

SPLIT TYPE
ROOM AIR CONDITIONER
FLOOR TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
AGYG09LVCB	AOYG09LVCN
AGYG12LVCB	AOYG12LVCN

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		AGYG09LVCB	AGYG12LVCB
OUTDOOR UNIT		AOYG12LVCN	AOYG12LVCN
COOLING CAPACITY		2.60 kW	3.50 kW
HEATING CAPACITY		3.50 kW	4.50 kW
POWER SOURCE		230 V	230 V
FREQUENCY		50 Hz	50 Hz
RUNNING CURRENT	Cooling	2.7 A	4.4 A
	Heating	3.9 A	5.6 A
INPUT WATTS	Cooling	0.53 kW	0.91 kW
	Heating	0.79 kW	1.19 kW
E.E.R.	Cooling	4.91 kW/kW	3.85 kW/kW
COP	Heating	4.43 kW/kW	3.78 kW/kW
MOISTURE REMOVAL		1.3 L/hr	1.8 L/h
AIR CIRCULATION HIGH	Cooling	570 m3/hr	570 m3/hr
	Heating	600 m3/hr	600 m3/hr
MAXIMUM CURRENT	Cooling	9.0 A	9.0 A
	Heating	11.5 A	11.5 A

FAN MOTOR

POWER SOURCE		230 V	
INDOOR UNIT cooling (upper fan / lower fan)	High speed	1,190 r.p.m. / 1,000 r.p.m.	
	Medium speed	1,000 r.p.m. / 850 r.p.m.	
	Low speed	820 r.p.m. / 690 r.p.m.	
	Quiet	660 r.p.m. / 560 r.p.m.	
INDOOR UNIT heating (upper fan / lower fan)	High speed	1,240 r.p.m. / 1,040 r.p.m.	
	Medium speed	1,040 r.p.m. / 880 r.p.m.	
	Low speed	840 r.p.m. / 700 r.p.m.	
	Quiet	660 r.p.m. / 560 r.p.m.	
OUTDOOR UNIT Cooling		870 r.p.m.	
OUTDOOR UNIT Heating		780 r.p.m.	

NOISE LEVEL

INDOOR UNIT Cooling	High speed	40 dB	
	Medium speed	35 dB	
	Low speed	29 dB	
	Quiet	22 dB	
INDOOR UNIT Heating	High speed	40 dB	
	Medium speed	35 dB	
	Low speed	29 dB	
	Quiet	22 dB	
OUTDOOR UNIT Cooling		47 dB	48 dB
OUTDOOR UNIT Heating		49 dB	50 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary	
DISCRIMINATION		808-884-80	
WEIGHT (with oil)		9.3 kg	
PRECHARGED REFRIGERANT		1,250 g	
REFRIGERANT TYPE		R410A	
FULL CHARGE	Pipe length 15 m	1,250 g	
	20 m	1,350 g	
ADDITIONAL CHARGE		20 g/m	
MAXIMUM PIPING HEIGHT		15m	

DIMENSIONS

INDOOR UNIT	H x W x D	600 x 740 x 200 mm
OUTDOOR UNIT	H x W x D	620 x 790 x 290 mm

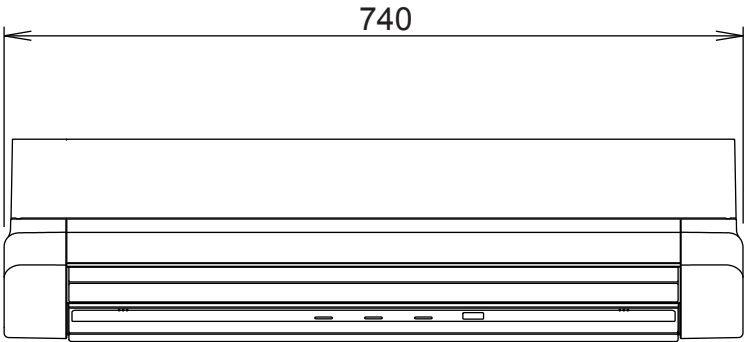
WEIGHT

INDOOR UNIT	Net / Shipping	14 kg / 17 kg
OUTDOOR UNIT	Net / Shipping	40 kg / 43 kg

DIMENSIONS

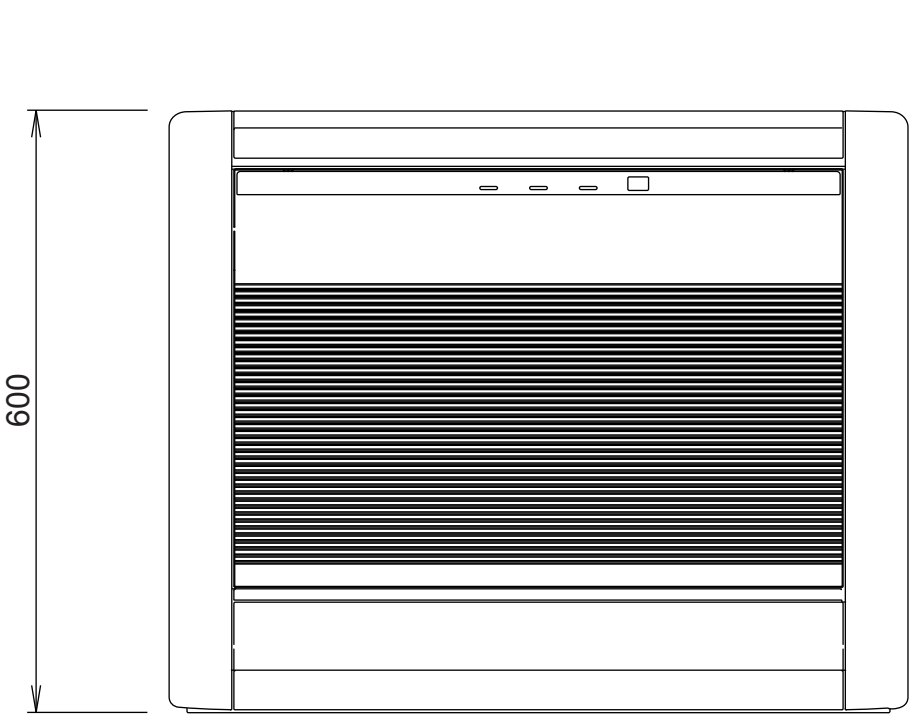
unit : mm

INDOOR UNIT

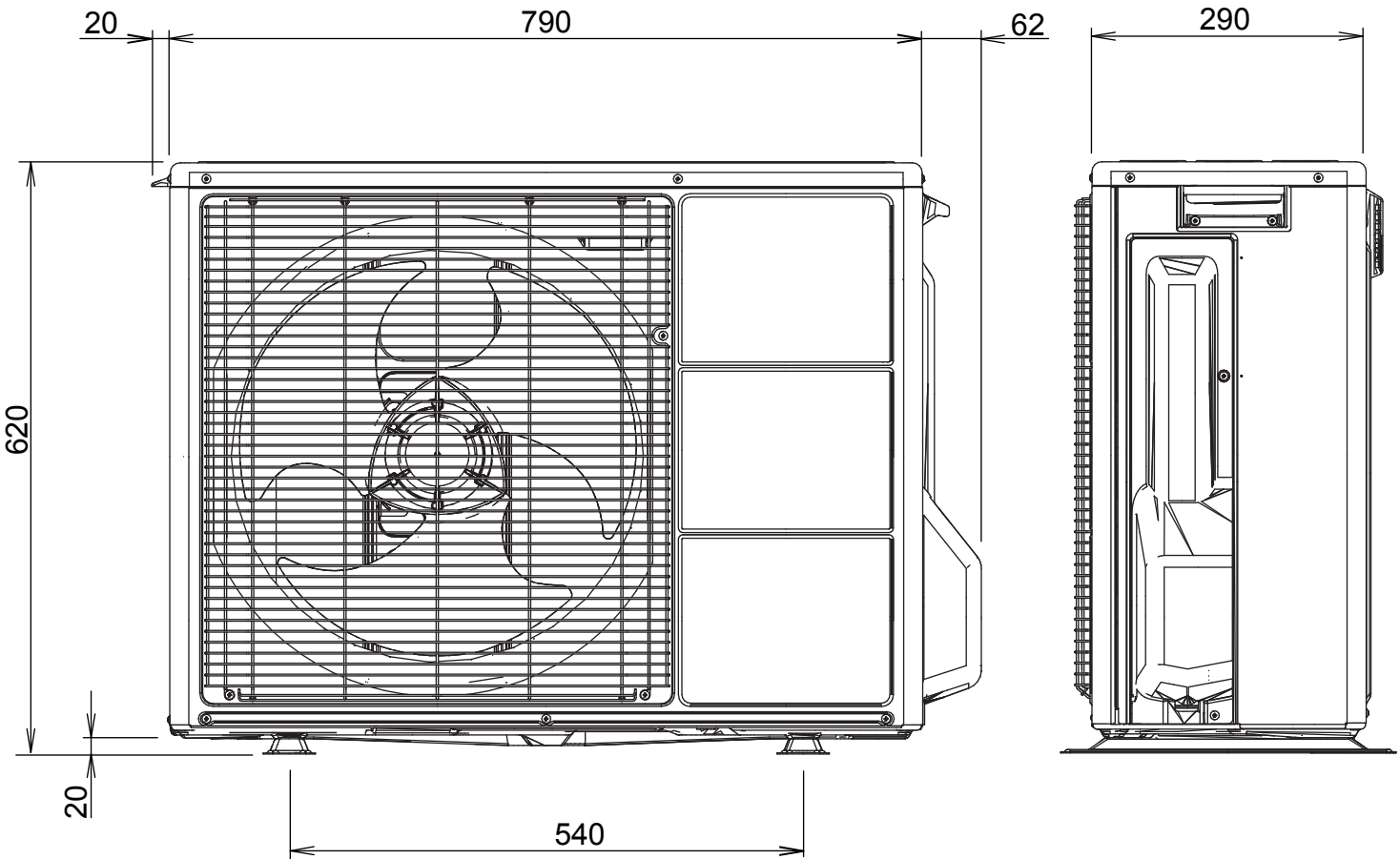


Drain hose length :
600 mm

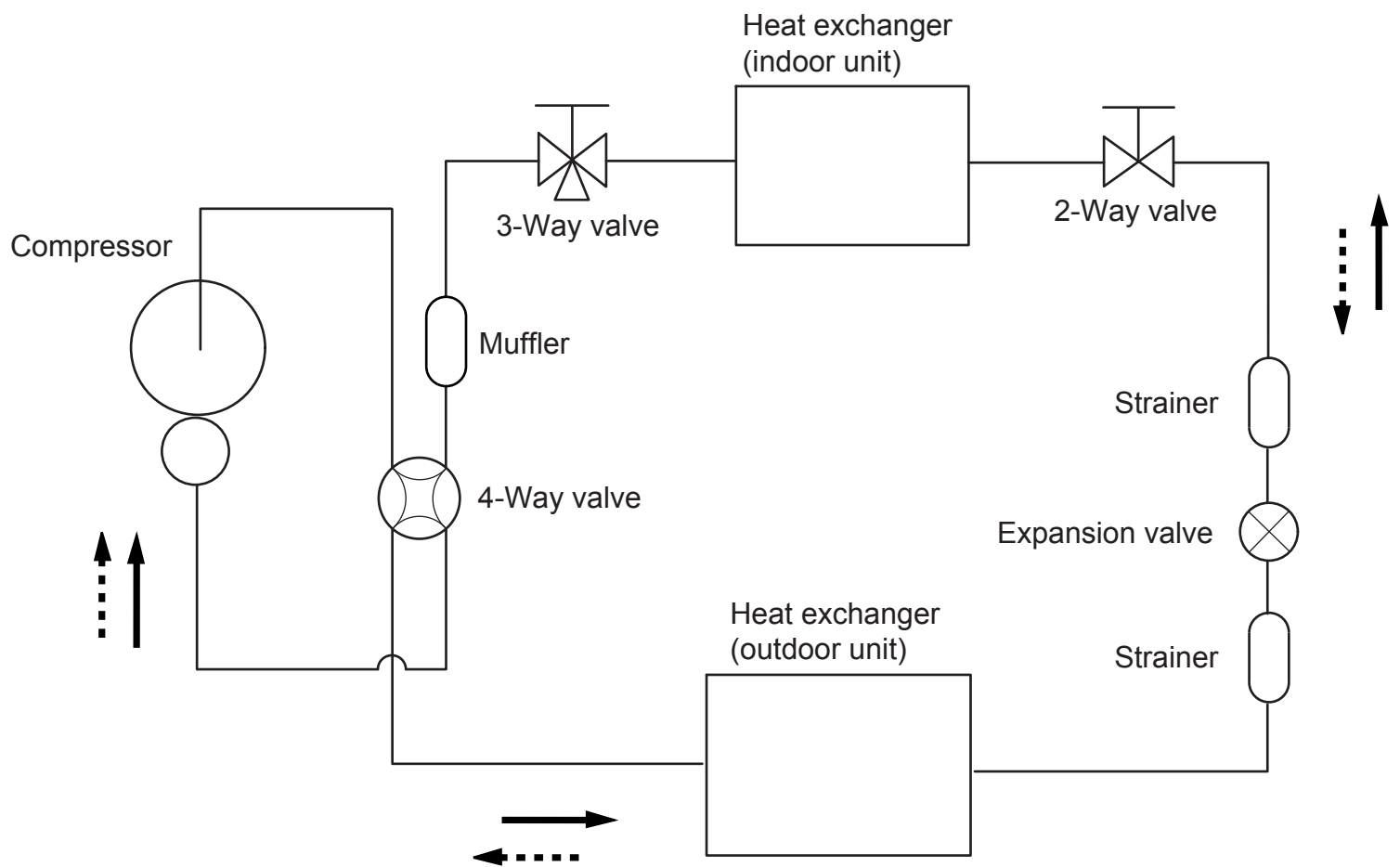
Drain pipe diameter
Inside : 14.2 mm
Outside : 16.2 mm



OUTDOOR UNIT

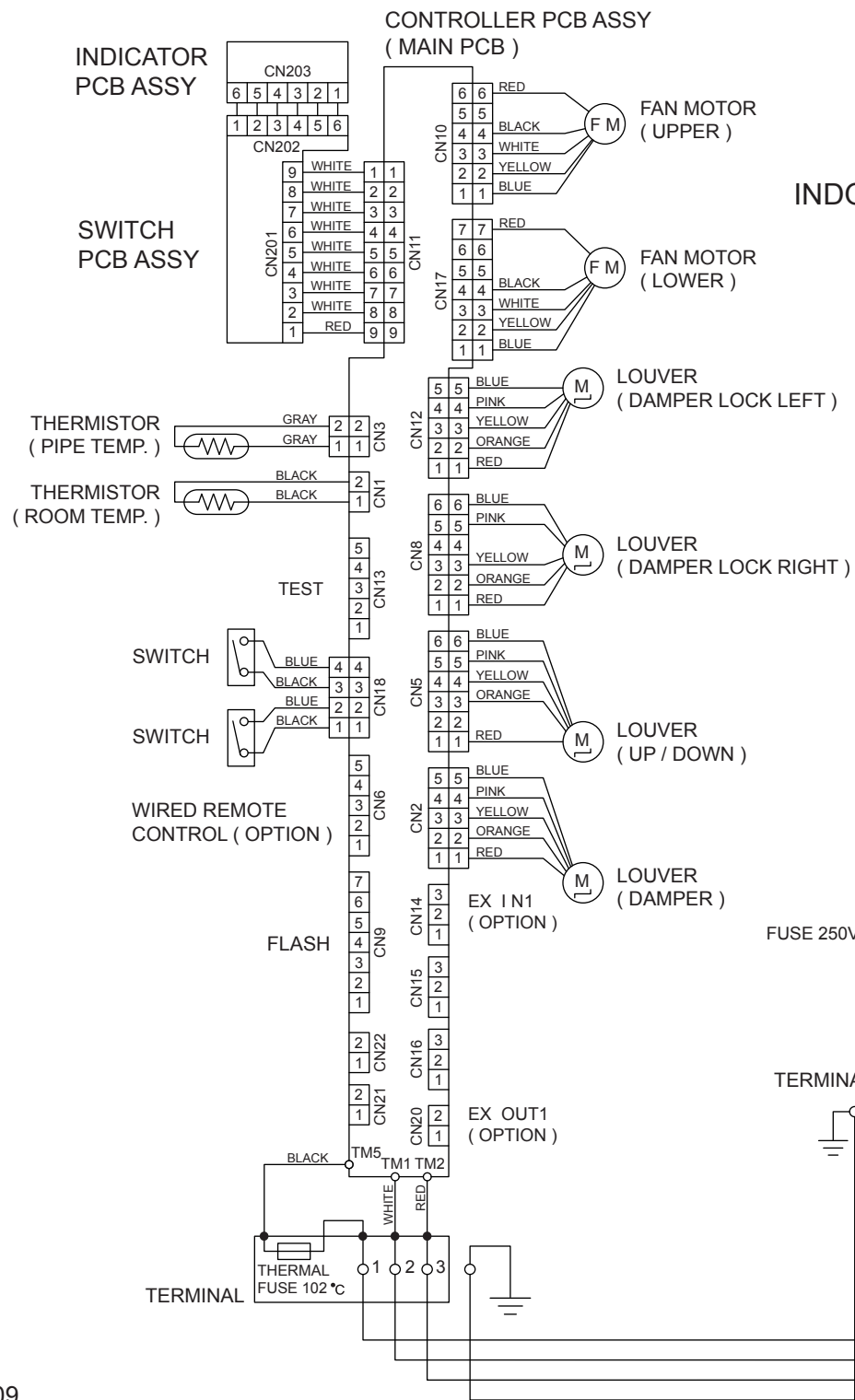


REFRIGERANT SYSTEM DIAGRAM



Refrigerant pipe diameter
 Liquid : 1/4" (6.35 mm)
 Gas : 3/8" (9.52 mm)

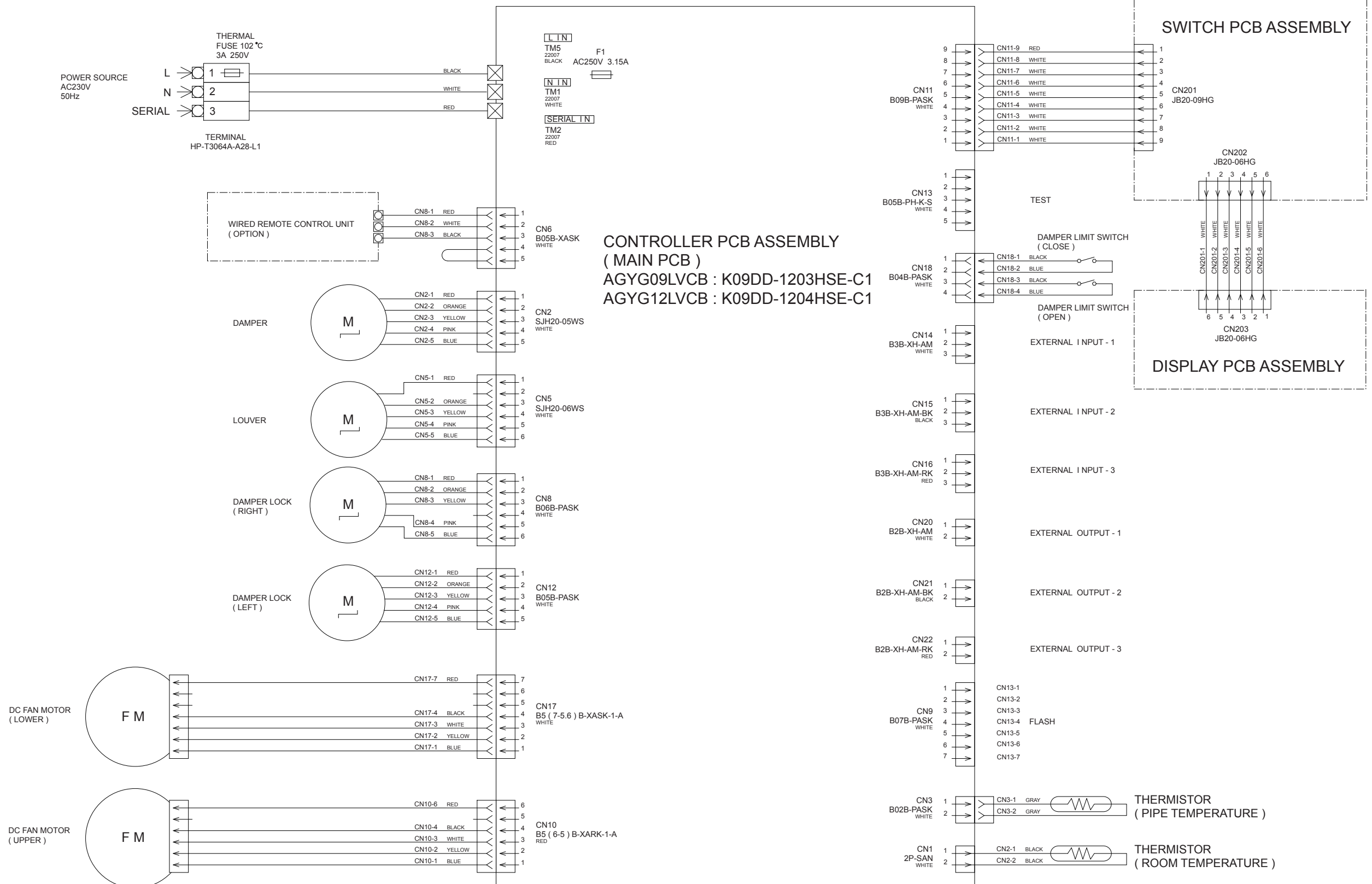
Refrigerant direction
 —————> Cooling
 - - - - -> Heating



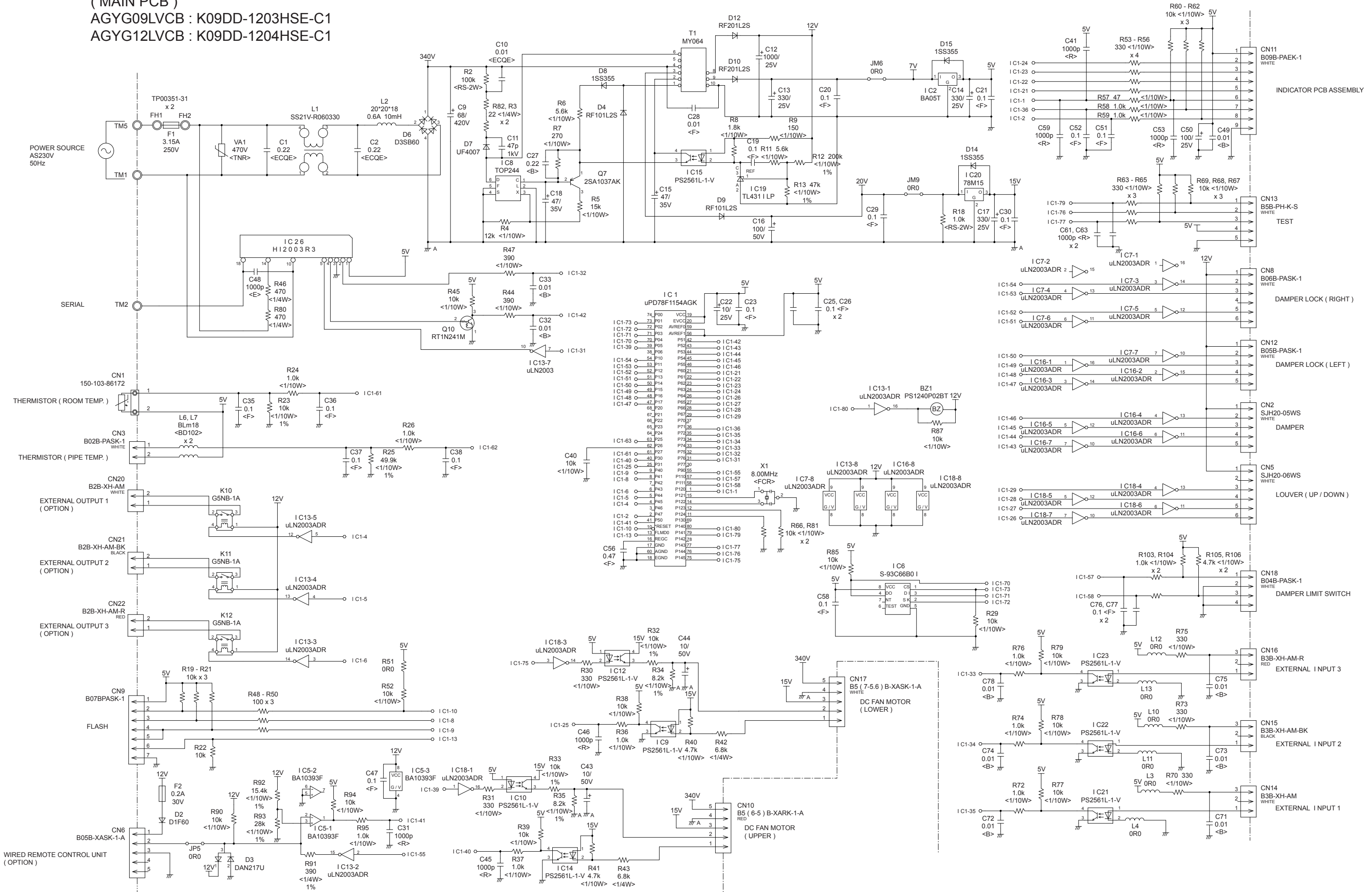
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
AGYG09LVCB : EZ-01219HSE
AGYG12LVCB : EZ-0121AHSE

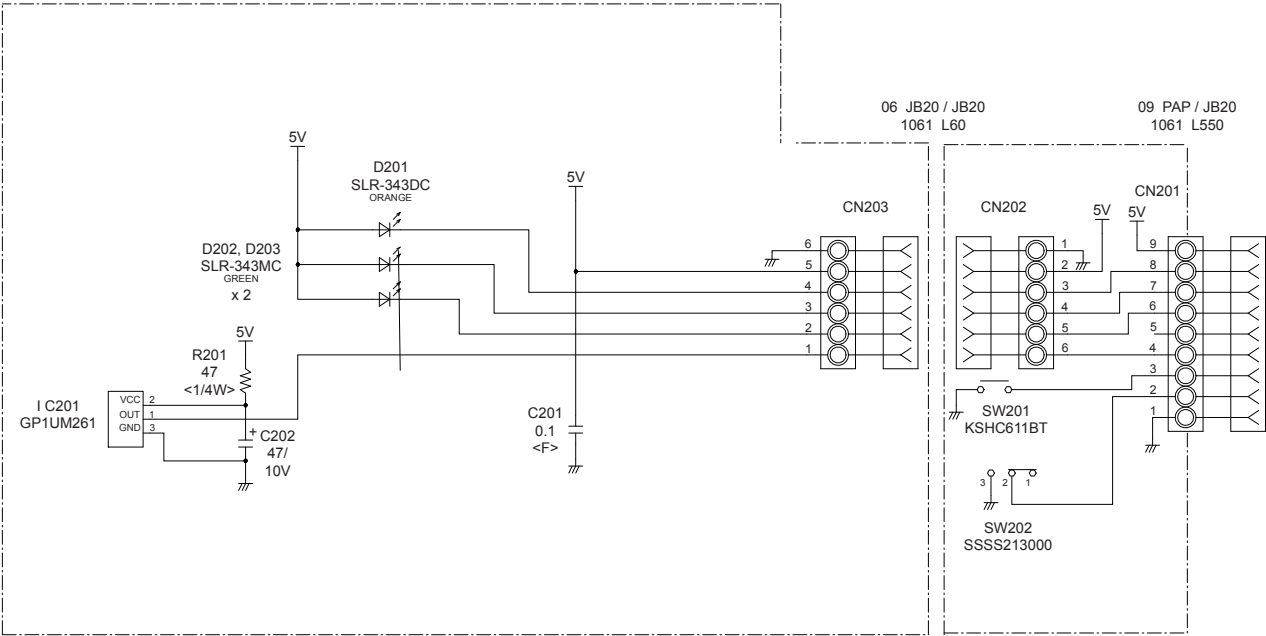
INDICATOR PCB ASSEMBLY
(SWITCH + DISPLAY)
K06DD-0801HSE-F0



(MAIN PCB)
AGYG09LVCB : K09DD-1203HSE-C1
AGYG12LVCB : K09DD-1204HSE-C1

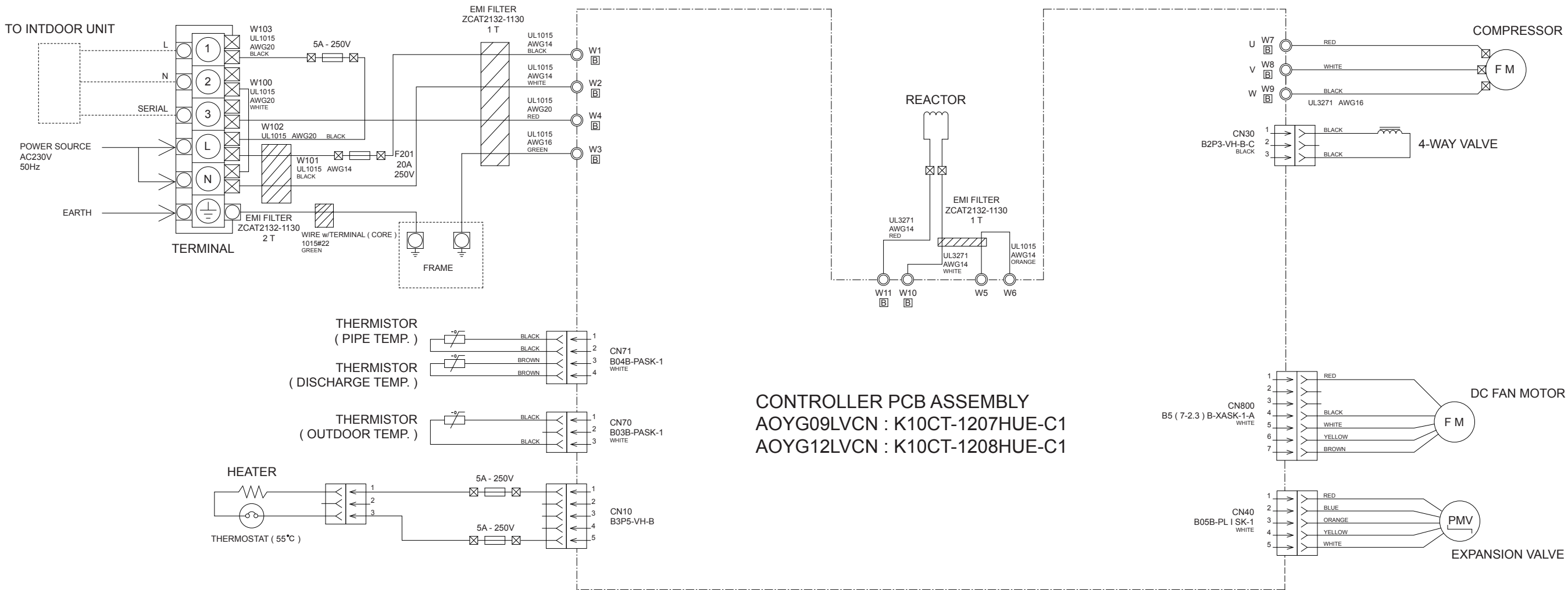


INDOOR UNIT
INDICATOR PCB ASSEMBLY
K06DD-0801HSE-F0



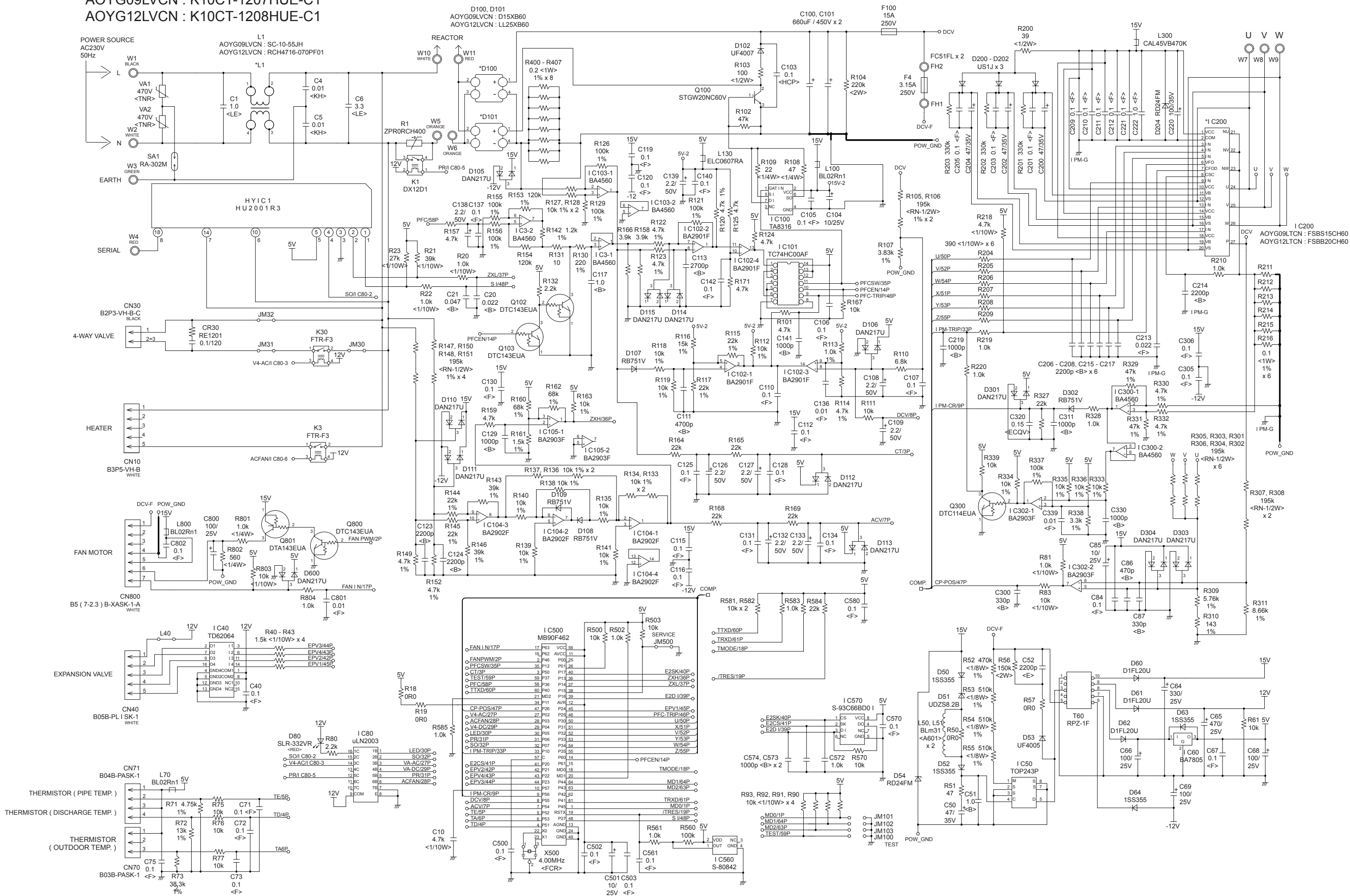
OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
AOYG09LVCN : EZ-011ZHUE
AOYG12LVCN : EZ-01110HUE



CONTROLLER PCB ASSEMBLY
AOYG09LVCN : K10CT-1207HUE-C1
AOYG12LVCN : K10CT-1208HUE-C1

OUTDOOR UNIT
CONTROLLER PCB ASSEMBLY
AOYG09LVCN : K10CT-1207HUE-C1
AOYG12LVCN : K10CT-1208HUE-C1

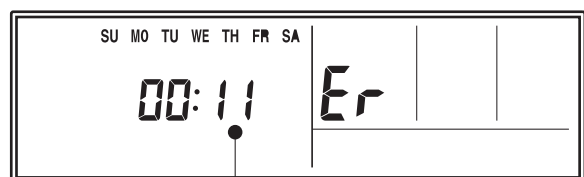


ERROR DETECTION

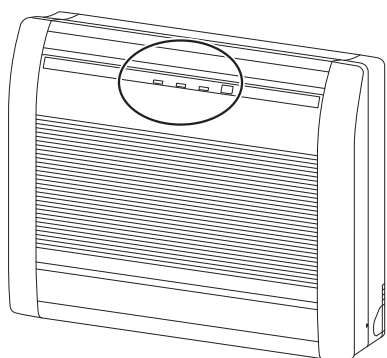
If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.
If you use a wired remote control, error codes will appear on the remote control display.
See the lamp blinking patterns and error codes in the table.
An error display is displayed only during operation.

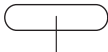
Wired remote control display (Option)

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



Indoor unit display



TIMER **OPERATION** **ECONOMY**
  
 TIMER lamp (orange) OPERATION lamp (green) ECONOMY lamp (green)

Error display			Wired remote control Error code	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (1)	● (1)	◇	11	Serial communication error
● (1)	● (2)	◇	12	Wired remote control communication error
● (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)	● (7)	◇	57	Damper error
● (6)	● (2)	◇	62	Outdoor unit main PCB model information error or communication error
● (6)	● (4)	◇	64	Active filter error
● (6)	● (5)	◇	65	Trip terminal L error
● (7)	● (1)	◇	71	Discharge temp. sensor error
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (8)	● (4)	◇	84	Current sensor 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

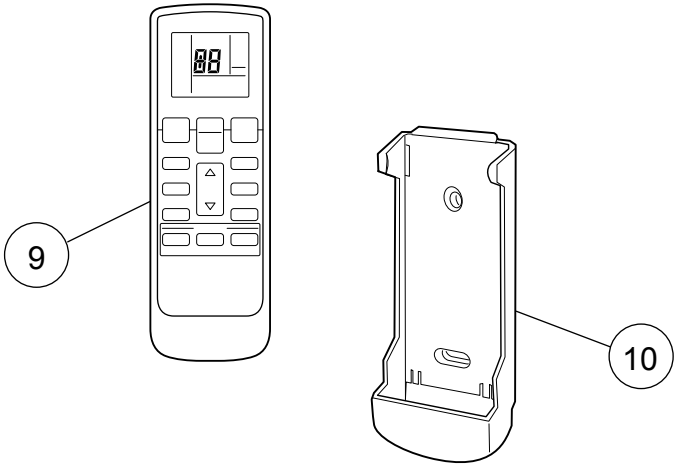
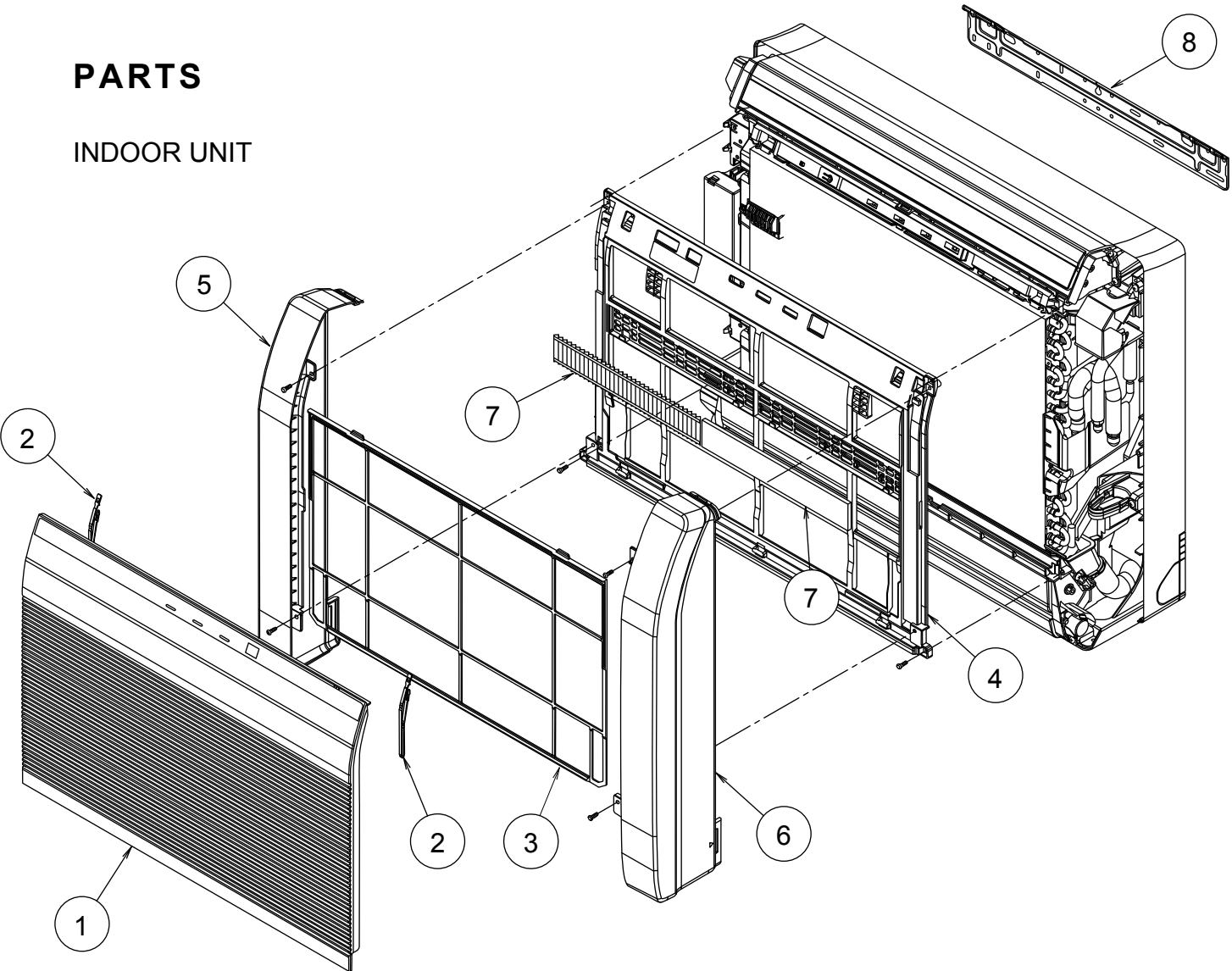
● : 0.5s on / 0.5s off
 ◇ : 0.1s on / 0.1s off
 () : Number of flash

OUTDOOR UNIT

LED	ERROR
on	Discharge temperature abnormal
0.5 second on / 0.5 second off	IPM overcurrent protection
0.1 second on / 0.1 second off	Thermistor abnormal
2.0 second on / 2.0 second off	CT abnormal
0.1 second on / 2.0 second off	Compressor location abnormal
5.0 second on / 5.0 second off	Fan abnormal

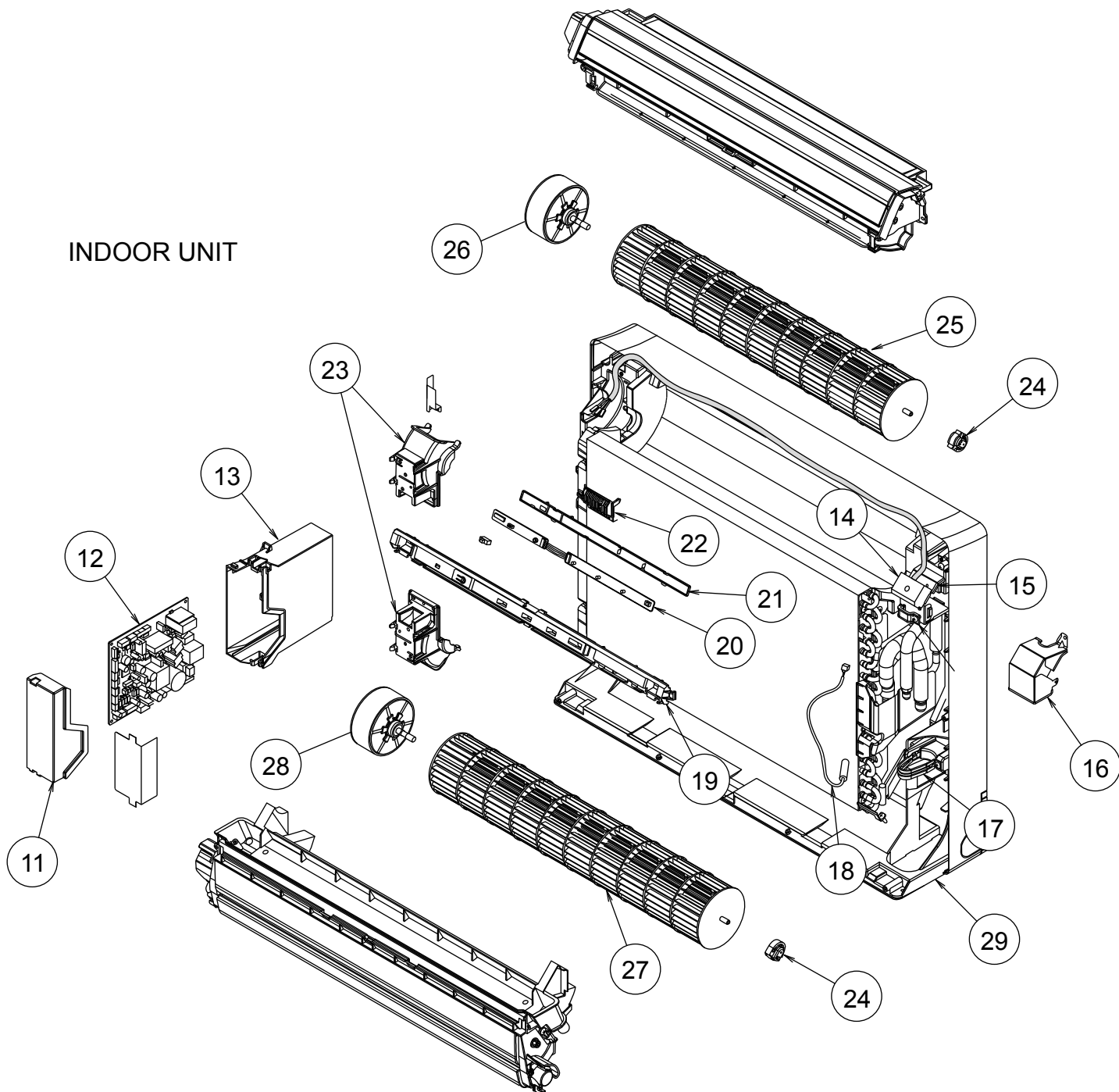
PARTS

INDOOR UNIT



Ref	Description	Parts number	
1	Intake Grille Assy	9316418059	
2	Rope Assy	9316458017	
3	Air Filter	9316189010	
4	Front Panel	9316185012	
5	Front Panel L	9316187016	
6	Front Panel R	9316186019	
7	Air Clean Filter Assy	9316474017	
8	Bracket Panel	9316272019	
9	Remote control	9379219006	
10	Remote Control Holder	9305642045	

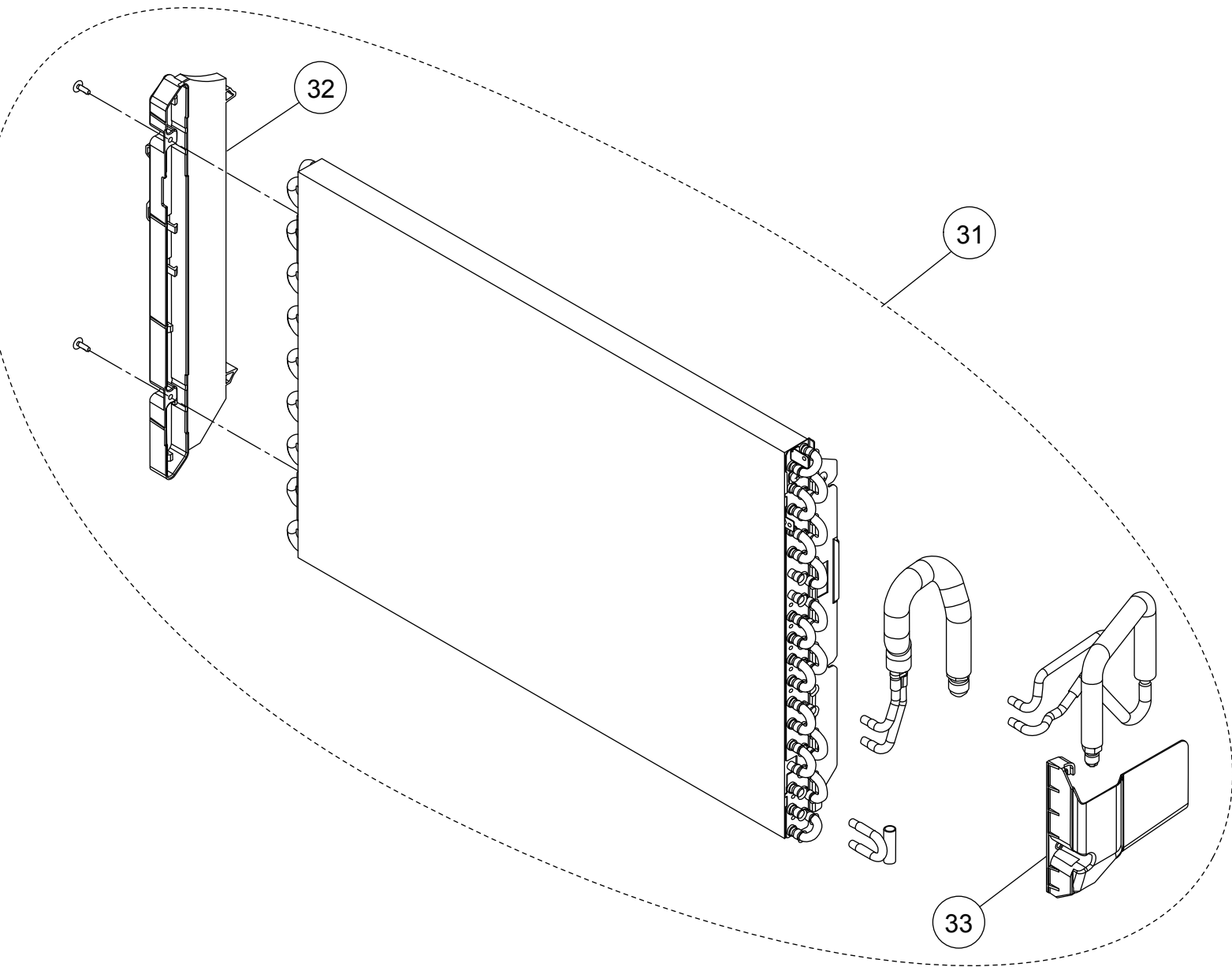
INDOOR UNIT



Ref	Description	Parts number	
11	Control Cover	9316201019	
12	Controller PCB Assy (09)	9708532103	
12	Controller PCB Assy (12)	9708532110	
13	Control Box	9316200012	
14	Terminal	9900385026	
15	Terminal Bracket	9316269019	
16	Terminal Cover	9316307018	
17	Pipe Bracket	9316270015	
18	Pipe Thermistor	9900425012	
19	Display Case	9316194014	

Ref	Description	Parts number	
20	Display PCB Assy	9707571042	
21	Display Cover	9316191013	
22	Thermistor Holder	9316192010	
23	Motor Holder	9316195011	
24	Bearing C Assy	9306628017	
25	Crossflow Fan Assy	9312004034	
26	Fan Motor, MFD-14TXN	9602850006	
27	Crossflow Fan B Assy	9316309012	
28	Fan Motor, MFD-14SXN	9602851003	
29	Base	9316193017	

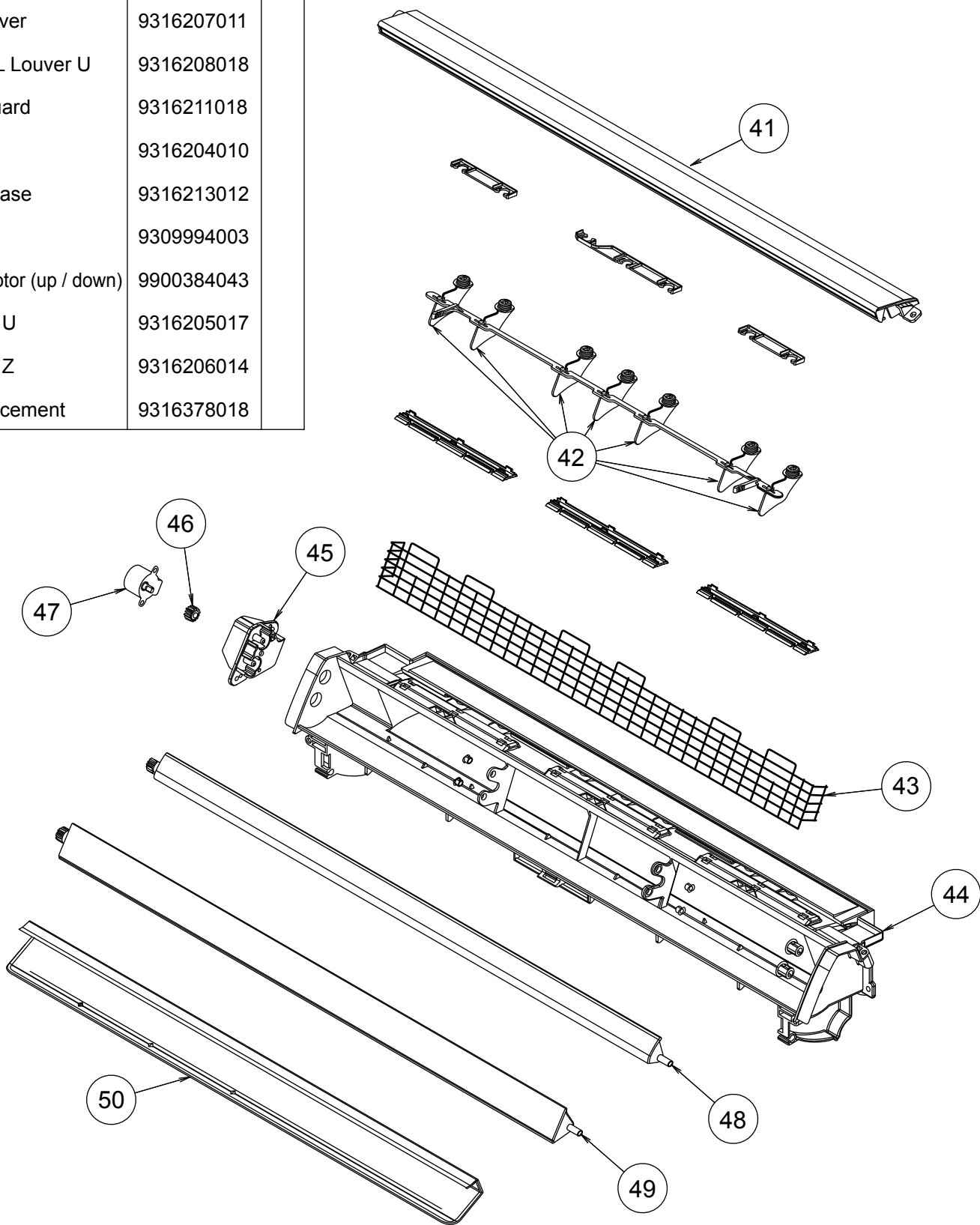
INDOOR UNIT



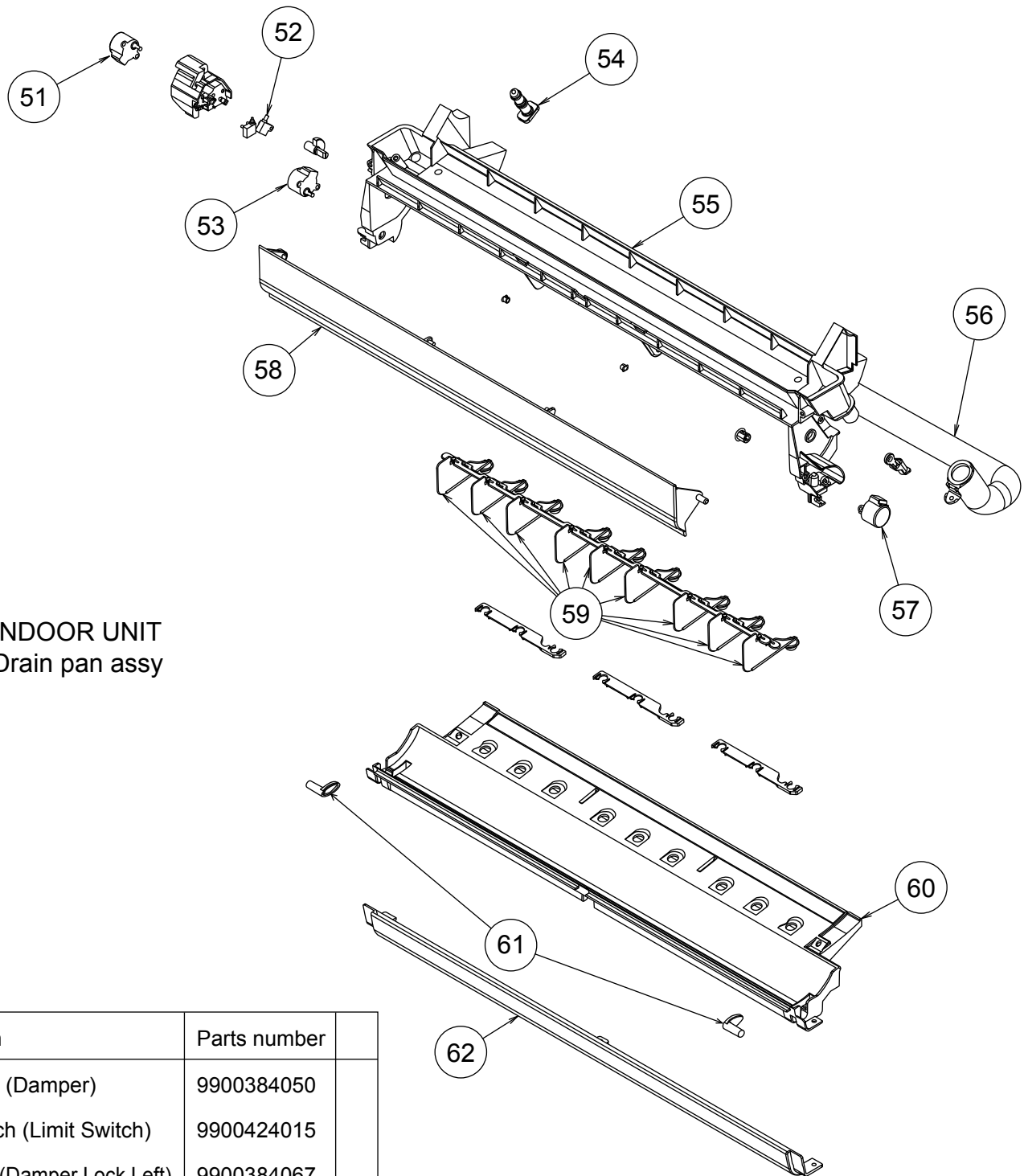
Ref	Description	Parts number	
31	Evaporator Total Assy	9316091016	
32	Evaporator Holder	9316199019	
33	Water Seal	9316271012	

INDOOR UNIT
Casing assy

Ref	Description	Parts number	
41	Top Cover	9316207011	
42	R and L Louver U	9316208018	
43	Fan Guard	9316211018	
44	Casing	9316204010	
45	Gear Case	9316213012	
46	Gear A	9309994003	
47	Step Motor (up / down)	9900384043	
48	Louver U	9316205017	
49	Louver Z	9316206014	
50	Reinforcement	9316378018	



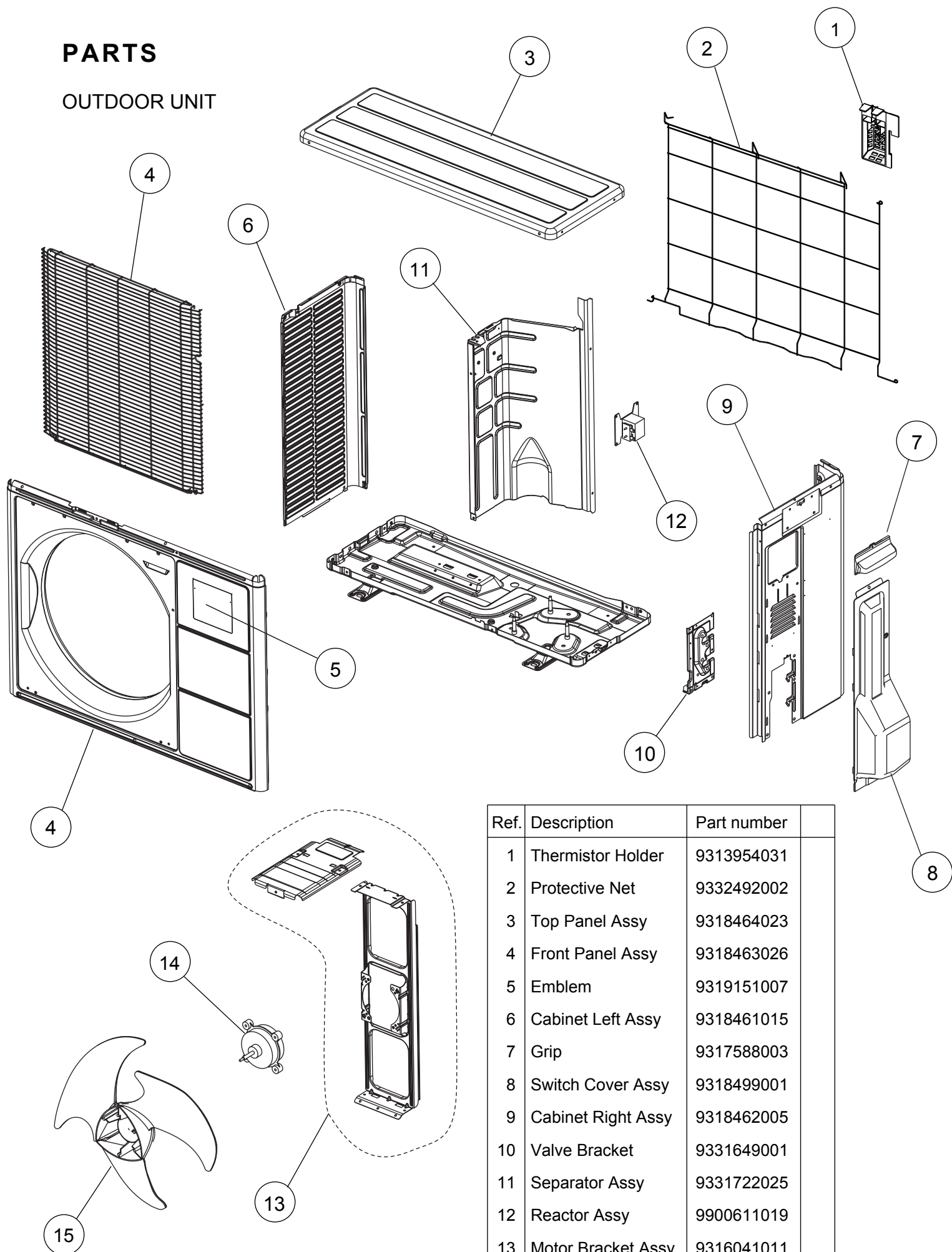
INDOOR UNIT
Drain pan assy



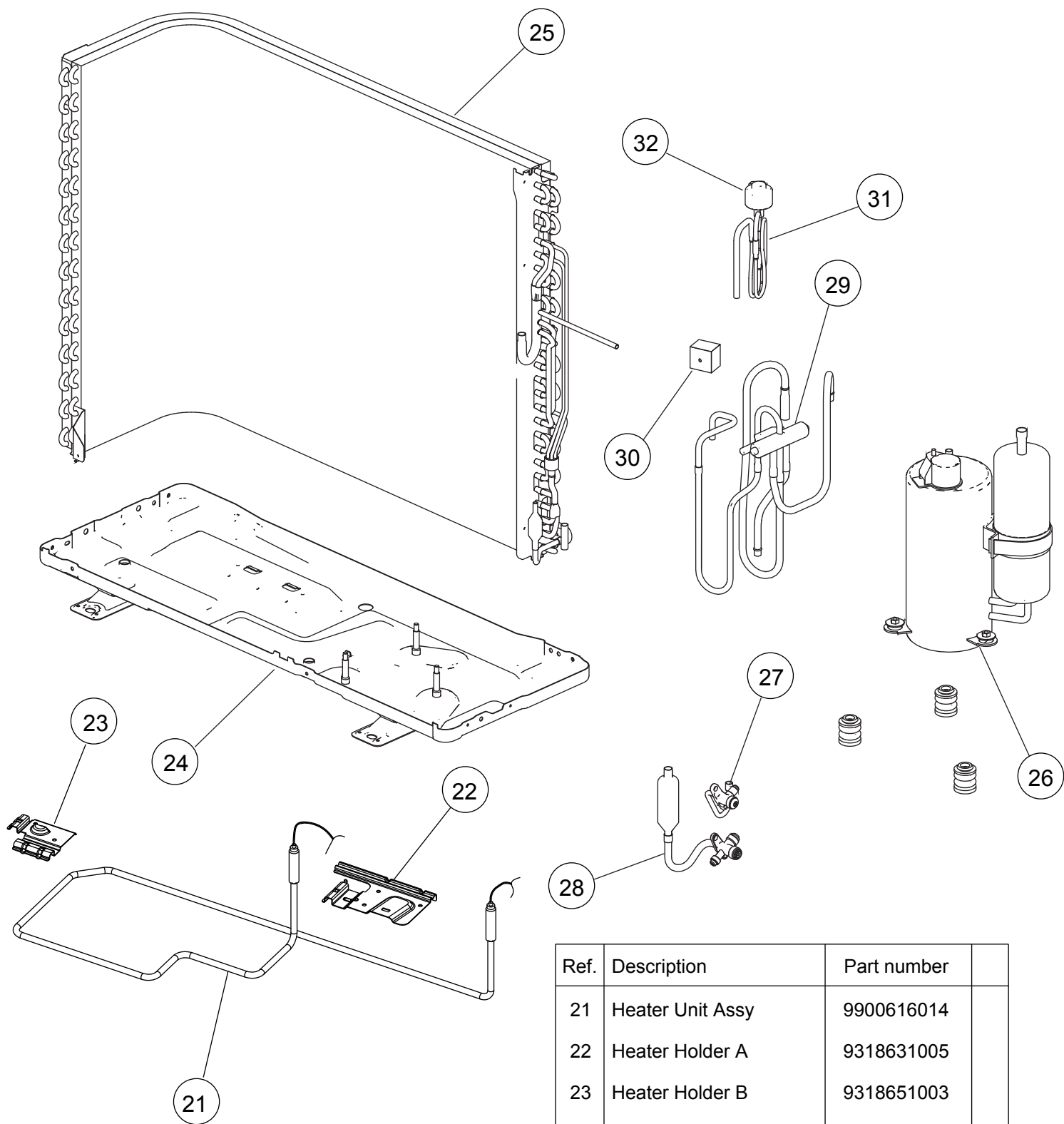
Ref	Description	Parts number	
51	Motor Step (Damper)	9900384050	
52	Micro Switch (Limit Switch)	9900424015	
53	Motor Step (Damper Lock Left)	9900384067	
54	Drain Cap	9316177017	
55	Drain Pan U	9316214019	
56	Drain Hose Assy	9314147029	
57	Step Motor (Damper Lock Right)	9900384074	
58	Damper	9316216013	
59	R and L Louver Z	9316334014	
60	Drain Pan Z	9316215016	
61	Stopper	9316219014	
62	Under Cover	9316374010	
--	Fan Guard Z	9316918009	

PARTS

OUTDOOR UNIT



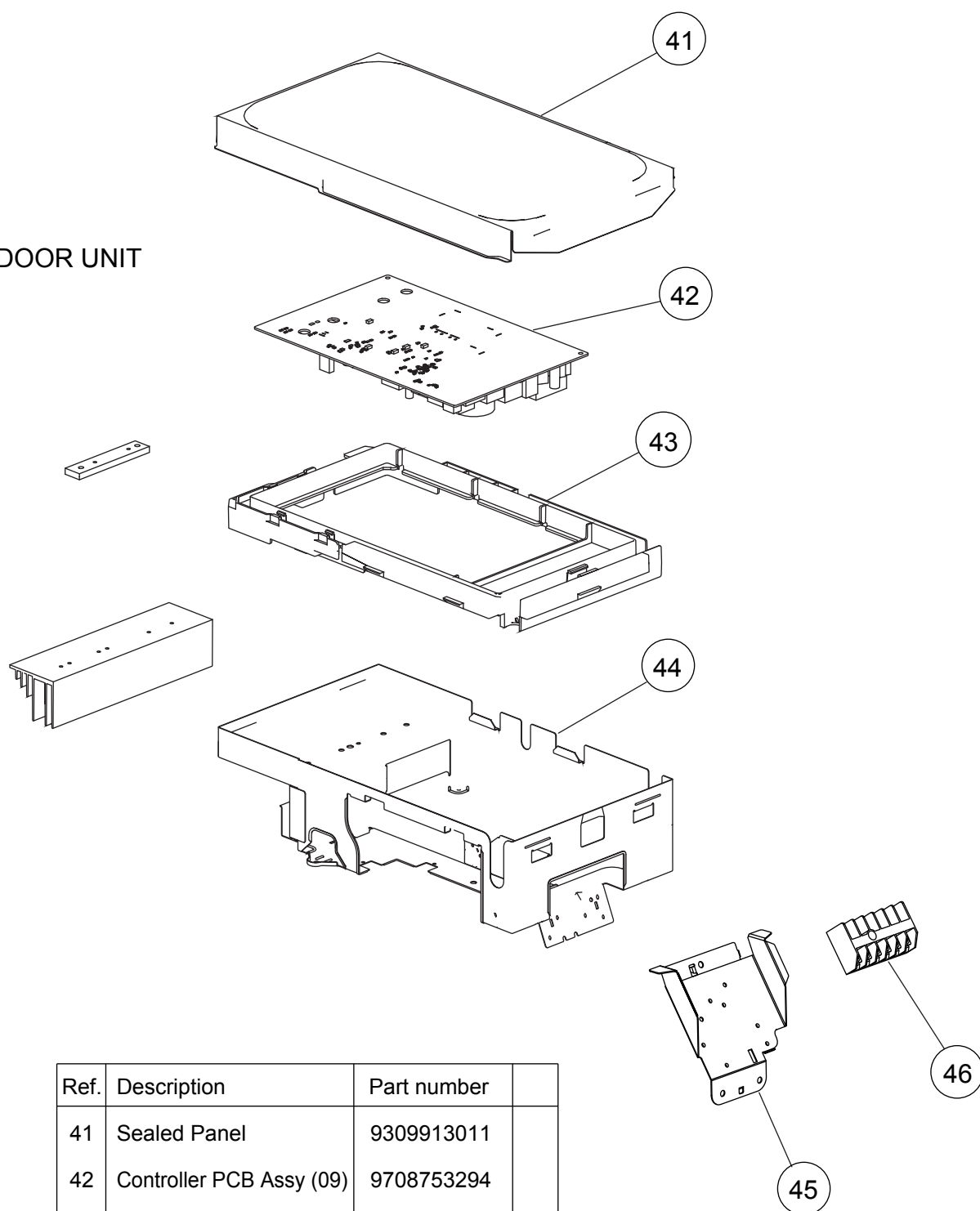
Ref.	Description	Part number	
1	Thermistor Holder	9313954031	
2	Protective Net	9332492002	
3	Top Panel Assy	9318464023	
4	Front Panel Assy	9318463026	
5	Emblem	9319151007	
6	Cabinet Left Assy	9318461015	
7	Grip	9317588003	
8	Switch Cover Assy	9318499001	
9	Cabinet Right Assy	9318462005	
10	Valve Bracket	9331649001	
11	Separator Assy	9331722025	
12	Reactor Assy	9900611019	
13	Motor Bracket Assy	9316041011	
14	Fan Motor	9602724017	
15	Propeller Fan	9313808013	



OUTDOOR UNIT

Ref.	Description	Part number	
21	Heater Unit Assy	9900616014	
22	Heater Holder A	9318631005	
23	Heater Holder B	9318651003	
24	Base Assy	9316885059	
25	Condenser Total Assy	9317089098	
26	Compressor Assy	9317117005	
27	2-way Valve Assy	9332371000	
28	3-way Valve Sub Assy	9317109000	
29	4-way Valve Assy	9317110020	
30	Solenoid	9970110047	
31	Pulse Motor Valve Assy	9332368000	
32	Expansion Valve Coil	9970095030	

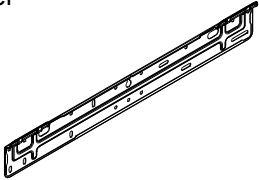
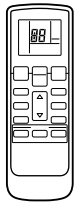
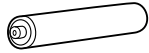
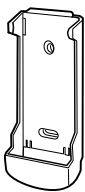
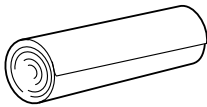
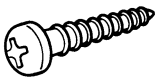
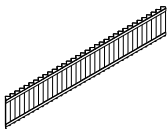
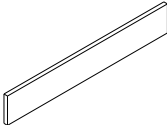
OUTDOOR UNIT



Ref.	Description	Part number	
41	Sealed Panel	9309913011	
42	Controller PCB Assy (09)	9708753294	
42	Controller PCB Assy (12)	9708753300	
43	PCB Holder	9313074029	
44	Inverter Case Assy	9315690074	
45	Terminal Bracket	9315233073	
46	Terminal	9900435028	
--	Outdoor Thermistor	9900544010	
--	Thermistor Assy	9900614027	

ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Use	Part No.
Bracket panel 	1	For indoor unit installation	9316272019
Remote control 	1	Use for air conditioner operation	9379219006
Battery (penlight) 	2	For remote control	0600185541
Remote control holder 	1	Hold a remote control	9305642045
Cloth tape 	1	For indoor unit installation	9310519004
Tapping screw (big) ($\phi 4 \times 25$) 	9	For wall hook bracket and body installation	0700076046
Tpping screw (small) ($\phi 3 \times 12$) 	2	Install a remote control holder	0700019036
Electric filter 	1	With 2 sheets	9312153015
Ion deodrant filter 	1	With 2 sheets	9311925033

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