



**INVERTER MULTI
AIR CONDITIONER**

WALL MOUNTED type

**SERVICE
MANUAL**



Models

Indoor unit

HSA07LACM
HSA09LACM
HSA12LACM
HSA14LACM
HSA18LACM

Outdoor unit

HOM-30L4A

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SPECIFICATIONS

INDOOR UNIT

ELECTRICAL DATA

TYPE	COOL & HEAT				
INDOOR UNIT	HSA07LACM	HSA09LACM	HSA12LACM	HSA14LACM	HSA18LACM
COOLING CAPACITY	2.3 kW	2.7 kW	3.5 kW	4.2 kW	5.0 kW
HEATING CAPACITY	2.7 kW	3.3 kW	4.0 kW	4.8 kW	6.0 kW
MOISTURE REMOVAL	0.8 L/hr	1.0 L/hr	1.2 L/hr	1.4 L/hr	2.0 L/hr
AIR CIRCULATION HIGH	500 m3/hr	550 m3/hr	580 m3/hr	700 m3/hr	700 m3/hr

FAN MOTOR

POWER SOURCE		230 V				
FAN SPEED (cool / heat)	Discrimination	MFD-34ROM				
	High	1,140 / 1,140 r.p.m.	1,220 / 1,220 r.p.m.	1,280 / 1,320 r.p.m.	1,480 / 1,480 r.p.m.	1,480 / 1,480 r.p.m.
	Meddle	1,000 / 1,050 r.p.m.	1,060 / 1,110 r.p.m.	1,100 / 1,180 r.p.m.	1,250 / 1,250 r.p.m.	1,250 / 1,250 r.p.m.
	Low	880 / 980 r.p.m.	900 / 1,040 r.p.m.	900 / 1,080 r.p.m.	1,050 / 1,100 r.p.m.	1,100 / 1,100 r.p.m.
	Quiet	700 / 800 r.p.m.	720 / 830 r.p.m.	750 / 860 r.p.m.	850 / 950 r.p.m.	950 / 950 r.p.m.

NOISE LEVEL

HIGH	35 dB(A)	38 dB(A)	39 dB(A)	45 dB(A)	45 dB(A)
QUIET	21 dB(A)	22 dB(A)	23 dB(A)	26 dB(A)	28 dB(A)

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		Cooling & Heating Multi
MODEL NAME		HOM-30L4A
COOLING CAPACITY		8.0 kW
HEATING CAPACITY		9.6 kW
POWER SUPPLY		(220) - 230 - (240) V
FREQUENCY		50 Hz
RUNNING CURRENT	Cooling	9.7 A
	Heating	10.5 A
INPUT	Cooling	2.22 kW
	Heating	2.40 kW
EER	Cooling	3.60 kW/kW
	Heating	4.00 kW/kW
AIR CIRCULATION HIGH		3,300 m ³ /hr

FAN MOTOR

DISCRIMINATION	MFE-60PO
HIGH SPEED (Cooling)	820 r.p.m.
HIGH SPEED (Heating)	780 r.p.m.

MEASUREMENT

DIMENSIONS	H x W x D	830 x 900 x 330 mm
WEIGHT	Gross / Net	78 kg / 68 kg

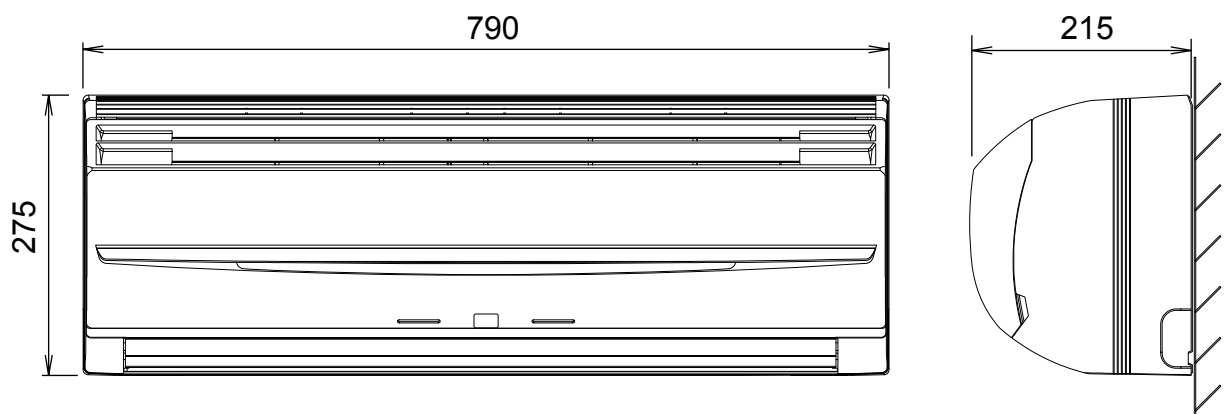
COMPRESSOR AND REFRIGERANT

TYPE		Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION		TNB220FPBMT
WEIGHT (with oil)		14.3 kg
STANDARD REFRIGERANT		3,300 g
REFRIGERANT TYPE		R410A
FULL CHARGE	Total Pipe Length 50 m	3,300 g
	60 m	3,550 g
	70 m	3,800 g
ADDITIONAL CHARGE		25 g/m
CHARGELESS		50 m
MAX PIPE LENGTH (each unit)		25 m
MAX PIPE LENGTH (total)		70 m
MAX ELEVATION (between indoor units)		10 m
MAX ELEVATION (between indoor and outdoor)		10 m
MIN. PIPE LENGTH (each unit)		5 m

DIMENSIONS

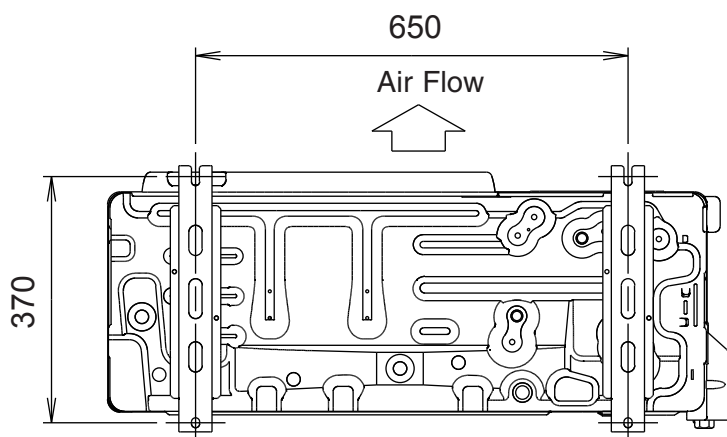
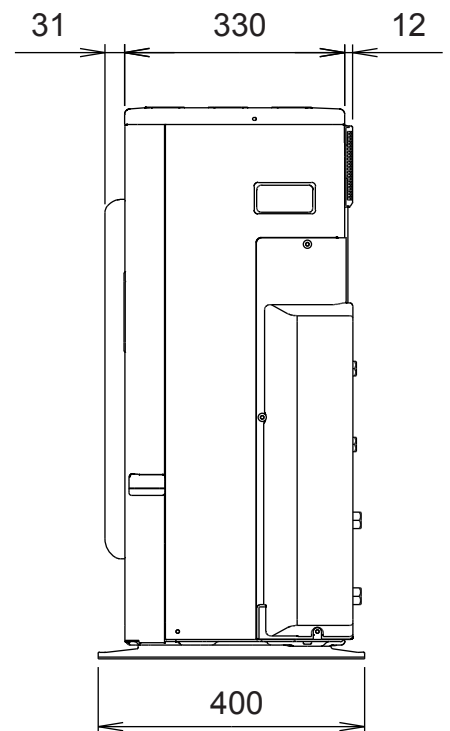
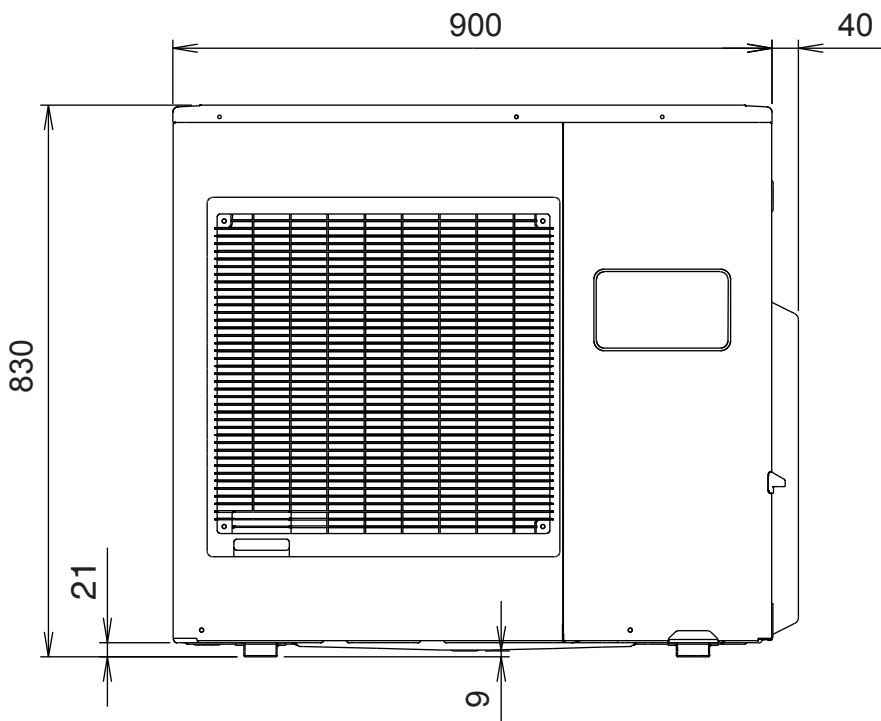
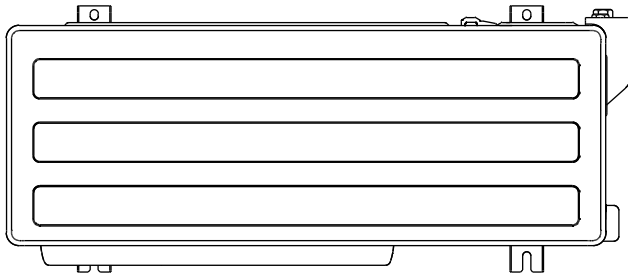
INDOOR UNIT

(unit : mm)



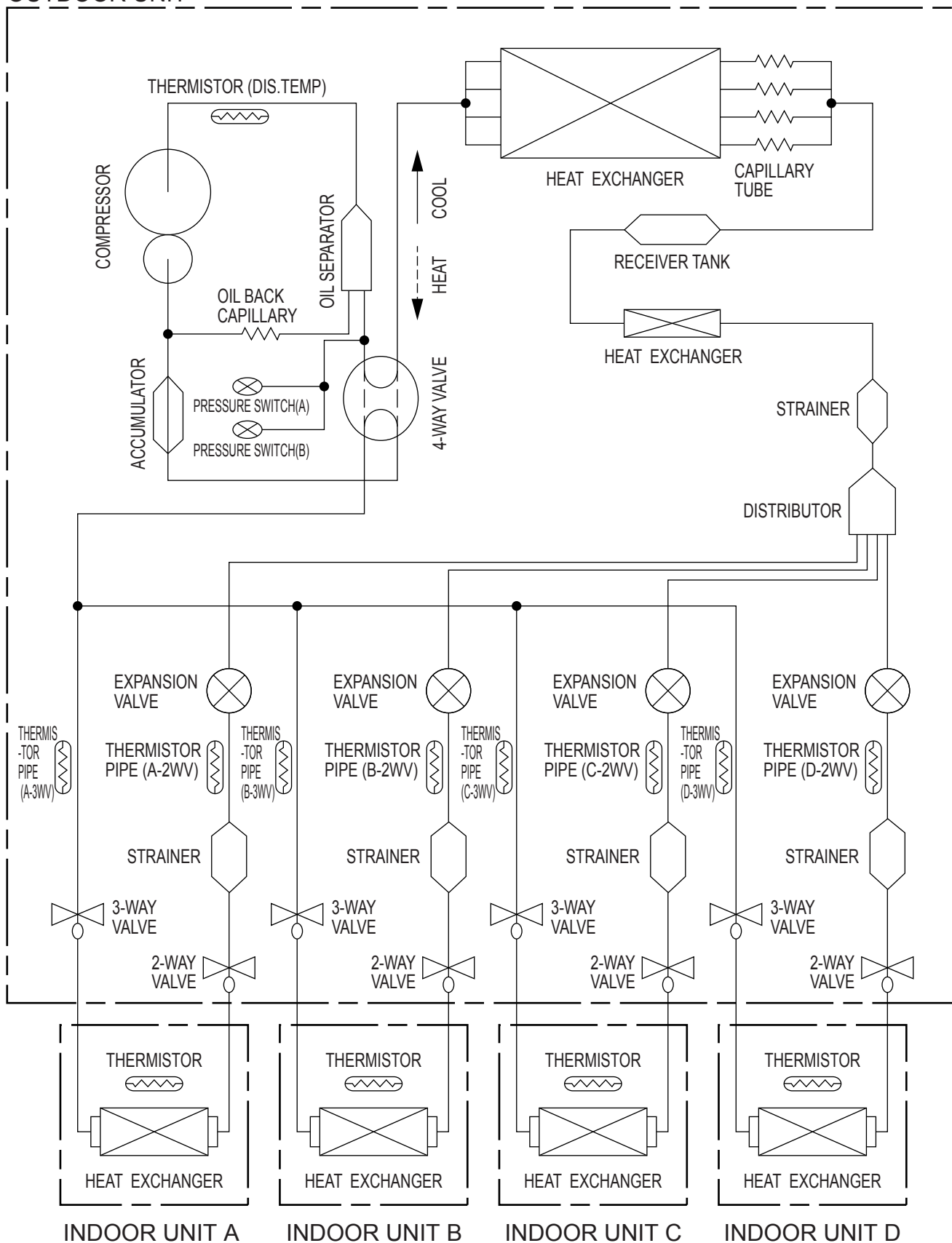
OUTDOOR UNIT

(Unit : mm)



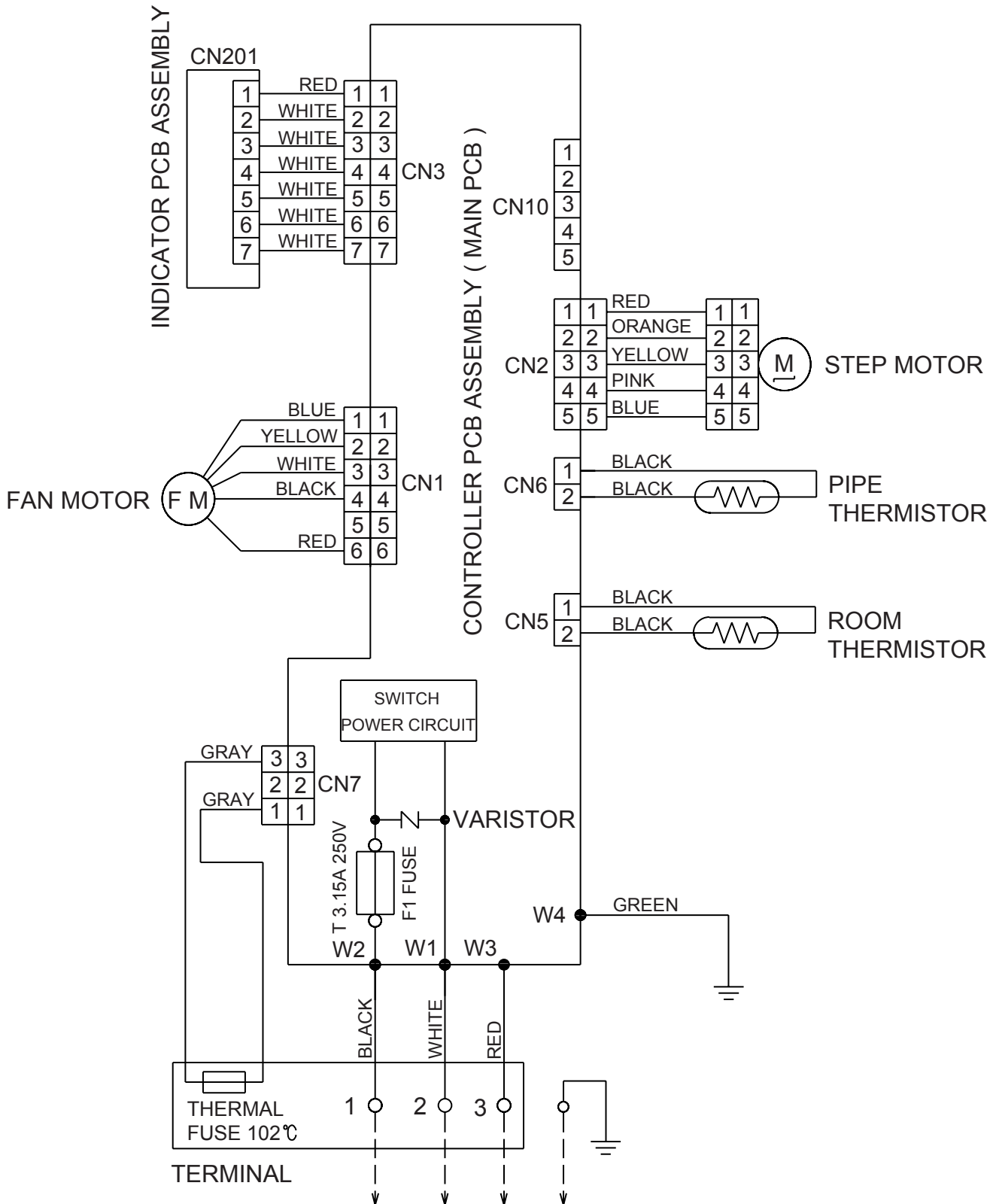
REFRIGERANT SYSTEM DIAGRAM

OUTDOOR UNIT



CIRCUIT DIAGRAM

INDOOR UNIT



The diagram illustrates the electrical wiring for a 4-way valve system, showing connections between various components and a central power supply assembly.

DC COMPRESSOR: The compressor is connected to a 4-way valve (4VW) and a DC fan motor (F M). The compressor's terminals are labeled U (RED), V (WHITE), and W (BLACK). The fan motor's terminals are labeled 1 (RED), 2 (BLACK), 3 (WHITE), 4 (YELLOW), 5 (BROWN), and 6 (BROWN). The compressor is also connected to a bridge diode and a terminal block (W305, W304, W303).

DC FAN MOTOR: The fan motor is connected to a terminal block (W17, W16) and a terminal block (W12, W13, W200, W201, W202, W203, W11, W10).

Thermistors: There are six thermistors connected to the system:

- Thermistor (Heat Sink Temp.): Connected to terminal 1 (RED) and 2 (BLACK).
- Thermistor (Compressor Temp.): Connected to terminal 1 (RED) and 2 (BLACK).
- Thermistor (Outdoor Temp.): Connected to terminal 1 (RED) and 2 (BLACK).
- Thermistor (Pipe Temp.): Connected to terminal 1 (RED) and 2 (BLACK).
- Thermistor (Discharge Temp.): Connected to terminal 1 (RED) and 2 (BLACK).
- Thermistor (Discharge Temp.): Connected to terminal 1 (RED) and 2 (BLACK).

Pressure Switches: There are two pressure switches:

- Pressure Switch 1: Connected to terminal 1 (RED) and 2 (RED).
- Pressure Switch 2: Connected to terminal 1 (WHITE) and 2 (WHITE).

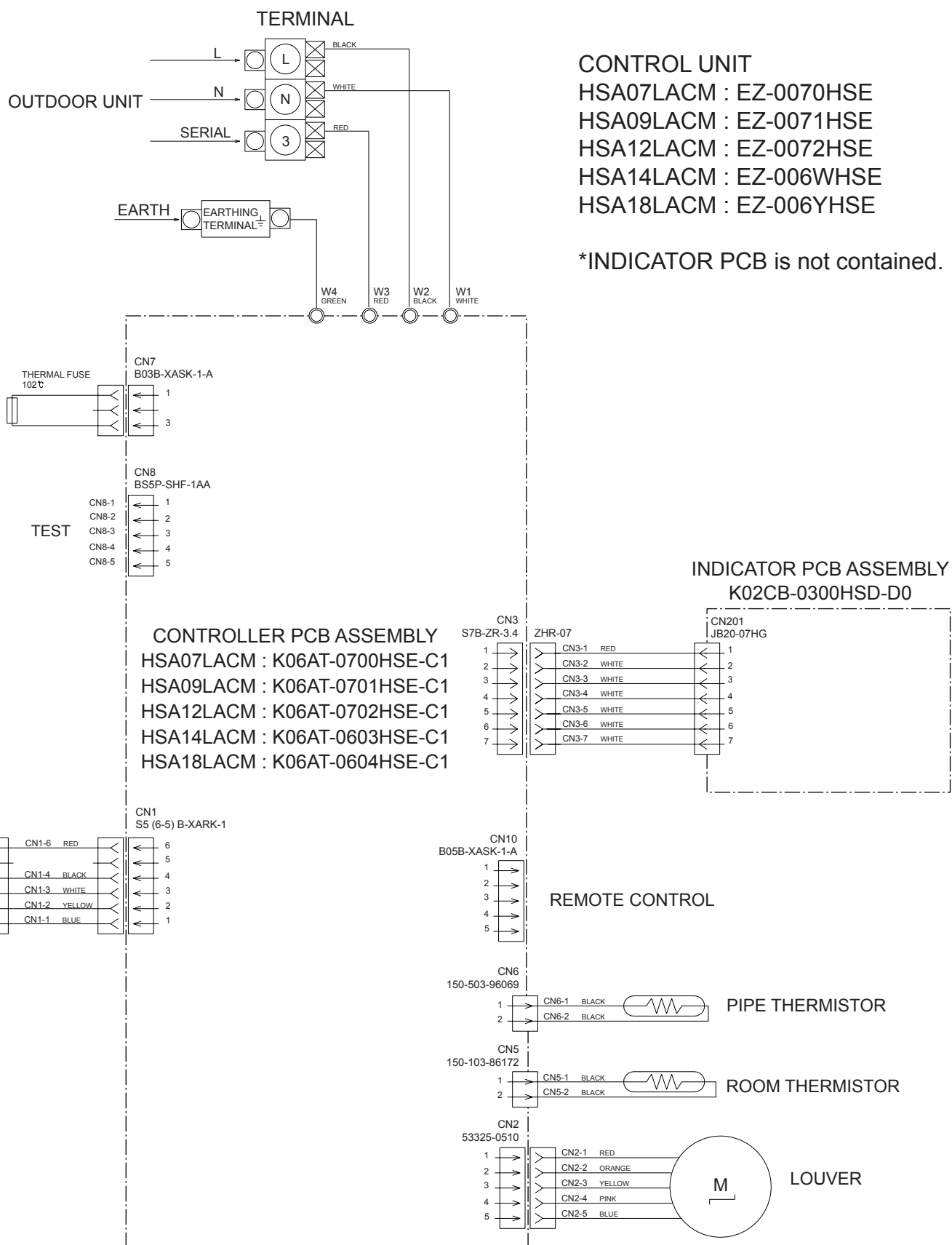
Expansion Valves: There are four expansion valves (A, B, C, D) connected to the system. Each valve has a terminal block with terminals 1 through 6. The connections are as follows:

- Valve A: 1 (RED), 2 (BROWN), 3 (BLUE), 4 (ORANGE), 5 (YELLOW), 6 (WHITE).
- Valve B: 1 (BLACK), 2 (RED), 3 (RED), 4 (RED), 5 (WHITE), 6 (WHITE).
- Valve C: 1 (BLACK), 2 (RED), 3 (RED), 4 (RED), 5 (WHITE), 6 (WHITE).
- Valve D: 1 (BLACK), 2 (RED), 3 (RED), 4 (RED), 5 (WHITE), 6 (WHITE).

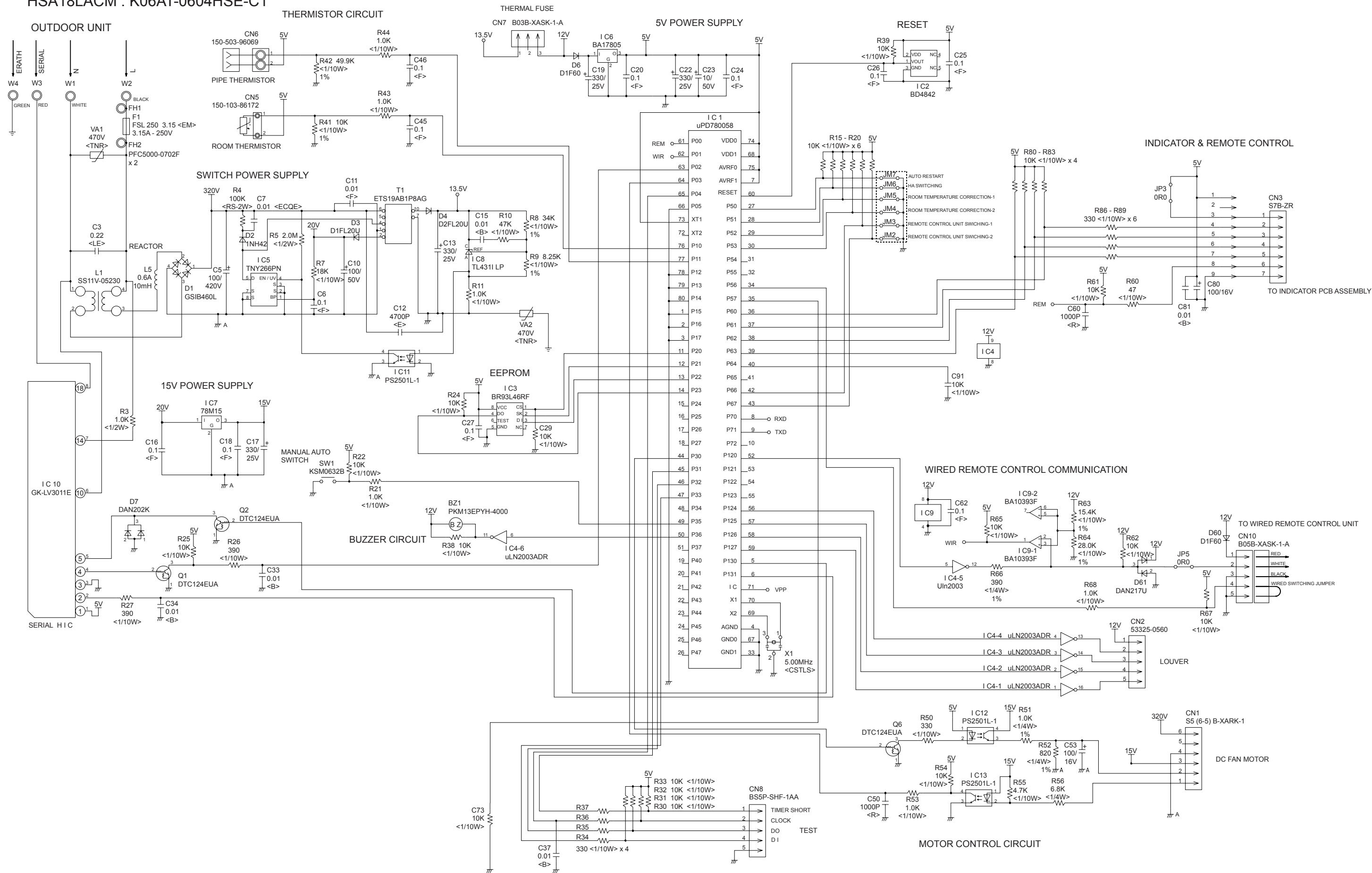
Power Supply Assembly: The power supply assembly is connected to a terminal block (W3, W6, W7, W4, W5) and a terminal block (W3, W6, W7, W4, W5). It includes a fuse (F4, 5A, 250V) and a terminal block (W3, W6, W7, W4, W5).

Other Components: The diagram also shows a 4-way valve (4VW) with a 4VW coil, a construction check switch, a current change switch (SW1), a fuse (F4, 5A, 250V), and a terminal block (W3, W6, W7, W4, W5).

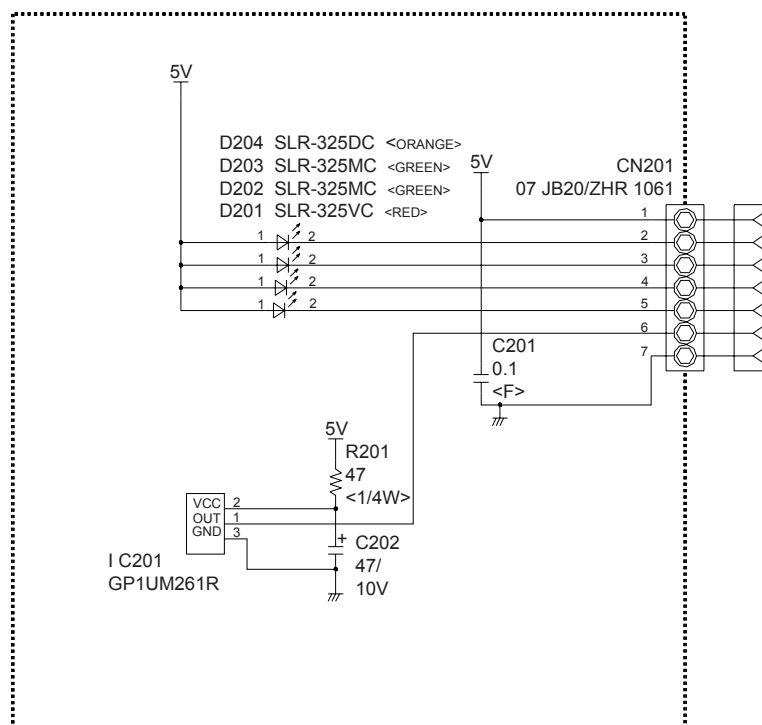
INDOOR PCB CIRCUIT DIAGRAM



INDOOR UNIT
CONTROLLER PCB ASSEMBLY (MAIN PCB)
HSA07LACM : K06AT-0700HSE-C1
HSA09LACM : K06AT-0701HSE-C1
HSA12LACM : K06AT-0702HSE-C1
HSA14LACM : K06AT-0603HSE-C1
HSA18LACM : K06AT-0604HSE-C1

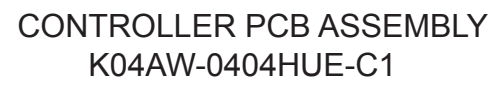


INDOOR UNIT
INDICATOR PCB ASSEMBLY
EZ-0300HSD-D0

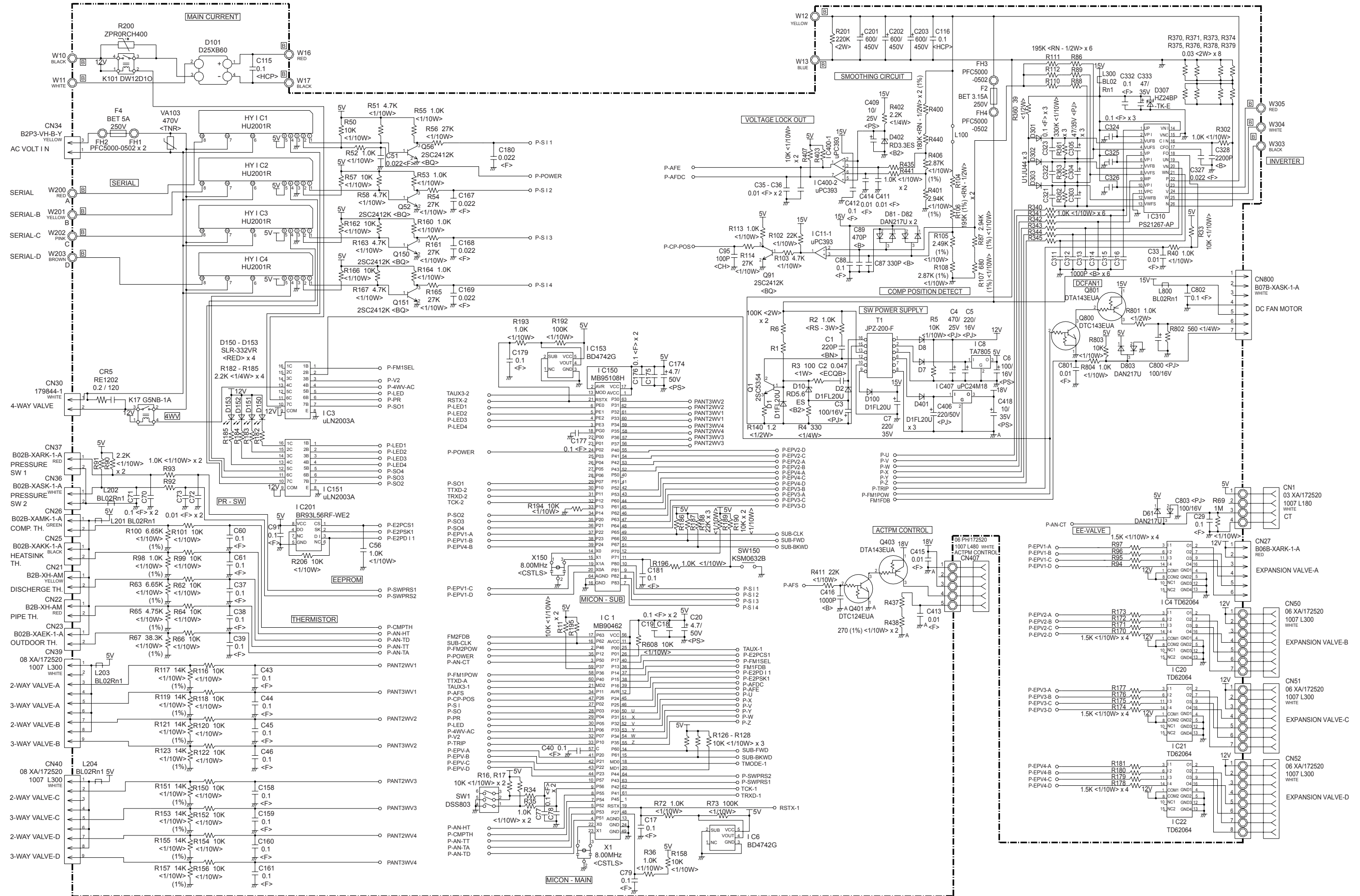


INVERTER ASSEMBLY

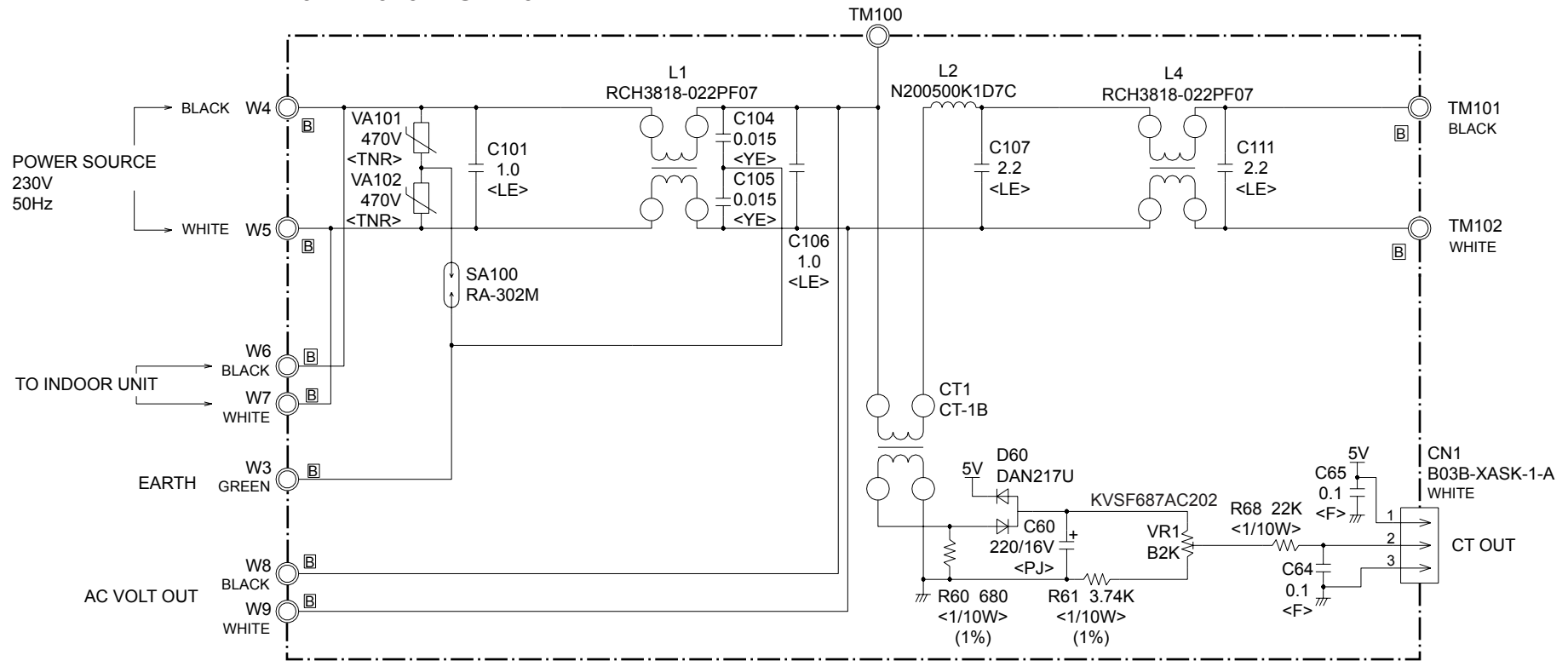
EZ-004HHUE



OUTDOOR UNIT
CONTROLLER PCB ASSEMBLY (MAIN PCB)
K04AW-0404HUE-C1



OUTDOOR UNIT
POWER SUPPLY PCB ASSEMBLY
K04BA-0402HUE-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

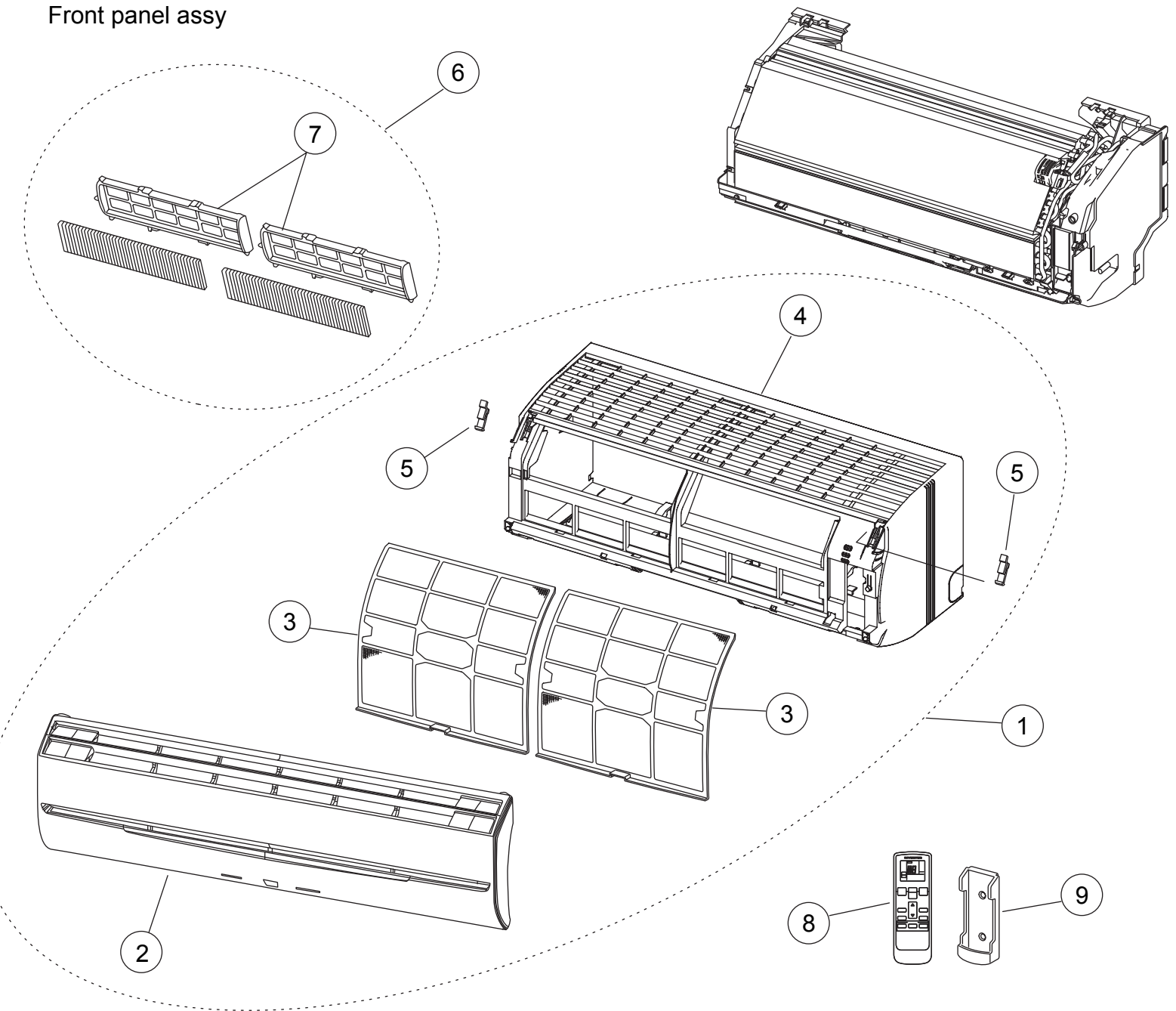
OUTDOOR UNIT

	LED A	LED B	LED C	LED D
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	—
Communication error (indoor unit D 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 2way valve(D) 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	—
Outdoor 3way valve(D) 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	—	—	—

● : Slow flashing — : Off

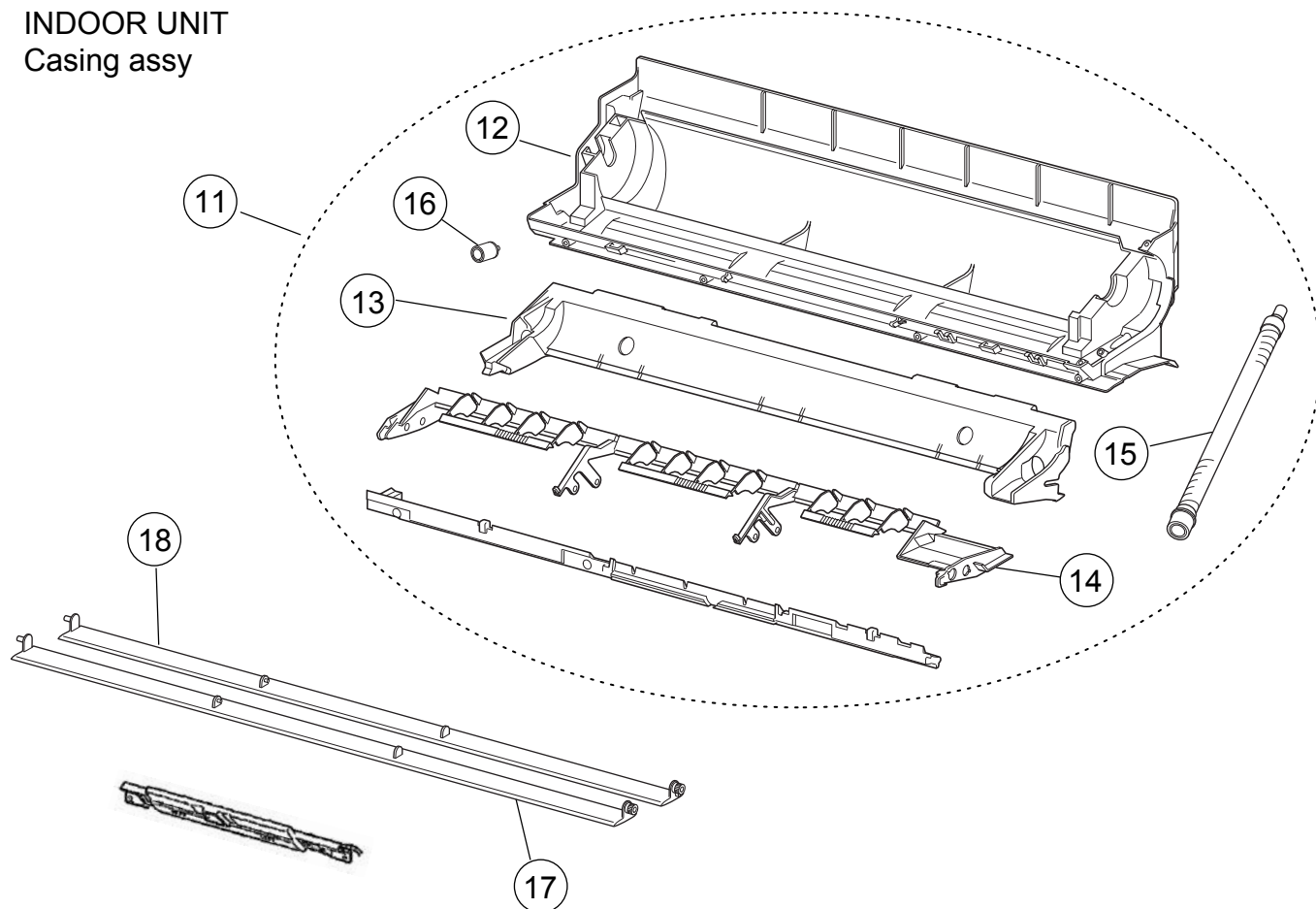
PARTS

INDOOR UNIT Front panel assy



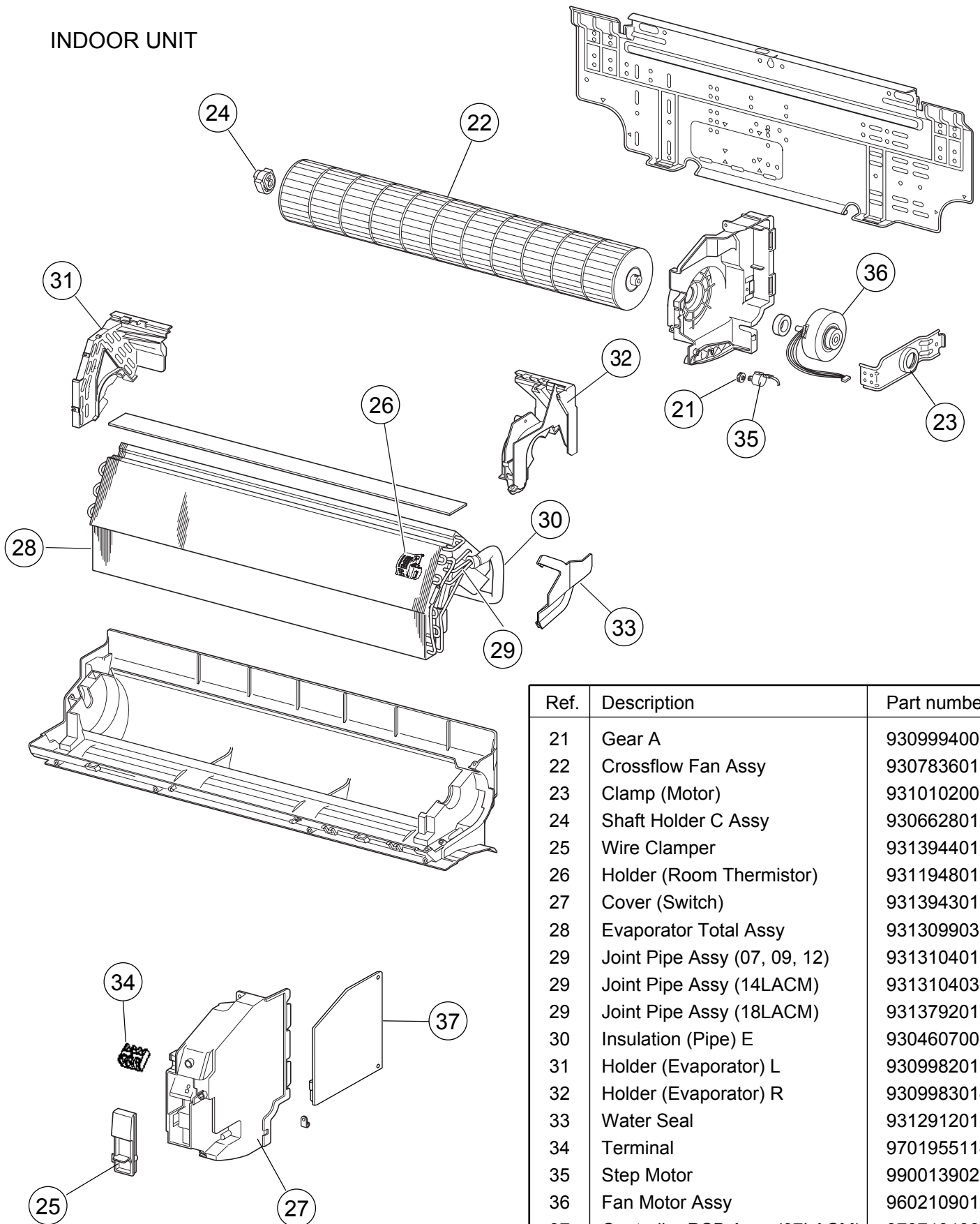
Ref.	Description	Part number	
1	Front Panel Assy	9313130282	
2	Intake Grille Assy	9313131081	
3	Air Filter	9309997011	
4	Front Panel	9309999053	
5	Clamper (Grille)	9306755010	
6	Air Clean Filter Assy	9312152018	
7	Electric Filter Holder	9306602017	
8	Remote Control Unit	9315027030	
9	Remote Control Holder	9305642045	

INDOOR UNIT
Casing assy



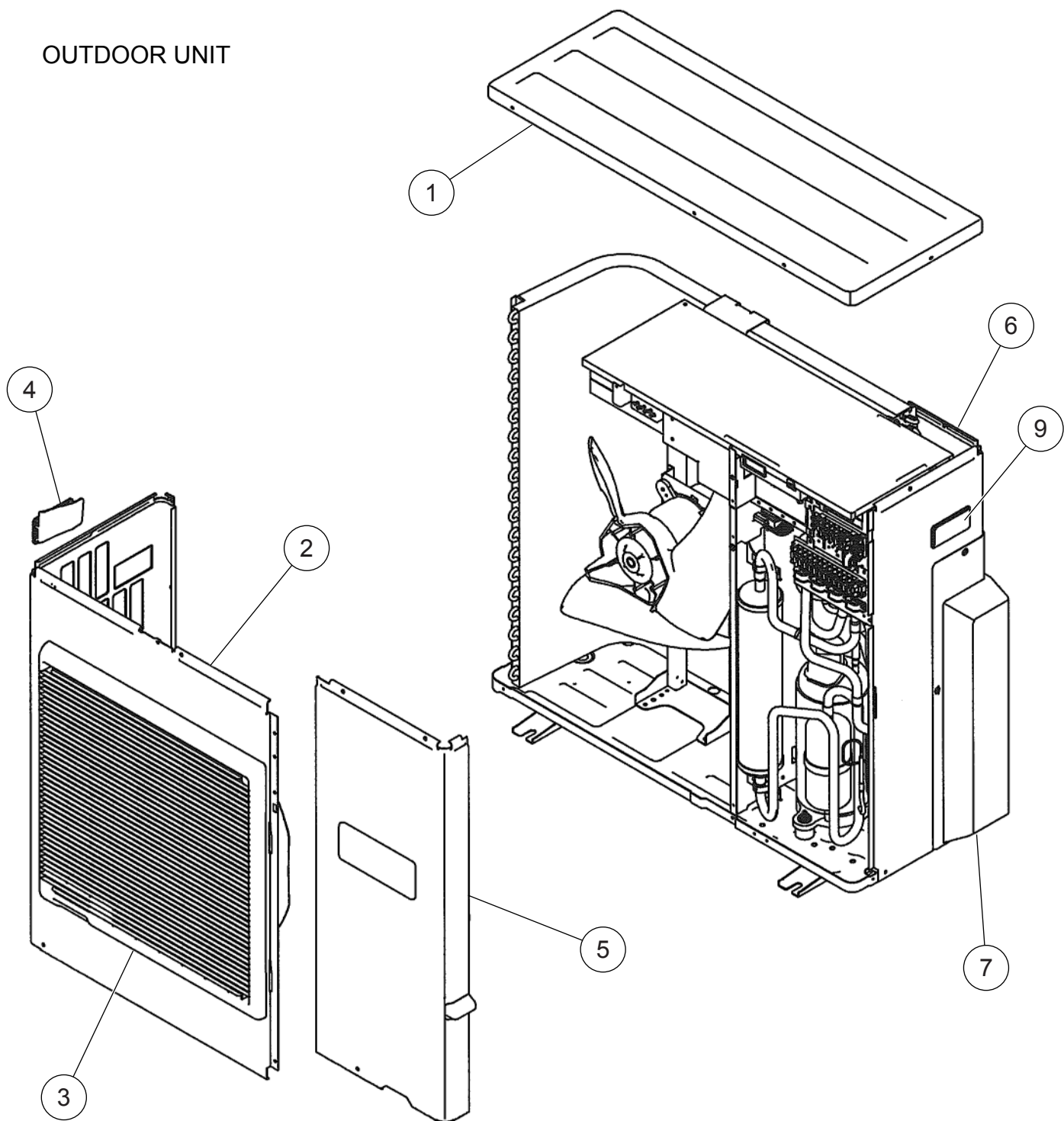
Ref.	Description	Part number	
11	Casing Assy	9311354116	
12	Casing Cover B	9314160011	
13	Casing Cover F	9309987005	
14	Louver Holder	9309993013	
15	Drain Hose Assy	9314147029	
16	Drain Cap Assy	9316177017	
17	Louver U	9309991033	
18	Louver Z	9309992030	

INDOOR UNIT



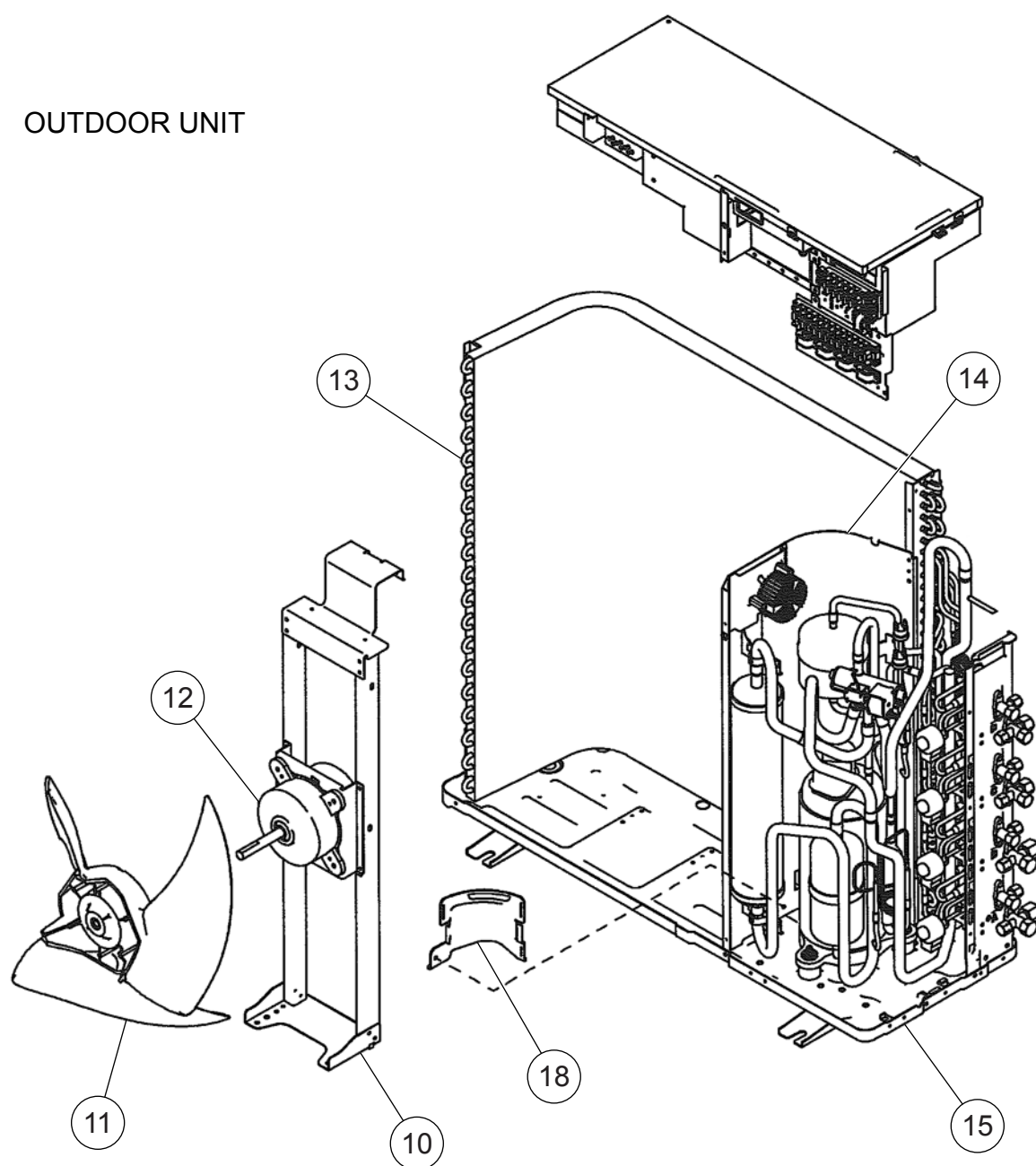
Ref.	Description	Part number
21	Gear A	9309994003
22	Crossflow Fan Assy	9307836015
23	Clamp (Motor)	9310102008
24	Shaft Holder C Assy	9306628017
25	Wire Clamer	9313944018
26	Holder (Room Thermistor)	9311948018
27	Cover (Switch)	9313943011
28	Evaporator Total Assy	9313099039
29	Joint Pipe Assy (07, 09, 12)	9313104016
29	Joint Pipe Assy (14LACM)	9313104030
29	Joint Pipe Assy (18LACM)	9313792015
30	Insulation (Pipe) E	9304607007
31	Holder (Evaporator) L	9309982017
32	Holder (Evaporator) R	9309983014
33	Water Seal	9312912018
34	Terminal	9701955114
35	Step Motor	9900139025
36	Fan Motor Assy	9602109012
37	Controller PCB Assy (07LACM)	9707404067
37	Controller PCB Assy (09LACM)	9707404074
37	Controller PCB Assy (12LACM)	9707404081
37	Controller PCB Assy (14LACM)	9707404043
37	Controller PCB Assy (18LACM)	9707404050
---	Pipe Thermistor	9702039042
---	Room Thermistor	9700801108
---	Indicator PCB Assy	9705039032
---	Evaporator B (18LACM only)	9311275022

OUTDOOR UNIT



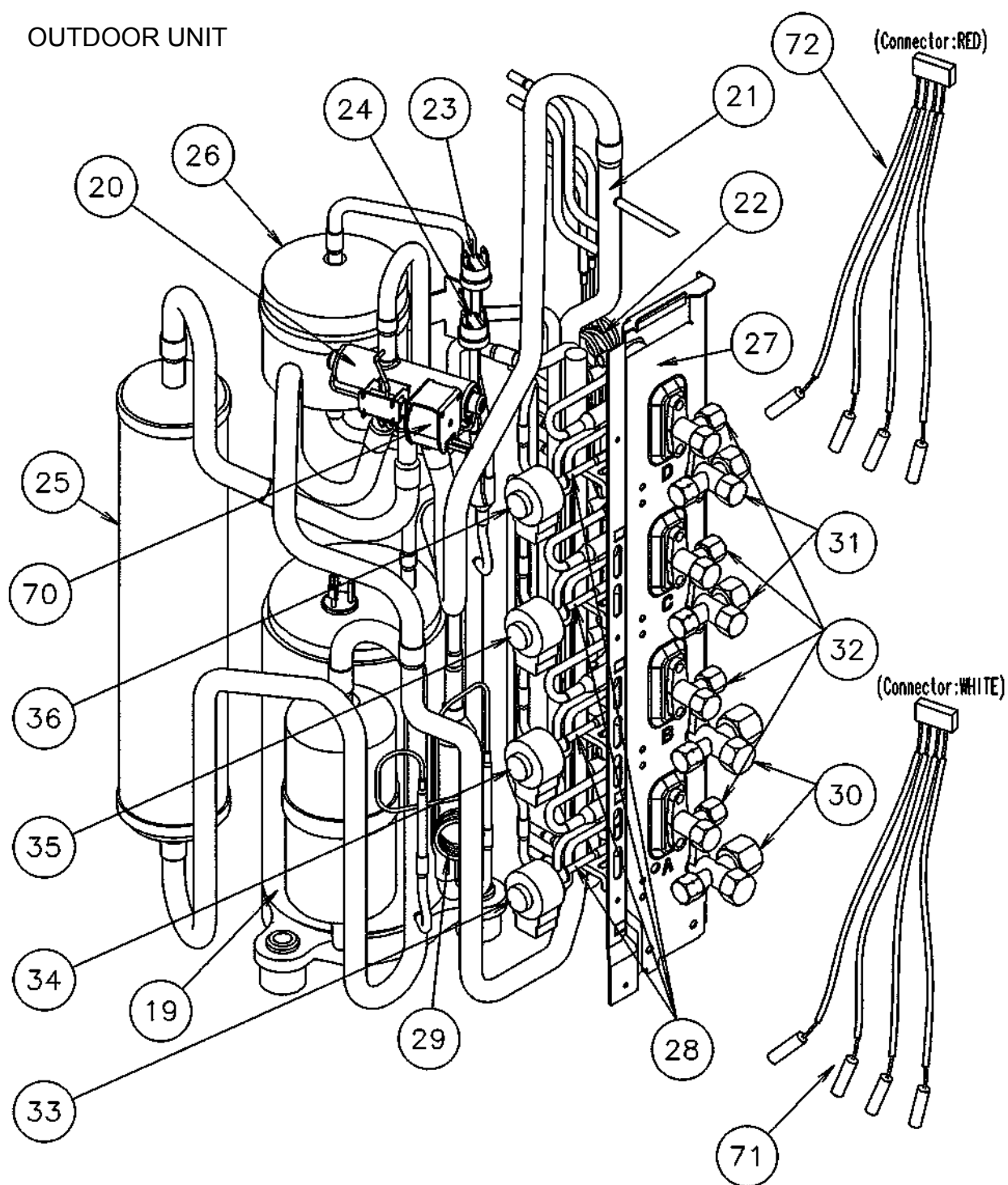
Ref.	Description	Part number	
1	Top Panel Sub Assy	9374417025	
2	Front Panel	9374094066	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Assy	9374415038	
6	Right Panel M	9374599028	
7	Valve Cover Sub Assy	9374827015	
9	Grip	9374172016	

OUTDOOR UNIT



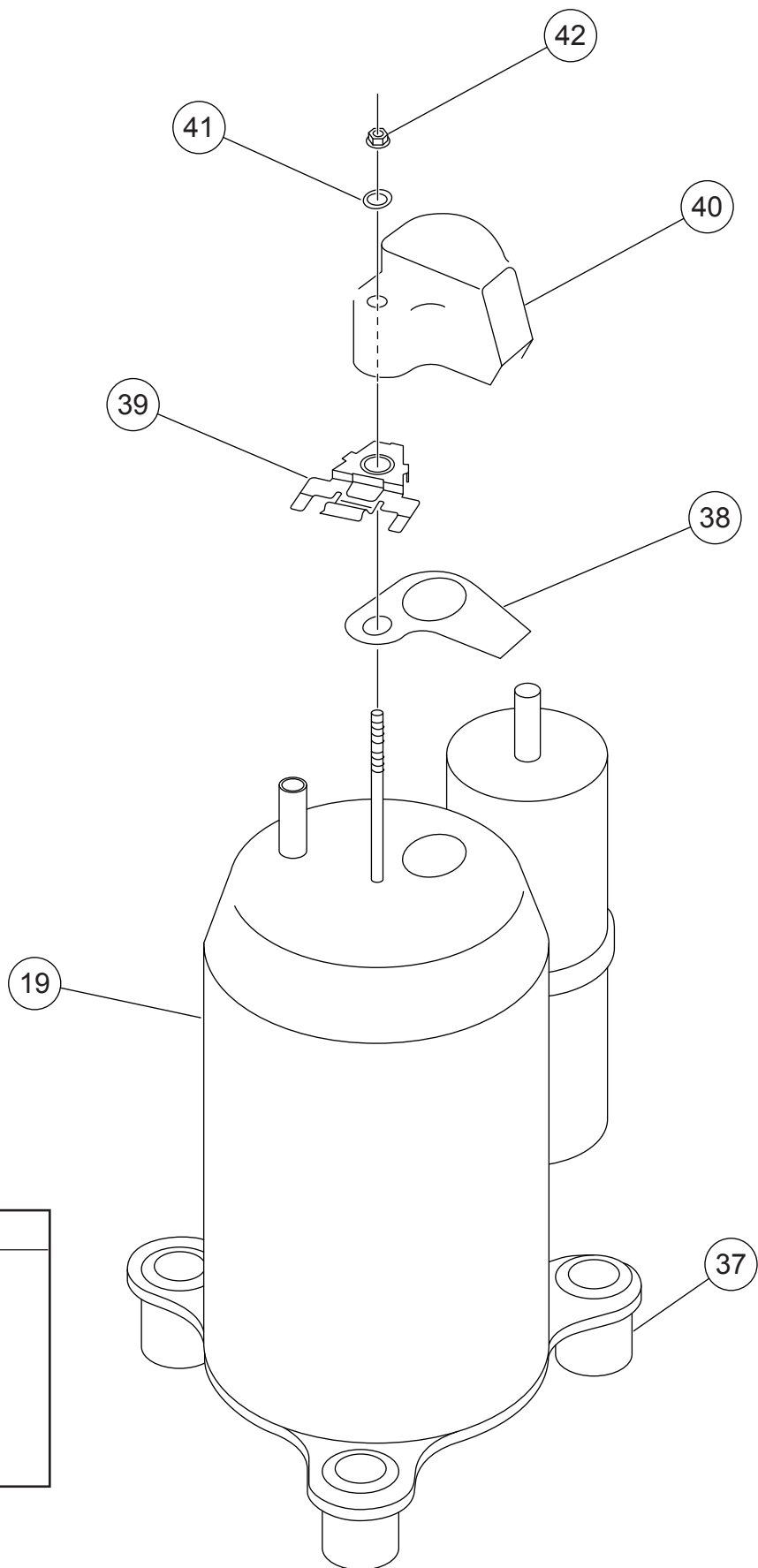
Ref.	Description	Part number	
10	Motor Bracket Sub Assy	9374418053	
11	Propeller Fan Assy	9366378020	
12	Fan Motor	9601882015	
13	Condenser A Assy	9374433056	
14	Separate Wall Assy	9374629022	
15	Base Assy	9374166084	
18	Cap Foot	9374345014	

OUTDOOR UNIT



Ref.	Description	Part number	Ref.	Description	Part number
19	Compressor Assy	9377946010	31	3-Way Valve Assy (3/8")	9372205044
20	4-Way Valve Assy	9374425044	32	2-Way Valve Assy	9372204054
21	Inlet Pipe (Cond) A Assy	9373461067	33	Coil (Expansion Valve)(A=Red)	9900057084
22	Outlet Pipe (Cond) A Assy	9374266067	34	Coil (Expansion Valve)(B=White)	9900057053
23	Pressure Switch A Assy	9367726028	35	Coil (Expansion Valve)(C=Green)	9900057060
24	Pressure Switch B Assy	9367727025	36	Coil (Expansion Valve)(D=Blue)	9900057077
25	Accumulator Sub Assy	9374426072	70	Solenoid	9900165055
26	Receiver Tank Sub Assy	9373426028	71	Pipe Thermistor (White)	9900322014
27	Valve Plate A Assy	9374628025	72	Pipe Thermistor (Red)	9900289010
28	Expansion Valve Assy	9370947106	---	Strainer	9372524015
29	Capillary Assy	9372197370	---	Strainer	9366602019
30	3-Way Valve Assy (1/2")	9372205051			

OUTDOOR UNIT
Compressor

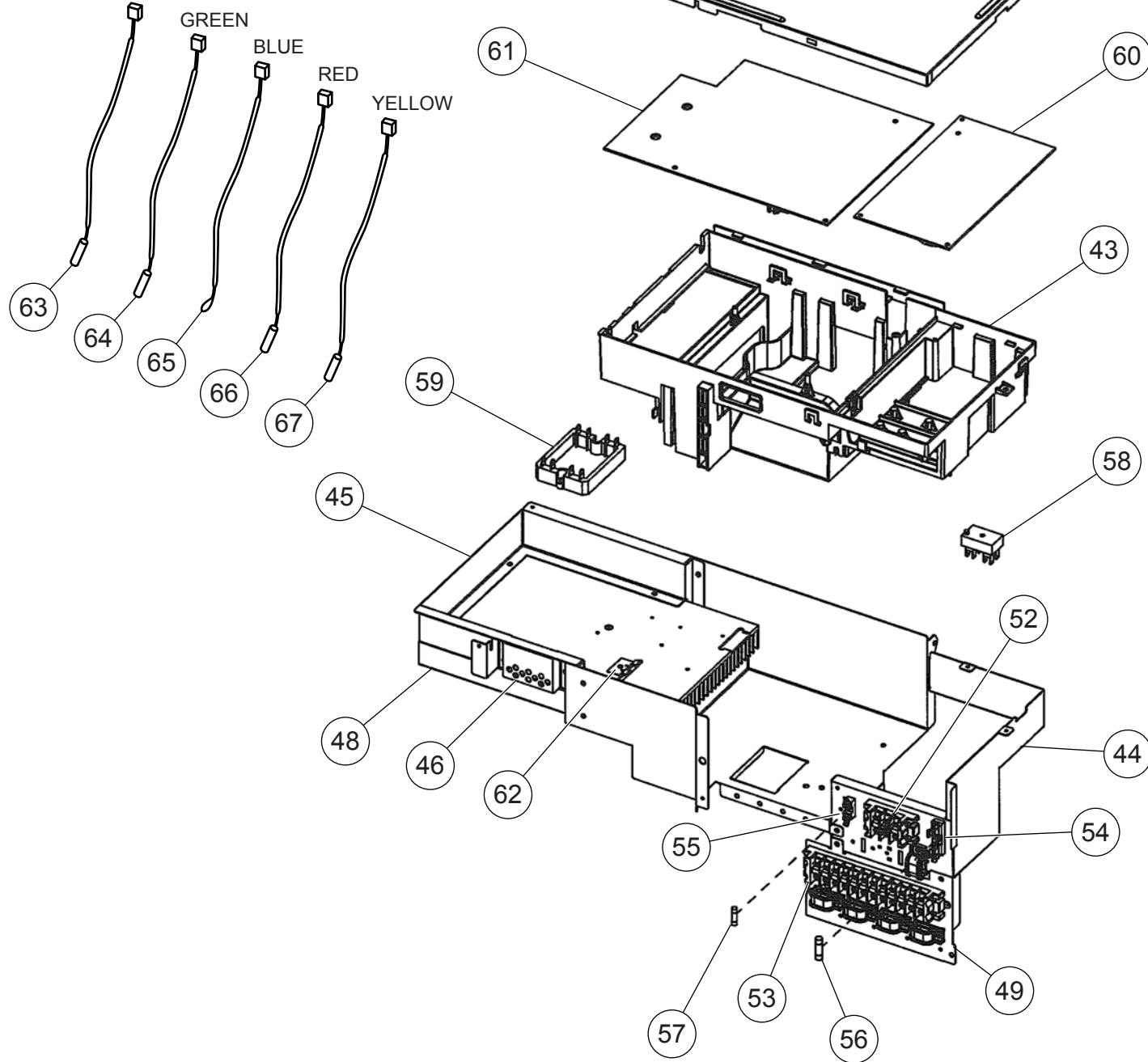


Ref.	Description	Part number	
19	Compressor Assy	9377946010	
37	Rubber Seat (For Comp)	9377951014	
38	Terminal Packing	9377948014	
39	Holder	9377952011	
40	Terminal Cover (Comp)	9377947017	
41	Washer (Rubber)	9377949011	
42	Frange Nut	9377950017	

OUTDOOR UNIT

Inverter assy

Connector : BLACK

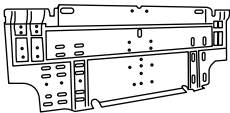
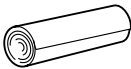


Ref.	Description	Part number
43	Inverter Box A	9374603015
44	Inverter Box B Assy	9374625017
45	Inverter Box C	9374605019
46	Inverter Box Duct	9374609017
47	Inverter Box Cover	9374608010
48	Heat Sink A	9374607013
49	Inverter Box D	9374606016
52	Terminal (3P)	9900203016
53	Terminal (12P)	9358660164
54	Fuse Holder (Big)	0501454012
55	Fuse Holder (Small)	0501456016
56	Fuse (Big)	0600086039

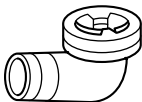
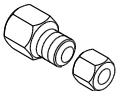
Ref.	Description	Part number
57	Fuse (Small)	0600376116
58	Terminal	9701971015
59	ACTPM	9703457012
60	Power Supply PCB Assy	9705647039
61	Controller PCB Assy	9705642058
62	Holder (Thermo)	9372797013
63	Heat Sink Thermistor	9900311018
64	Compressor Thermistor	9900156022
65	Thermistor (Outdoor Temp)	9703516078
66	Heat Exchanger Thermistor	9704220059
67	Discharge Pipe Thermistor	9704219114

STANDARD ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Use	Part number
Wall hook bracket 	1	To install indoor unit	9310001004
Remote control 	1	To operate air conditioner	9315027030
Battery (penlight) 	2	For remote control unit	0600185527
Cloth tape 	1	For indoor unit installation	9310519004
Remote control holder 	1	To hold remote control	9305642045
Ttpping screw (big) (ϕ 4 x 25) 	8	For wall hook bracket installation	0700076046
Ttpping screw (small) (ϕ 3 x 12) 	2	For remote control unit holder installation	0700019036

OUTDOOR UNIT

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

0711G3310