

SERVICE MANUAL



Models

Indoor unit		Outdoor unit
RSA14LACM	—	ROA18LAT3
RSA14LACM	└─┐	ROA24LAT3
RSA18LACM	└─┘	

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SPECIFICATIONS

INDOOR UNIT

ELECTRICAL DATA

TYPE	COOL & HEAT	
MODEL NAME	RSA14LACM	RSA18LACM
COOLING CAPACITY	4.2 kW	5.0 kW
HEATING CAPACITY	4.8 kW	6.0 kW
MOISTURE REMOVAL	2.1 L/hr	2.8 L/hr
AIR CIRCULATION HIGH	700 m3/hr	700 m3/hr

FAN MOTOR

POWER SOURCE		230 V	
FAN SPEED (cool / heat)	Discrimination	MFD-34ROM	
	High	1,480 / 1,480 r.p.m.	1,480 / 1,480 r.p.m.
	Med	1,250 / 1,250 r.p.m.	1,250 / 1,250 r.p.m.
	Low	1,050 / 1,100 r.p.m.	1,100 / 1,100 r.p.m.
	Quiet	850 / 950 r.p.m.	950 / 950 r.p.m.

NOISE LEVEL

HIGH	45 dB	45 dB
QUIET	26 dB	28 dB

MEASUREMENT

DIMENSIONS	H x W x D	275 x 790 x 215 mm
WEIGHT	Gross / Net	12 kg / 9 kg

OUTDOOR UNIT

ELECTRICAL SPECIFICATIONS

TYPE		Colling & Heating	
MODEL NAME		ROA18LAT3	ROA24LAT3
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 m³/hr	3,300 m³/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.

MEASUREMENT

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

COMPRESSOR

TYPE	Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary	
DISCRIMINATION	DA150A1F-20NA	
REFRIGERANT	R410	2,200 g

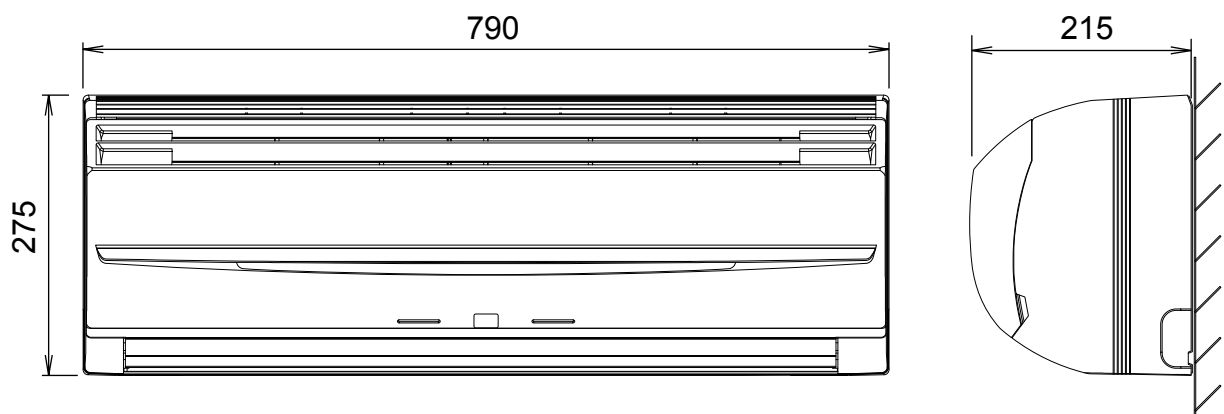
REFRIGERANT CHARGE (R410A)

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

DIMENSIONS

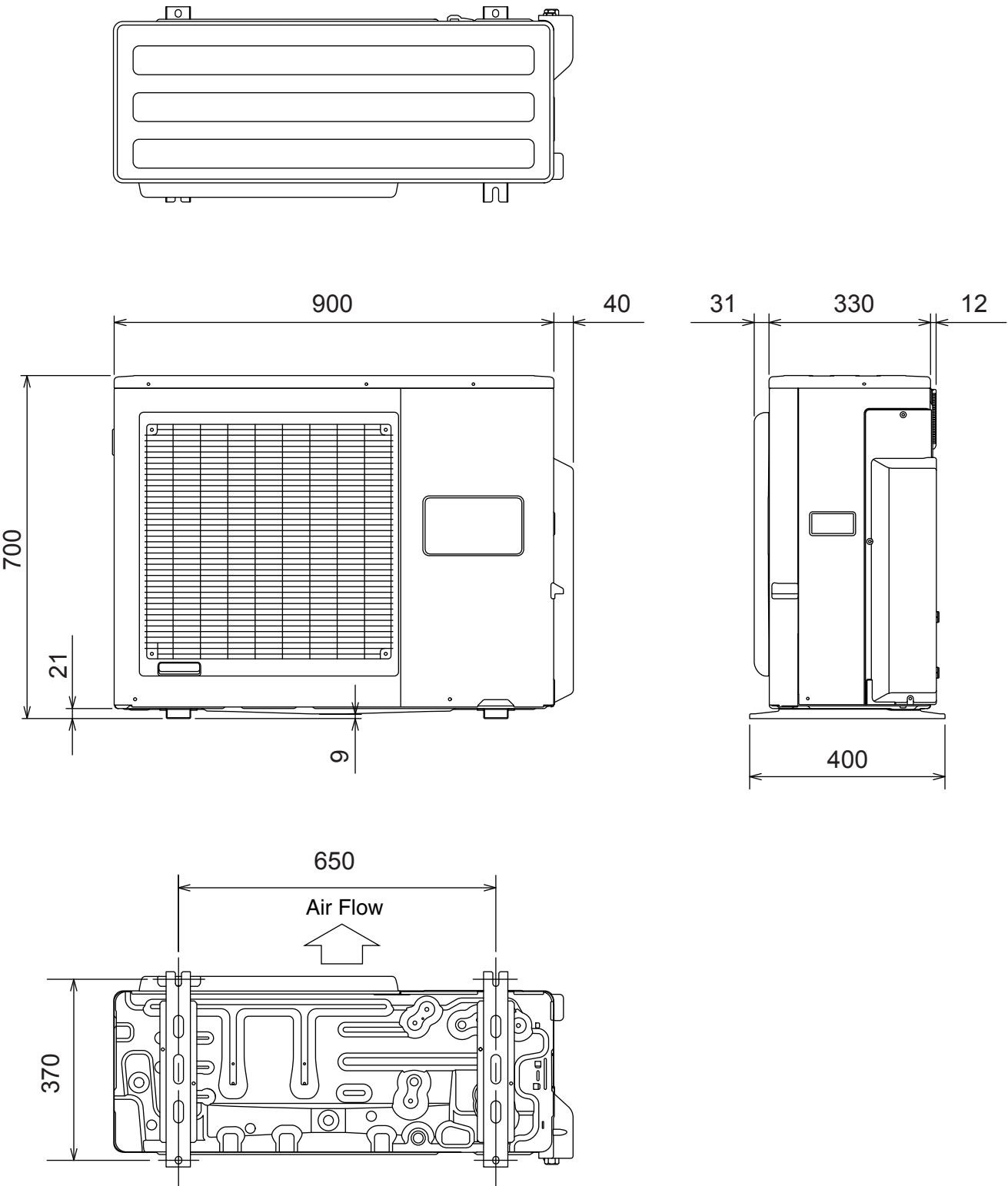
INDOOR UNIT

(unit : mm)



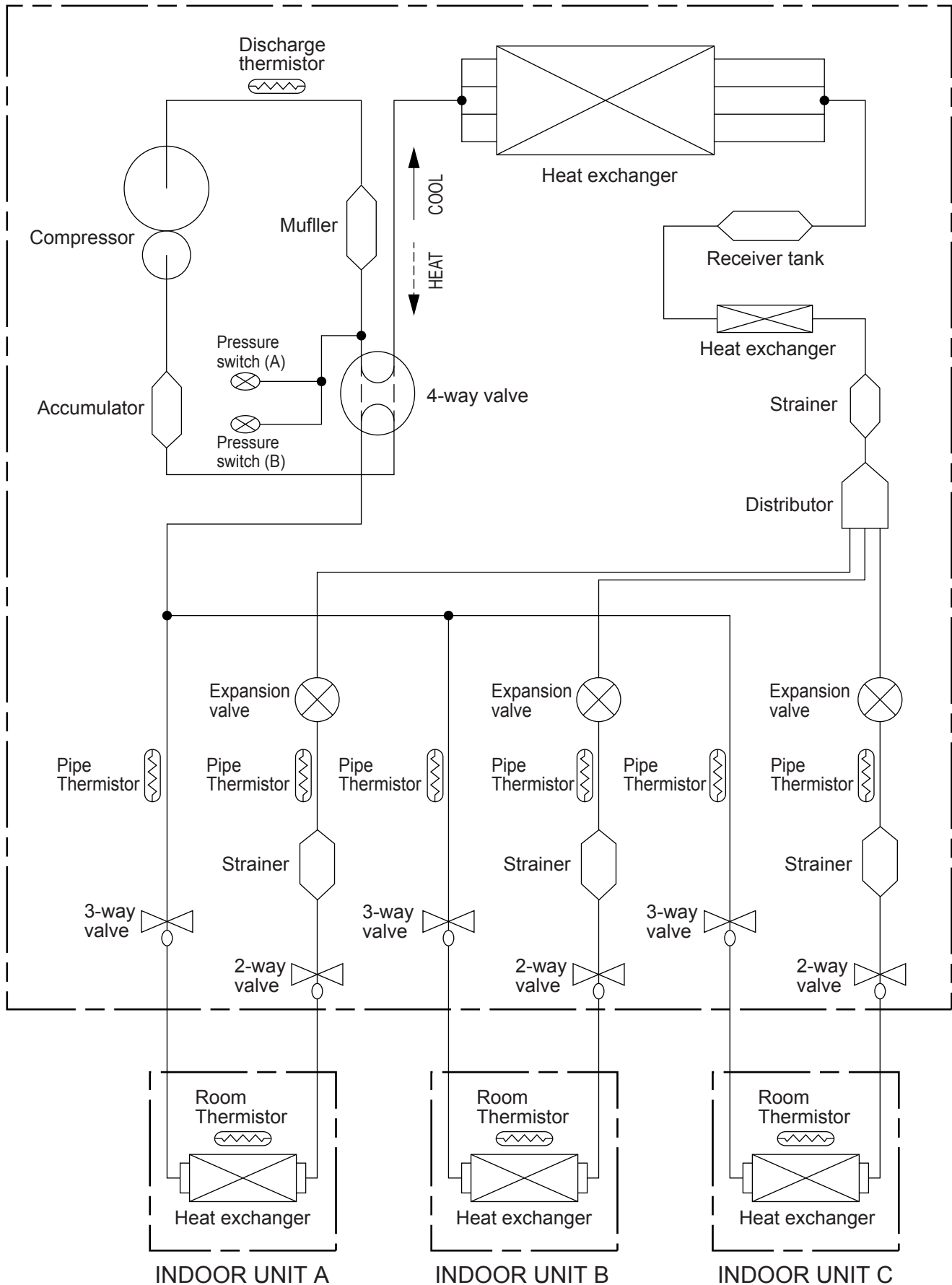
OUTDOOR UNIT

(Unit : mm)



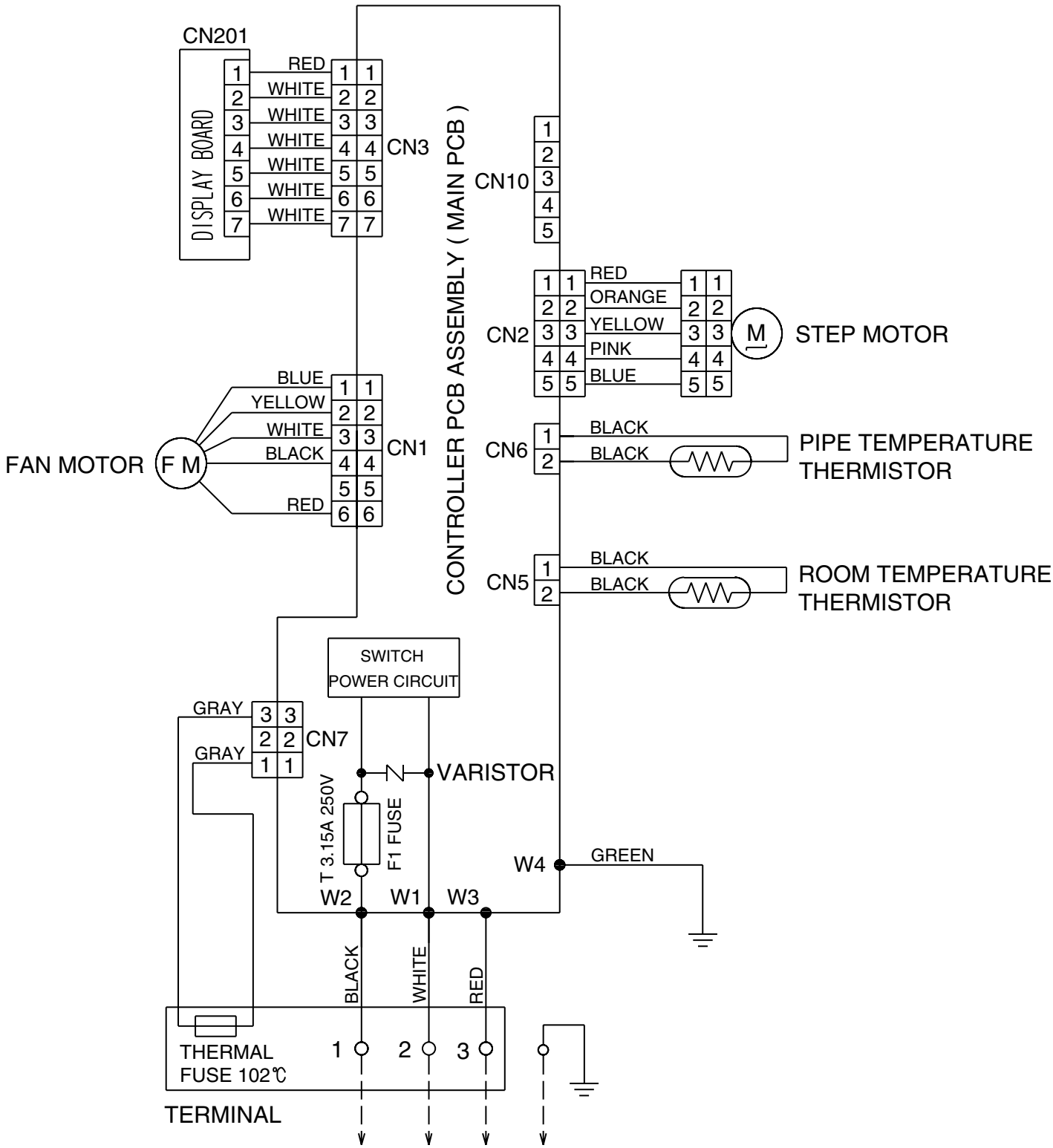
REFRIGERANT SYSTEM DIAGRAM

OUTDOOR UNIT

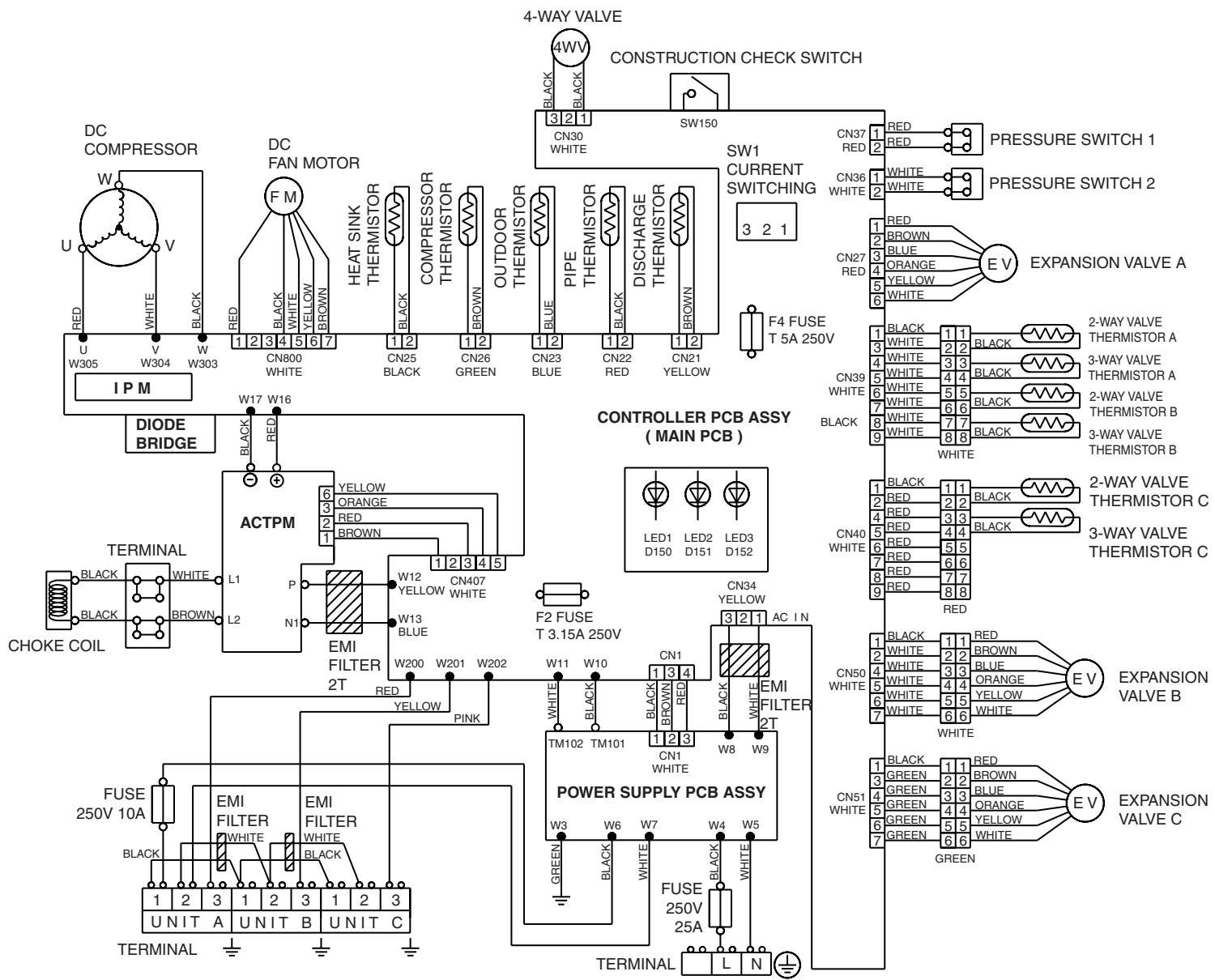


CIRCUIT DIAGRAM

INDOOR UNIT

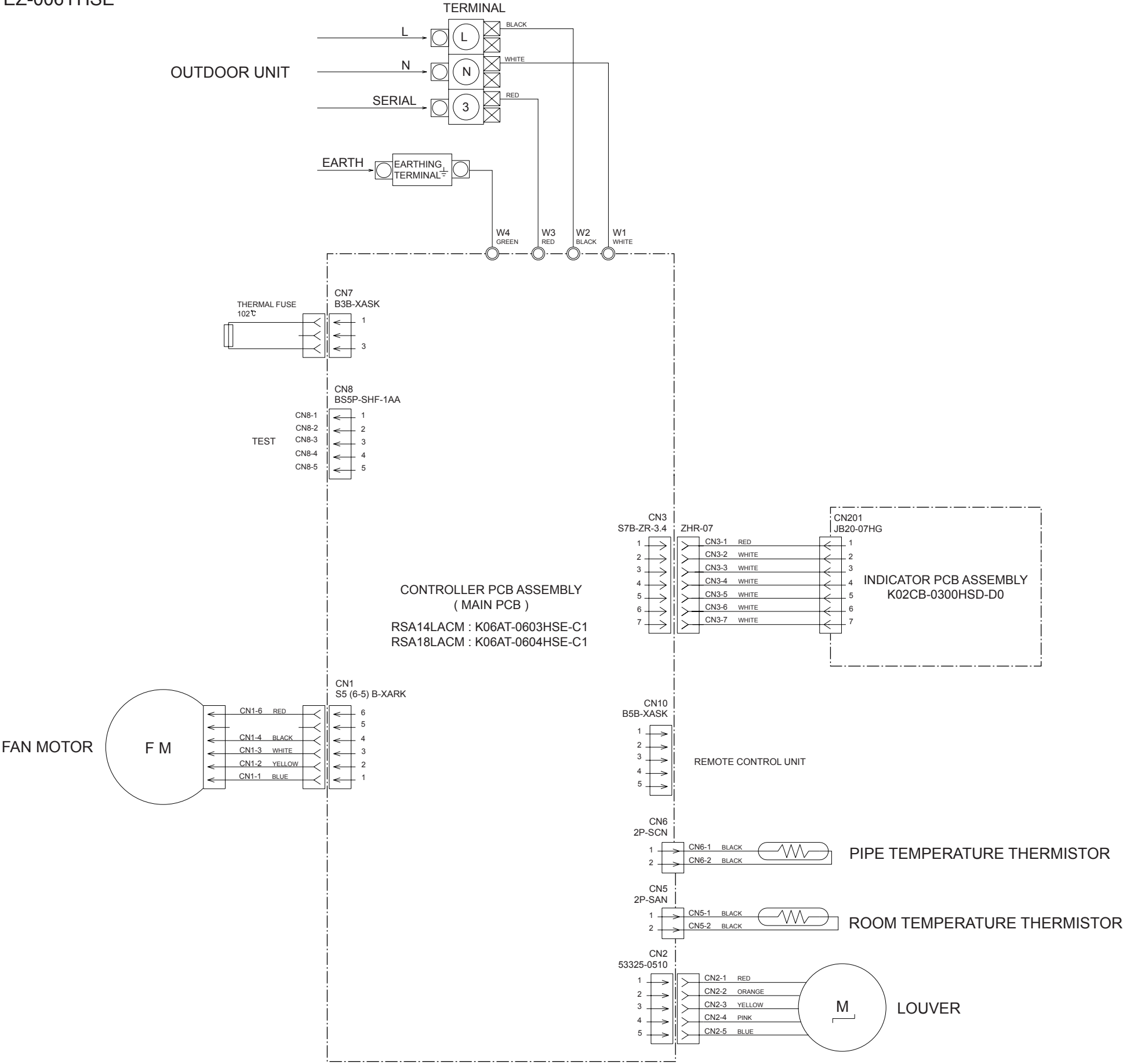


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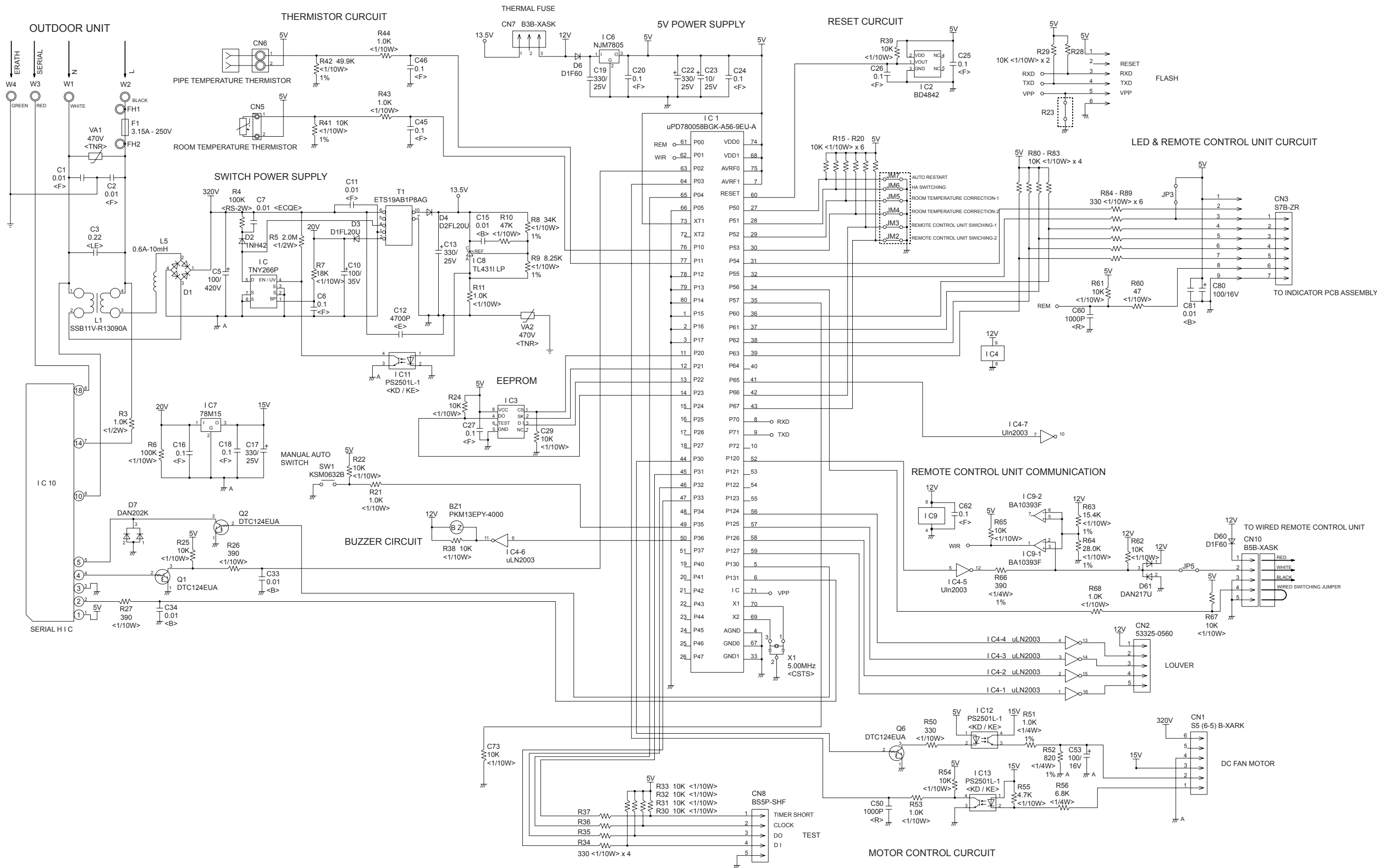


INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
RSA14LACM : EZ-006WHSE
RSA18LACM : EZ-006YHSE

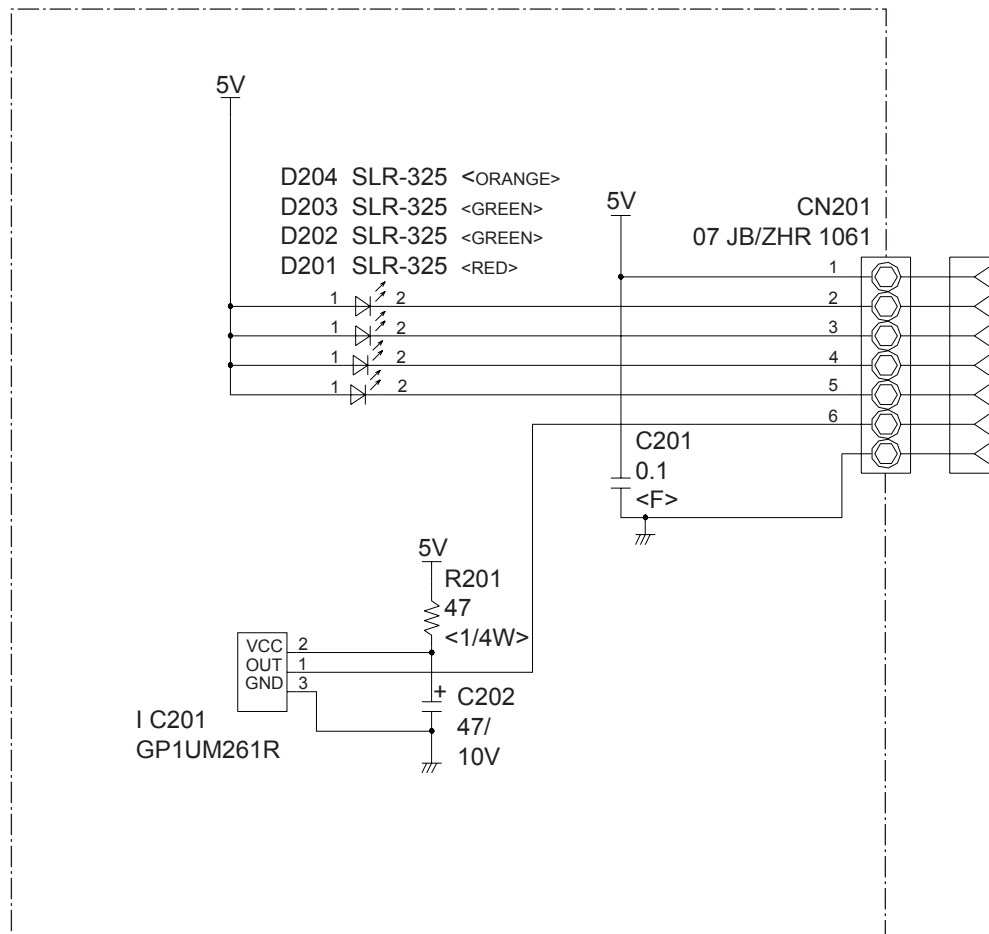


CONTROLLER PCB ASSEMBLY
RSA14LATM : K06AT-0603HSE-C1
RSA18LATM : K06AT-0604HSE-C1



INDOOR UNIT

INDICATOR PCB ASSY K02CB-0300HSD-D0

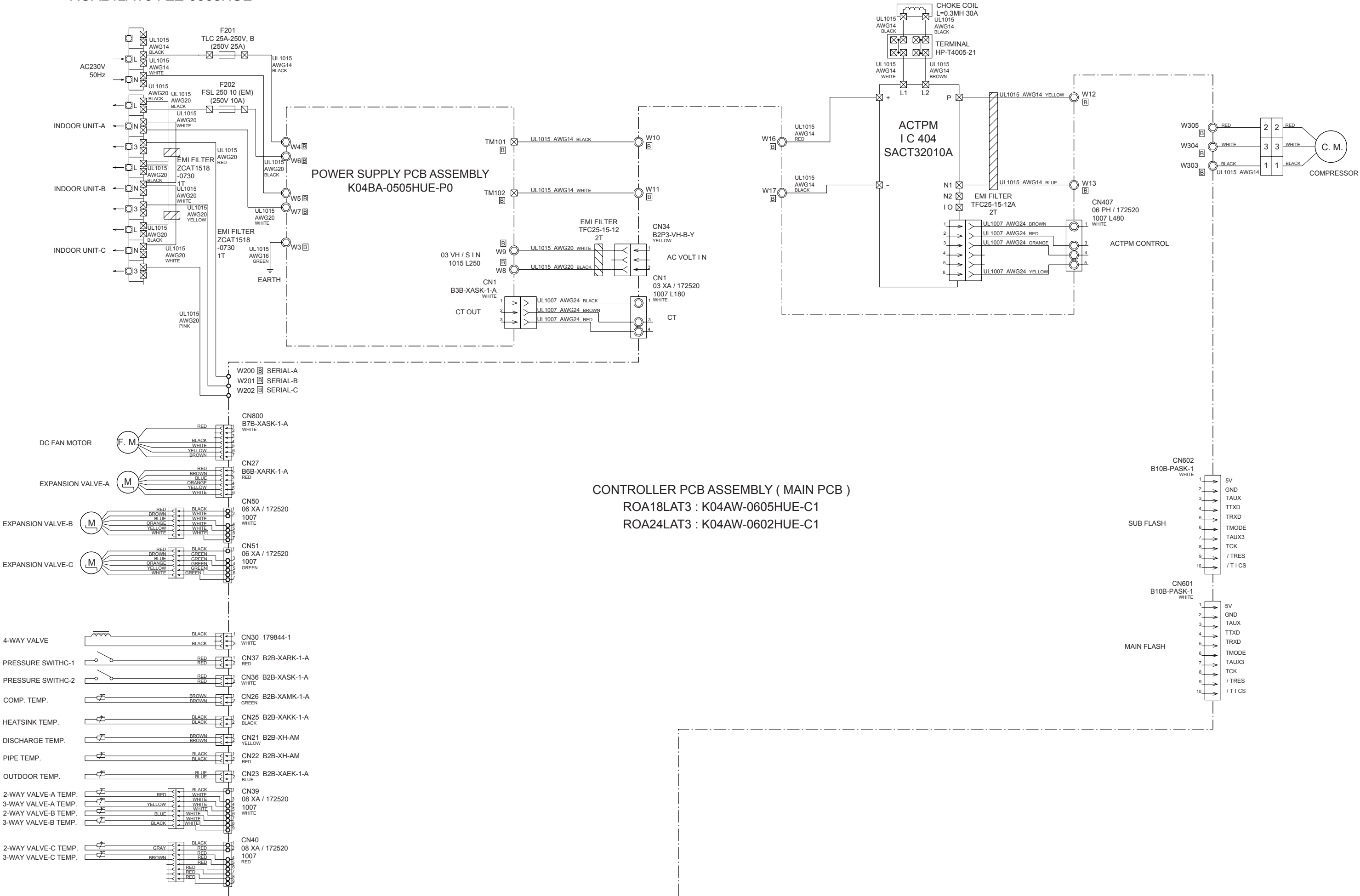


OUTDOOR PCB CIRCUIT DIAGRAM

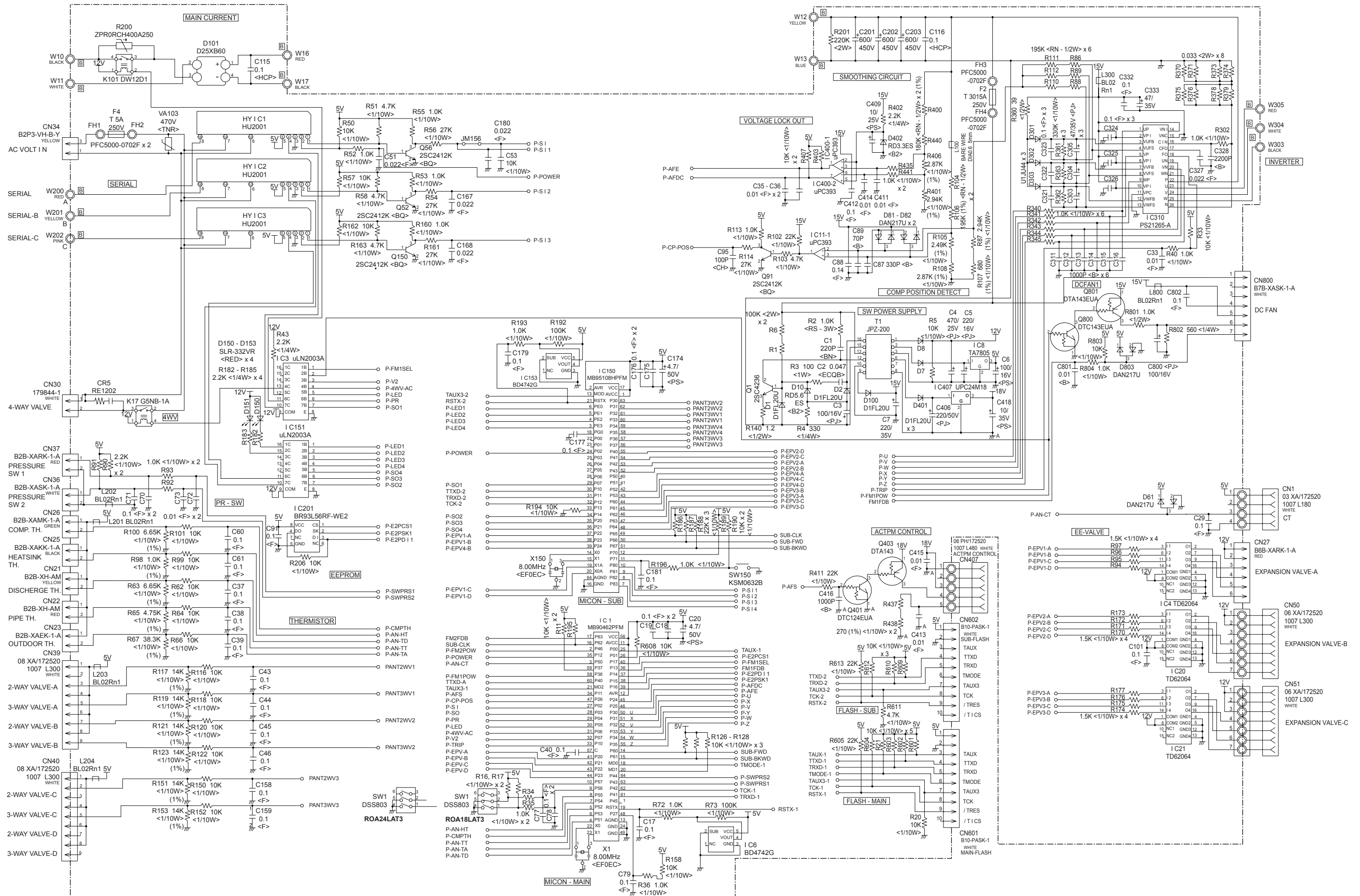
INVERTER ASSEMBLY

ROA18LAT3 : EZ-006KHUE

ROA24LAT3 : EZ-0068HUE

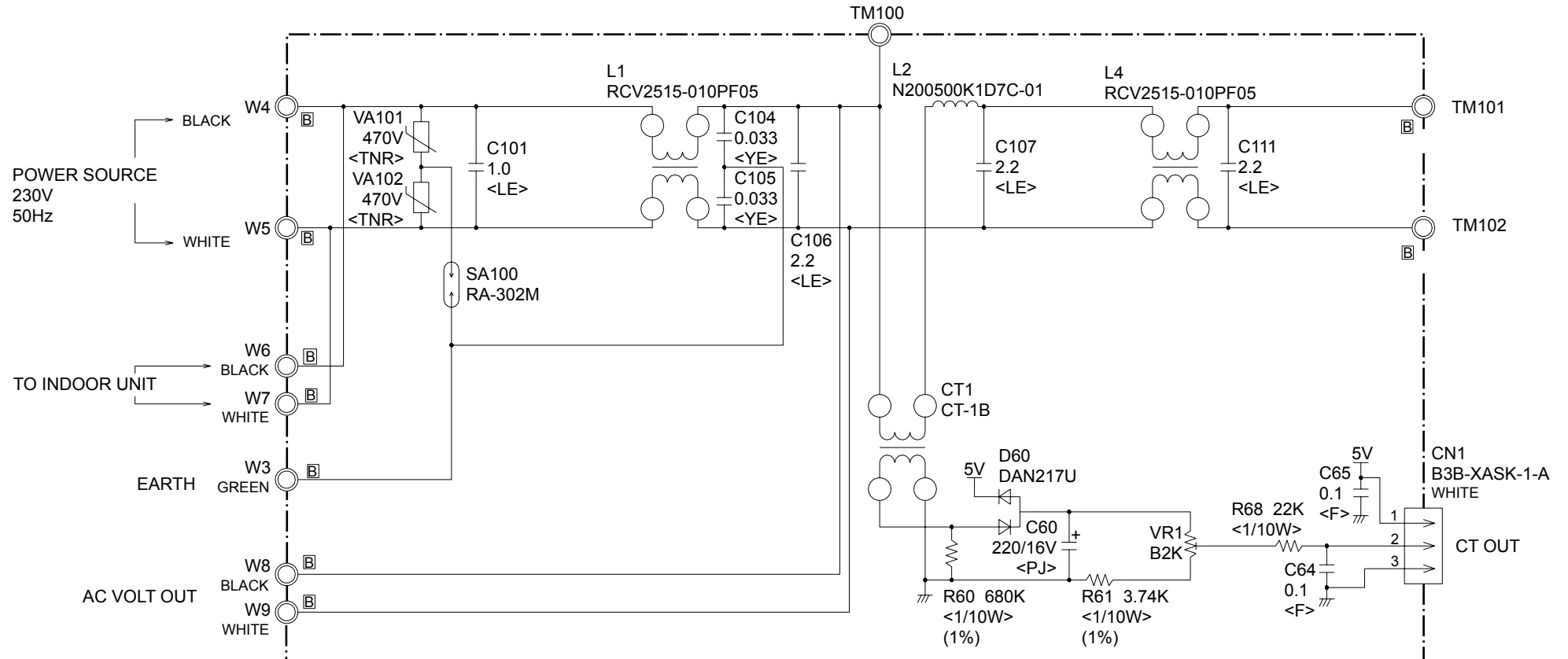


CONTROLLER PCB ASSEMBLY
ROA18LAT3 : K04AW-0605HUE-C1
ROA24LAT3 : K04AW-0602HUE-C1



OUTDOOR UNIT

POWER SUPPLY PCB ASSEMBLY K04BA-0505HUE-P0



ERROR CONTENTS

INDOOR UNIT

Error contents		Error display Indoor unit LED			
		OPERATION (Red)	TIMER (Green)	AIR CLEAN or QUIET (Green)	COIL DRY (Orange)
Communication error	Indoor unit - Outdoor unit	off	2 - 5 flashes	off	off
Indoor unit temperature error	Room temp. sensor error	2 flashes	2 flashes	off	off
	Heat exchanger temp. sensor error	2 flashes	3 flashes	off	off
Outdoor unit temperature error	Discharge pipe temp. sensor error	3 flashes	2 flashes	off	off
	Heat exchanger temp. sensor error	3 flashes	3 flashes	off	off
	Outdoor temp. sensor error	3 flashes	4 flashes	off	off
	2 way valve temp. sensor error	3 flashes	off	2 flashes	off
	3 way valve temp. sensor error	3 flashes	off	3 flashes	off
	Heat sink temp. sensor error	3 flashes	7 flashes	off	off
	Compressor temp. sensor error	3 flashes	8 flashes	off	off
Indoor unit control system error	MANUAL AUTO button error	4 flashes	2 flashes	off	off
	50Hz / 60Hz distinguish error	4 flashes	4 flashes	off	off
	Electronic Air clean filter error	4 flashes	7 flashes	off	off
	Electronic Air clean filter error	4 flashes	8 flashes	off	off
Outdoor unit control system error	Current trip error	5 flashes	2 flashes	off	off
	CT error	5 flashes	3 flashes	off	off
	Compressor position error	5 flashes	5 flashes	off	off
	Fan motor error	5 flashes	6 flashes	off	off
	Connected indoor unit error	5 flashes	7 flashes	off	off
	Main CPU - sub CPU communication error	5 flashes	8 flashes	off	off
Indoor unit fan motor error	Fan motor error	6 flashes	2 flashes	off	off
	Fan motor error	6 flashes	3 flashes	off	off
Refrigerant system error	Discharge pipe temp. error	7 flashes	2 flashes	off	off
	High pressure error	7 flashes	3 flashes	off	off
	High pressure switch error	7 flashes	6 flashes	off	off
Added function error	Active filter error	8 flashes	2 - 3 flashes	off	off
Indoor unit connect error	Indoor unit model error	blinking	blinking	blinking	blinking

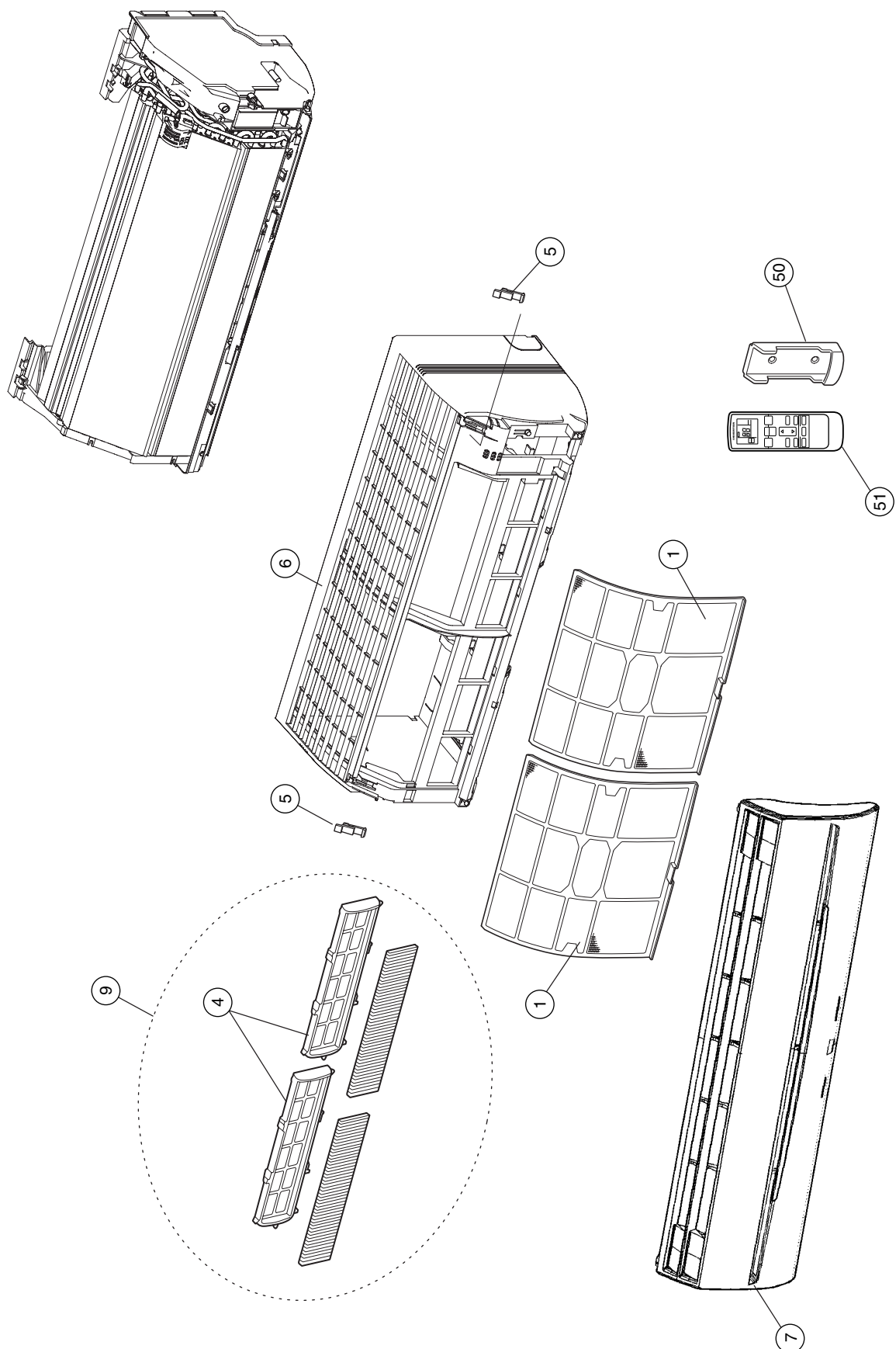
OUTDOOR UNIT

	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	—	—

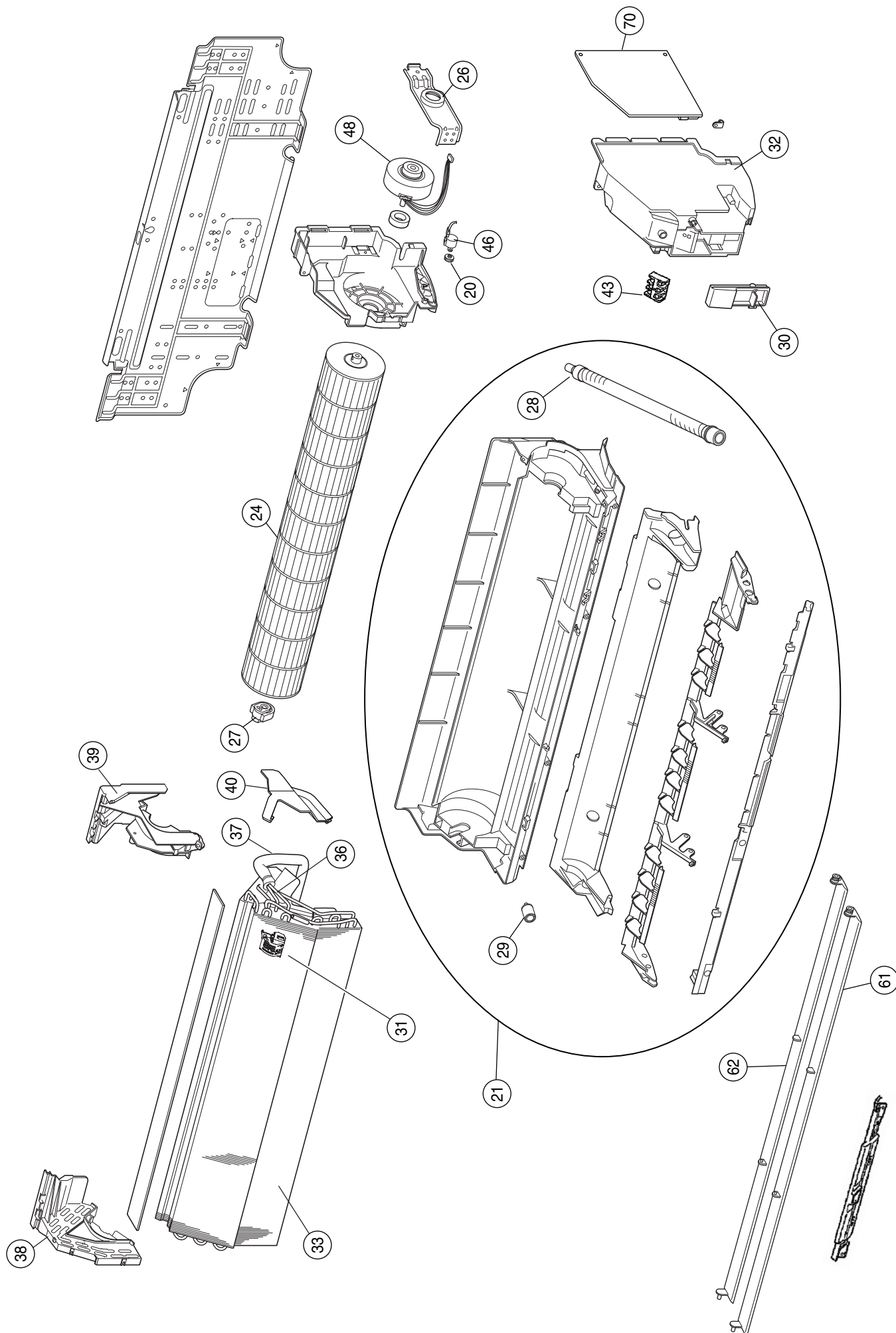
● : Slow flashing - : Off

DISASSEMBLY ILLUSTRATION

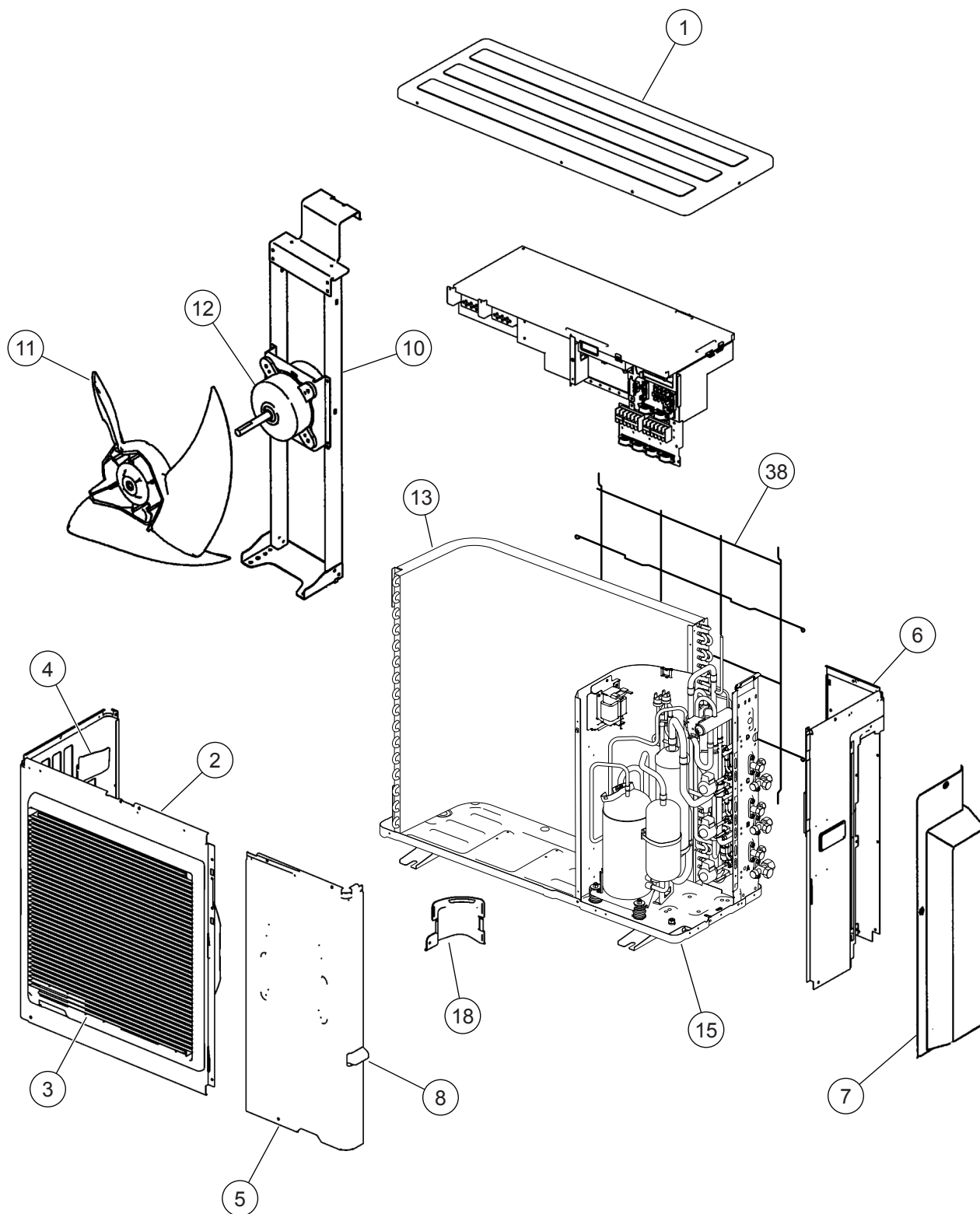
INDOOR UNIT



INDOOR UNIT



OUTDOOR UNIT



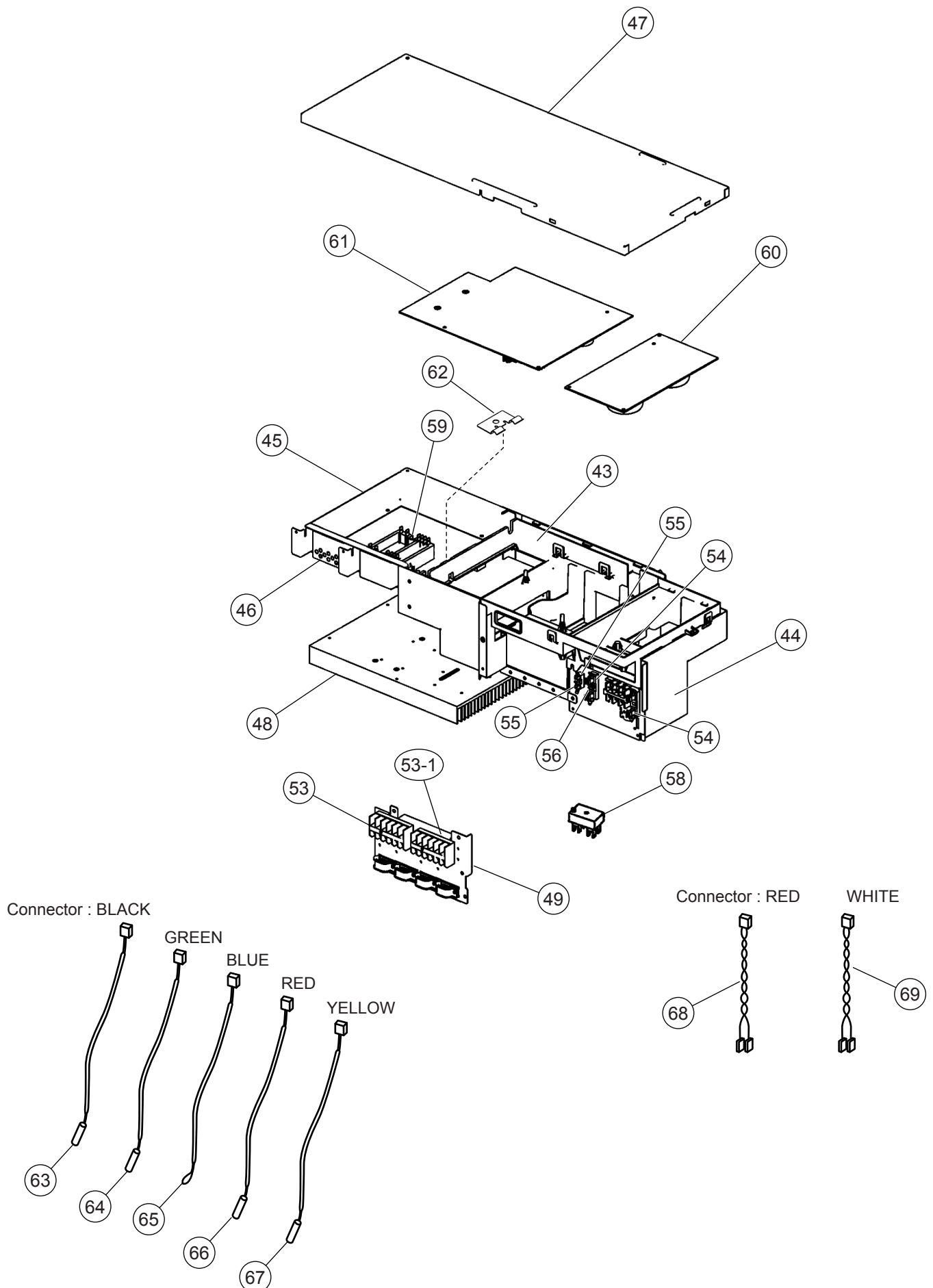
OUTDOOR UNIT

14 24 23 70 26 21 22 27 20 25 28 31 32 30 35 34 33 73 39 19 37 78 76 77 75 74 72 71

Connector : RED

Connector : WHITE

OUTDOOR UNIT INVERTER ASSY



PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		RSA14LACM	RSA18LACM	
1	Air Filter	9309997011	9309997011	
4	Electric Filter Holder	9306602017	9306602017	
5	Clamper (Grille)	9306755010	9306755010	
6	Front Panel	9309999053	9309999053	
7	Intake Grille Assy	9313131074	9313131074	
9	Air Clean Filter Assy	9312152018	9312152018	
20	Gear-A	9309994003	9309994003	
21	Casing Assy	9311354116	9311354116	
24	Crossflow Fan Assy	9307836015	9307836015	
26	Clamp (Motor)	9310102008	9310102008	
27	Shaft Holde -C Assy	9306628017	9306628017	
28	Drain Hose Assy	9314147012	9314147012	
29	Drain Cap Assy	9314493010	9314493010	
30	Wire Clamper	9313944018	9313944018	
31	Holder (Room Thermistor)	9311948018	9311948018	
32	Cover (Switch)	9313943011	9313943011	
33	Evaporator Total Assy	9313099015	9313099015	
36	Joint Pipe Assy	9313104030	9313792015	
37	Insulation (Pipe) E	9304607007	9304607007	
38	Holder (Evaporator) L	9309982017	9309982017	
39	Holder (Evaporator) R	9309983014	9309983014	
40	Water Seal	9312912018	9312912018	
43	Terminal	9701955114	9701955114	
46	Step Motor	9900139025	9900139025	
48	Fan Motor Assy	9602109012	9602109012	
50	Remote Control Holder	9305642045	9305642045	
51	Remote Control Unit	9315027030	9315027030	
61	Louver U	9309991033	9309991033	
62	Louver Z	9309992030	9309992030	
70	Controller PCB Assy	9707404043	9707404050	
---	Pipe Thermistor	9702039042	9702039042	
---	Room Thermistor	9700801108	9700801108	
---	Indicator PCB Assy	9705039032	9705039032	
---	Evaporator B Assy	-----	9311275022	

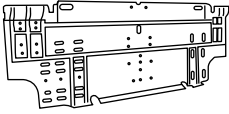
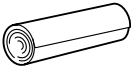
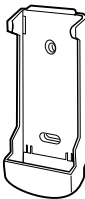
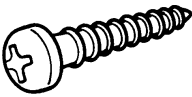
OUTDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		ROA18LAT3 ROA24LAT3				ROA18LAT3 ROA24LAT3	
1	Top Panel Sub Assy	9374417049		45	Inverter Box C	9375140014	
2	Front Panel Sub Assy	9374414048		46	Inverter Box Duct	9374609017	
5	Service Panel Sub Assy	9374415045		47	Inverter Box Cover	9375139018	
6	Right Panel Sub Assy	9374416103		48	Heat Sink A	9375138011	
7	Valve Cover Sub Assy	9374827015		49	Inverter Box D	9374606023	
10	Motor Bracket Sub Assy	9374418060		52	Terminal (3P)	9900203016	
11	Propeller Fan Assy	9366378020		53	Terminal (6P)	9900016036	
12	Motor DC Brushless	9601882015		53-1	Terminal (3P)	9306489045	
13	Condenser A Assy	9374433179		54	Fuse Holder (Big)	0501454012	
14	Separate Wall Assy SS	9375226022		55	Fuse Holder (Small)	0501456016	
15	Base Assy	9374166121		56	Fuse (Big)	0600086039	
17	Coil. Choke	9900366018		57	Fuse (Small)	0600376116	
18	Cap Foot	9374345014		58	Terminal (2P)	9701971015	
19	Compressor Assy	9315297037		59	ACTPM	9703457012	
20	4-Way Valve Assy	9374425136		60	Power Supply PCB Assy	9705647091	
21	Inlet Pipe (Cond) A Assy	9373461104		61	Controller PCB Assy (ROA18L)	9705642225	
22	Outlet Pipe (Cond) A Assy	9374266111		61	Controller PCB Assy (ROA24L)	9705642195	
23	Pressure Switch A	9900186012		62	Holder (Thermo)	9372797013	
24	Pressure Switch B	9900341015		63	Heat Sink Thermistor	9900311018	
25	Accumulator Assy	9375250027		64	Compressor Thermistor	9900156053	
26	Receiver Tank Assy	9374575039		65	Thermistor (Outdoor Temp)	9900378028	
27	Valve Plate A Assy	9374628148		66	Heat Exchanger Thermistor	9900374020	
28	Pulse Motor Valve	9900056025		67	Discharge Pipe Thermistor	9704219039	
30	3-Way Valve Assy (1/2")	9375104016		68	Wire (Pressure Sw) (Red)	9377823014	
31	3-Way Valve Assy (3/8")	9375103019		69	Wire (Pressure Sw) (White)	9377823021	
32	2-Way Valve Assy	9375102012		70	Solenoid	9900165079	
33	Coil (Expansion Valve) (A=Red)	9900057084		71	Thermistor (Pipe)(White)	9900373030	
34	Coil (Expansion Valve) (B=White)	9900057053		72	Thermistor (Pipe)(Red)	9900372019	
35	Coil (Expansion Valve) (C=Green)	9900057060		73	Compressor Plate Assy	9375221058	
37	Rubber Cushion (For Comp)	9312680016		74	Water Seal Plate	9375222017	
38	Net S Protective	9375381028		75	Thermo Holder	9375211011	
39	Thermistor Holder	9377911018		76	Compressor Cover A	9374430093	
43	Inverter Box A	9374603015		77	Compressor Cover B	9374431090	
44	Inverter Box B Assy	9374625024		78	Compressor Cover C	9372067079	

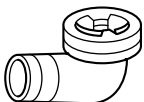
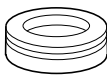
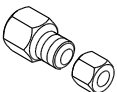
When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

STANDARD ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Use	Part No.
Wall hook bracket 	1	For indoor unit installation	9310001004
Remote control unit 	1	Use for air conditioner operation	9315027030
Battery (penlight) 	2	For remote control unit	0600185527
Cloth tape 	1	For indoor unit installation	9310519004
Remote control unit holder 	1	Use as remote control unit holder	9305642045
Tpping screw (big) (φ 4 x 25) 	8	For wall hook bracket installation	0700076046
Tpping screw (small) (φ 3 x 12) 	2	For remote control unit holder installation	0700019036

OUTDOOR UNIT

Name and Shape	Q'ty	Use	Part No.
Drain pipe 	1	For outdoor unit 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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