



INVERTER MULTI
AIR CONDITIONER
DUCT TYPE

SERVICE MANUAL

Indoor unit	Outdoor unit
ARHF09LALU	AOHA18LAT3
ARHF09LALU	AOHA24LAT3



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SPECIFICATIONS

INDOOR UNIT

ELECTRICAL DATA

TYPE	COOL & HEAT MULTI
MODEL NAME	ARHF09LALU
POWER SOURCE	230 V
FREQUENCY	50 Hz
COOLING CAPACITY	2.7 kW
HEATING CAPACITY	3.3 kW
MOISTURE REMOVAL	1.0 L/hr
AIR CIRCULATION HIGH	480 m3/hr

FAN MOTOR

POWER SOURCE	230 V	
DISCRIMINATION	MFG-09TVL	
FAN SPEED	HIGH SPEED	1,010 r.p.m.
	MIDDLE	950 r.p.m.
	LOW	880 r.p.m.
	QUIET	830 r.p.m.
NOISE LEVEL	HIGH	35 dB
	MIDDLE	33 dB
	LOW	31 dB
	QUIET	30 dB

Note : Static pressure : 0 pa

Duct length : Inlet 1m, Outlet 2m (indoor unit)

MEASUREMENT

DIMENSIONS	H x W x D	217 x 663 x 595 mm
WEIGHT	Gross / Net	22 kg / 18 kg

OUTDOOR UNIT

ELECTRICAL SPECIFICATIONS

TYPE		Colling & Heating	
MODEL NAME		AOHA18LAT3	AOHA24LAT3
COOLING CAPACITY		5.4 kW	6.8 kW
HEATING CAPACITY		6.8 kW	8.0 kW
POWER SUPPLY		(220V) - 230V - (240V)	
FREQUENCY		50 Hz	
RUNNING CURRENT	Cooling	5.9 A	8.5 A
	Heating	7.1 A	8.8 A
INPUT	Cooling	1.35 kW	1.94 kW
	Heating	1.62 kW	2.00 kW
EER	Cooling	4.00 kW/kW	3.50 kW/kW
	Heating	4.20 kW/kW	4.00 kW/kW
AIR CIRCULATION HIGH		3,050 m ³ /hr	3,300 m ³ /hr

FAN MOTOR

DISCRIMINATION	MFE-60PO	
HIGH SPEED (COOL)	730 r.p.m.	780 r.p.m.
HIGH SPEED (HEAT)	660 r.p.m.	780 r.p.m.

COMPRESSOR AND REFRIGERANT

TYPE	Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary	
DISCRIMINATION	DA150A1F-20NA	
WEIGHT (with oil)	10.0 kg	
PRECHARGED REFRIGERANT	2,200 g	
REFRIGERANT TYPE	R410A	
FULL CHARGE AMOUNT	Total pipe length 30 m	2,200 g
	40 m	2,400 g
	50 m	2,600 g
ADDITIONAL CHARGE	20 g/m	
CHARGELESS	30 m	
MAX PIPE LENGTH (each unit)	25 m	
MAX PIPE LENGTH (total)	50 m	
MAX ELEVATION (between indoor units)	10 m	
MAX ELEVATION (between indoor and outdoor)	15 m	
MIN. PIPE LENGTH (each unit)	5 m	

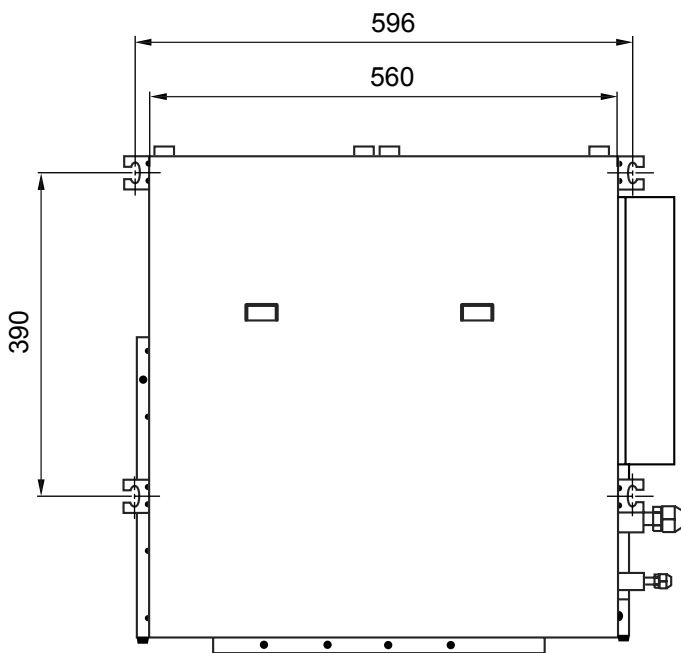
MEASUREMENT

DIMENSIONS	H x W x D	700 x 900 x 330 mm
WEIGHT	Net / Gross	55 kg / 63 kg

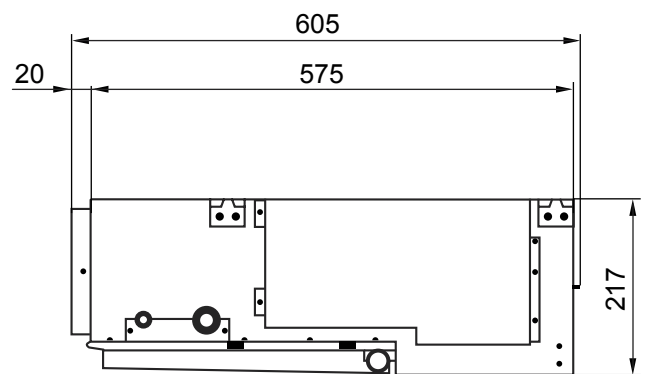
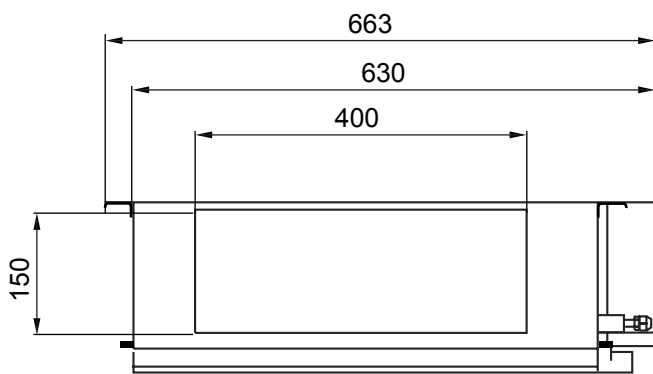
OUTLINE AND DIMENSIONS

INDOOR UNIT

Unit : mm

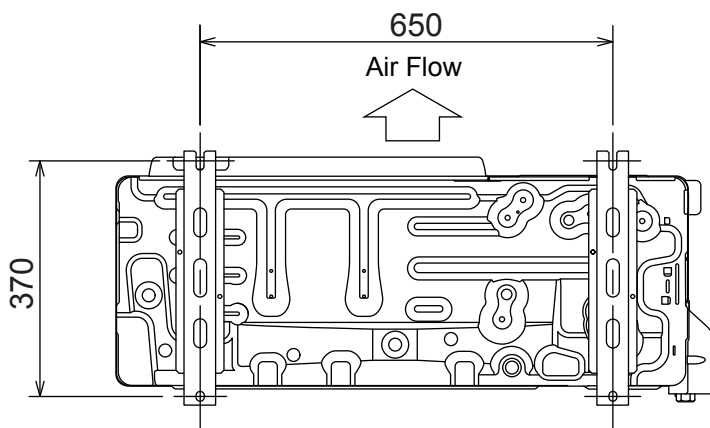
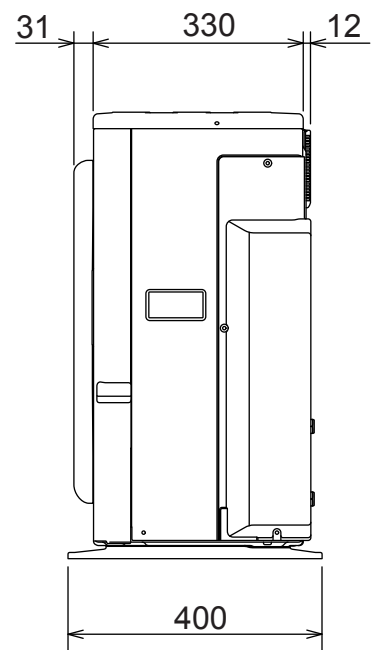
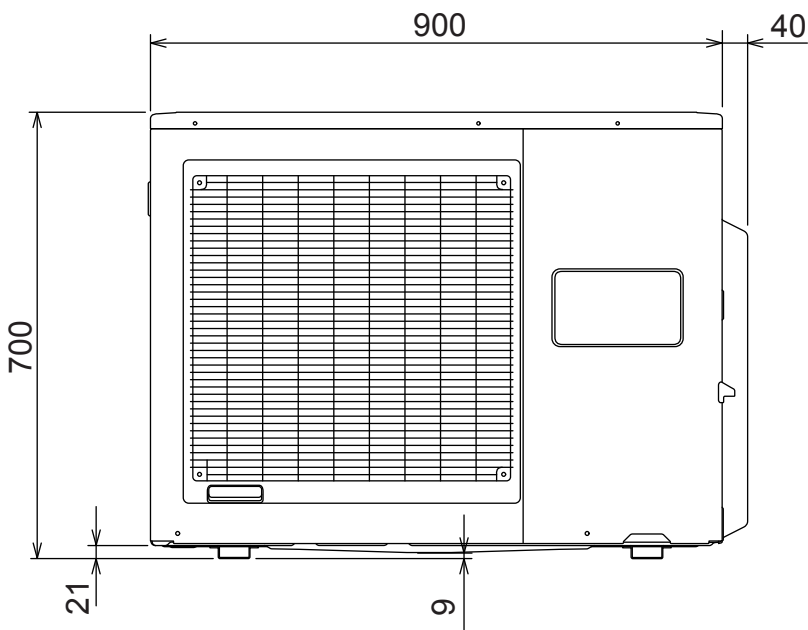
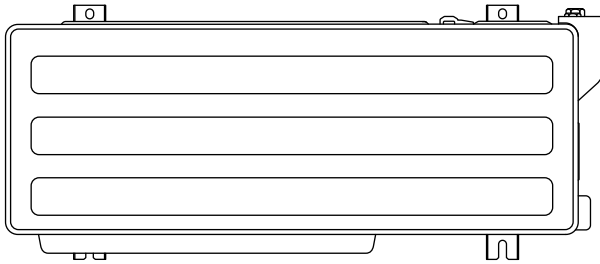


Drain pipe diameter
Inside : 21.5 mm
Outside : 26.0 mm



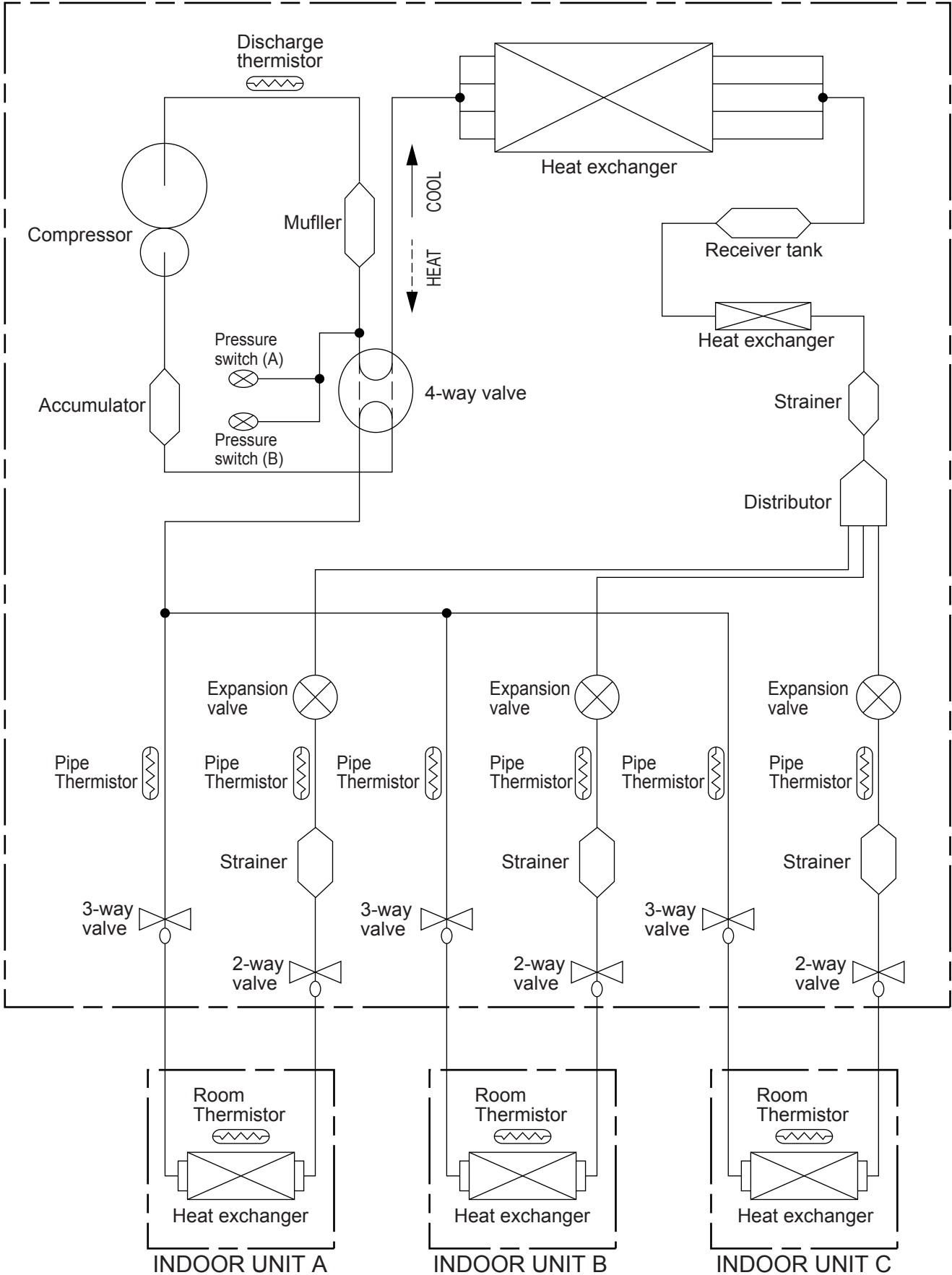
OUTDOOR UNIT

(Unit : mm)



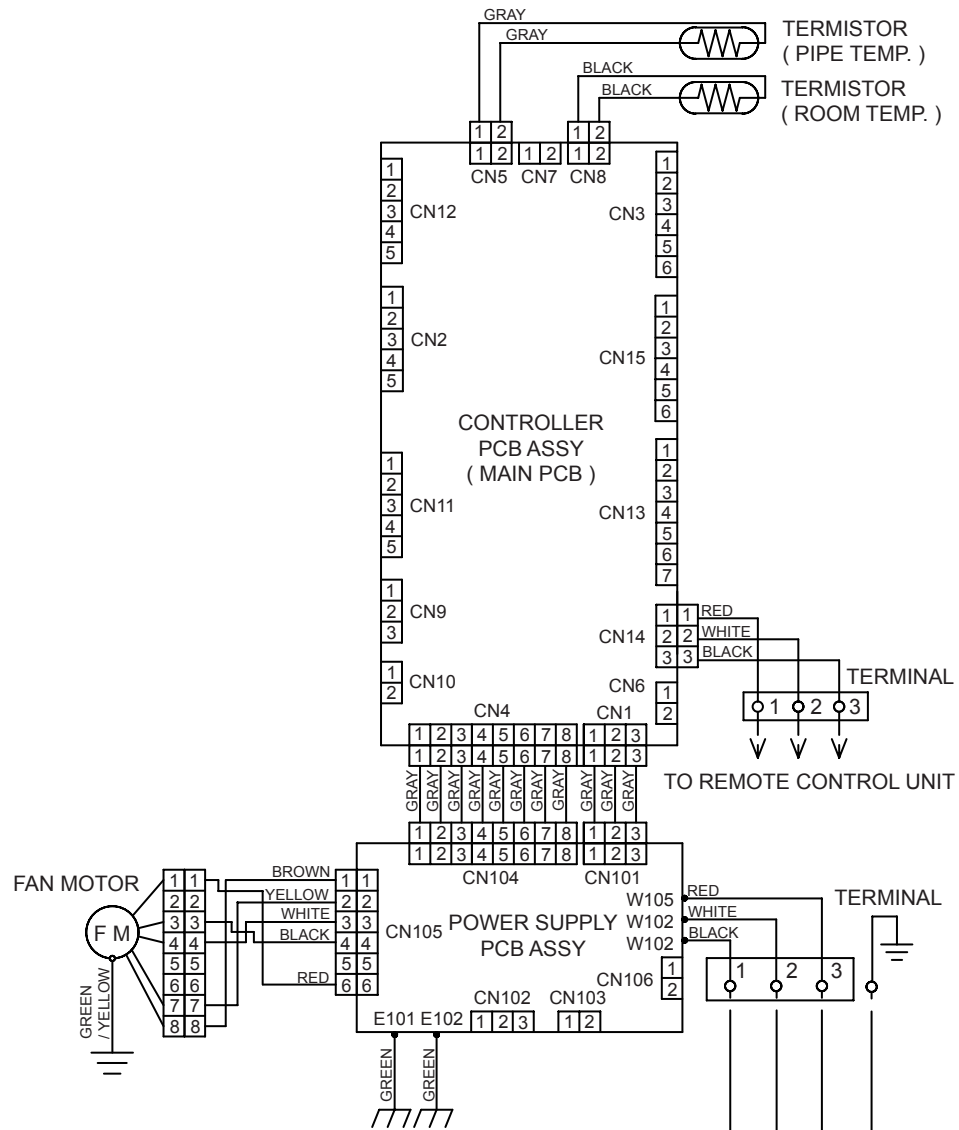
REFRIGERANT SYSTEM DIAGRAM

OUTDOOR UNIT

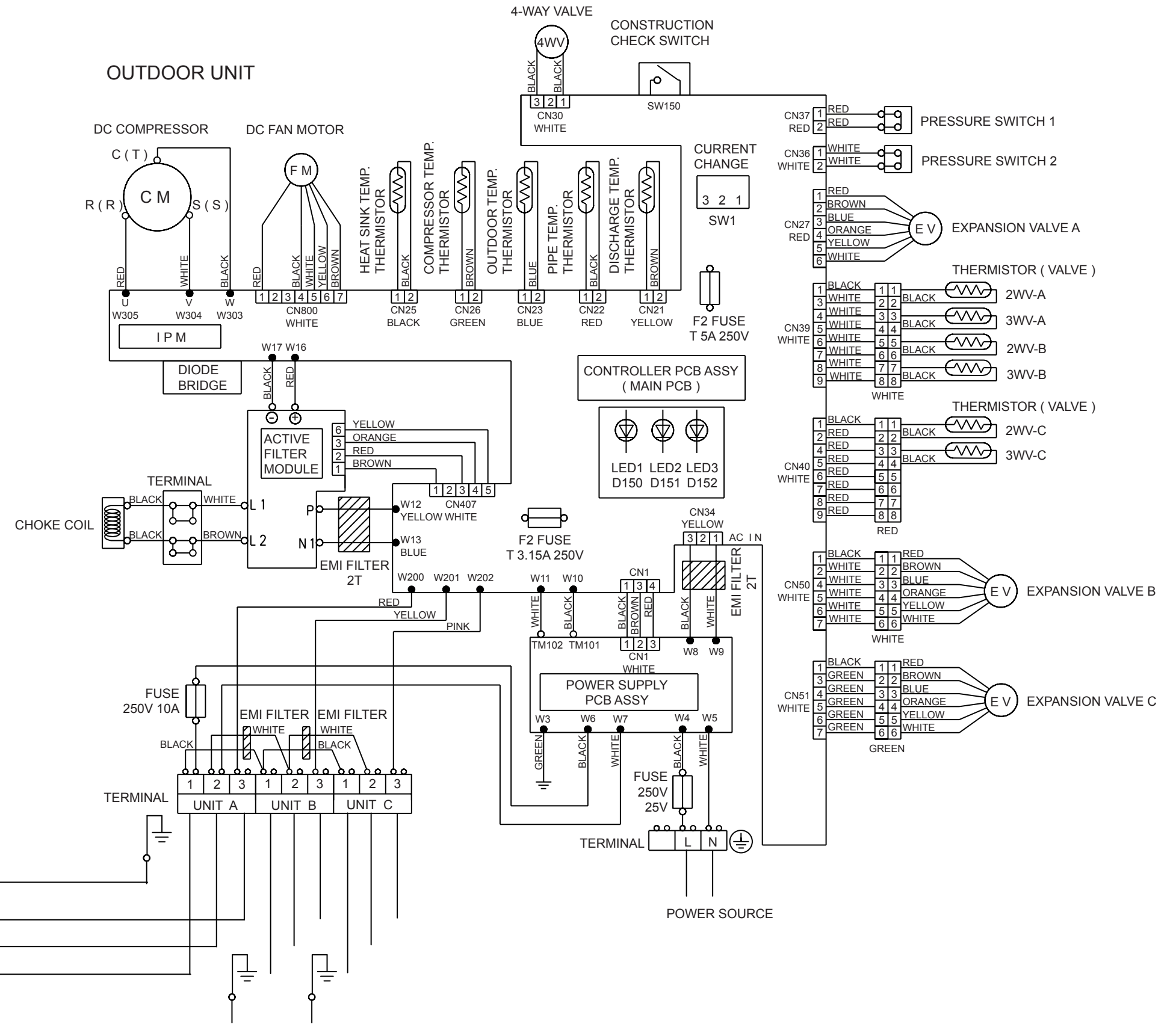


CIRCUIT DIAGRAM

INDOOR UNIT

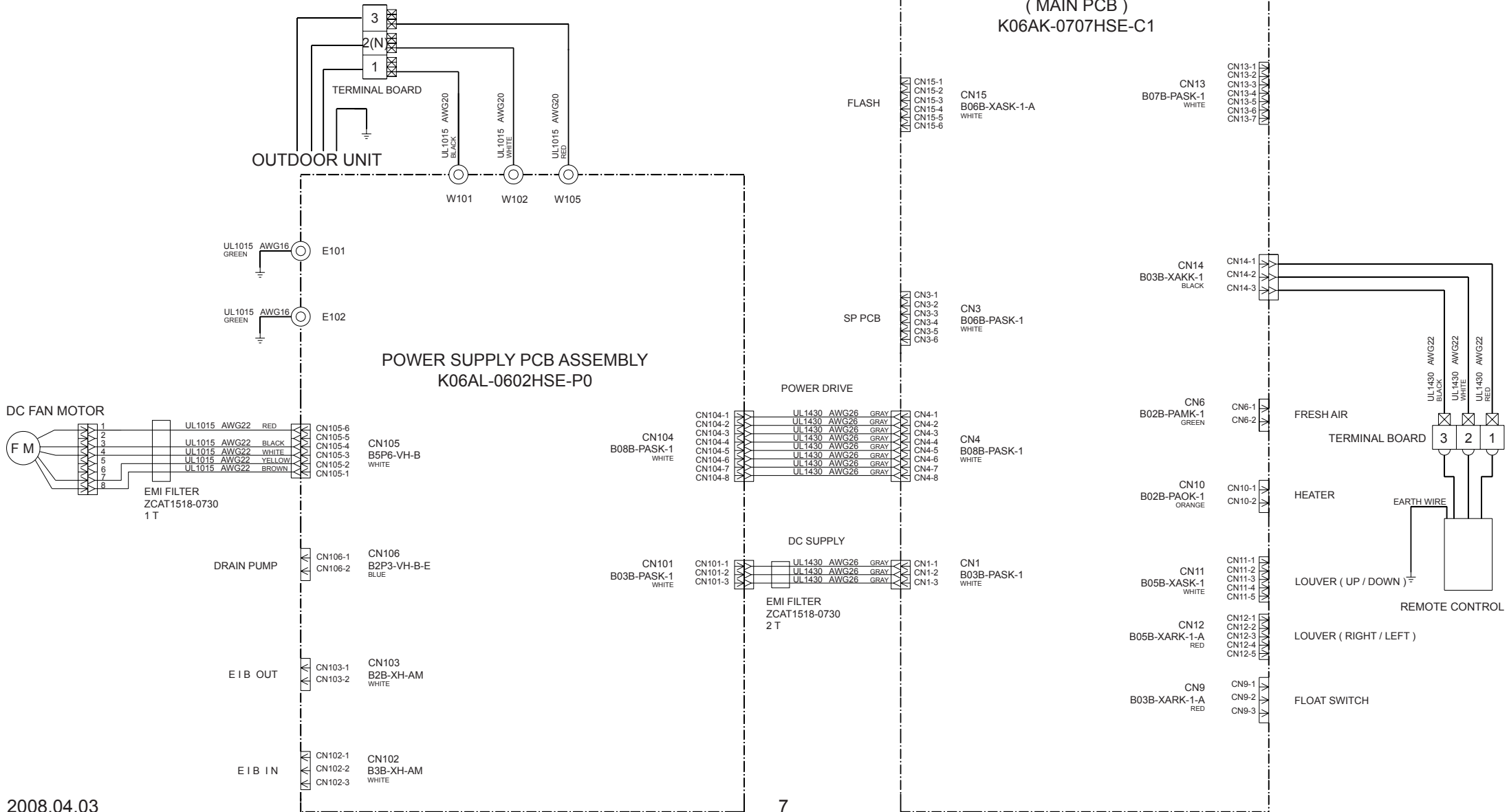


OUTDOOR UNIT

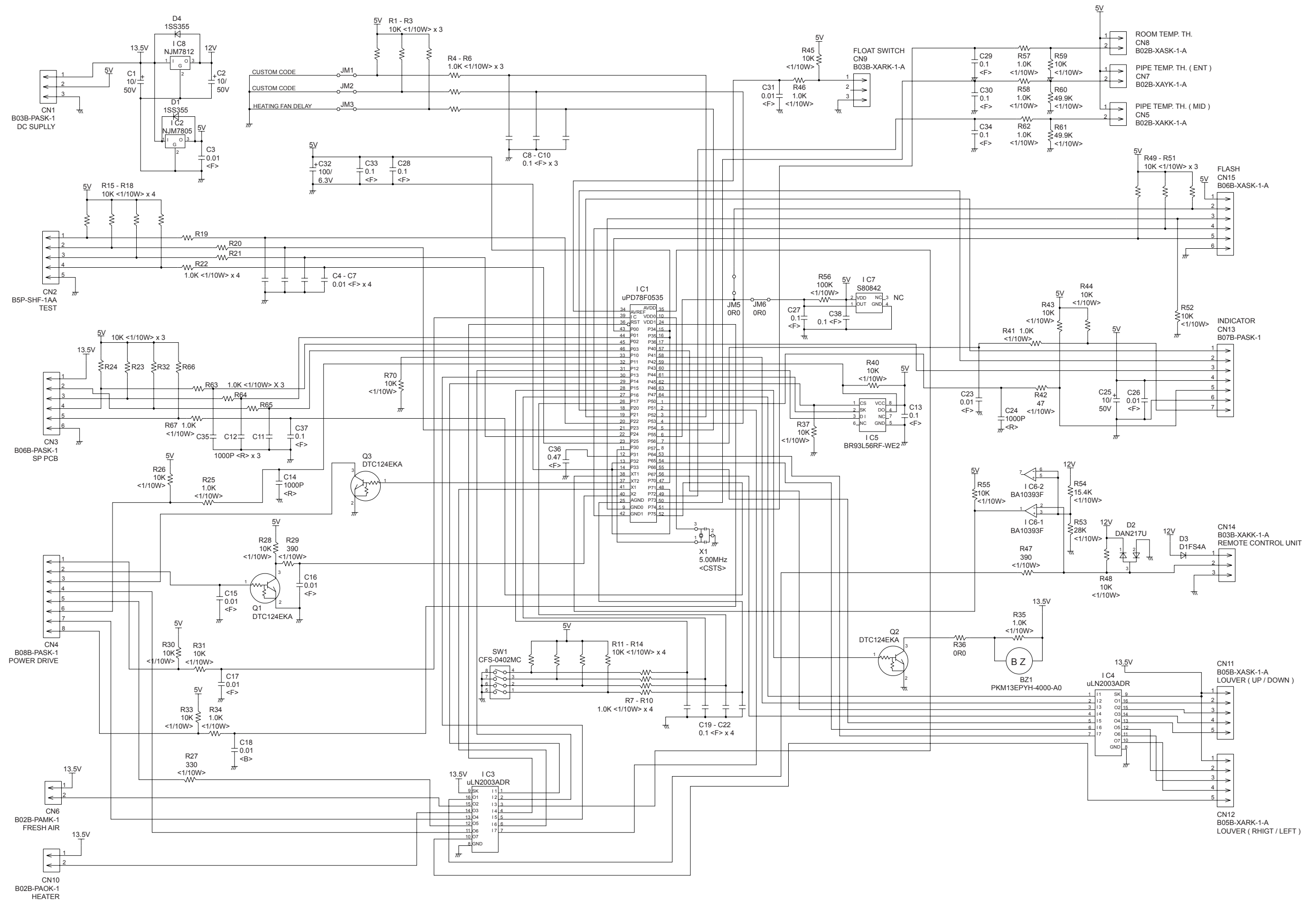


INDOOR PCB CIRCUIT DIAGRAM

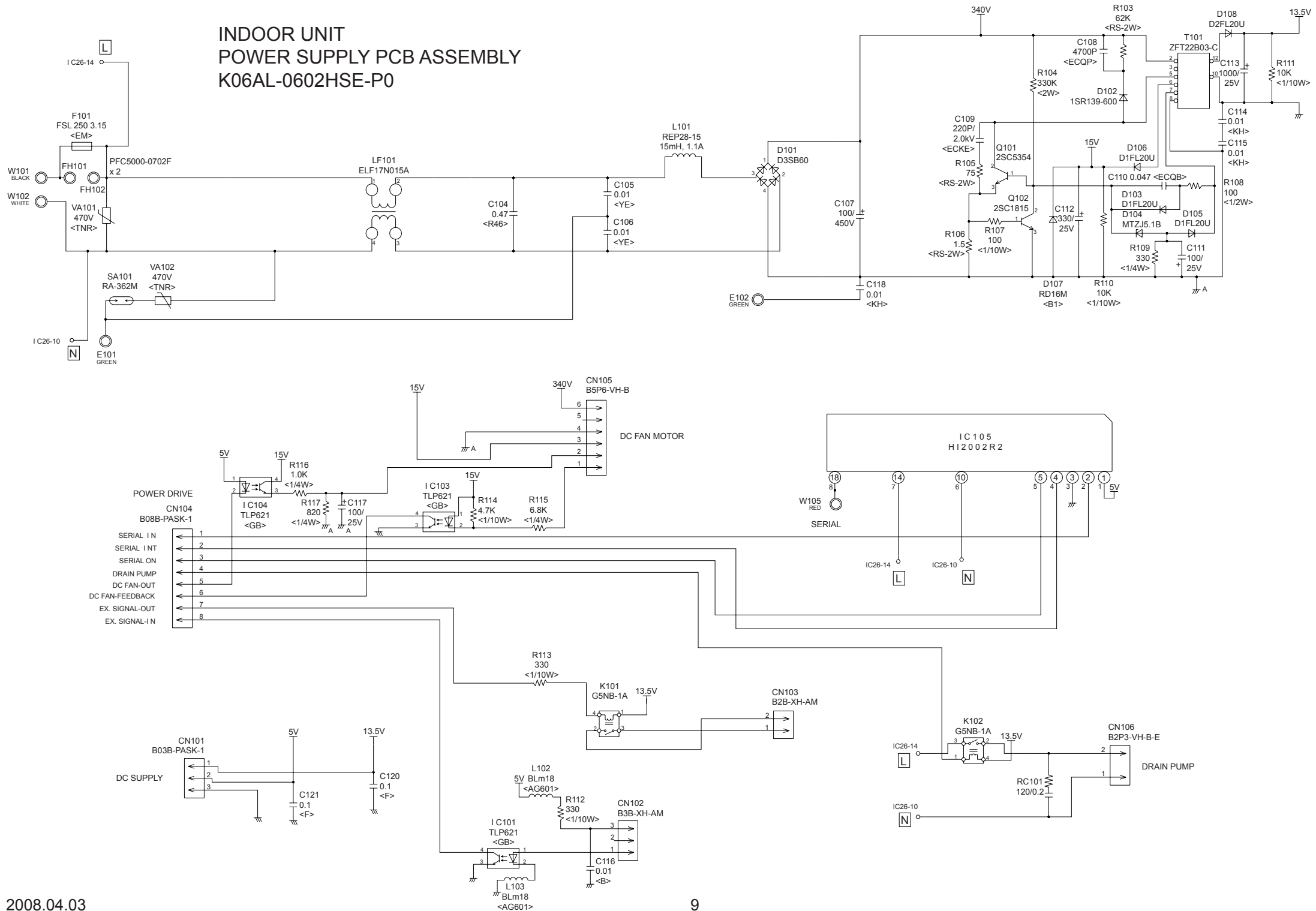
CONTROL UNIT
EZ-0070RHSE



INDOOR UNIT
CONTROLLER PCB ASSEMBLY
K06AK-0707HSE-C1

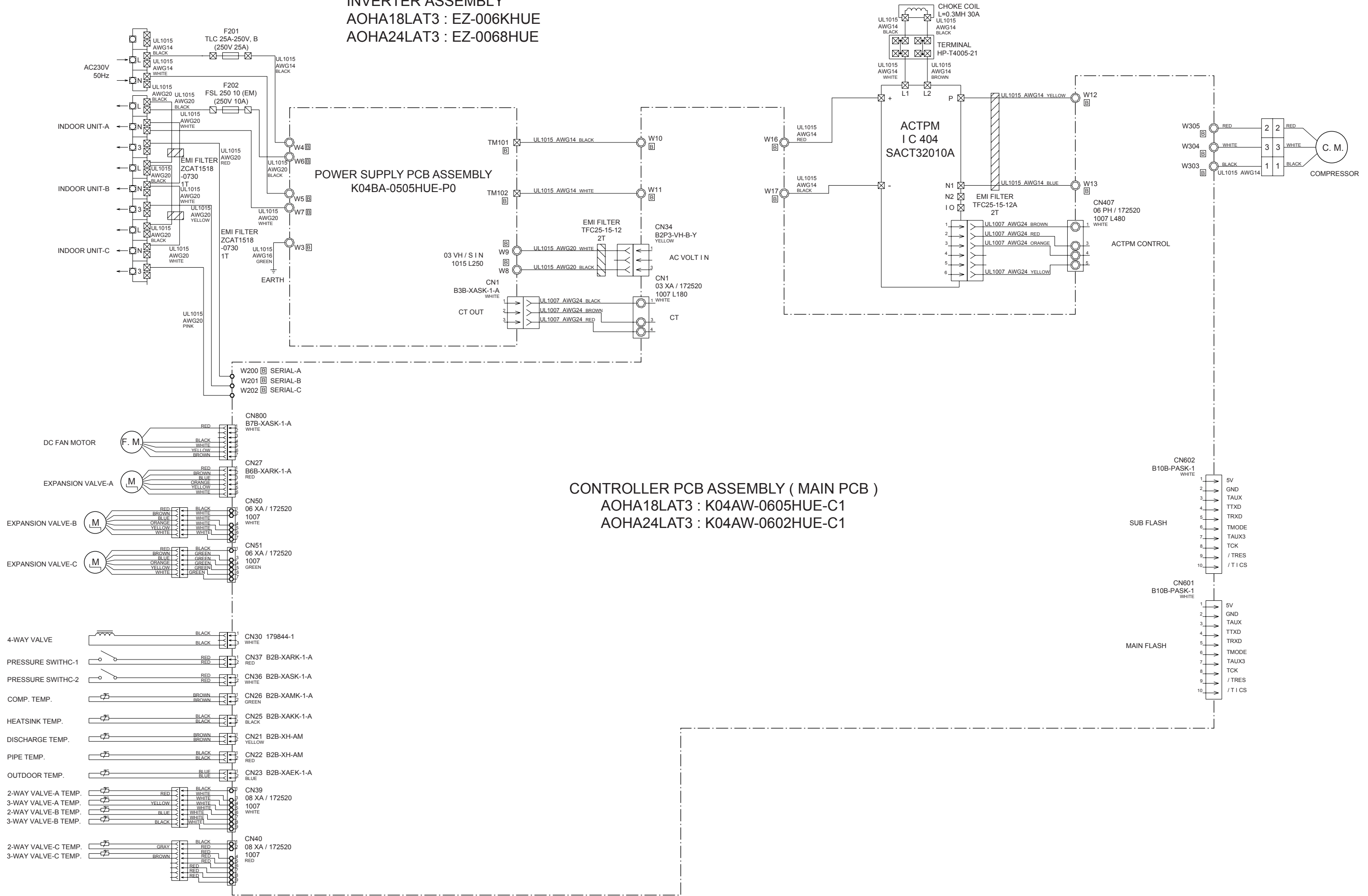


INDOOR UNIT POWER SUPPLY PCB ASSEMBLY K06AL-0602HSE-P0

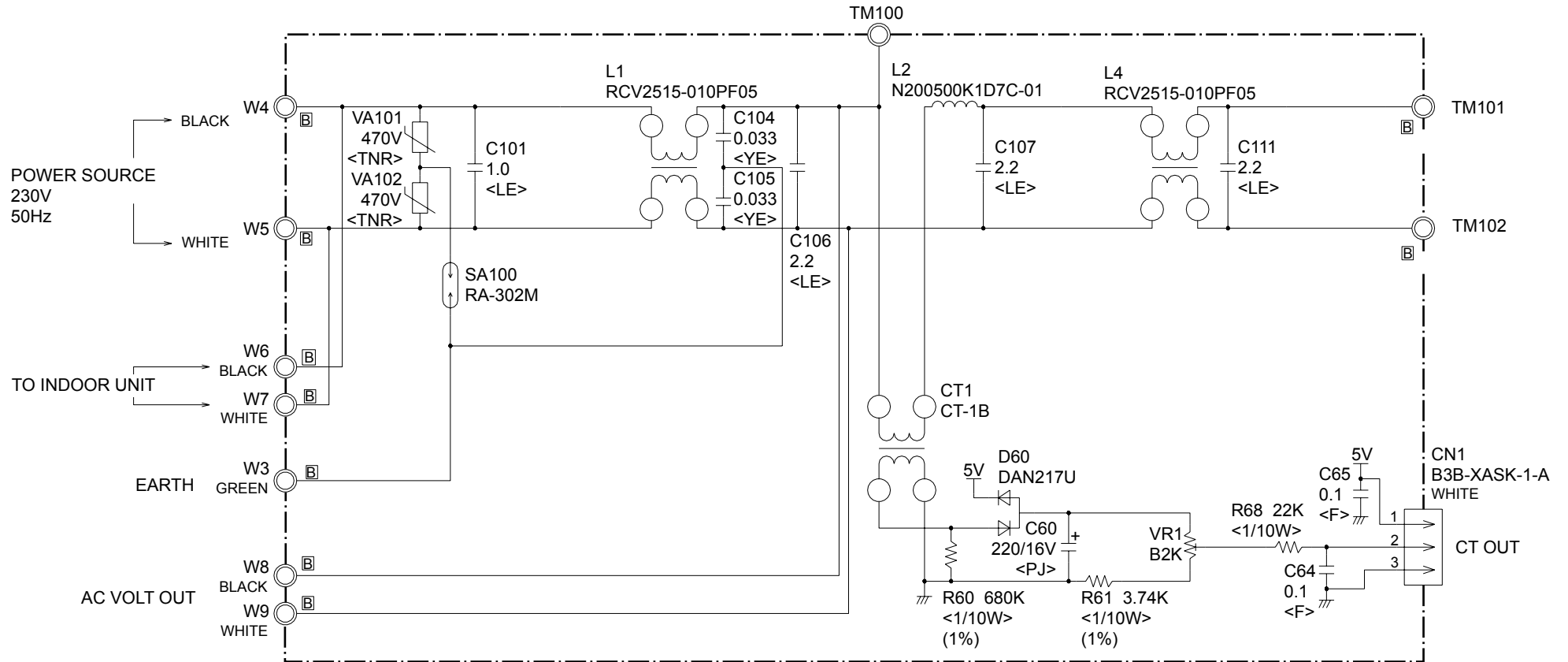


OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOHA18LAT3 : EZ-006KHUE
 AOHA24LAT3 : EZ-0068HUE



OUTDOOR UNIT
 POWER SUPPLY PCB ASSEMBLY
 K04BA-0505HUE-P0



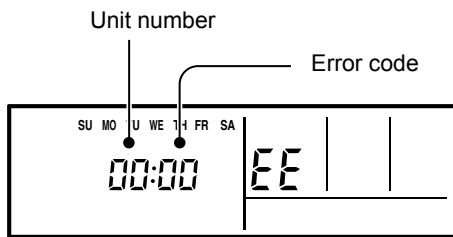
ERROR CONTENTS

REMOTE CONTROL

Troubleshooting at the remote control LCD
This is possible only on the wired remote control.

SELF-DIAGNOSIS

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



Ex. Self-diagnosis

Code	Error contents
01 13 26 27	Indoor signal error
00	Wired remote controller abnormal
02	Indoor room temperature sensor error
04	Indoor heat exchanger temperature sensor (middle) error
28	Indoor heat exchanger temperature sensor (inlet) error
09	Float switch operated
0C	Outdoor discharge pipe temperature sensor error
06	Outdoor heat exchanger temperature sensor (outlet) error
0A	Outdoor temperature sensor error
15	Compressor temperature sensor error
1d	2-way valve temperature sensor error
1E	3-way valve temperature sensor error
29	Outdoor heat exchanger temperature sensor (middle) error
20	Indoor manual auto switch abnormal
2A	Power supply frequency detection error
17	IPM protection
18	CT error
1A	Compressor location error
1b	Outdoor fan error
1F	Connected indoor unit abnormal
1c	Outdoor unit computer communication error
12	Indoor fan abnormal
0F	Discharge temperature error
24	Excessive high pressure protection on cooling
2c	4-way valve abnormal
16	Pressure switch abnormal
2b	Compressor temperature error
19	Active filter abnormal
25	PFC circuit error

If "CO" appears in the unit number display,
there is a remote control error.

Unit number	Error code	Content
CO	1d	Incompatible indoor unit is connected
CO	1c	Communication error between indoor unit and remote control

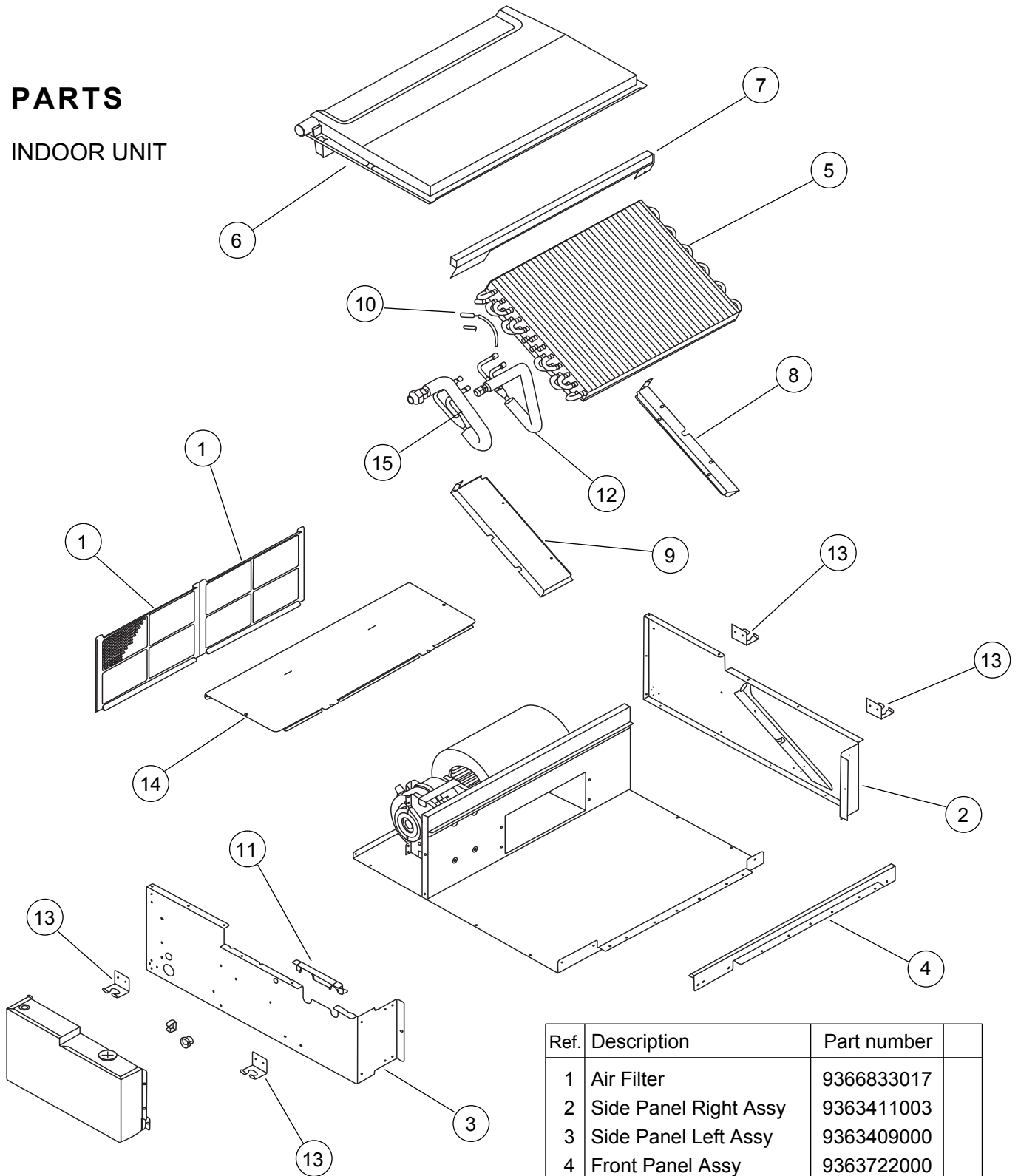
OUTDOOR UNIT

	LED A	LED B	LED C
Communication error (indoor unit A to outdoor unit)	● 1 time	—	—
Communication error (indoor unit B to outdoor unit)	—	● 1 time	—
Communication error (indoor unit C to outdoor unit)	—		● 1 time
Discharge pipe temperature sensor	● 2 times	—	—
Outdoor heat exchanger temperature sensor	● 3 times	—	—
Outdoor temperature sensor	● 4 times	—	—
Outdoor 2way valve(A) temperature sensor	● 5 times	—	—
Outdoor 2way valve(B) temperature sensor	—	● 5 times	—
Outdoor 2way valve(C) temperature sensor	—	—	● 5 times
Outdoor 3way valve(A) temperature sensor	● 6 times	—	—
Outdoor 3way valve(B) temperature sensor	—	● 6 times	—
Outdoor 3way valve(C) temperature sensor	—	—	● 6 times
Compressor temperature sensor	● 7 times	—	—
Heatsink temperature sensor	● 8 times	—	—
Pressure switch A abnormal	● 9 times	—	—
Pressure switch B abnormal	● 10 times	—	—
Indoor unit connection capacity error	● 11 times	—	—
IPM error	● 12 times	—	—
Compressor loter location error	● 13 times	—	—
Compressor can not start to operate	● 14 times	—	—
Outdoor fan (upper) motor error	● 15 times	—	—
Outdoor fan (lower) motor error	● 16 times	—	—
Microcomputer error	● 17 times	—	—
4way valve (Solenoid) abnormal	● 18 times	—	—

● : Slow flashing - : Off

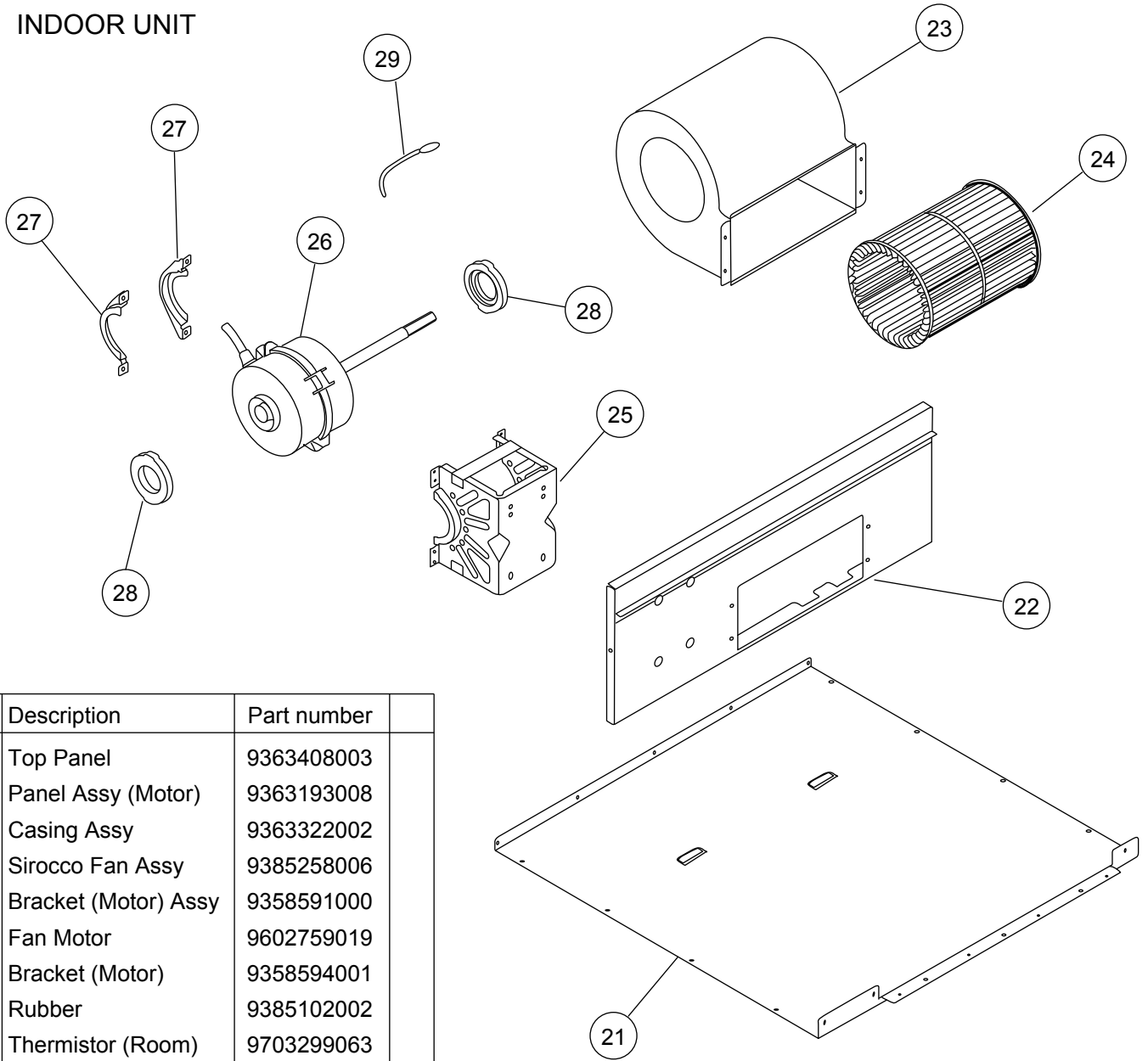
PARTS

INDOOR UNIT



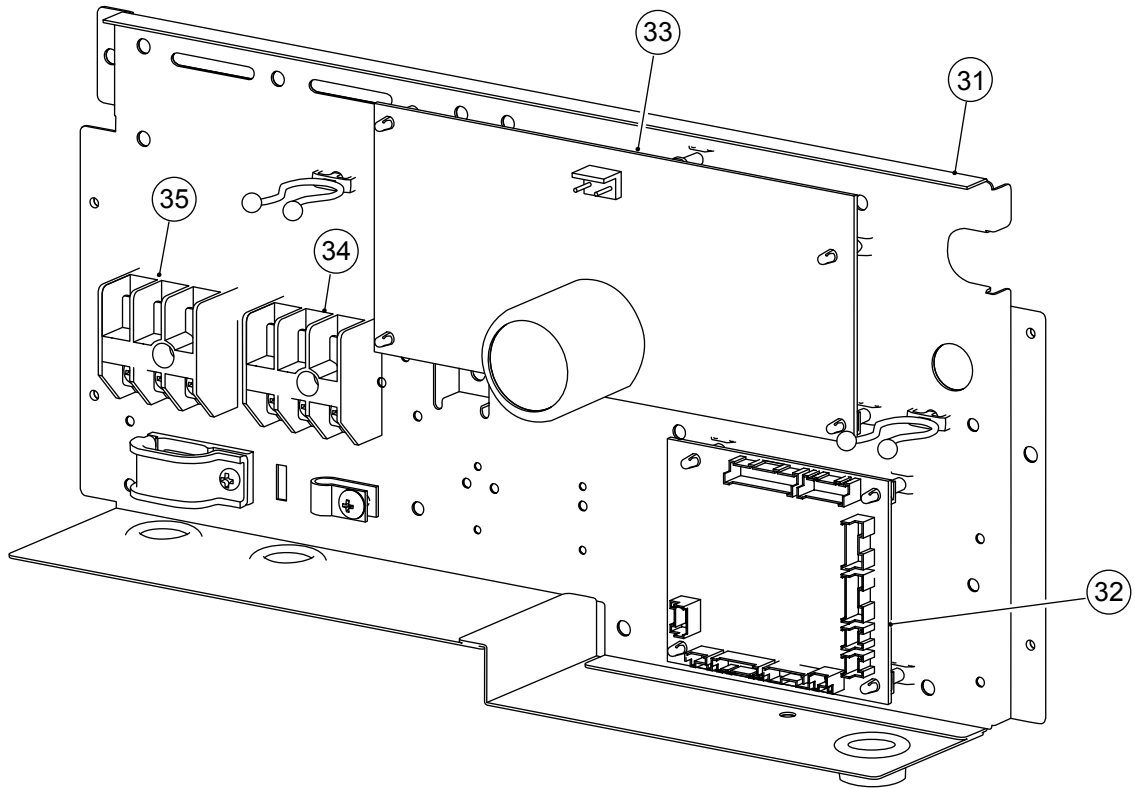
Ref.	Description	Part number
1	Air Filter	9366833017
2	Side Panel Right Assy	9363411003
3	Side Panel Left Assy	9363409000
4	Front Panel Assy	9363722000
5	Evaporator Assy	9373255055
6	Drain Pan Sub Assy	9364502052
7	Support Plate (Evaporator)	9363323009
8	Bracket Evaporator R	9363199000
9	Bracket Evaporator L	9363198003
10	Pipe Thermistor	9703297090
11	Cover (Piping)	9363330007
12	Distributor Assy	9373034193
13	Hook Metal	9363195002
14	Cabinet Cover	9363325003
15	Coupling Pipe Assy	9373038498
--	Drain Cap Assy	9377878014

INDOOR UNIT



Ref.	Description	Part number
21	Top Panel	9363408003
22	Panel Assy (Motor)	9363193008
23	Casing Assy	9363322002
24	Sirocco Fan Assy	9385258006
25	Bracket (Motor) Assy	9358591000
26	Fan Motor	9602759019
27	Bracket (Motor)	9358594001
28	Rubber	9385102002
29	Thermistor (Room)	9703299063

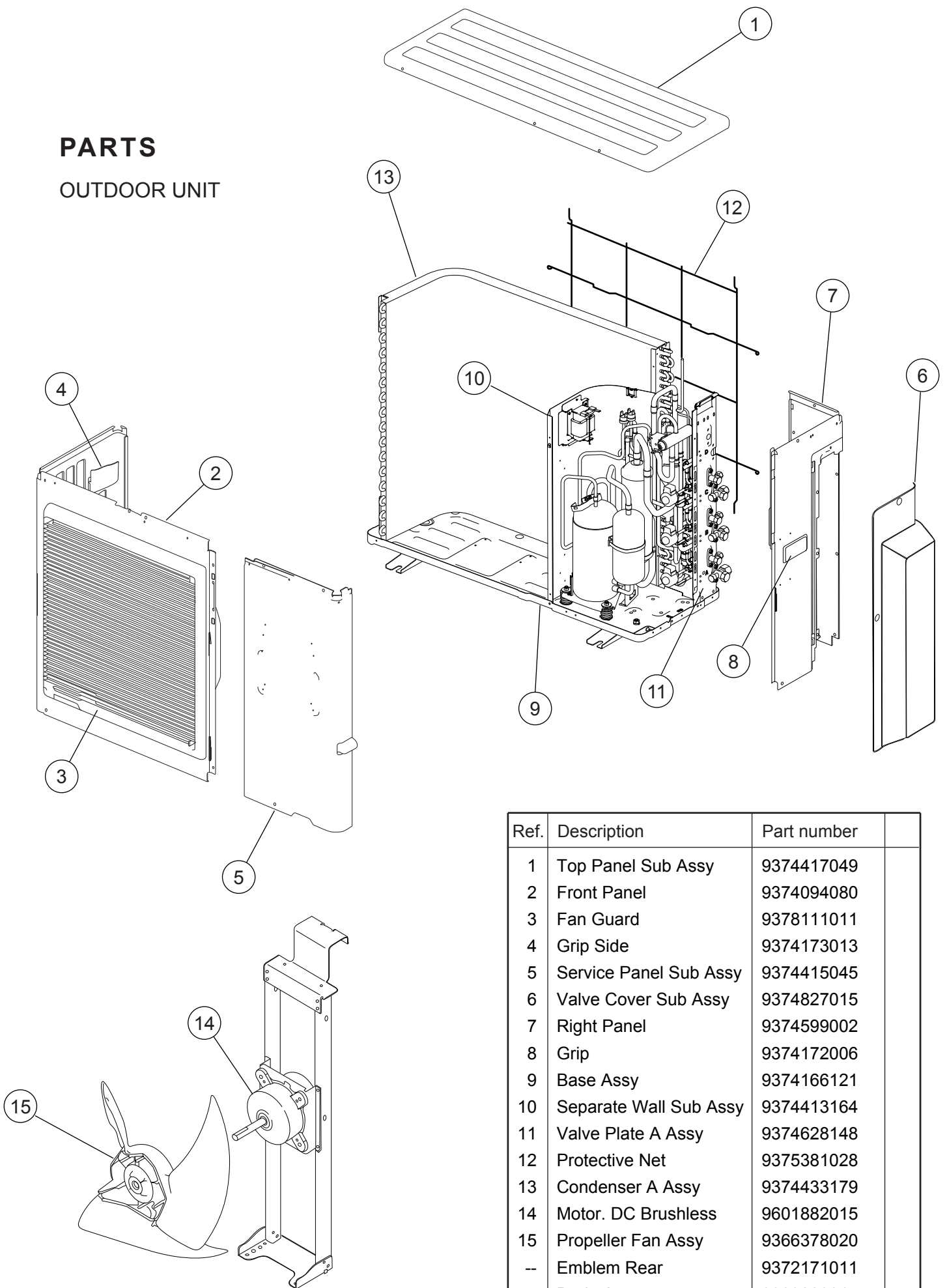
INDOOR UNIT



Ref.	Description	Part number	
31	Control Box	9375240035	
32	Controller PCB Assy	9707393361	
33	Power Supply PCB Assy	9707398038	
34	Terminal	9703345012	
35	Terminal	9306489045	
--	Control Box Cover	9363201000	
--	Remote Control	9372266199	
--	Wire between C and P (8 lines)	9703339028	
--	Wire between C and P (3 lines)	9707442014	
--	Hole Cover	9378176010	
--	Cap (Power)	9352173011	

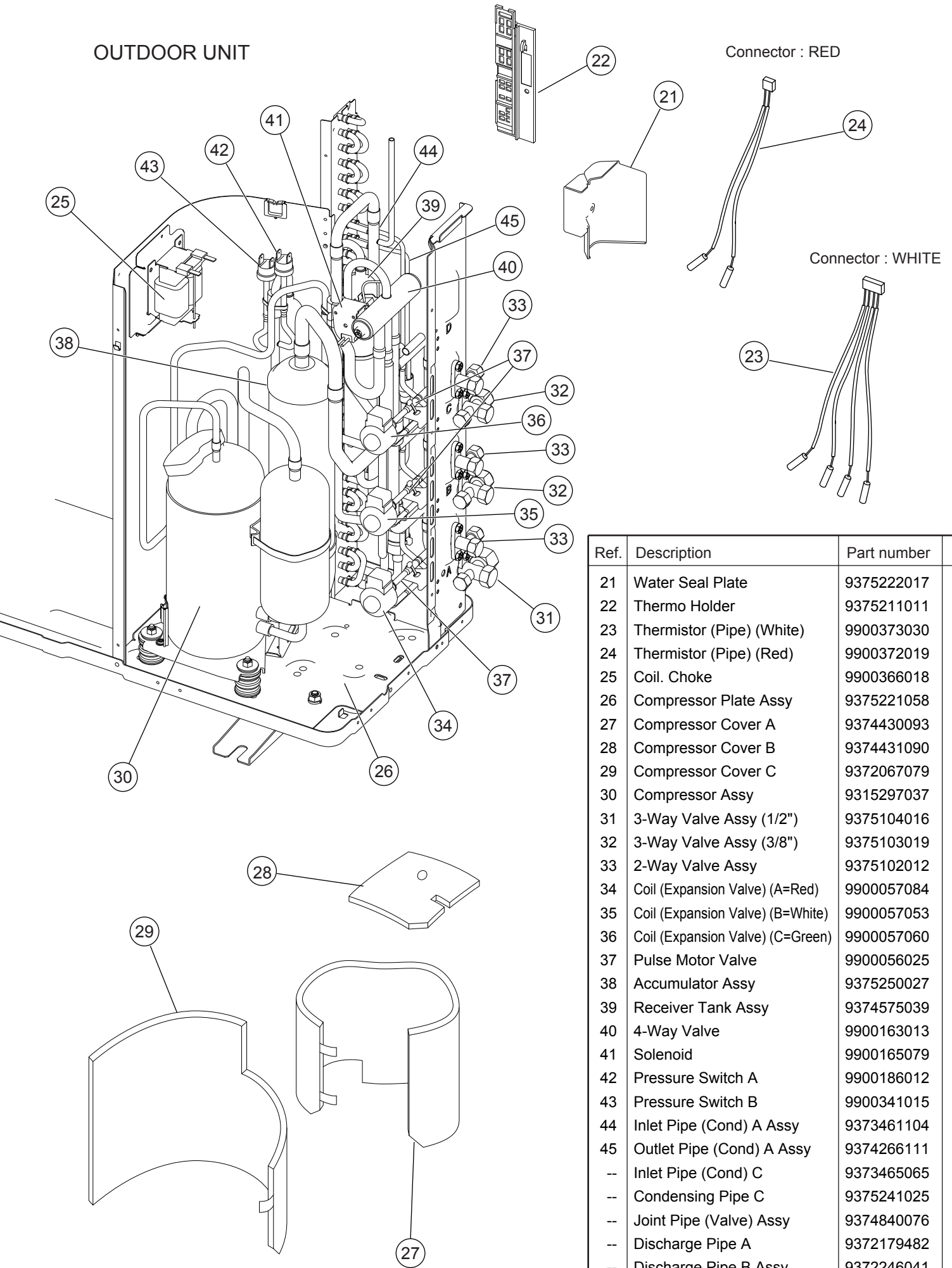
PARTS

OUTDOOR UNIT

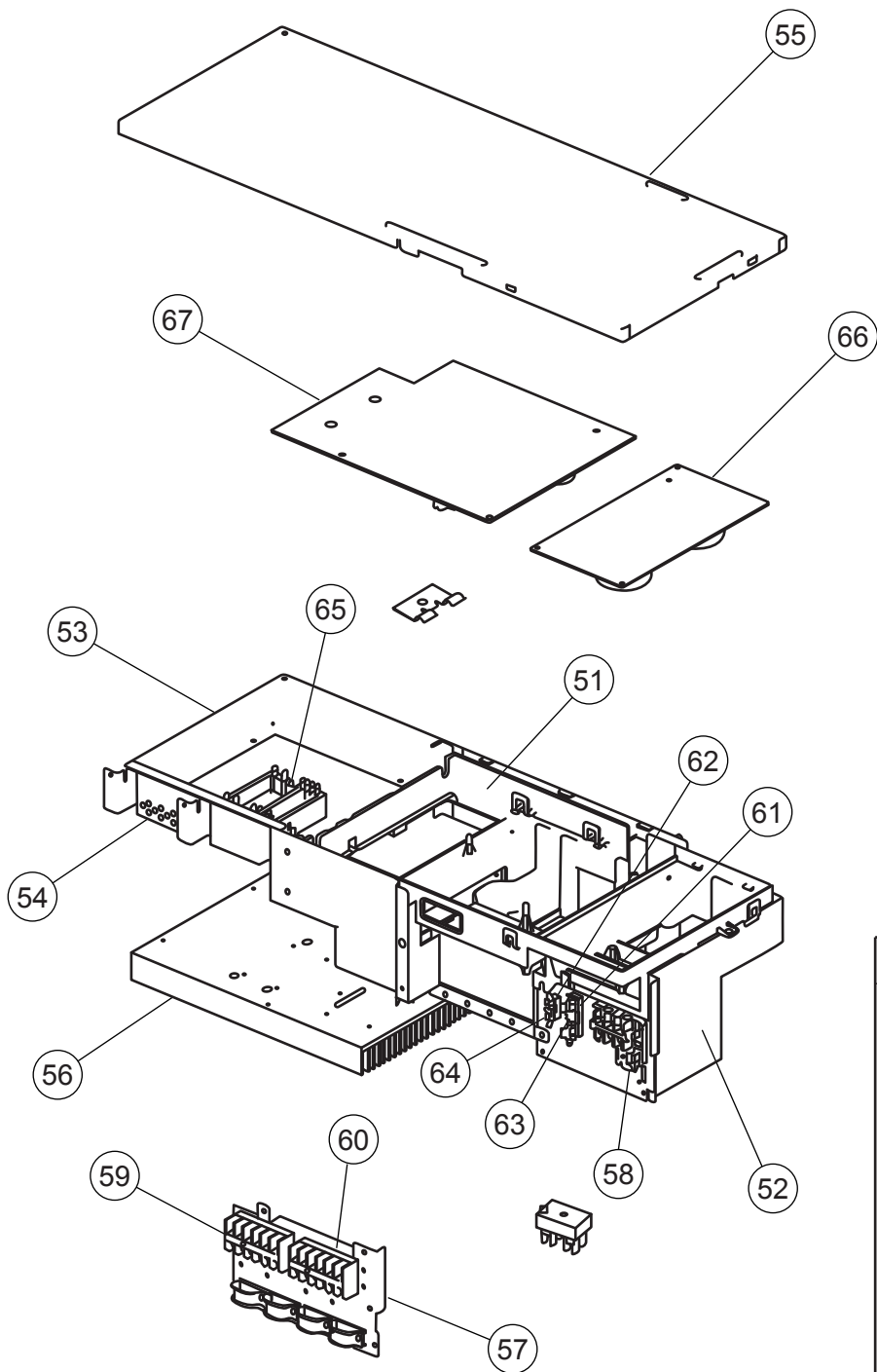


Ref.	Description	Part number	
1	Top Panel Sub Assy	9374417049	
2	Front Panel	9374094080	
3	Fan Guard	9378111011	
4	Grip Side	9374173013	
5	Service Panel Sub Assy	9374415045	
6	Valve Cover Sub Assy	9374827015	
7	Right Panel	9374599002	
8	Grip	9374172006	
9	Base Assy	9374166121	
10	Separate Wall Sub Assy	9374413164	
11	Valve Plate A Assy	9374628148	
12	Protective Net	9375381028	
13	Condenser A Assy	9374433179	
14	Motor, DC Brushless	9601882015	
15	Propeller Fan Assy	9366378020	
--	Emblem Rear	9372171011	
--	Drain Assy	9303029015	
--	Drain Cap	313166024302	

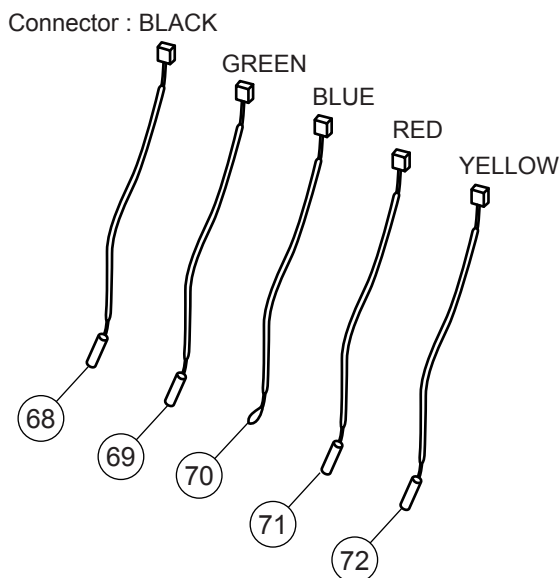
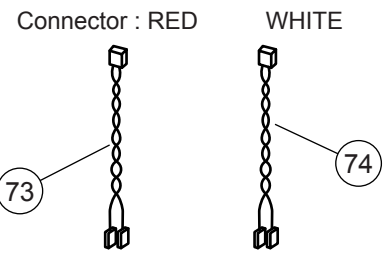
OUTDOOR UNIT



Ref.	Description	Part number
21	Water Seal Plate	9375222017
22	Thermo Holder	9375211011
23	Thermistor (Pipe) (White)	9900373030
24	Thermistor (Pipe) (Red)	9900372019
25	Coil. Choke	9900366018
26	Compressor Plate Assy	9375221058
27	Compressor Cover A	9374430093
28	Compressor Cover B	9374431090
29	Compressor Cover C	9372067079
30	Compressor Assy	9315297037
31	3-Way Valve Assy (1/2")	9375104016
32	3-Way Valve Assy (3/8")	9375103019
33	2-Way Valve Assy	9375102012
34	Coil (Expansion Valve) (A=Red)	9900057084
35	Coil (Expansion Valve) (B=White)	9900057053
36	Coil (Expansion Valve) (C=Green)	9900057060
37	Pulse Motor Valve	9900056025
38	Accumulator Assy	9375250027
39	Receiver Tank Assy	9374575039
40	4-Way Valve	9900163013
41	Solenoid	9900165079
42	Pressure Switch A	9900186012
43	Pressure Switch B	9900341015
44	Inlet Pipe (Cond) A Assy	9373461104
45	Outlet Pipe (Cond) A Assy	9374266111
--	Inlet Pipe (Cond) C	9373465065
--	Condensing Pipe C	9375241025
--	Joint Pipe (Valve) Assy	9374840076
--	Discharge Pipe A	9372179482
--	Discharge Pipe B Assy	9372246041
--	Suction Pipe B	9371275338
--	Strainer Assy	9372524015



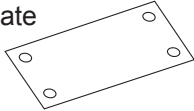
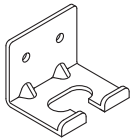
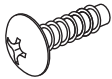



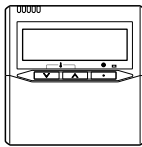
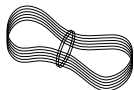

OUTDOOR UNIT INVERTER ASSY



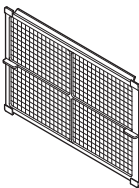
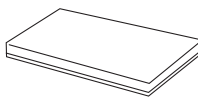



Ref.	Description	Part number
51	Inverter Box A	9374603015
52	Inverter Box B Assy	9374625024
53	Inverter Box C	9375140014
54	Inverter Box Duct	9374609017
55	Inverter Box Cover	9375139018
56	Heat Sink A	9375138011
57	Inverter Box D	9374606023
58	Terminal (3P)	9900203016
59	Terminal (6P)	9900016036
60	Terminal (3P)	9306489045
61	Fuse Holder (Big)	0501454012
62	Fuse Holder (Small)	0501456016
63	Fuse (Big)	0600086039
64	Fuse (Small)	0600376116
65	ACTPM	9703457012
66	Power Supply PCB Assy	9705647091
67	Controller PCB Assy (18L)	9705642225
67	Controller PCB Assy (24L)	9705642195
68	Heat Sink Thermistor	9900311018
69	Compressor Thermistor	9900156053
70	Thermistor (Outdoor)	9900477011
71	Heat Exchanger Thermistor	9900374020
72	Discharge Thermistor	9704219039
73	Wire (Pressure Sw) (Red)	9377823014
74	Wire (Pressure Sw) (White)	9377823021
--	Terminal (3P)	9306489045

ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Application
Installation template 	1	For positioning the indoor unit (P/N 9364224008)
Hanger 	4	For suspending the indoor unit from ceiling (P/N 9363195002)
Tapping screw (ø4 x 10) 	8	For installing the hanger (P/N 301171164104)
Special nut A (large flange) 	4	For suspending the indoor unit from ceiling (P/N 313005446653) (P/N 313005446759)
Special nut B (small flange) 	4	
Binder 	(Small) 1	For remote control and cord binding (P/N 313361275805)
	(Large) 4	For fixing the coupler heat insulation (P/N 312300787605)
Remote control 	1	For air conditioner operation (P/N 9372266199)
Remote control cord 	1	For connecting a remote control (P/N 9372714010)
Tapping screw (ø4 x 16) 	2	For installing a remote control (P/N 0700181108)

Name and Shape	Q'ty	Application
Coupler heat insulation (large) 	1	For indoor side pipe joint (gas pipe) (P/N 9350716029)
Coupler heat insulation (small) 	1	For indoor side pipe joint (liquid pipe) (P/N 9352766015)
Filter 	2	For protecting air conditioner from dust (P/N 9366833017)
Drain hose insulation 	1	Insulates the drain hose and vinyl hose connection (P/N 313806217708)
Edge cover 	1	For making a wiring hole for connecting optional units (P/N 9378176010)

OPTIONAL PARTS

The following options are available.

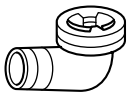

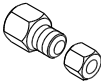

Remote sensor :UTD-RS100 (P/N 9072619004)

External control set :UTD-ECS5A (P/N 9077359004)

IR receiver unit : UTY-LRHY1 (P/N 9048098000)

Drain pump unit : UTZ-PX1BBA(P/N 9052976004)

OUTDOOR UNIT

Name and Shape	Q'ty	Use	Part number
Drain pipe 	1	For drain piping work	9303029015
Drain cap 	2		313166024302
Adapter assy 12.7 mm → 9.52 mm (1/2 in.) (3/8 in.) 	1	For use when connecting models 9-12 to outdoor port A	9370244007
Putty 	1	For sealing	303020200114

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