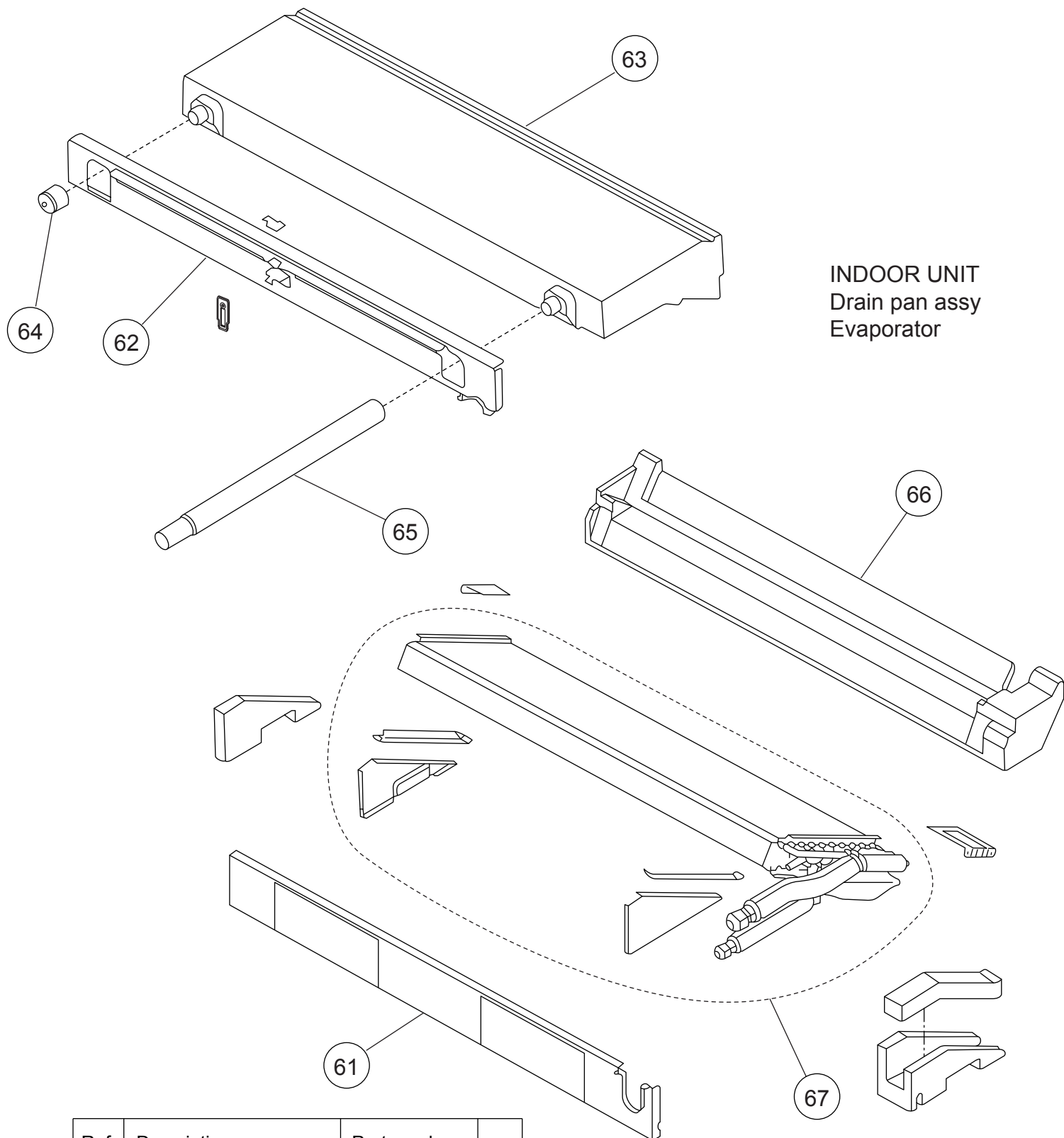


Ref.	Description	Part number	
31	Bushing	9357942001	
32	Bushing C	9358553008	
33	Flap (Upper) O	9358540015	
34	Kit (Flap Lower)	9372671023	
35	Step Motor H	9900297015	
36	Louver Link	9358556009	
37	Louver Shaft	9358557006	
38	Louver Link Cover	9358558010	
39	Step Motor-V	9900362010	
40	Motor Base	9358562017	
41	Motor Rod-A (Step V)	9358550007	
42	Flap Link-Upper (Step V)	9358551004	
43	Flap Link-Lower (Step V)	9358552001	

INDOOR UNIT
Kit (Flap base)

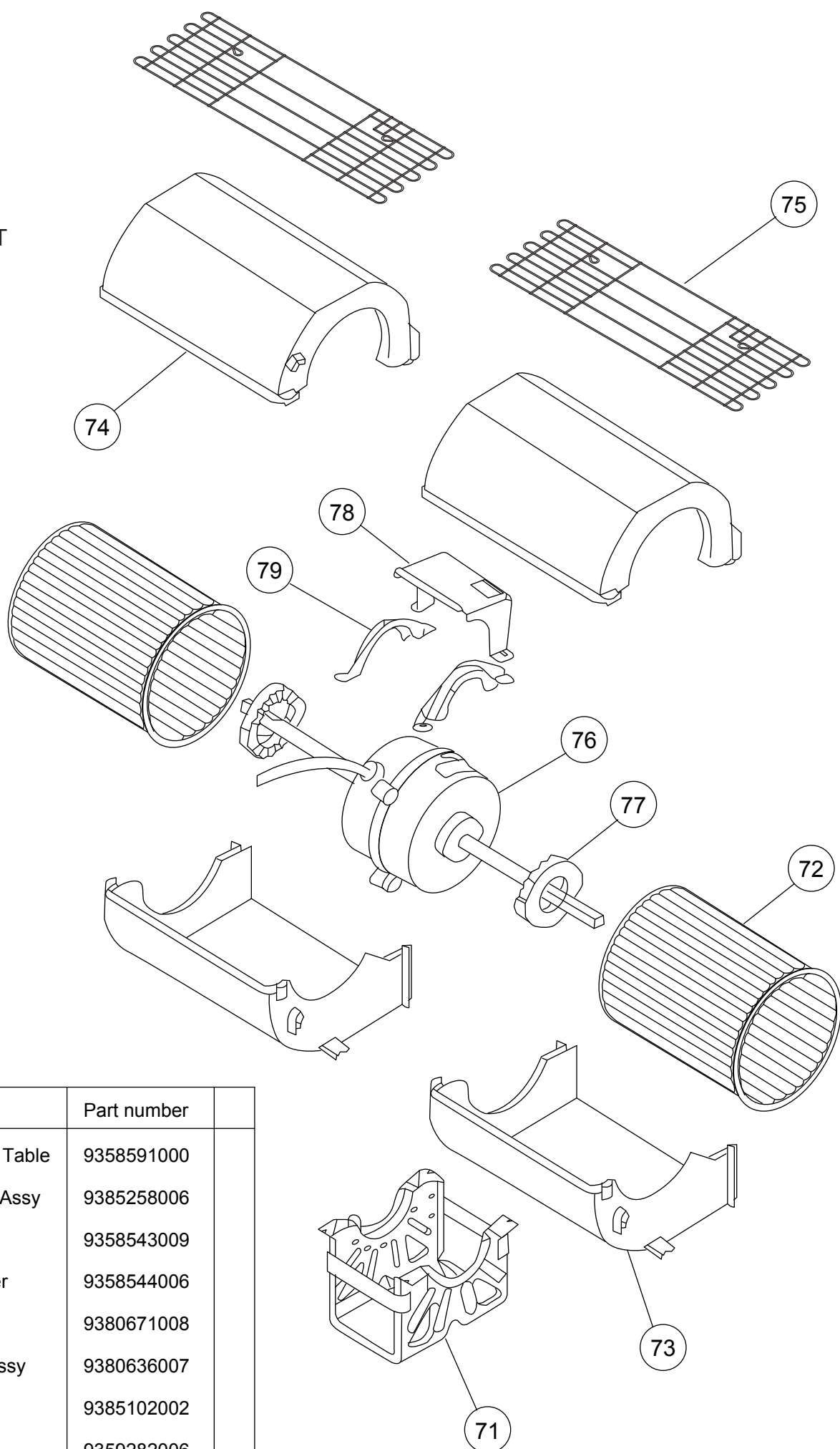


Ref.	Description	Part number	
51	Kit (Flap Base)	9372670040	
52	Flap Base	9358537022	
53	Protect Cover	9358564011	
54	Support Stay	9358599006	
55	Louver	9358561027	
56	Bushing B	9358554005	
57	Louver Stopper	9358555002	
58	Louver Rod	9358559017	
59	Motor Rod	9358560013	



Ref.	Description	Part number	
61	Kit (Separate Wall A)	9372666012	
62	Kit (Separate Wall B)	9373448013	
63	Kit (Drain Pan Assy)	9372669013	
64	Drain Cap	9358746004	
65	Drain Hose Assy	9377785060	
66	Kit (Insulation Flap Base)	9372672013	
67	Evaporator sub Assy	9359051275	
--	Pipe Thermistor	9900022020	

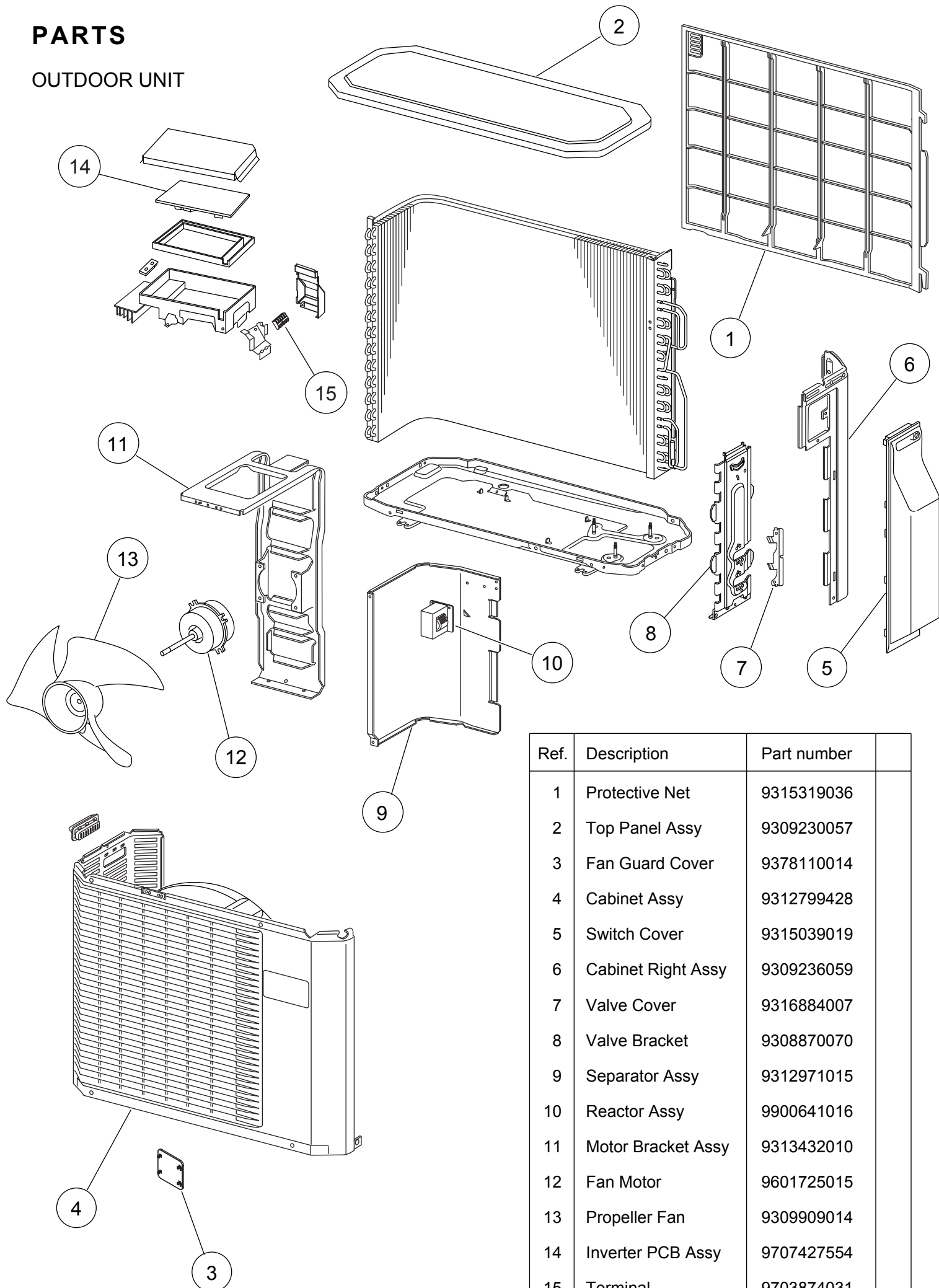
INDOOR UNIT
Fan motor



Ref.	Description	Part number
71	Motor Fixing Table	9358591000
72	Sirocco Fan Assy	9385258006
73	Casing	9358543009
74	Casing Cover	9358544006
75	Barrier	9380671008
76	Fan Motor Assy	9380636007
77	Rubber	9385102002
78	Protector	9359282006
79	Motor Fixture	9358594001

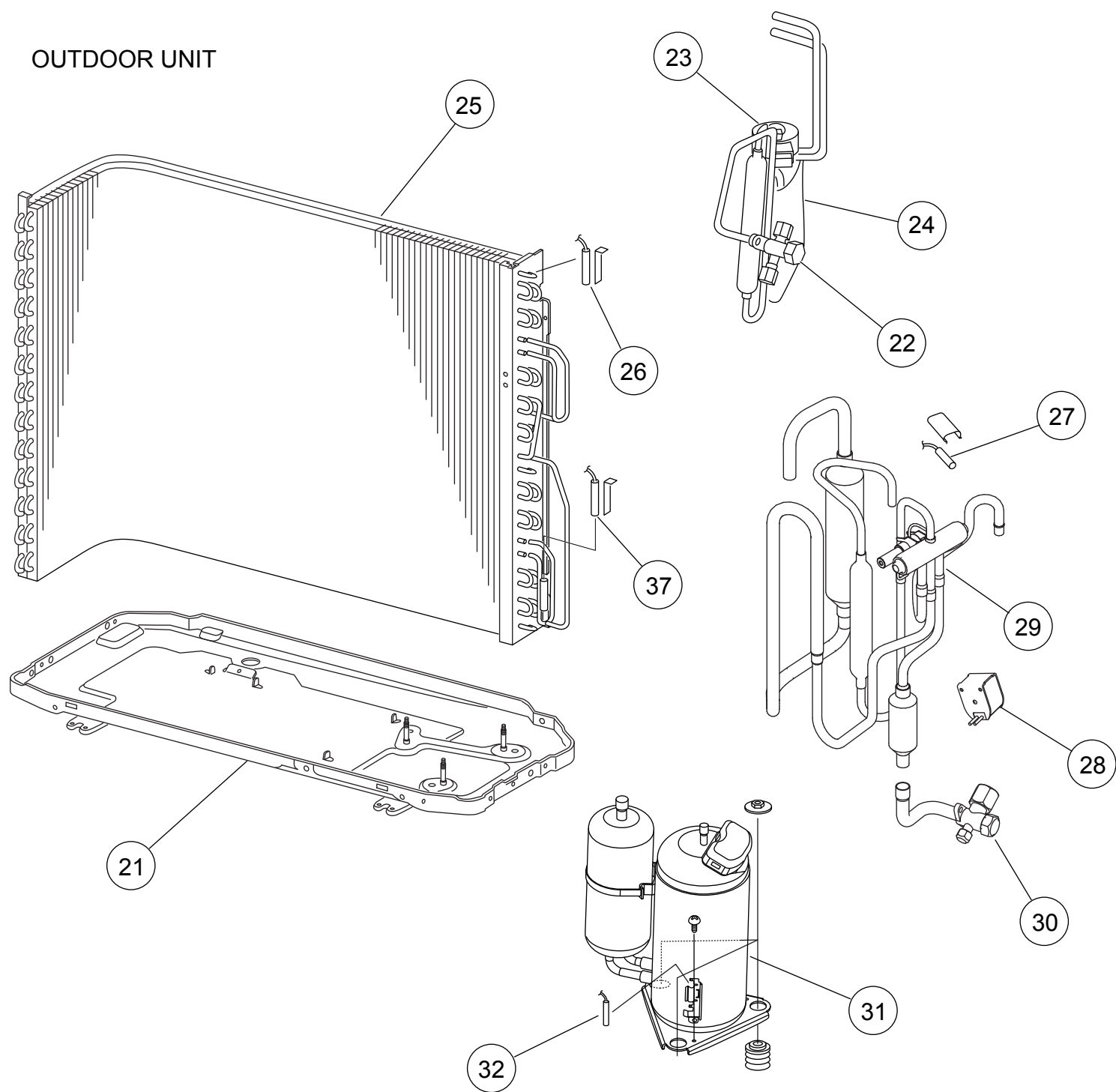
PARTS

OUTDOOR UNIT



Ref.	Description	Part number
1	Protective Net	9315319036
2	Top Panel Assy	9309230057
3	Fan Guard Cover	9378110014
4	Cabinet Assy	9312799428
5	Switch Cover	9315039019
6	Cabinet Right Assy	9309236059
7	Valve Cover	9316884007
8	Valve Bracket	9308870070
9	Separator Assy	9312971015
10	Reactor Assy	9900641016
11	Motor Bracket Assy	9313432010
12	Fan Motor	9601725015
13	Propeller Fan	9309909014
14	Inverter PCB Assy	9707427554
15	Terminal	9703874031

OUTDOOR UNIT

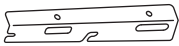
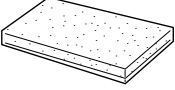
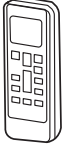


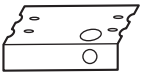
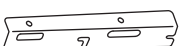
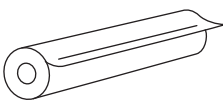
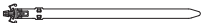
Ref.	Description	Part number
21	Base Assy	9308869081
22	2-way Valve Assy	9970093012
23	Expansion Valve Coil	9900057039
24	Pulse Motor Valve Assy	9311641018
25	Condenser Total Assy	9311381068
26	Heat Exchanger Thermistor	9900403010
27	Thermistor Assy	9900148027

Ref.	Description	Part number
28	Solenoid	9970033018
29	4-way Valve Assy	9315311030
30	3-way Valve Assy	9970092015
31	Compressor Assy	9313763039
32	Compressor Thermistor	9900156046
--	Outdoor Thermistor	9900210045
--	Drain Assy	9303029015

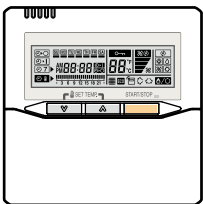
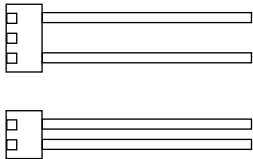
ACCESSORIES

INDOOR UNIT

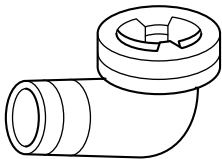
Name and Shape	Q'ty
Cover plate (left) 	1
Screw (M4 × 10mm) 	2
Bracket (left)  For suspending the indoor unit from ceiling	1
Special nut  For suspending the indoor unit from ceiling	4
Screw (M4 × 20mm)  For fixing the wall bracket	6
Coupler heat insulator (Small)  For indoor side pipe joint (Small pipe)	1
Binder (Small)  For electrical wiring	2
Drain hose 	1
Insulation (Drain hose)  Adhesive type 100 x 220(mm)	1
Remote control 	1
Remote control holder 	1

Name and Shape	Q'ty
Cover plate (right) 	1
Installation template Positioning for under ceiling type 	1
Bracket (right)  For suspending the indoor unit from ceiling	1
Wall bracket  For suspending the indoor unit on the wall	2
Coupler heat insulator (Large)  For indoor side pipe joint(Large pipe)	1
Binder (Large)  For fixing drain hose	1
Wire clammer  For electrical wiring	1
Hose band  For installing drain hose	1
VT wire  For fixing drain hose L 280mm	1
Battery  For remote control	2
Screw (M3 × 12mm)  For remote control holder installation	2

OPTIONAL PARTS

Exterior	Parts name	Model No.	Summary
	Wired remote controller	UTY-RNNXM	Unit control is performed by wired remote controller
	External connect kit	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PC board.

OUTDOOR UNIT

Name and Shape	Q'ty
Drain pipe 	1

1112G4008