

SPLIT TYPE
ROOM AIR CONDITIONER
FLOOR TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
AGYG09LVCA	AOYG09LVCA
AGYG12LVCA	AOYG12LVCA

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cool & heat inverter	
INDOOR UNIT		AGYG09LVCA	AGYG12LVCA
OUTDOOR UNIT		AOYG09LVCA	AOYG12LVCA
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	2.6 A	4.4 A
	Heating	3.8 A	5.5 A
INPUT WATTS	Cooling	0.53 kW	0.94 kW
	Heating	0.79 kW	1.19 kW
EER	Cooling	4.91 kW/kW	3.72 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/h	570 m3/h
	Heating	600 m3/h	600 m3/h
MAXIMUM CURRENT	Cooling	7.0 A	7.0 A
	Heating	10.0 A	10.0 A

FAN MOTOR

POWER SOURCE		230 V	
INDOOR UNIT cooling (upper fan / lower fan)	High	1,190 r.p.m. / 1,000 r.p.m.	
	Medium	1,000 r.p.m. / 850 r.p.m.	
	Low	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	1,240 r.p.m. / 1,040 r.p.m.	
	Medium	1,040 r.p.m. / 880 r.p.m.	
	Low	840 r.p.m. / 700 r.p.m.	
	Quiet	660 r.p.m. / 560 r.p.m.	
OUTDOOR UNIT Cooling		760 r.p.m.	
OUTDOOR UNIT Heating		680 r.p.m.	760 r.p.m.

NOISE LEVEL

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

COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, Rotary, DC inverter motor	
DISCRIMINATION		DA89X1C-20FZ	DA89X1C-20FZ2
WEIGHT (with oil)		9.8 kg	9.2 kg
PRECHARGED REFRIGERANT		1,050 g	
REFRIGERANT TYPE		R410A	
FULL CHARGE	Pipe length 15 m	1,050 g	
	20 m	1,150 g	
ADDITIONAL CHARGE		20 g/m	
MAXIMUM PIPING HEIGHT		15m	

DIMENSIONS

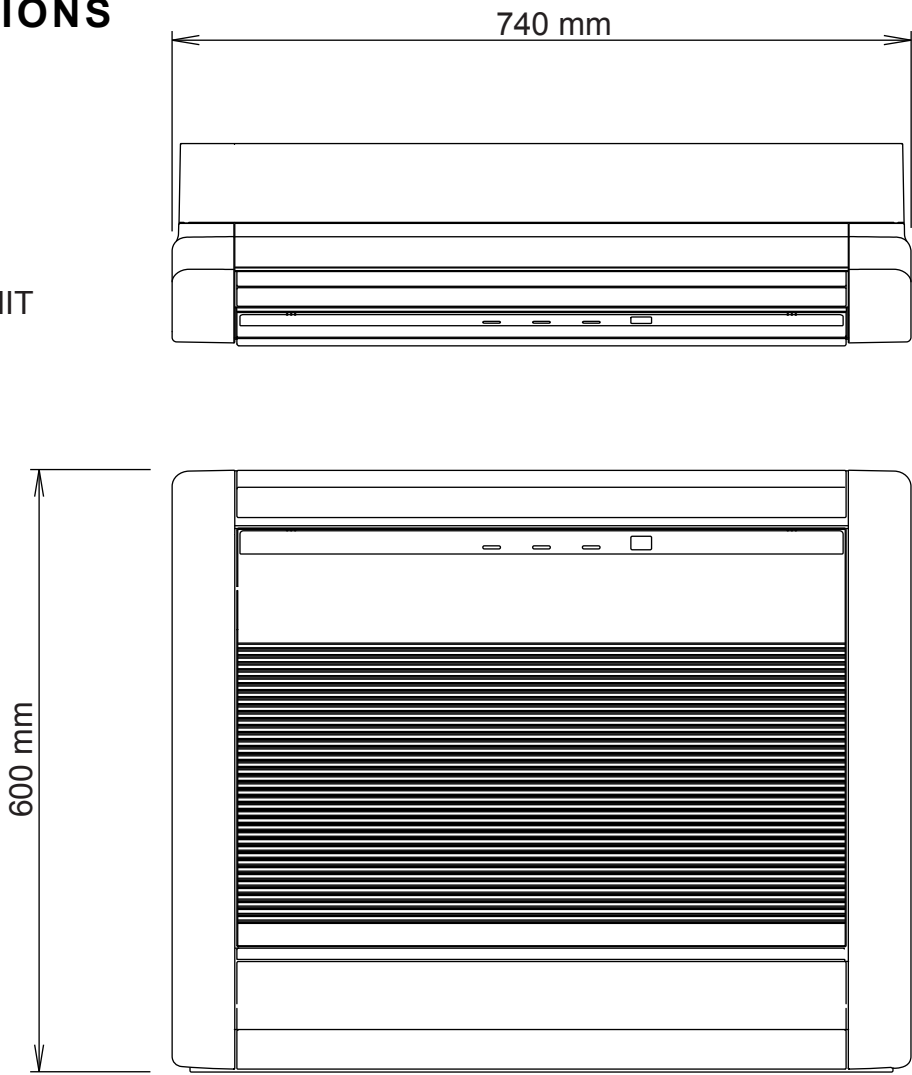
INDOOR UNIT	H x W x D	600 x 740 x 200 mm
OUTDOOR UNIT	H x W x D	540 x 790 x 290 mm

WEIGHT

INDOOR UNIT	Net / Shipping	14 kg / 17 kg
OUTDOOR UNIT	Net / Shipping	36 kg / 40 kg

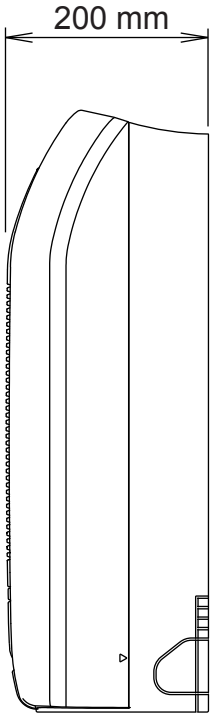
DIMENSIONS

INDOOR UNIT

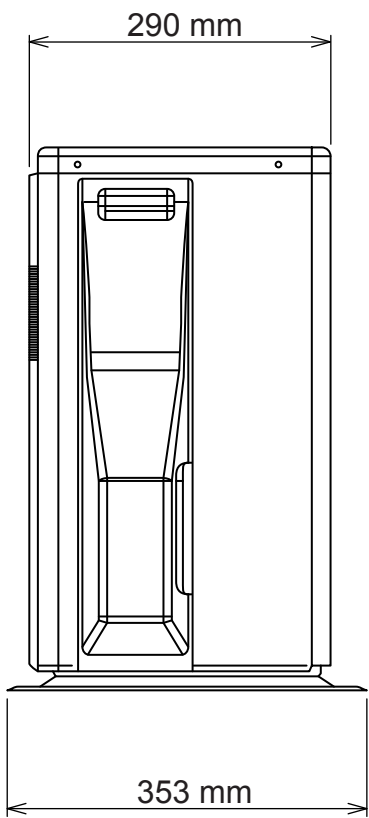
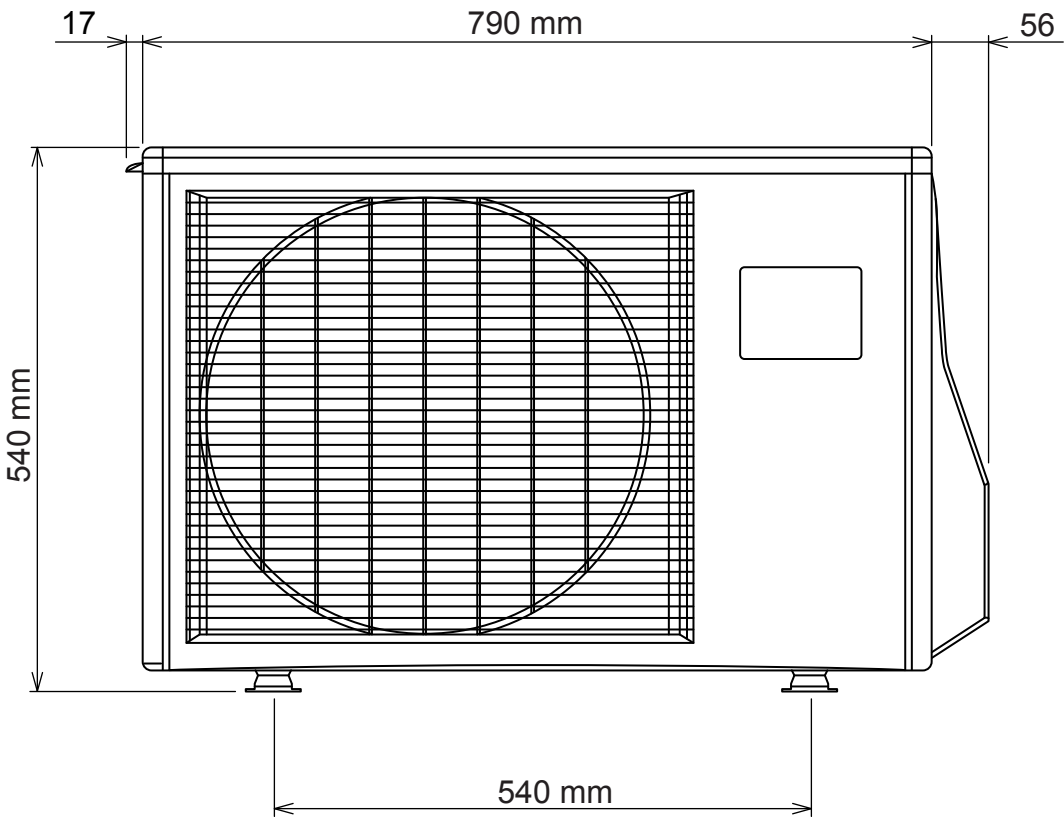


Drain hose length :
600 mm

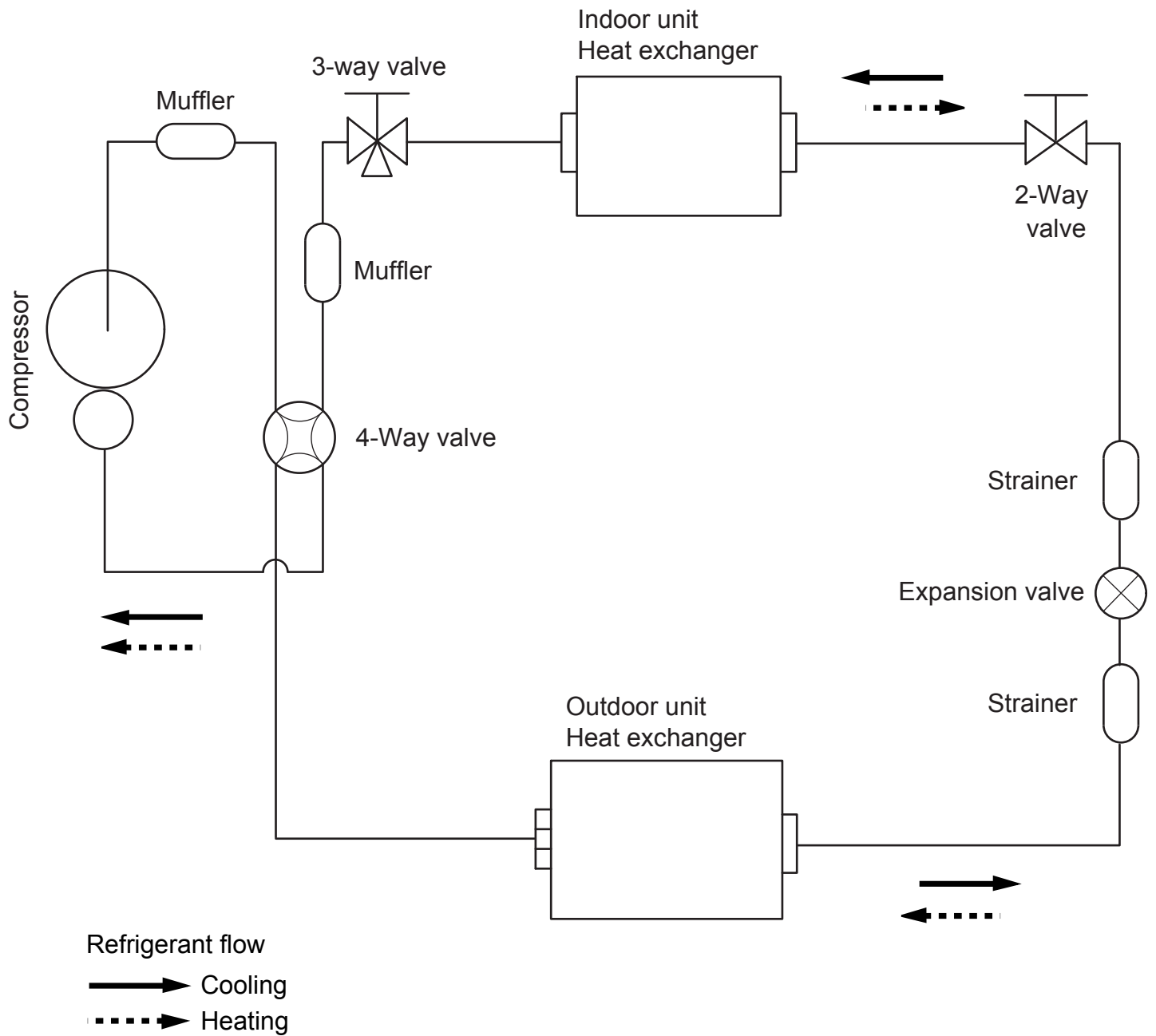
Drain pipe diameter
Inside : 13.8 mm
Outside : 15.8 mm
to 16.7 mm



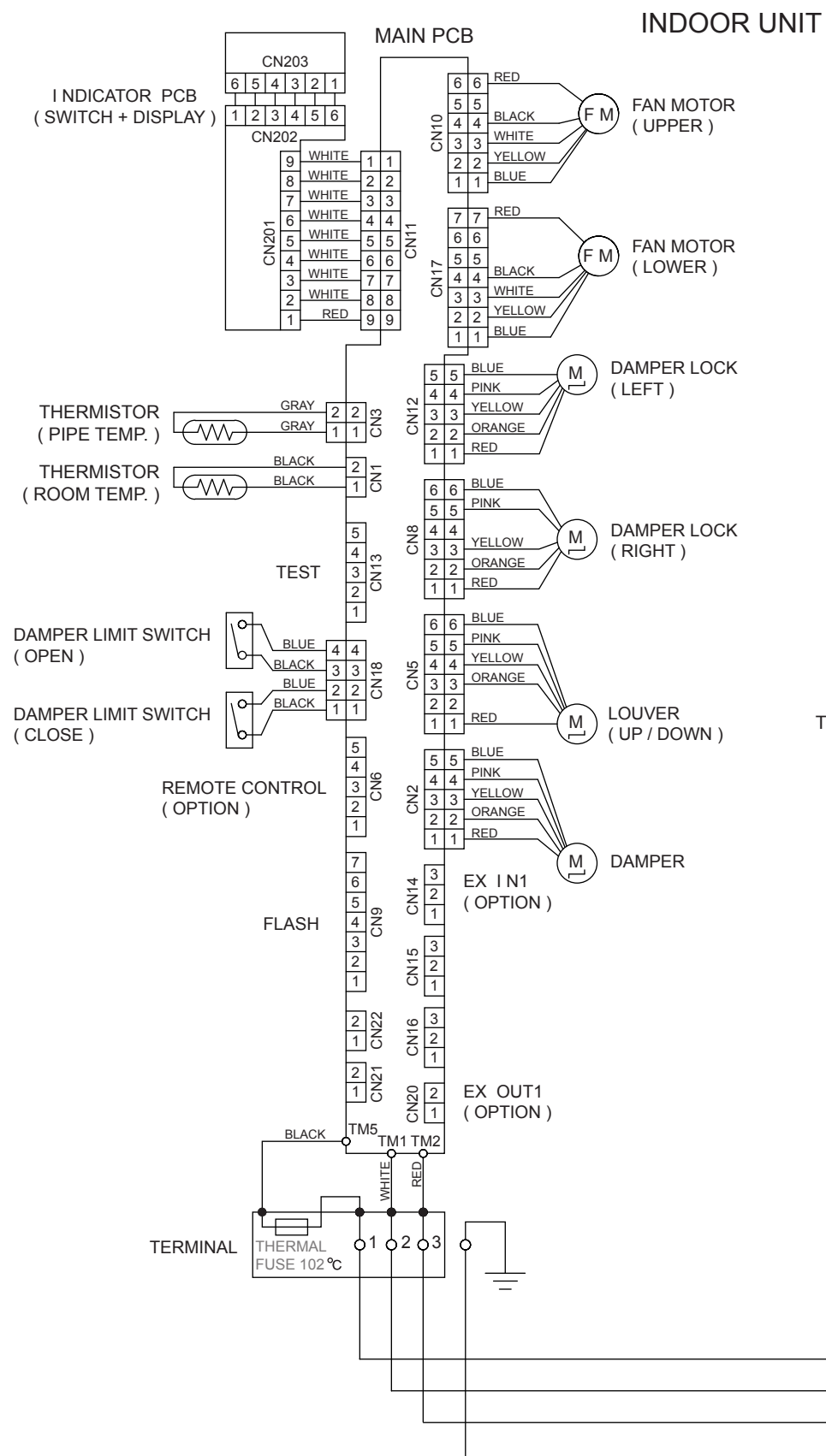
OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM

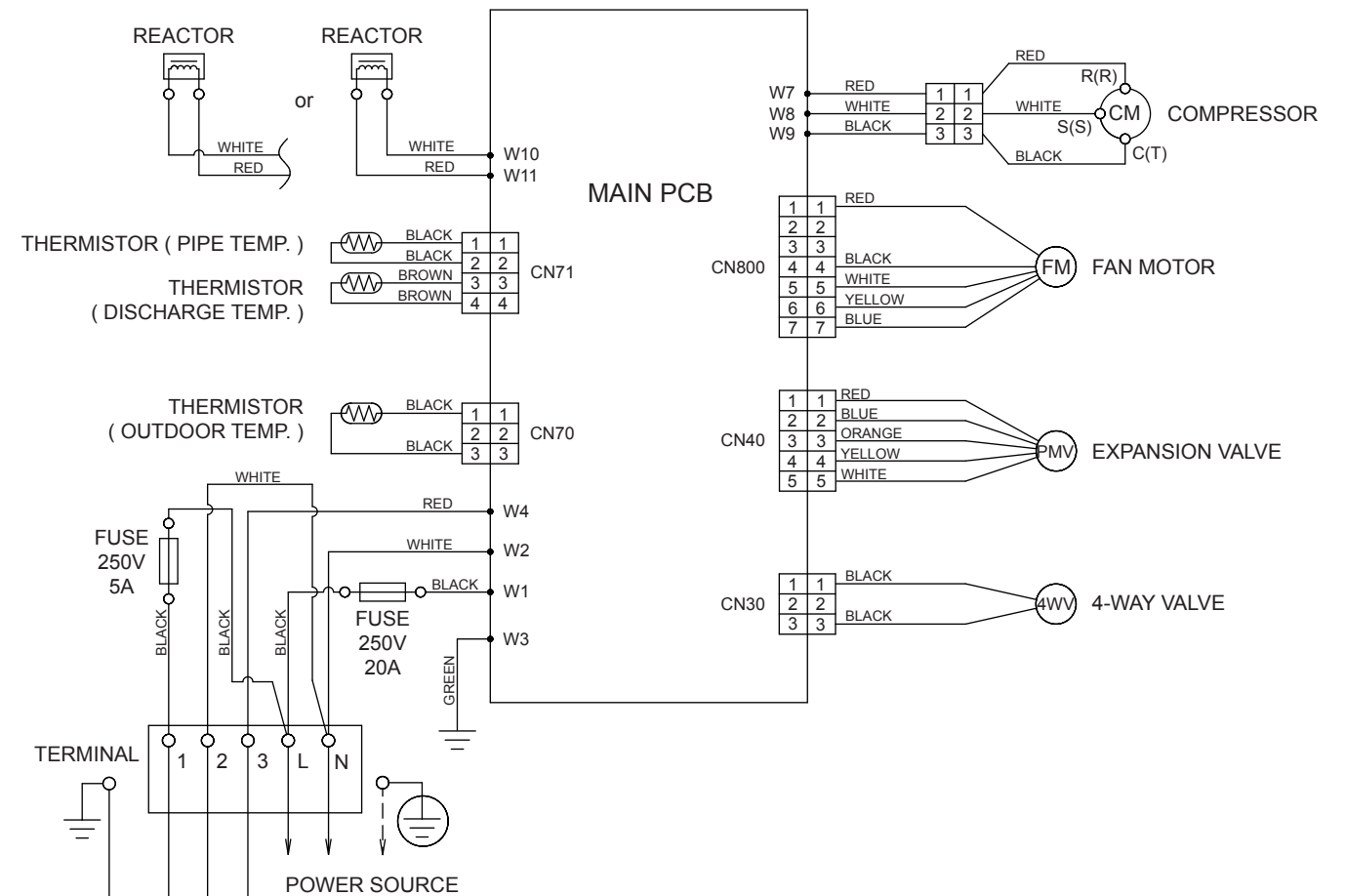


Refrigerant pipe diameter
Liquid : 1/4" (6.35 mm)
Gas : 3/8" (9.52 mm)



CIRCUIT DIAGRAM

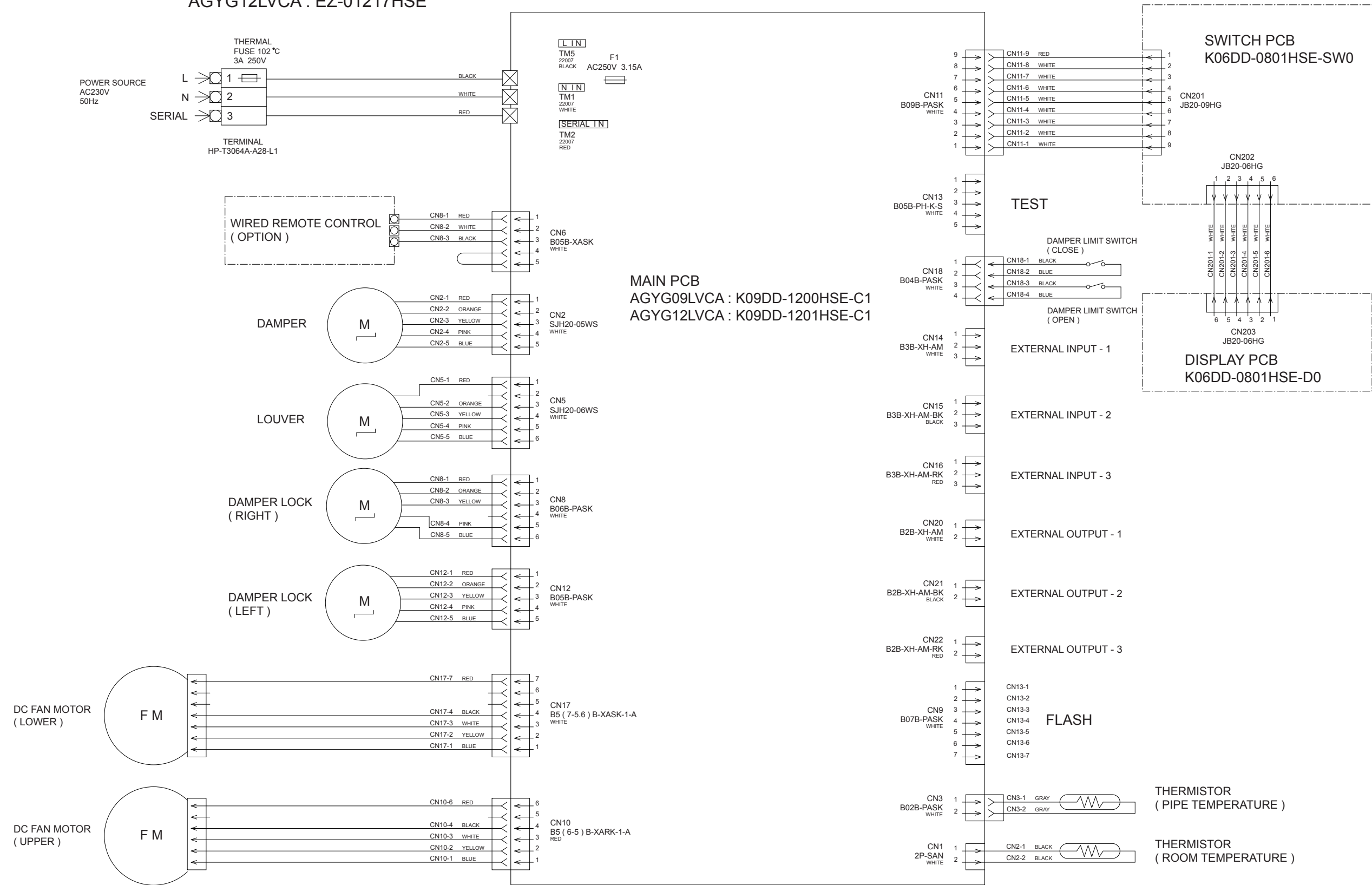
OUTDOOR UNIT



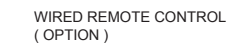
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
AGYG09LVCA : EZ-01216HSE
AGYG12LVCA : EZ-01217HSE

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

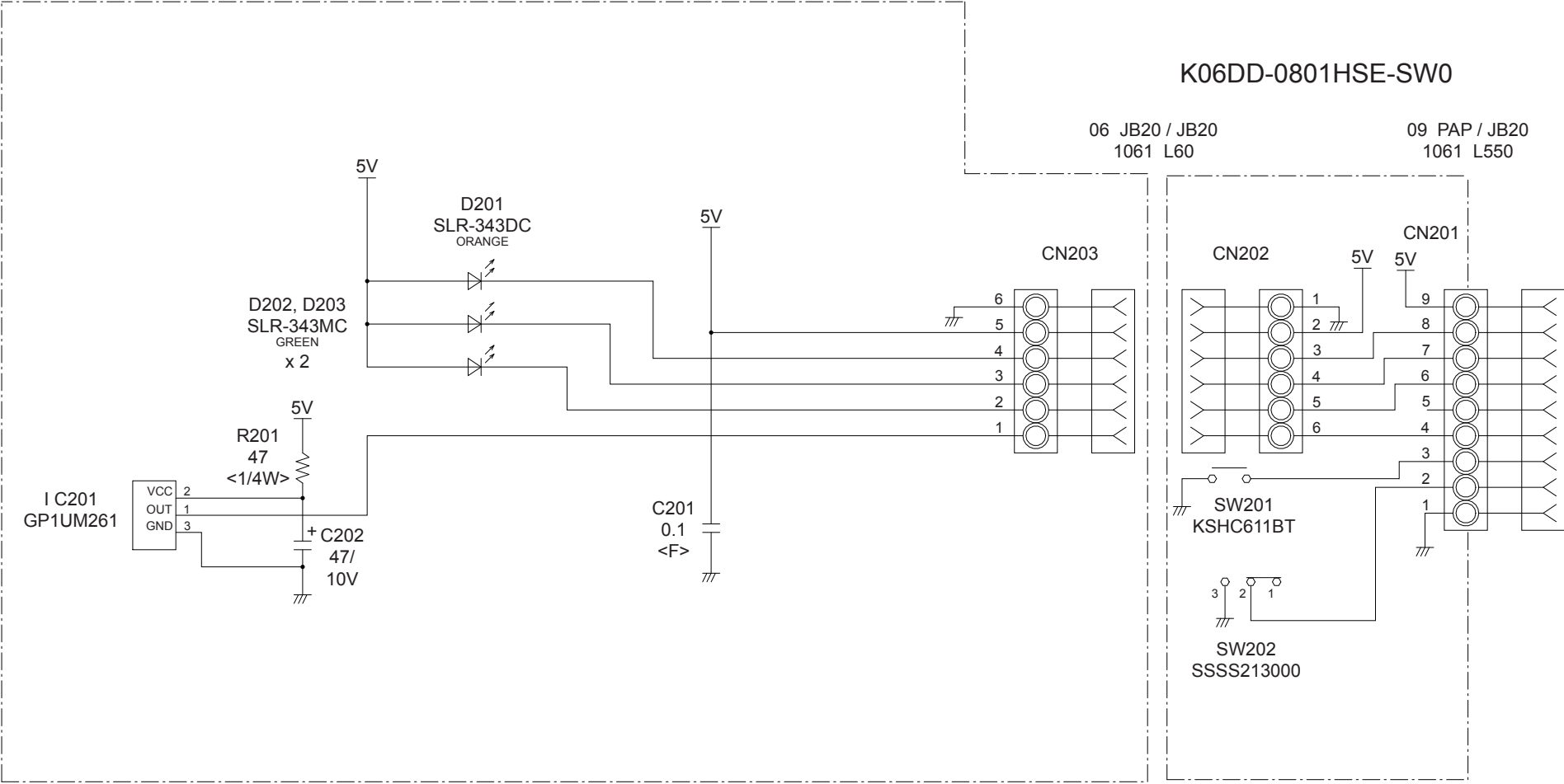


AGYG12LVCA : K09DD-1201HSE-C1



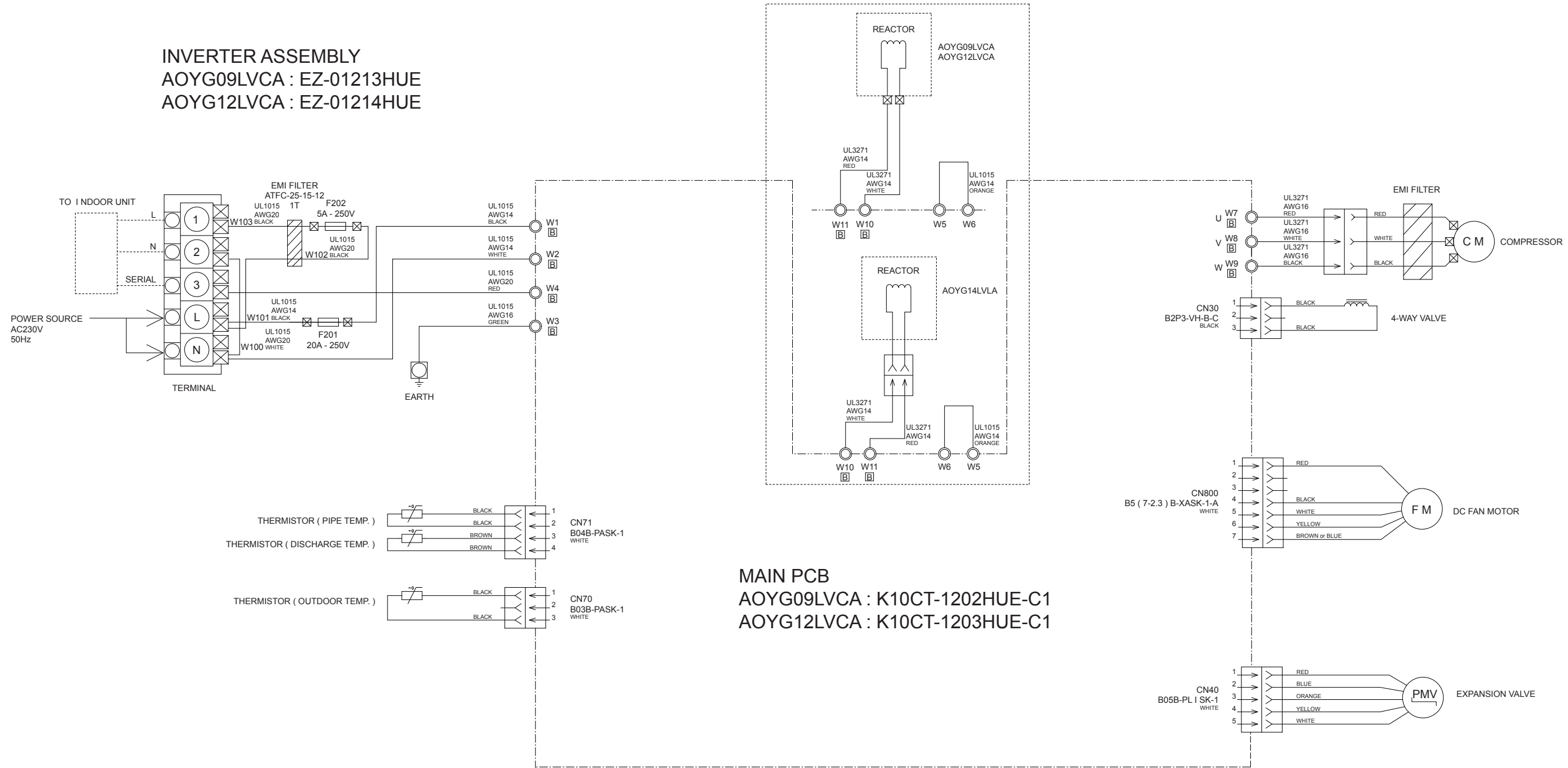
INDOOR UNIT
INDICATOR PCB
K06DD-0801HSE-F0

K06DD-0801HSE-D0

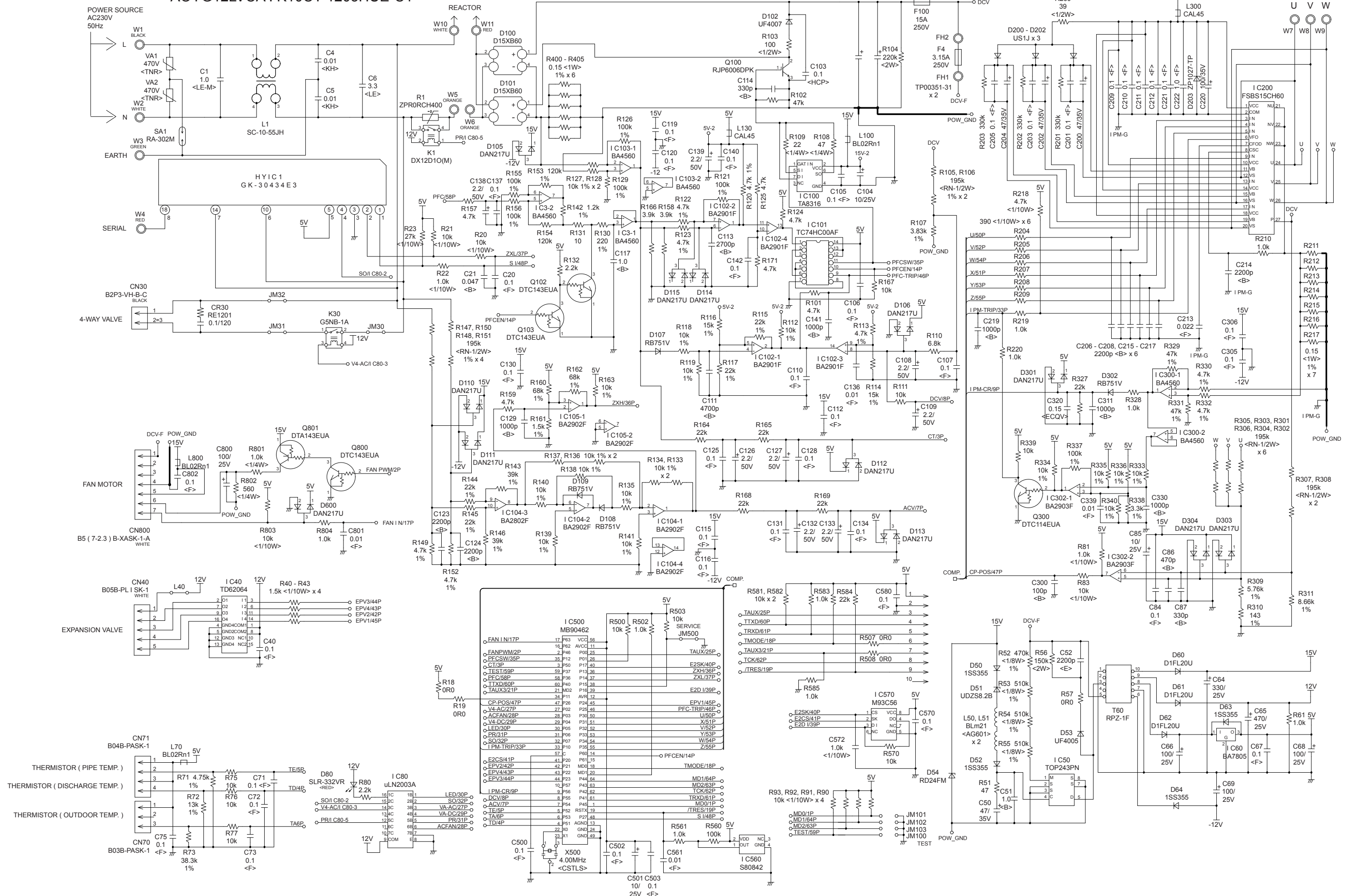


OUTDOOR PCB
CIRCUIT DIAGRAM

INVERTER ASSEMBLY
AOYG09LVCA : EZ-01213HUE
AOYG12LVCA : EZ-01214HUE



OUTDOOR UNIT
MAIN PCB
AOYG09LVCA : K10CT-1202HUE-C1
AOYG12LVCA : K10CT-1203HUE-C1



ERROR DETECTION

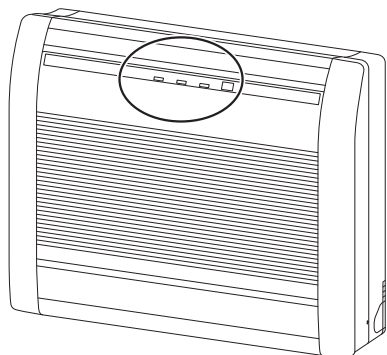
If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

If you use a wired remote control, error codes will appear on the remote control display.

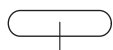
See the lamp blinking patterns and error codes in the table.

An error display is displayed only during operation.

Indoor unit display

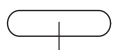


TIMER



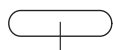
TIMER lamp
(orange)

OPERATION



OPERATION lamp (green)

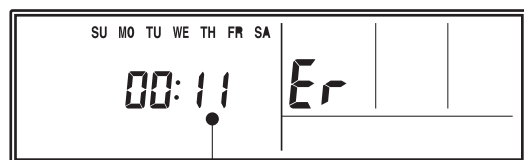
ECONOMY



ECONOMY lamp (green)

Wired remote control display (Option)

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



Error code

● : 0.5s on / 0.5s off

◇ : 0.1s on / 0.1s off

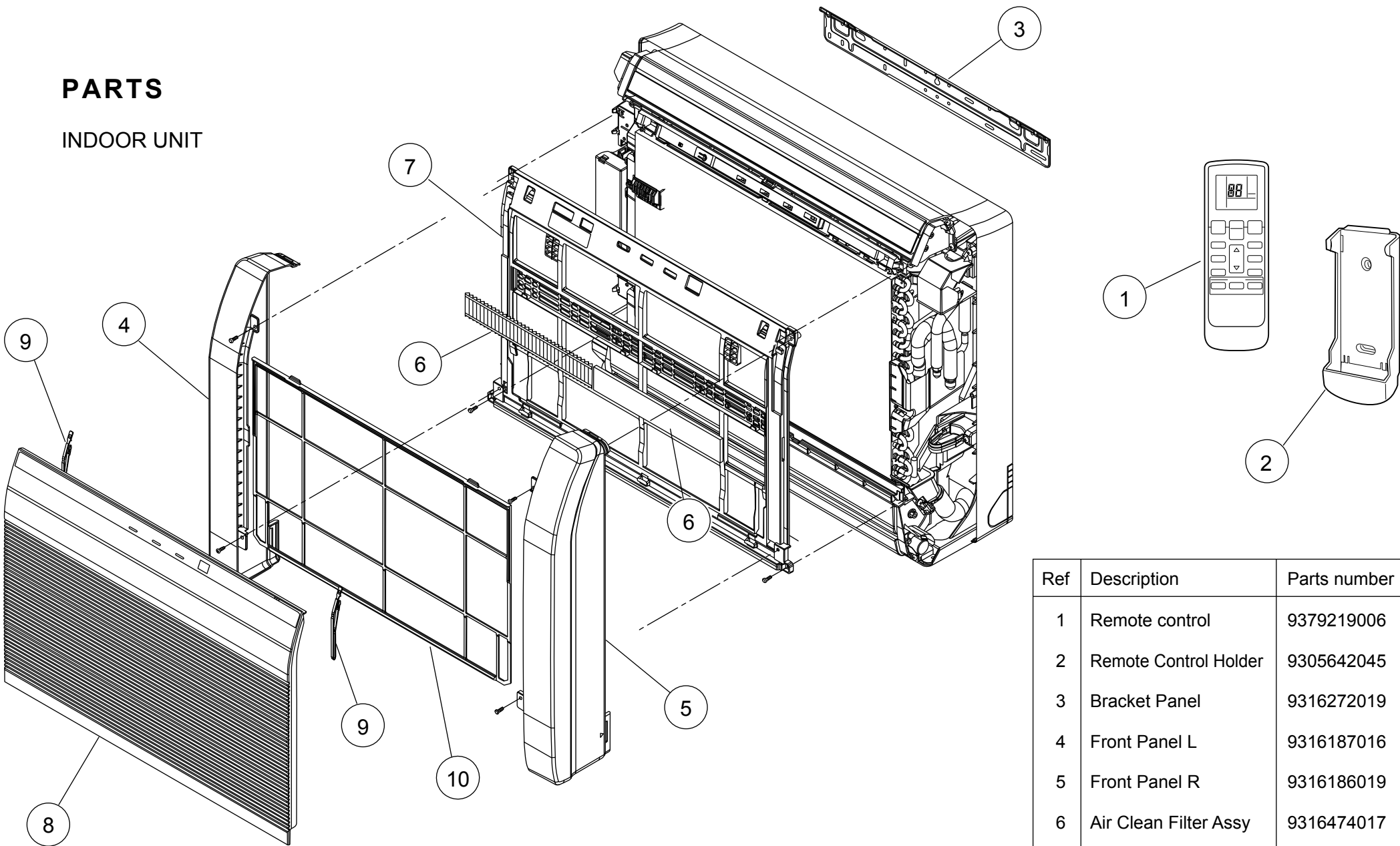
() : Number of flash

Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	Wired remote controller 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 secondary unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(7)	◇	27	Primary unit, secondary 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

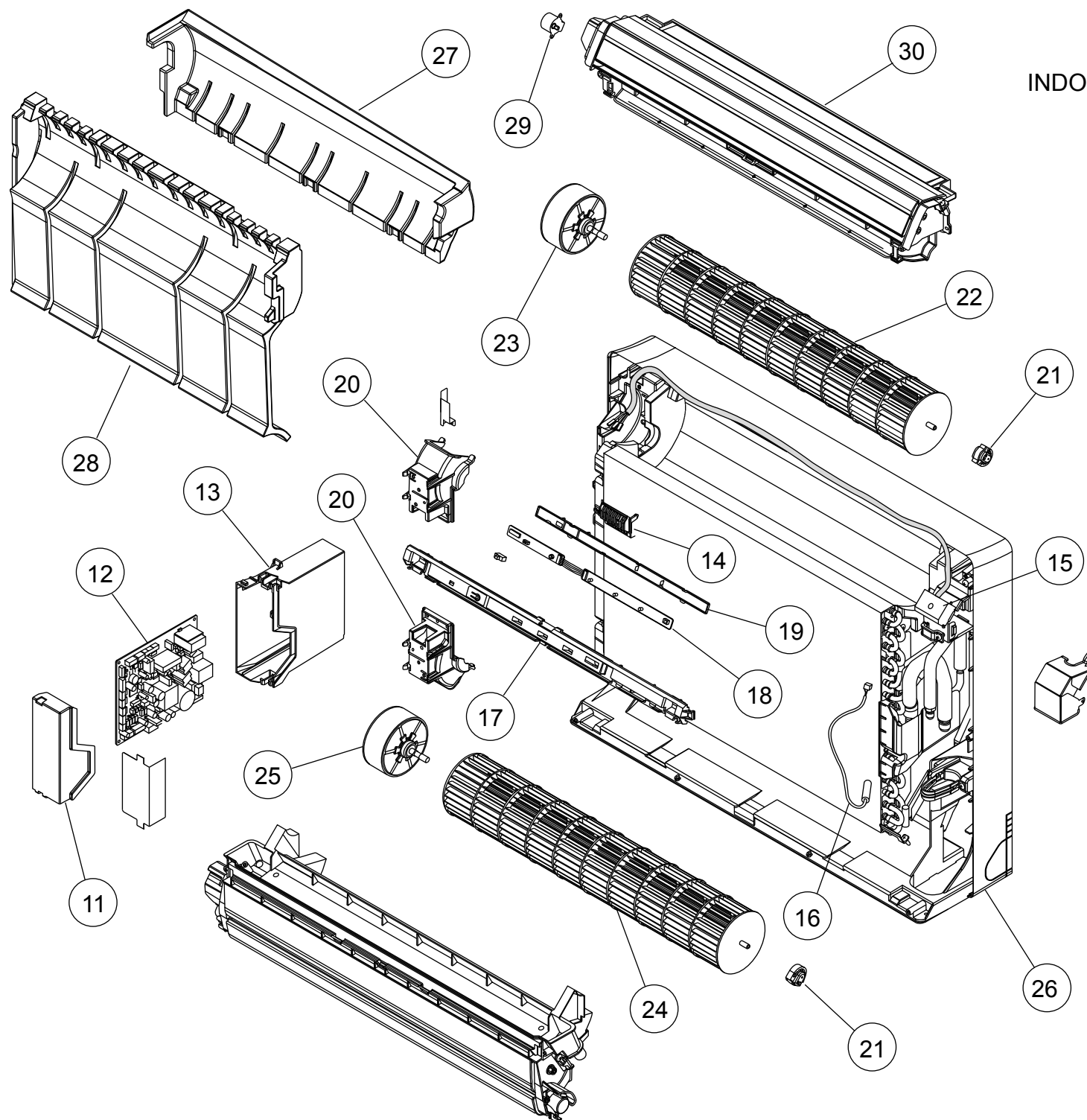
Indoor unit lamps			Wired remote control	Description
OPERATION (green)	TIMER (orange)	ECONOMY (green)		
●(6)	●(10)	◇	6A	Display PCB microcomputers communication error
●(7)	●(1)	◇	71	Discharge temp. sensor error
●(7)	●(2)	◇	72	Compressor temp. sensor error
●(7)	●(3)	◇	73	Outdoor unit Heat Ex. liquid temp. 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

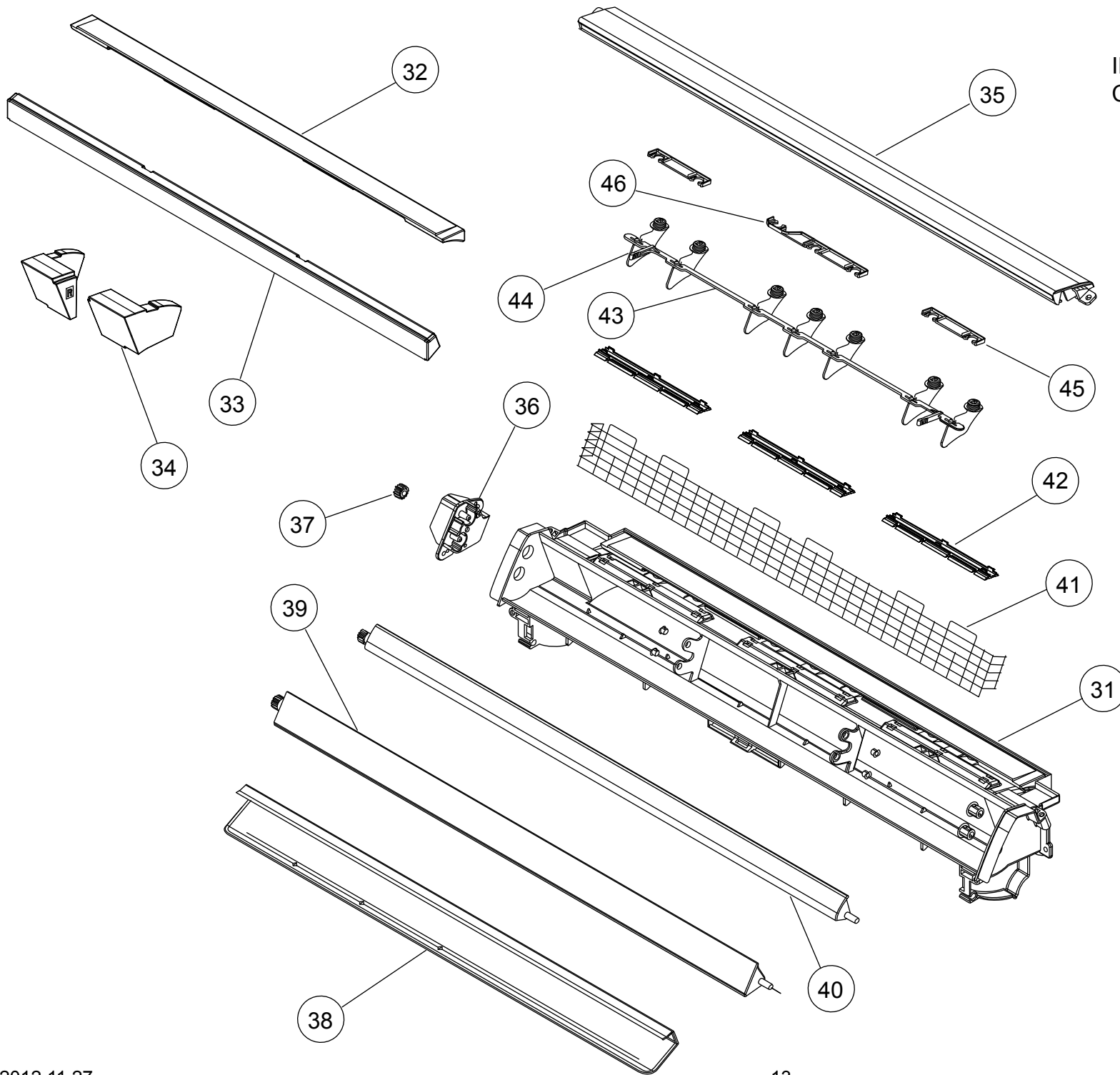


Ref	Description	Parts number	
1	Remote control	9379219006	
2	Remote Control Holder	9305642045	
3	Bracket Panel	9316272019	
4	Front Panel L	9316187016	
5	Front Panel R	9316186019	
6	Air Clean Filter Assy	9316474017	
7	Front Panel	9316185012	
8	Intake Grille Assy	9316418059	
9	Rope Assy	9316458017	
10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



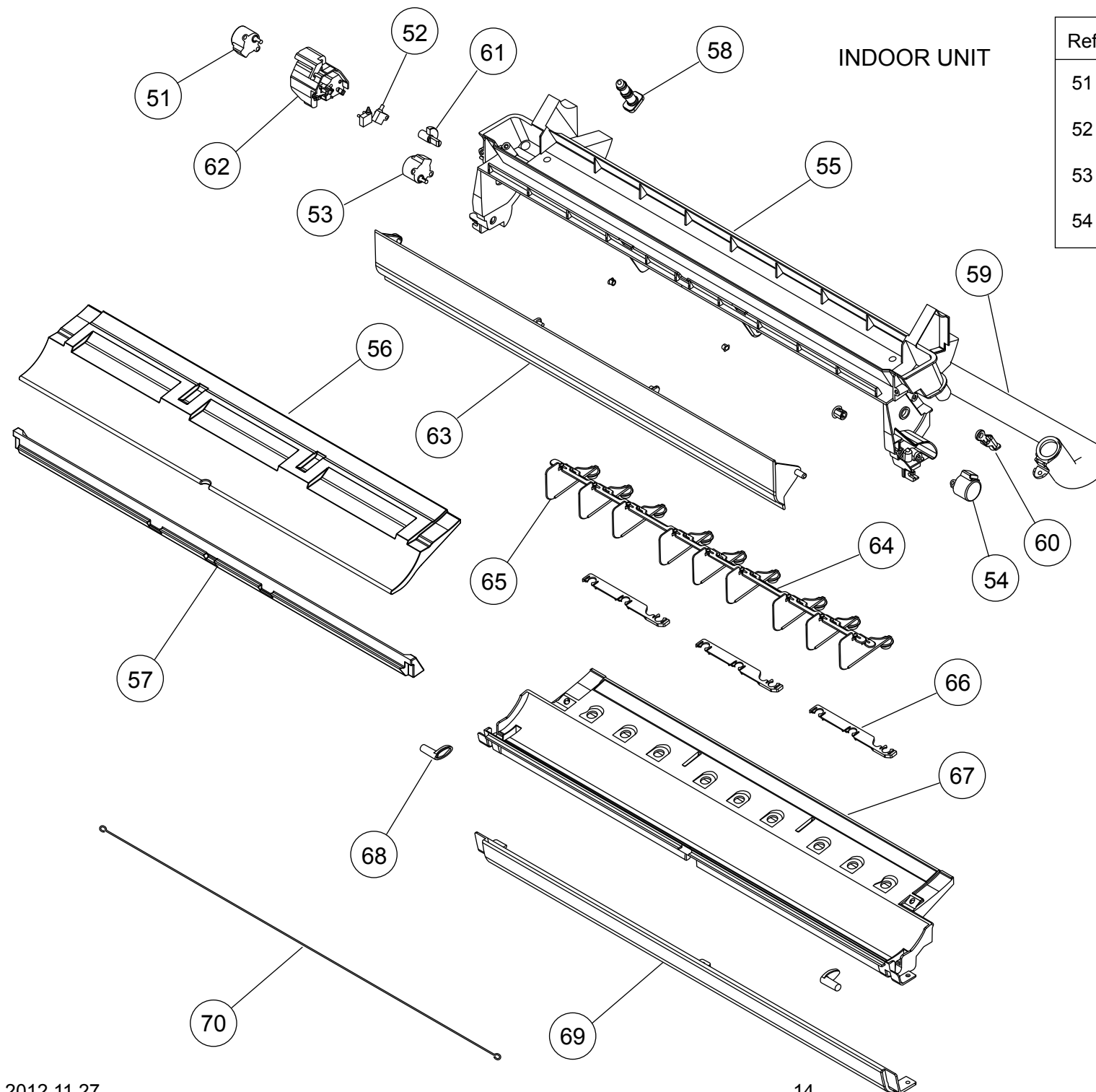
INDOOR UNIT

Ref	Description	Parts number	
11	Control Cover	9316201019	
12	Main PCB (09)	9708532073	
12	Main PCB (12)	9708532080	
13	Control Box	9316200012	
14	Thermistor Holder	9316192010	
15	Terminal	9900385026	
16	Pipe Thermistor	9900425012	
17	Display Case	9316194014	
18	Indicator PCB	9707571042	
19	Display Cover	9316191013	
20	Motor Holder	9316195011	
21	Bearing C Assy	9306628017	
22	Crossflow Fan Assy	9312004034	
23	Fan Motor, MFD-14TXN	9602850006	
24	Crossflow Fan B Assy	9316309012	
25	Fan Motor, MFD-14SXN	9602851003	
26	Base	9316193017	
27	Base Cover A	9316197015	
28	Base Cover B	9316373013	
29	Step Motor (Up / down)	9900384043	
30	Casing Assy	9316411012	



INDOOR UNIT Casing assy

Ref	Description	Parts number	
31	Casing	9316204010	
32	Casing Cover B	9316273016	
33	Casing Cover F	9316308015	
34	Casing Cover LR	9316310018	
35	Top Cover	9316207011	
36	Gear Case	9316213012	
37	Gear A	9309994003	
38	Reinforcement	9316378018	
39	Louver Z (Lower)	9316206014	
40	Louver U (Upper)	9316205017	
41	Fan Guard	9316211018	
42	Guard Holder	9316210011	
43	Joint U	9316209015	
44	R and L Louver U	9316208018	
45	Spacer C	9315281012	
46	Spacer D	9315282019	



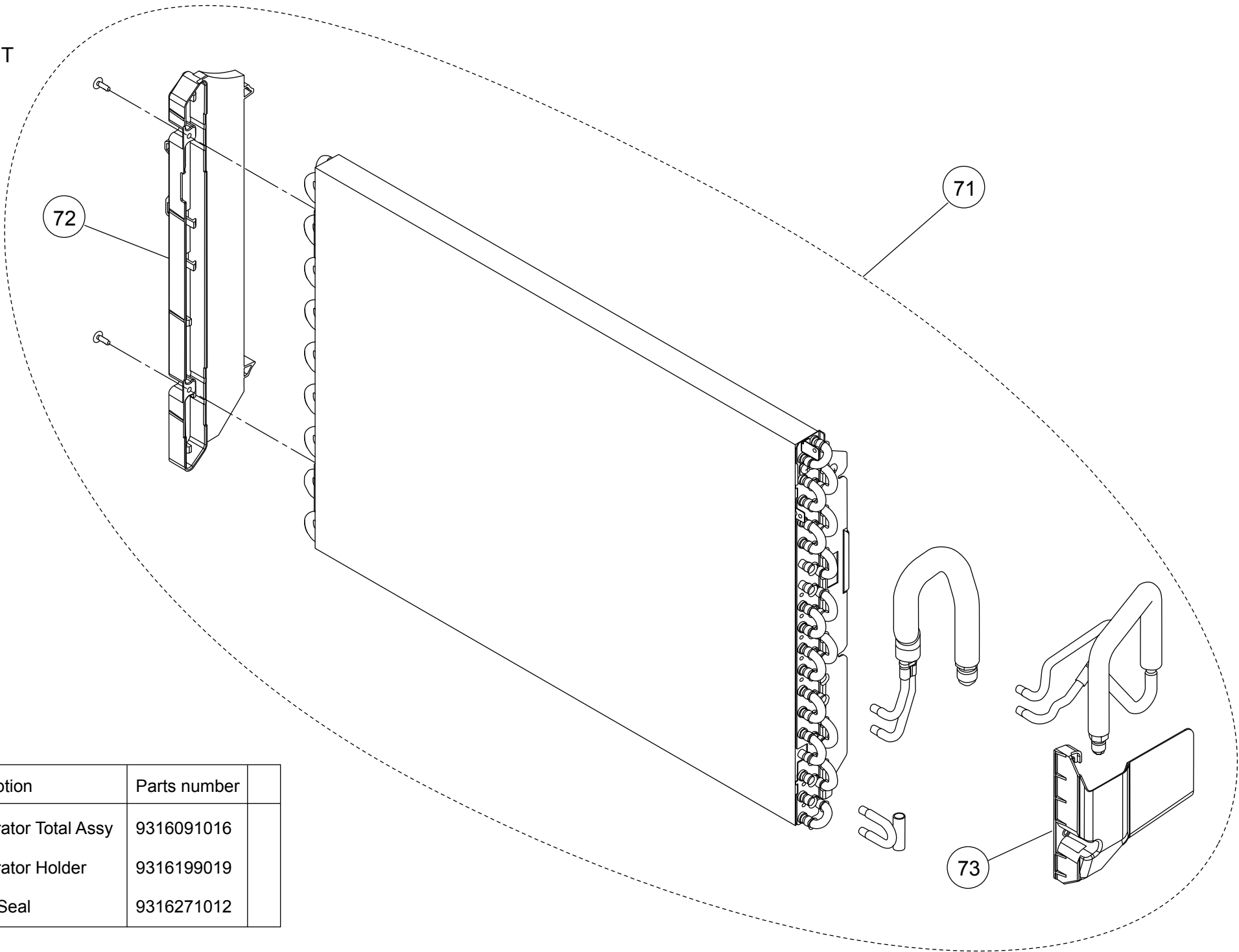
INDOOR UNIT

Ref	Description	Parts number	
51	Motor Step (Damper)	9900384050	
52	Micro Switch (Limit Switch)	9900424015	
53	Motor Step (Damper Lock Left)	9900384067	
54	Step Motor (Damper Lock Right)	9900384074	

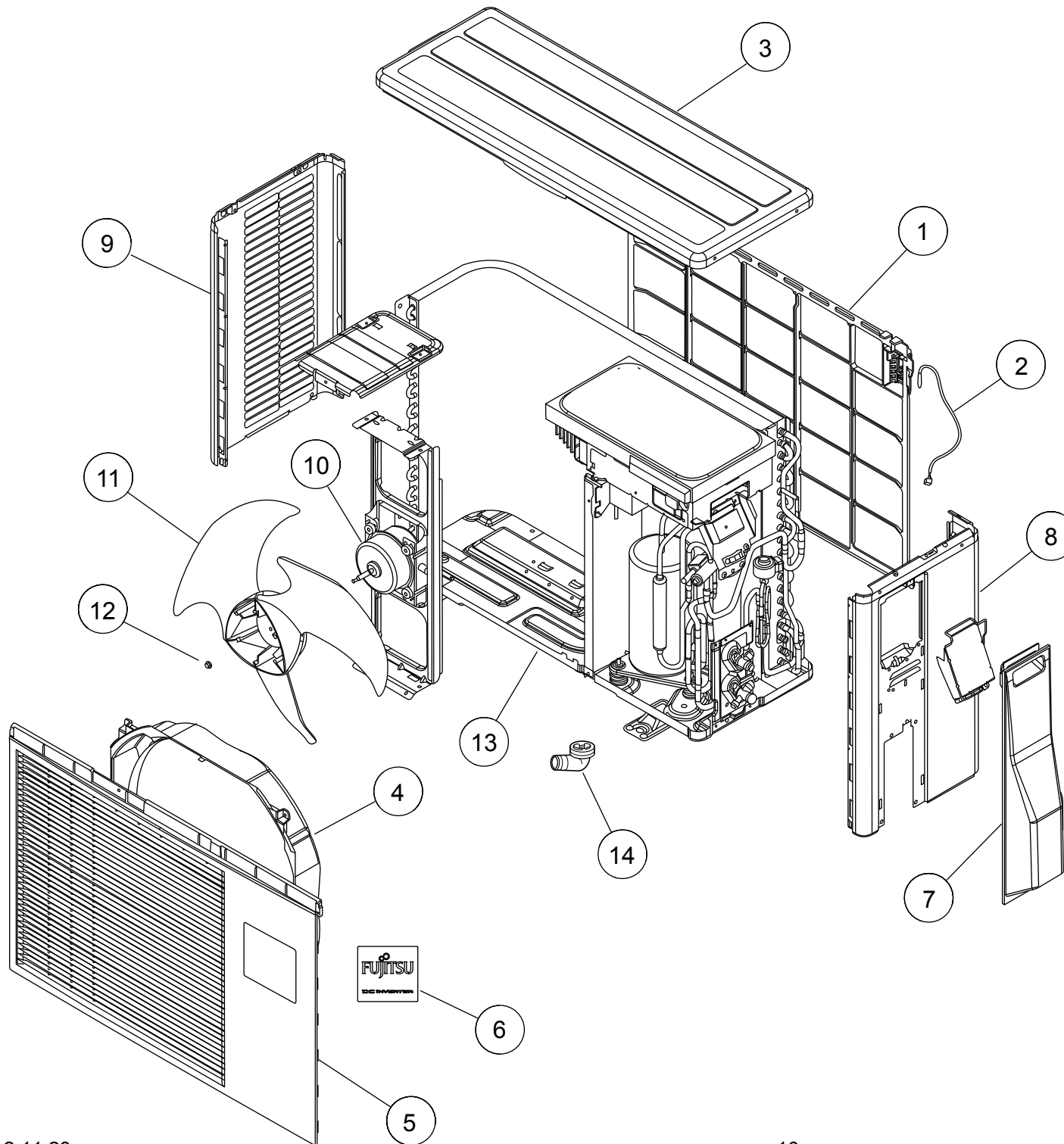
Drain Pan Assy

Ref	Description	Parts number	
--	Drain Pan Assy	9316412019	
55	Drain Pan U	9316214019	
56	Drain Pan Cover B	9316386013	
57	Drain Pan Cover F	9316274013	
58	Drain Cap	9316177017	
59	Drain Hose Assy	9314147029	
60	Drain Holder	9316384019	
61	Key Top	9316218017	
62	Limit Switch Cover	9316217010	
63	Damper	9316216013	
64	Joint Z	9316335011	
65	R and L Louver Z	9316334014	
66	Spacer D	9315282019	
67	Drain Pan Z	9316215016	
68	Stopper	9316219014	
69	Under Cover	9316374010	
70	Fan Guard Z	9316918009	

INDOOR UNIT



Ref	Description	Parts number	
71	Evaporator Total Assy	9316091016	
72	Evaporator Holder	9316199019	
73	Water Seal	9316271012	

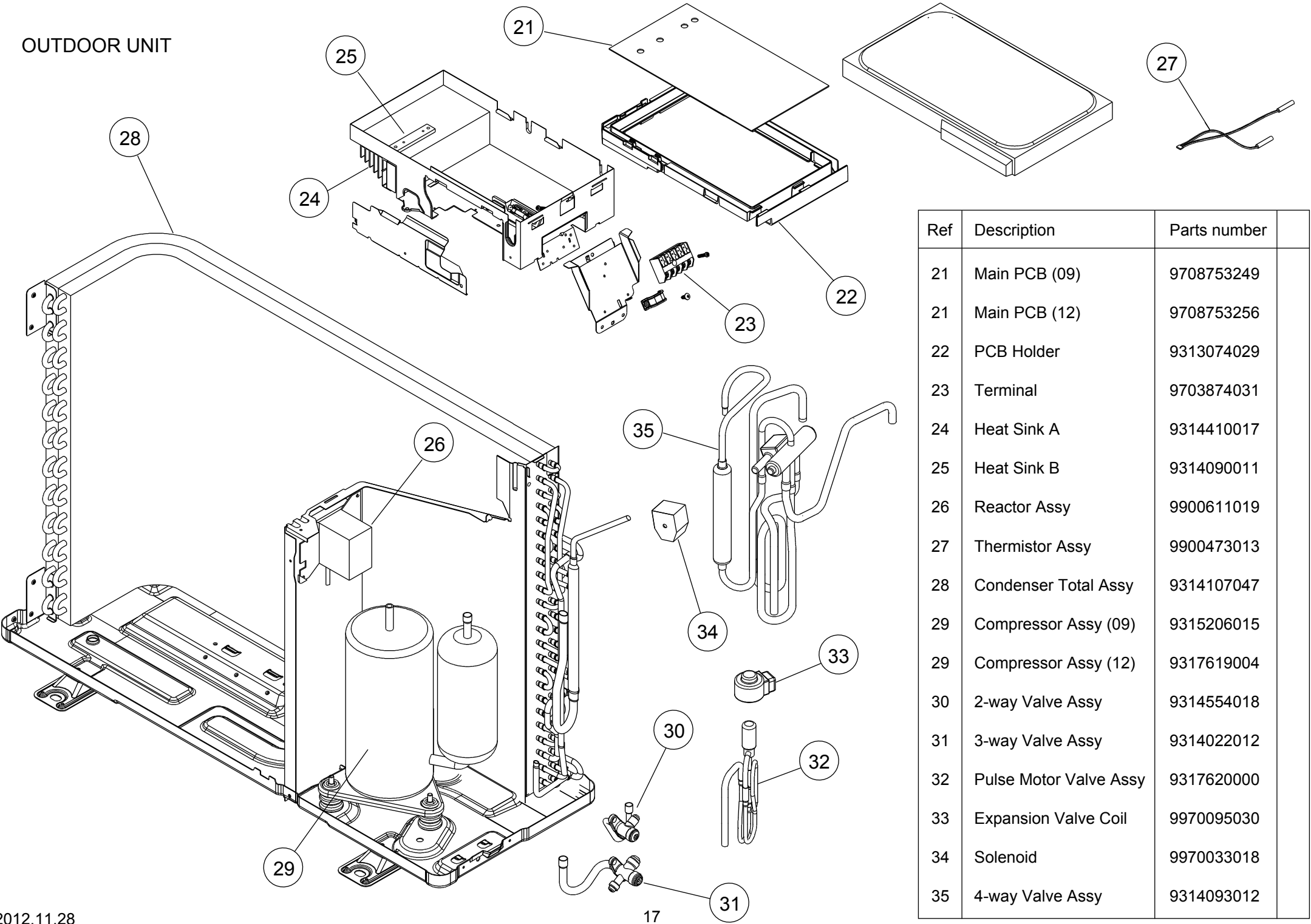


PARTS

OUTDOOR UNIT

Ref	Description	Parts number
1	Protective Net	9313941031
2	Outdoor Thermistor	9900544010
3	Top Panel Assy	9313988029
4	Fan Ring	9313807016
5	Front Panel	9313806026
6	Rear Emblem	9319151007
7	Switch Cover	9310979020
8	Cabinet Right Assy	9313994082
9	Cabinet Left Assy	9313991012
10	Fan Motor	9602111015
11	Propeller Fan	9313808013
12	Nut with Washer	9304902003
13	Base Assy	9316885004
14	Drain Assy	9303029022

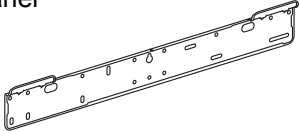
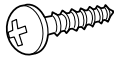
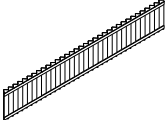
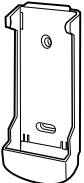
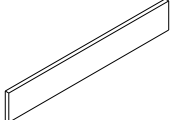
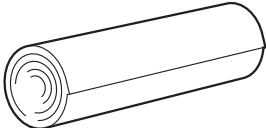
OUTDOOR UNIT



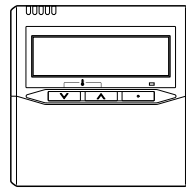
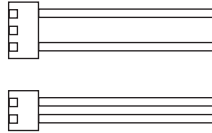
Ref	Description	Parts number	
21	Main PCB (09)	9708753249	
21	Main PCB (12)	9708753256	
22	PCB Holder	9313074029	
23	Terminal	9703874031	
24	Heat Sink A	9314410017	
25	Heat Sink B	9314090011	
26	Reactor Assy	9900611019	
27	Thermistor Assy	9900473013	
28	Condenser Total Assy	9314107047	
29	Compressor Assy (09)	9315206015	
29	Compressor Assy (12)	9317619004	
30	2-way Valve Assy	9314554018	
31	3-way Valve Assy	9314022012	
32	Pulse Motor Valve Assy	9317620000	
33	Expansion Valve Coil	9970095030	
34	Solenoid	9970033018	
35	4-way Valve Assy	9314093012	

ACCESSORIES

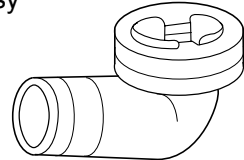
INDOOR UNIT

Name and part number	Q'ty	Name and part number	Q'ty
Bracket panel  9316272019	1	Tapping screw (big) (φ 4 x 25)  0700076046	9
Remote control  9379219006	1	Tpping screw (small) (φ 3 x 12)  0700019036	2
Battery (penlight)  0600185541	2	Electric filter  UTR-FC03-2	1
Remote control holder  9305642045	1	Ion deodrant filter  UTR-FC03-3	1
Cloth tape  9310519004	1		

OPTIONAL PARTS

Name and part model name	
Wired remote control UTY-RNN*M 	
Simple remote control UTY-RSN*M 	
External connect kit UTY-XWZX 	

OUTDOOR UNIT

Name and part model name	Q'ty
Drain pipe Assy  9303029022	1

1211G4129