

INVERTER MULTI
AIR CONDITIONER
FLOOR CONSOLE /
UNDER CEILING DUAL TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ABYF14LBT	AOY30LMAW4
ABYF18LBT	
ABYF24LBT	

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SPECIFICATIONS

INDOOR UNIT

ELECTRICAL DATA

TYPE	Cool and Heat		
MODEL NAME	ABYF14LBT	ABYF18LBT	ABYF24LBT
POWER SOURCE	230 V		
FREQUENCY	50 Hz		
AIR CIRCULATION HIGH	640 m3/hr	780 m3/hr	880 m3/hr

FAN MOTOR

POWER SOURCE		230 V		
DISCRIMINATION		MFH-24RVL		
FAN SPEED	High speed	850 r.p.m.	1,040 r.p.m.	1,230 r.p.m.
	Middle speed	800 r.p.m.	950 r.p.m.	1,040 r.p.m.
	Low speed	740 r.p.m.	800 r.p.m.	900 r.p.m.
	Quiet	670 r.p.m.	740 r.p.m.	900 r.p.m.
NOISE LEVEL	High speed	36 dB	41 dB	45 dB
	Middle speed	34 dB	38 dB	40 dB
	Low speed	33 dB	34 dB	36 dB
	Quiet	29 dB	32 dB	33 dB

MEASUREMENT

DIMENSIONS	H x W x D	199 x 990 x 655 mm
WEIGHT	Gross / Net	36 kg / 27 kg

OUTDOOR UNIT

ELECTRICAL SPECIFICATIONS

TYPE		Colling & Heating
MODEL NAME		AOY30LMAW4
COOLING CAPACITY		8.0 kW
HEATING CAPACITY		9.6 kW
POWER SUPPLY		230 V
FREQUENCY		50 Hz
RUNNING CURRENT	Cooling	9.7 A
	Heating	10.5 A
INPUT	Cooling	2.22 kW
	Heating	2.40 kW
E.E.R.	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.

NOISE LEVEL

COOLING	50dB
HEATING	51dB

COMPRESSOR AND REFRIGERANT

TYPE		Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION		TNB220FPBMT
WEIGHT (with oil)		14.3 kg
PRECHARGED 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
(between indoor and outdoor units)		10 m
MIN. PIPE LENGTH (each unit)		5 m

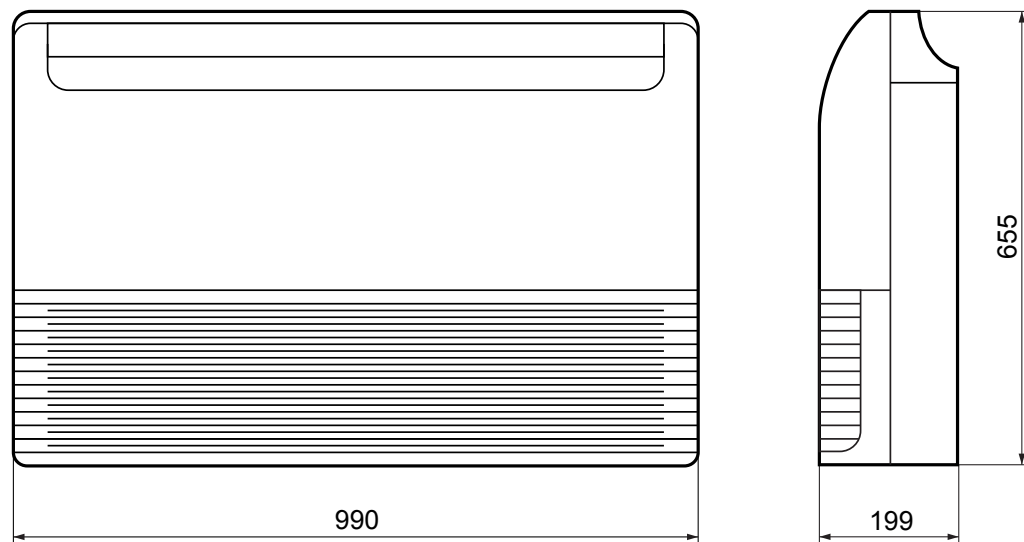
MEASUREMENT

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

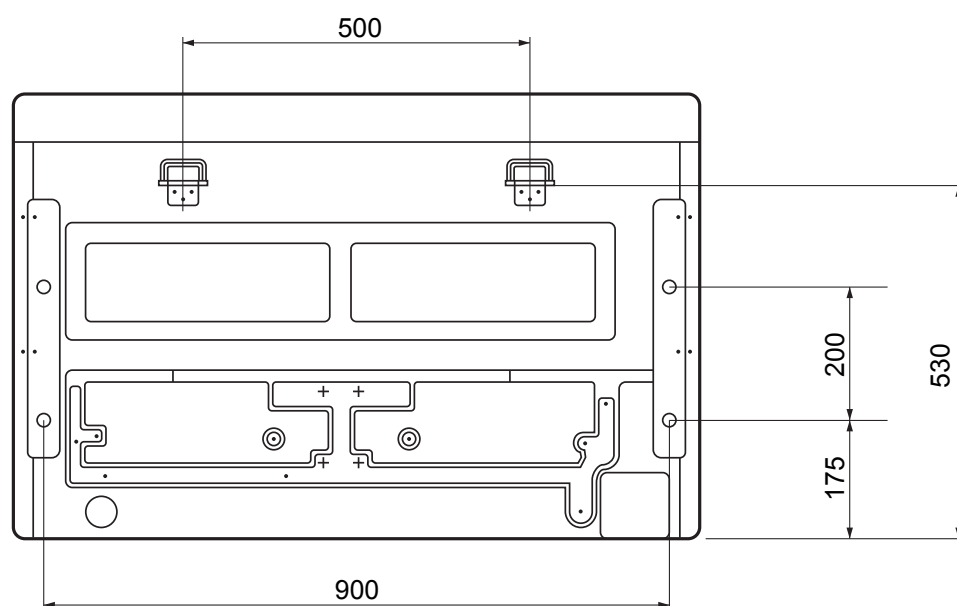
OUTLINE AND DIMENSIONS

INDOOR UNIT

Unit : mm

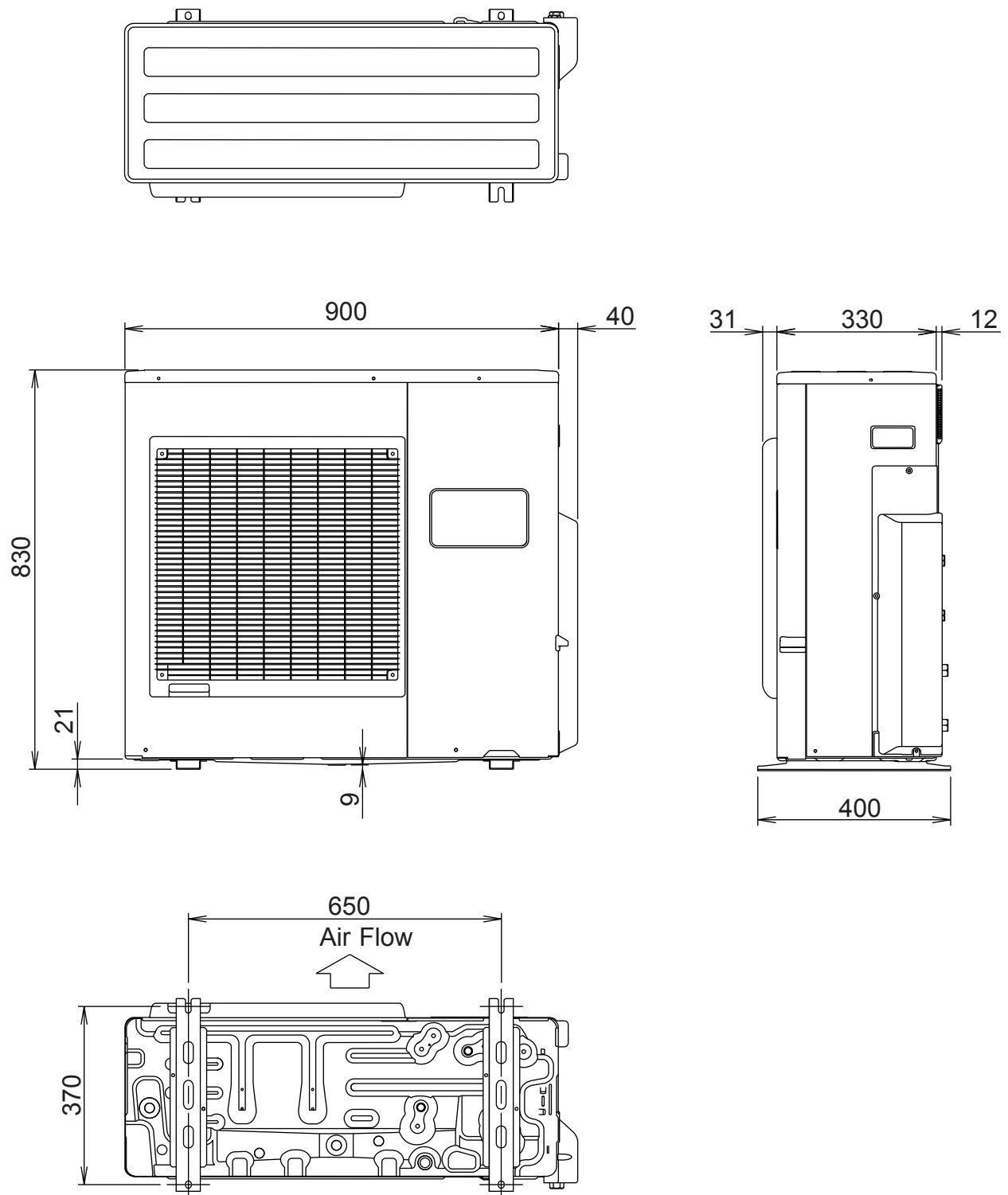


(rear view)



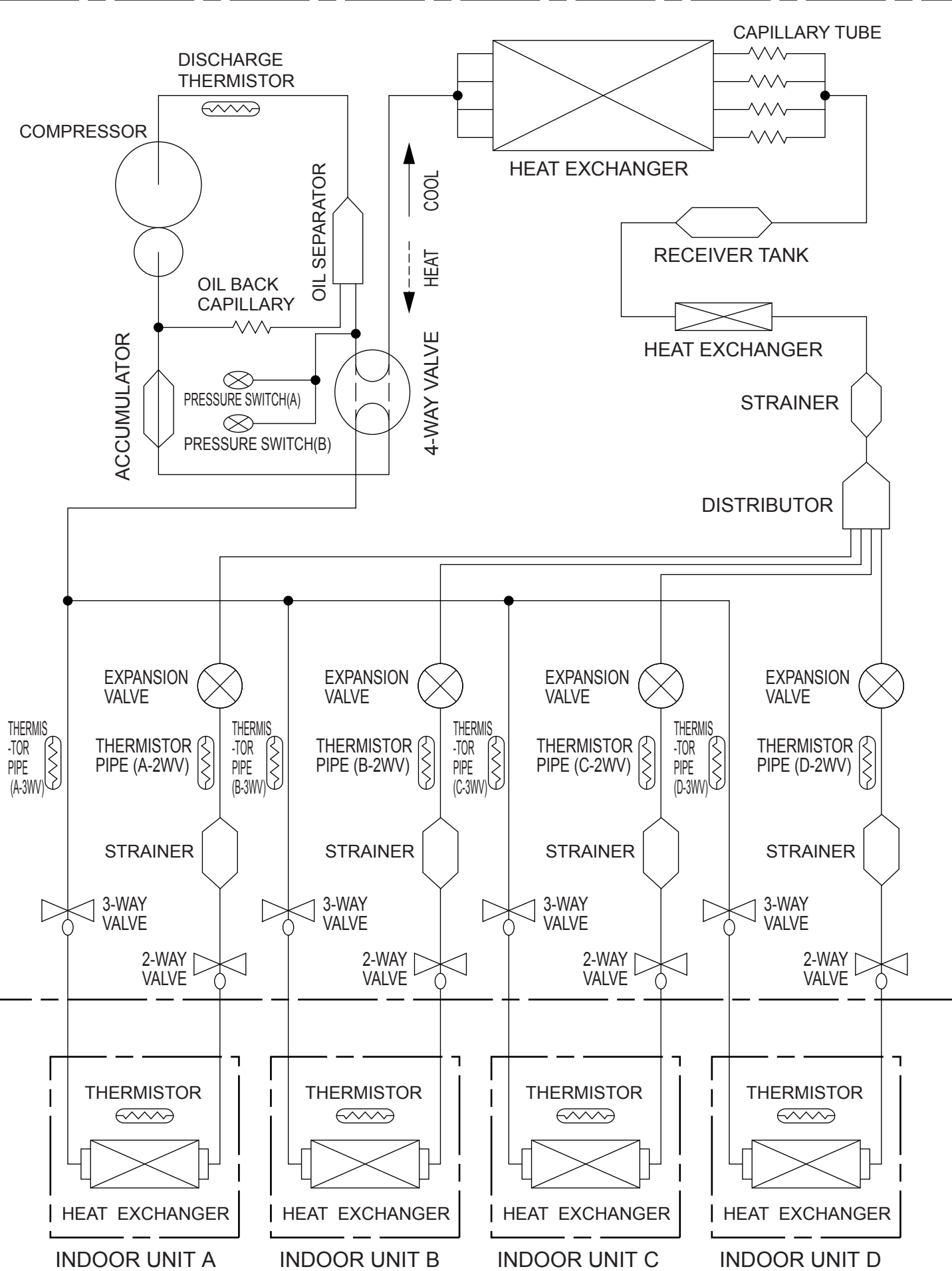
OUTDOOR UNIT

Unit : mm

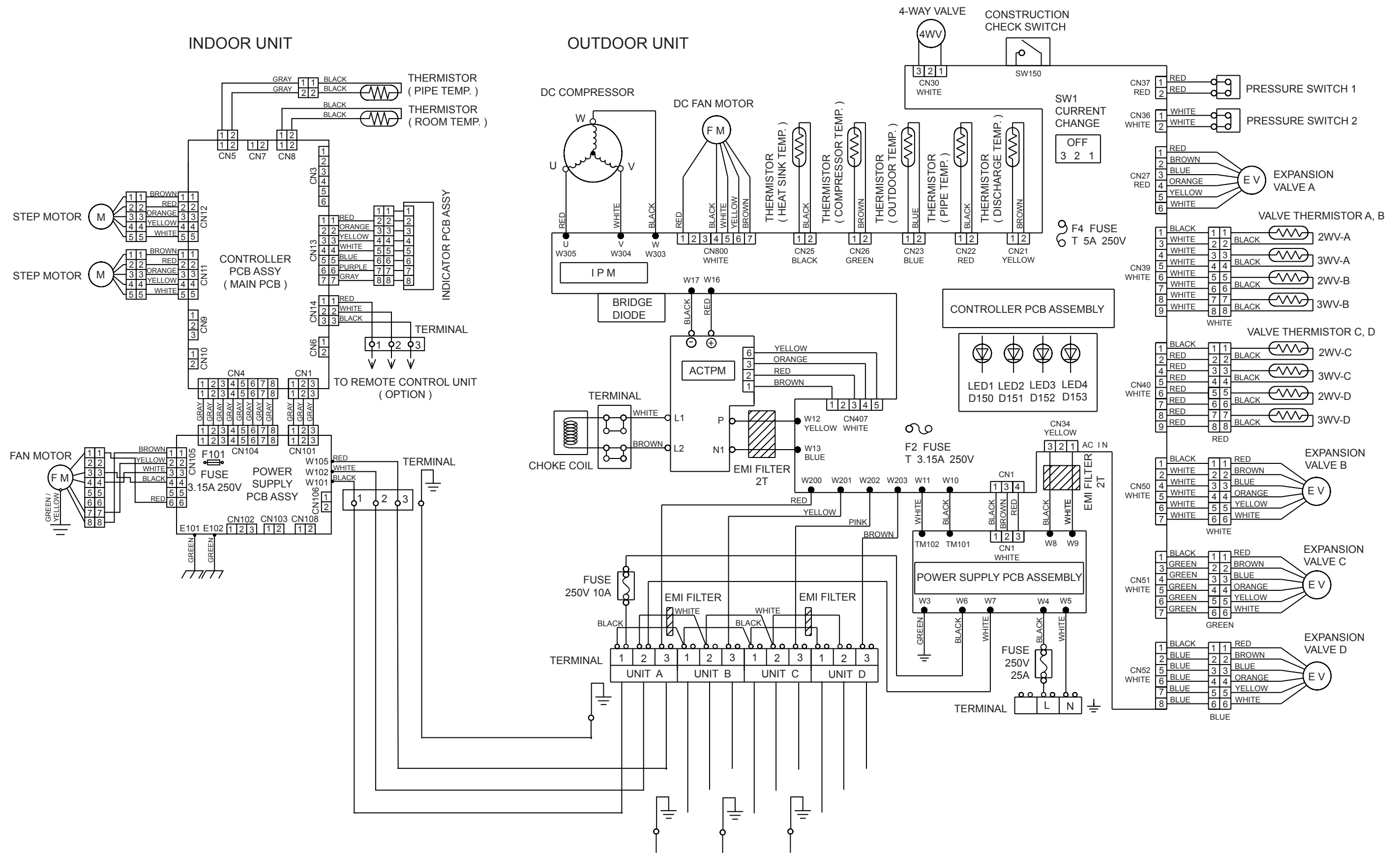


REFRIGERANT SYSTEM DIAGRAM

OUTDOOR UNIT



CIRCUIT DIAGRAM



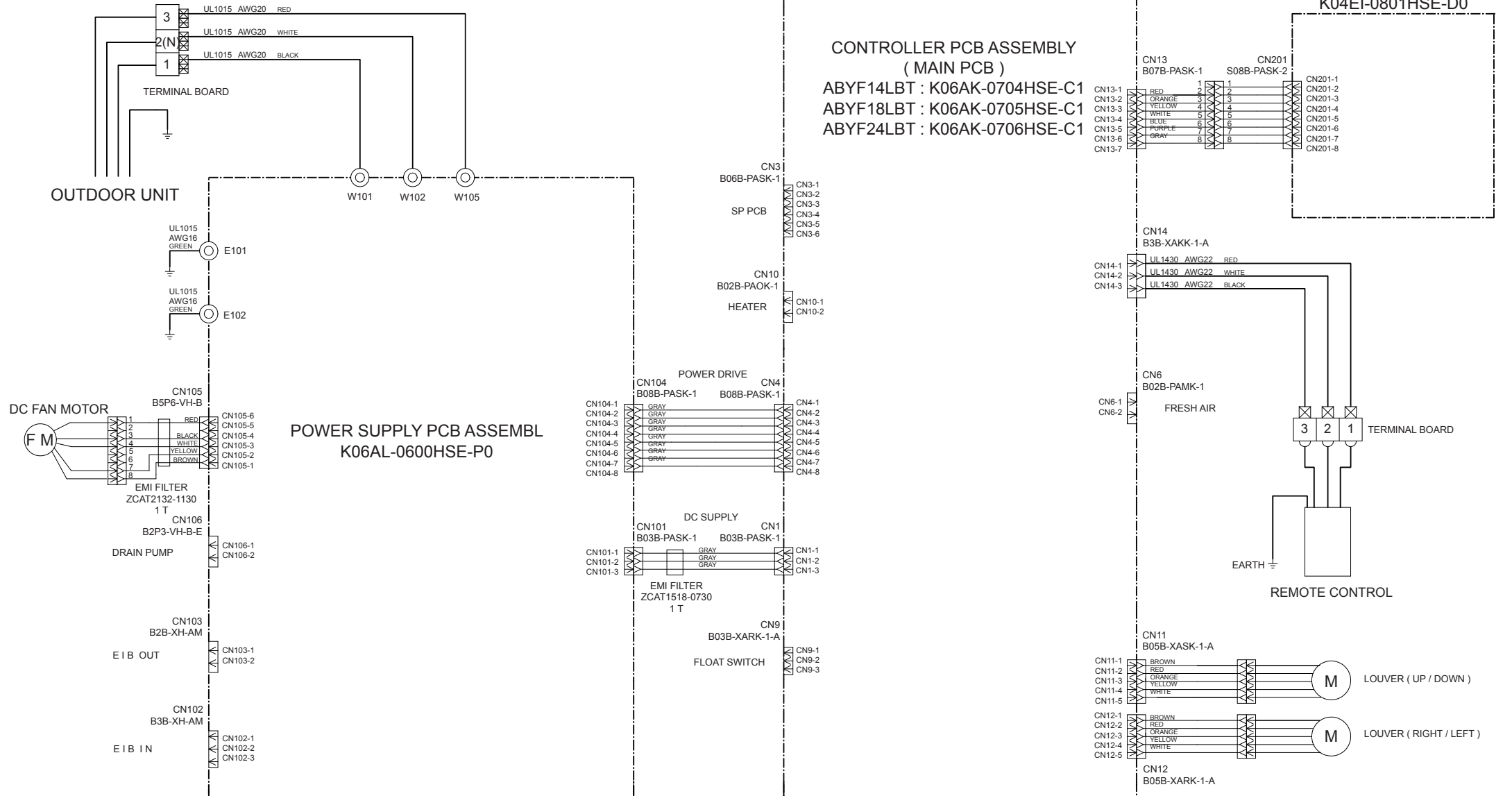
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT

ABYF14LBT : EZ-0070LHSE

ABYF18LBT : EZ-0070MHSE

ABYF24LBT : EZ-0070PHSE



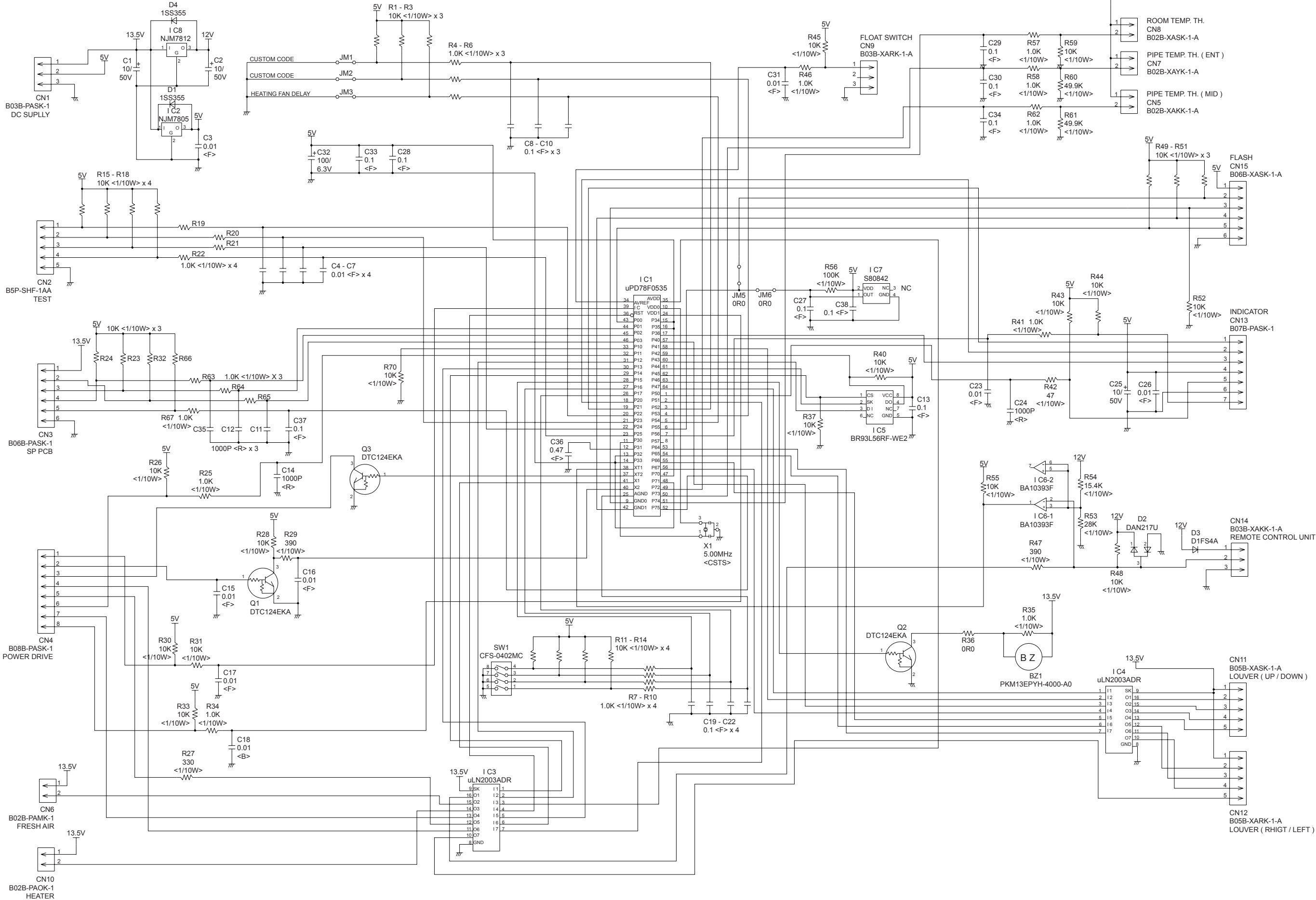
INDOOR UNIT

CONTROLLER PCB ASSEMBLY (MAIN PCB)

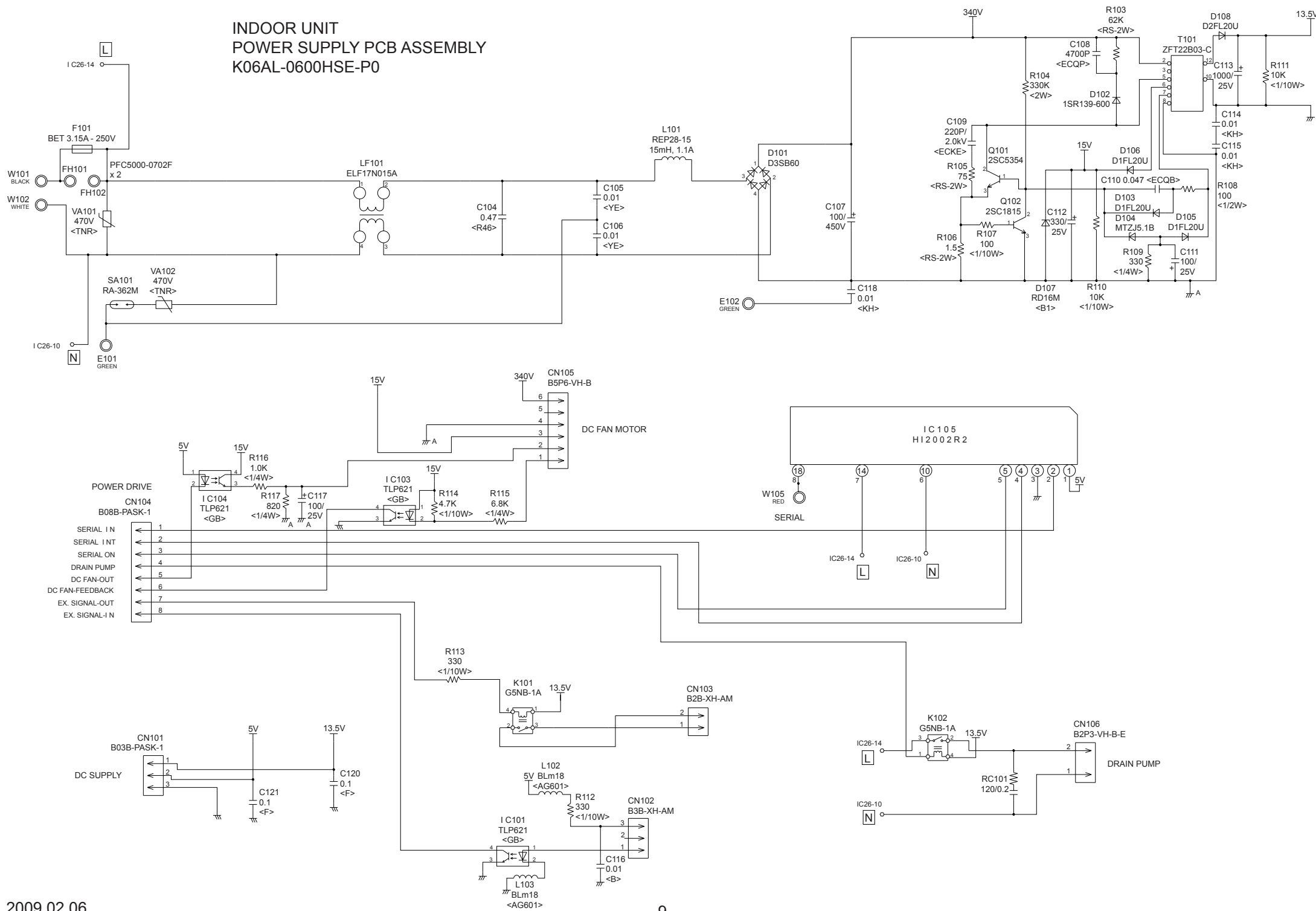
ABYF14LBT : K06AK-0704HSE-C1

ABYF18LBT : K06AK-0705HSE-C1

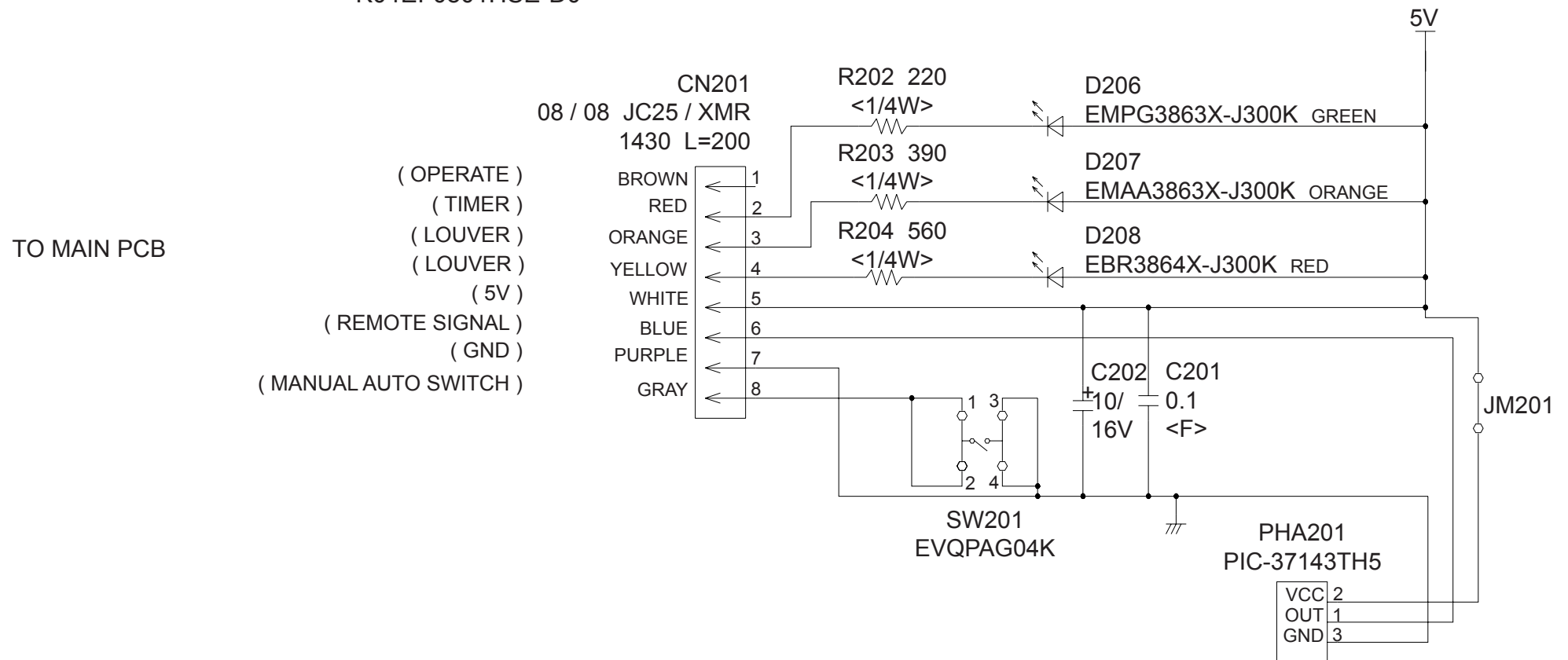
ABYF24LBT : K06AK-0706HSE-C1



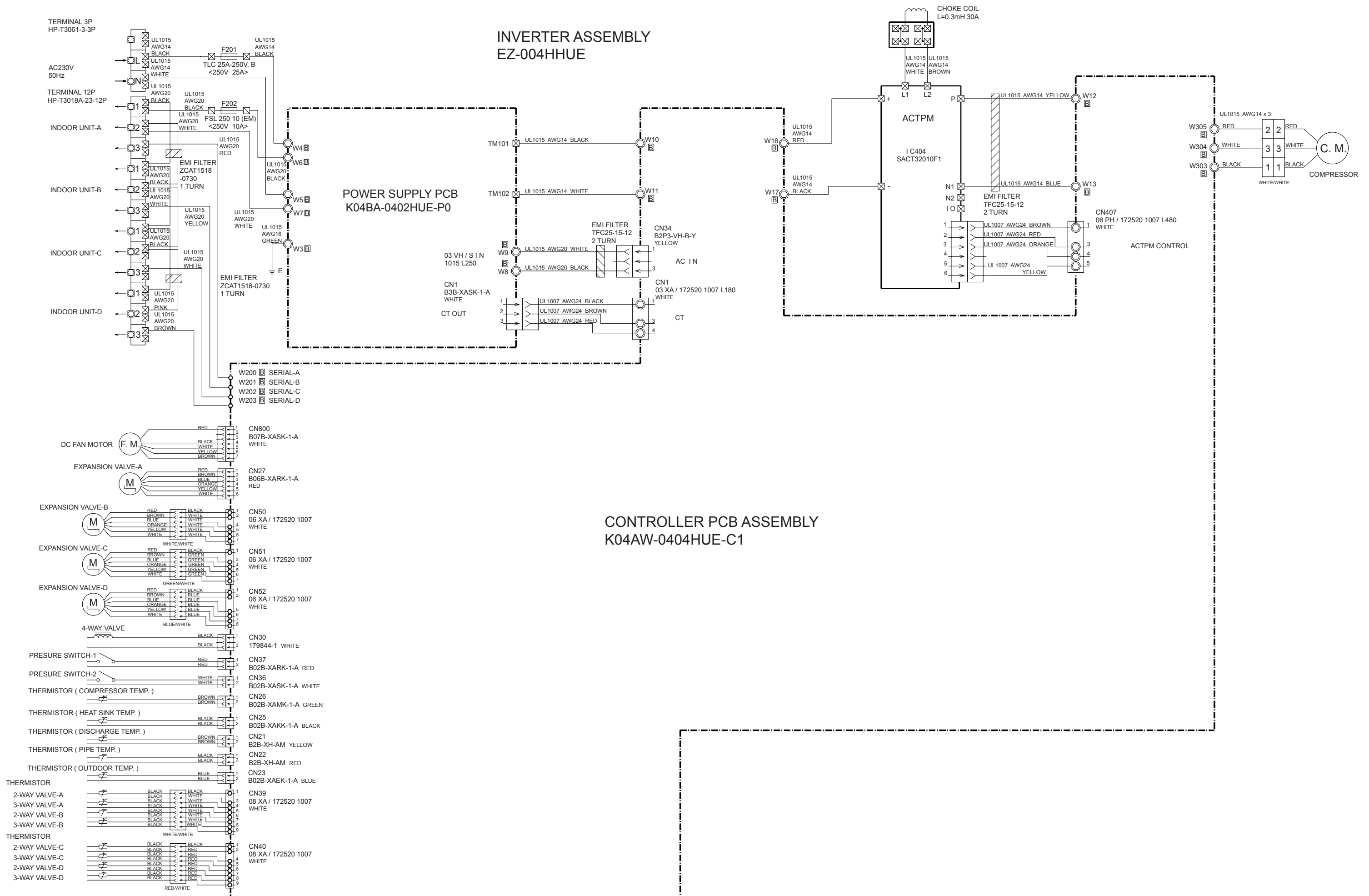
INDOOR UNIT POWER SUPPLY PCB ASSEMBLY K06AL-0600HSE-P0



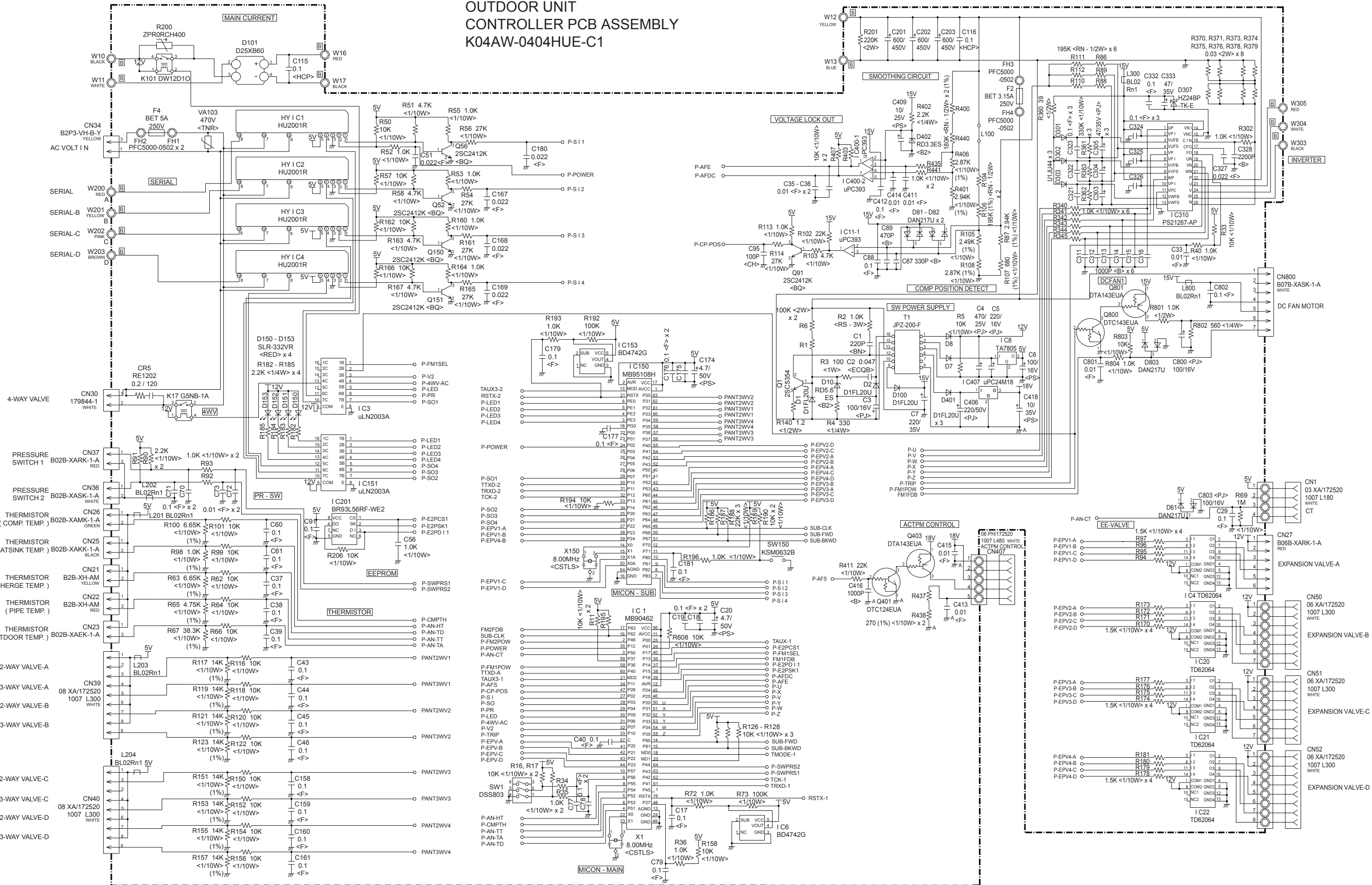
INDOOR UNIT
INDICATOR PCB ASSEMBLY
K04EI-0801HSE-D0



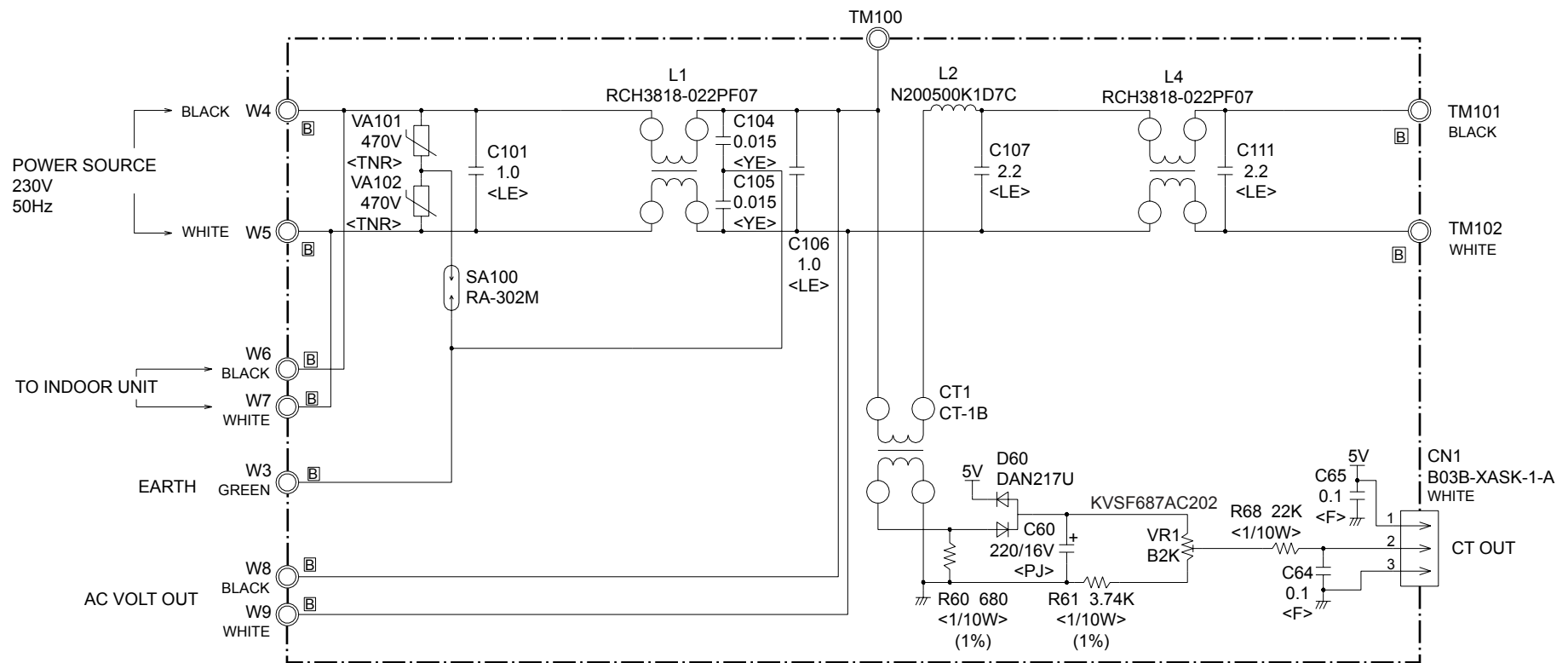
OUTDOOR PCB CIRCUIT DIAGRAM



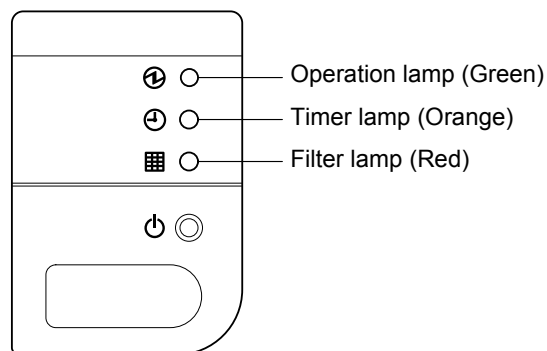
OUTDOOR UNIT
CONTROLLER PCB ASSEMBLY
K04AW-0404HUE-C1



OUTDOOR UNIT
POWER SUPPLY PCB ASSEMBLY
K04BA-0402HUE-P0



ERROR DETECTION



INDOOR UNIT

The lamps show the error contents.

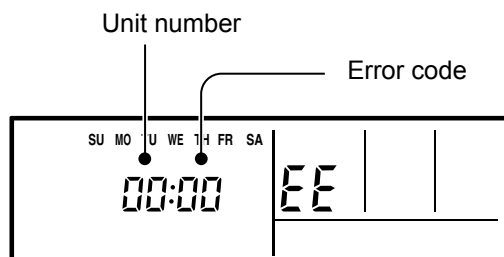
○ : 0.5s ON/0.5s OFF (Flash) × : OFF

Operation lamp (Green)	Timer lamp (Orange)	Filter lamp (Red)	Error contents
×	2 times ○	×	Serial reverse transfer error at starting up operation
×	3 times ○	×	Serial reverse transfer error during the operation
×	4 times ○	×	Serial forward transfer error at starting up operation
×	5 times ○	×	Serial forward transfer error during the operation
×	6 times ○	×	Communication error (Main PCB → Display PCB)
×	7 times ○	×	Communication error (Display PCB → Main PCB)
×	8 times ○	×	Wired remote control abnormal
2 times ○	2 times ○	×	Indoor room temperature sensor error
2 times ○	3 times ○	×	Indoor heat exchanger temperature sensor (middle) error
2 times ○	4 times ○	×	Indoor heat exchanger temperature sensor (inlet) error
2 times ○	6 times ○	×	Float switch operated
3 times ○	2 times ○	×	Outdoor discharge pipe temperature sensor error
3 times ○	3 times ○	×	Outdoor heat exchanger temperature sensor (outlet) error
3 times ○	4 times ○	×	Outdoor temperature sensor error
3 times ○	8 times ○	×	Compressor temperature sensor error
3 times ○	×	2 times ○	2-way valve temperature sensor error
3 times ○	×	3 times ○	3-way valve temperature sensor error
3 times ○	×	4 times ○	Outdoor heat exchanger temperature sensor (middle) error
4 times ○	2 times ○	×	Indoor manual auto switch abnormal
5 times ○	2 times ○	×	IPM protection
5 times ○	3 times ○	×	CT error
5 times ○	5 times ○	×	Compressor location error
5 times ○	6 times ○	×	Outdoor fan error
5 times ○	7 times ○	×	Connected indoor unit abnormal
5 times ○	8 times ○	×	Outdoor unit computer communication error
6 times ○	2 or 3 times ○	×	Indoor fan abnormal
7 times ○	2 times ○	×	Discharge temperature error
7 times ○	3 times ○	×	Excessive high pressure protection on cooling
7 times ○	4 times ○	×	4-way valve abnormal
7 times ○	5 times ○	×	Pressure switch abnormal
7 times ○	6 times ○	×	Compressor temperature error
8 times ○	2 or 3 times ○	×	Active filter abnormal
8 times ○	4 times ○	×	PFC circuit error
0.1 second flashing			Model appreciation error

WIRED REMOTE CONTROL

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

If "CO" appears in the unit number display, there is a remote control error.
Refer to the installation instruction sheet included with the remote control.



Error code	Error contents
01	Serial reverse transfer error
13	Serial forward transfer error
26	Communication error (Main PCB → Display PCB)
27	Communication error (Display PCB → Main PCB)
00	Wired remote control 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
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
11	Model appreciation error

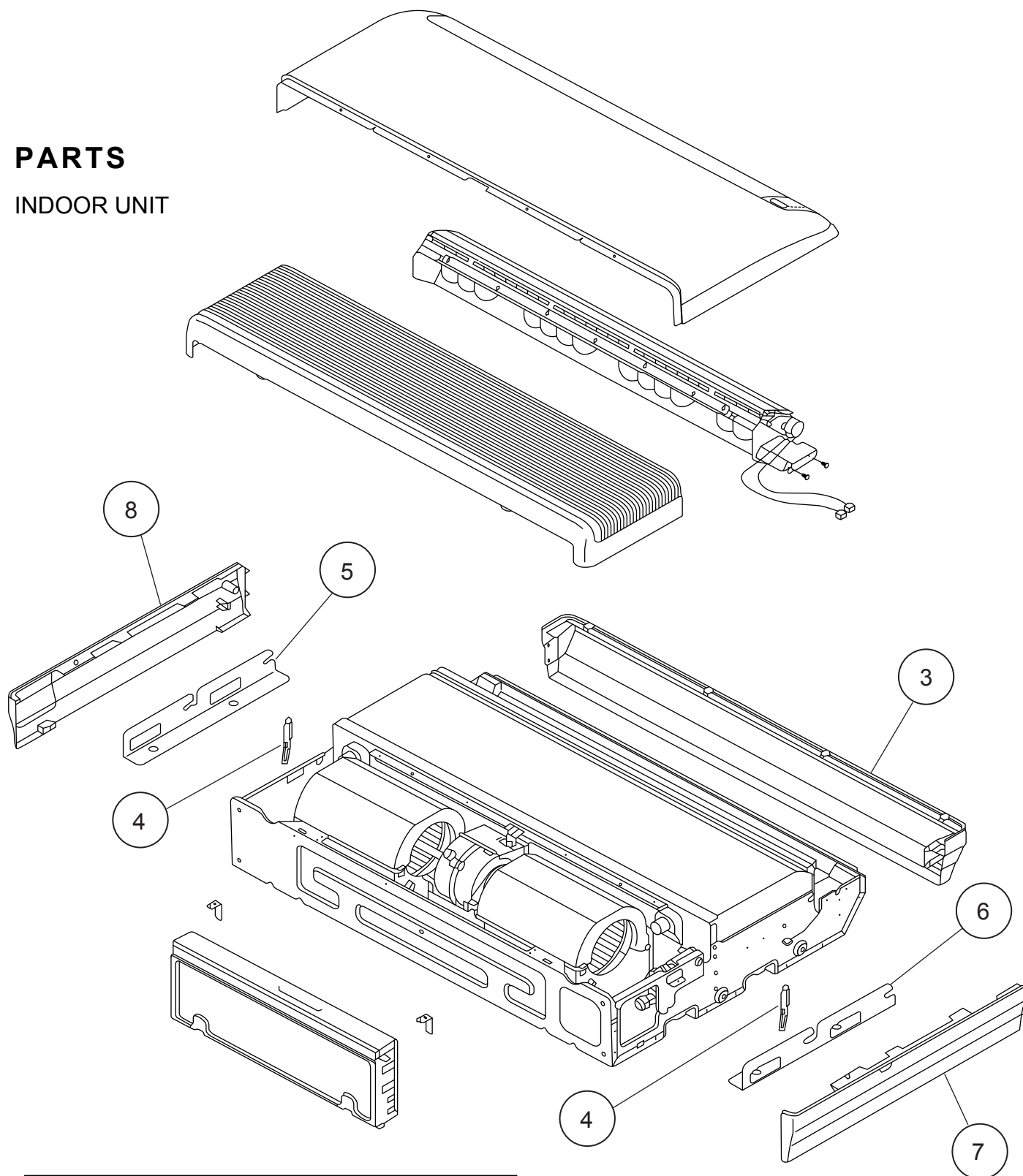
OUTDOOR UNIT

	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	—	—	—

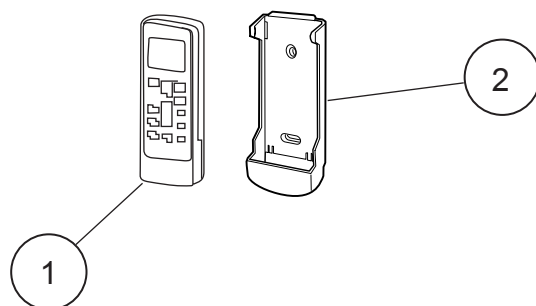
● : Slow flashing - : Off

PARTS

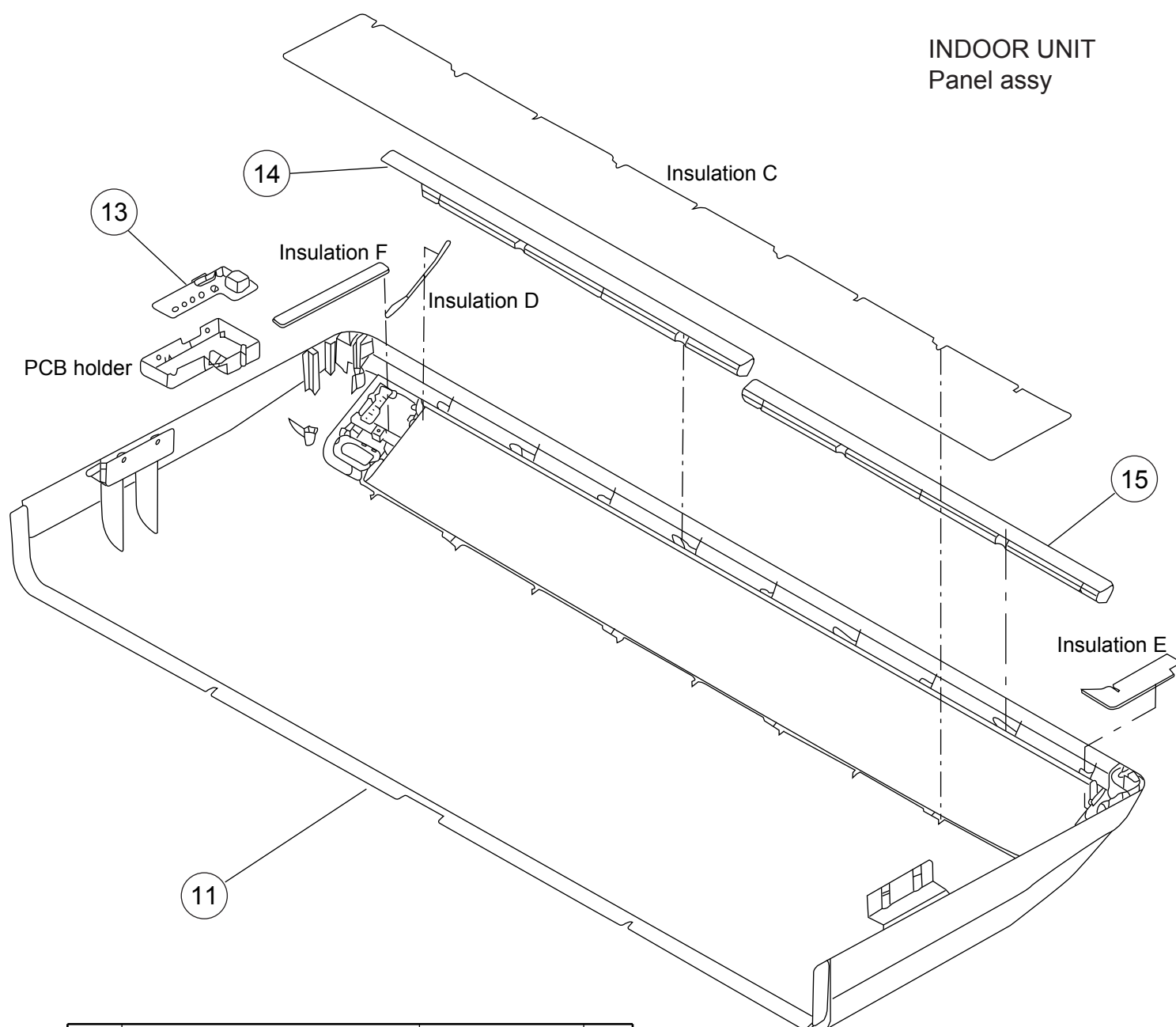
INDOOR UNIT



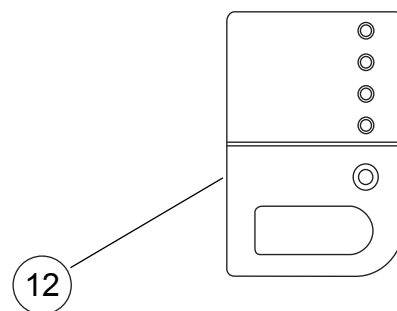
Ref.	Description	Part number	
1	Remote Control	9315885012	
2	Remote Control Holder	9305642045	
3	Top Cover	9358534021	
4	Arm	9358565001	
5	Hanger Bracket L	9358596005	
6	Hanger Bracket R	9358595008	
7	Cosmetic Panel R	9358535028	
8	Cosmetic Panel L	9358536025	



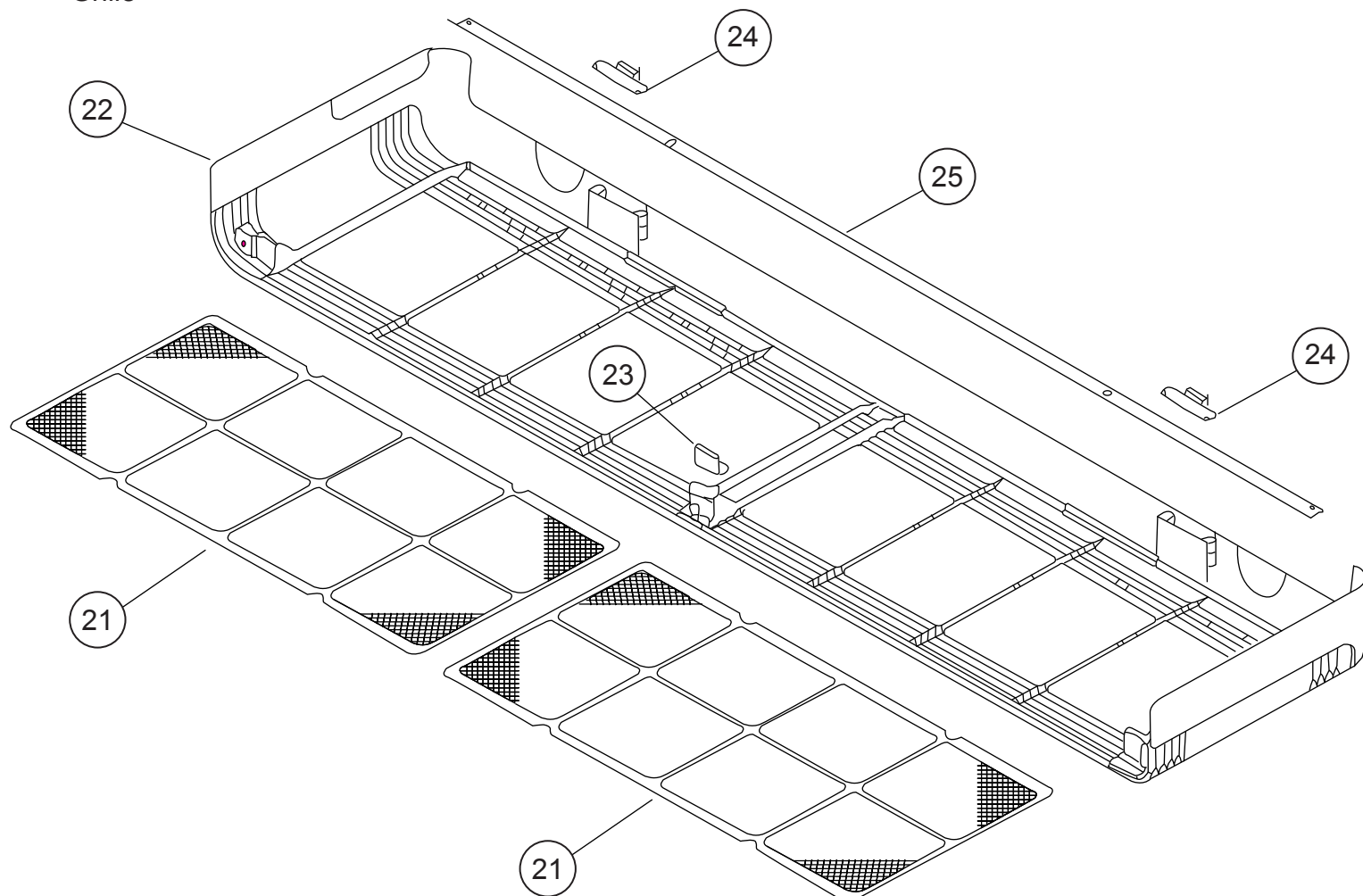
INDOOR UNIT Panel assy



Ref.	Description	Part number	
11	Panel	9358531167	
12	Side Cover R Assy	9359069072	
13	Indicator PCB Assy	9705798069	
14	Insulation (Panel) A	9358574003	
15	Insulation (Panel) B	9358914007	
--	Panel Assy (with side cover R)	9359076247	

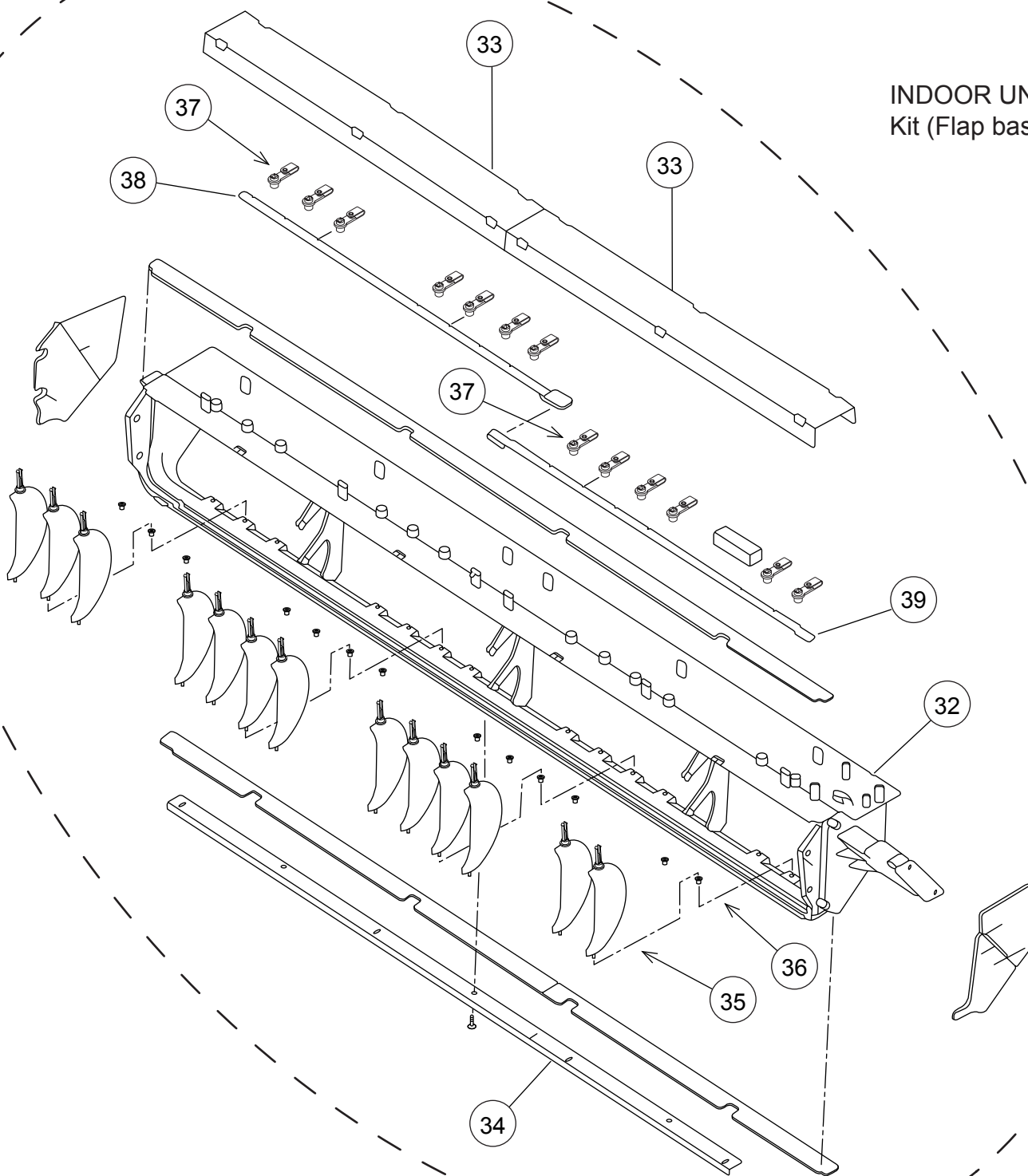


INDOOR UNIT
Grille



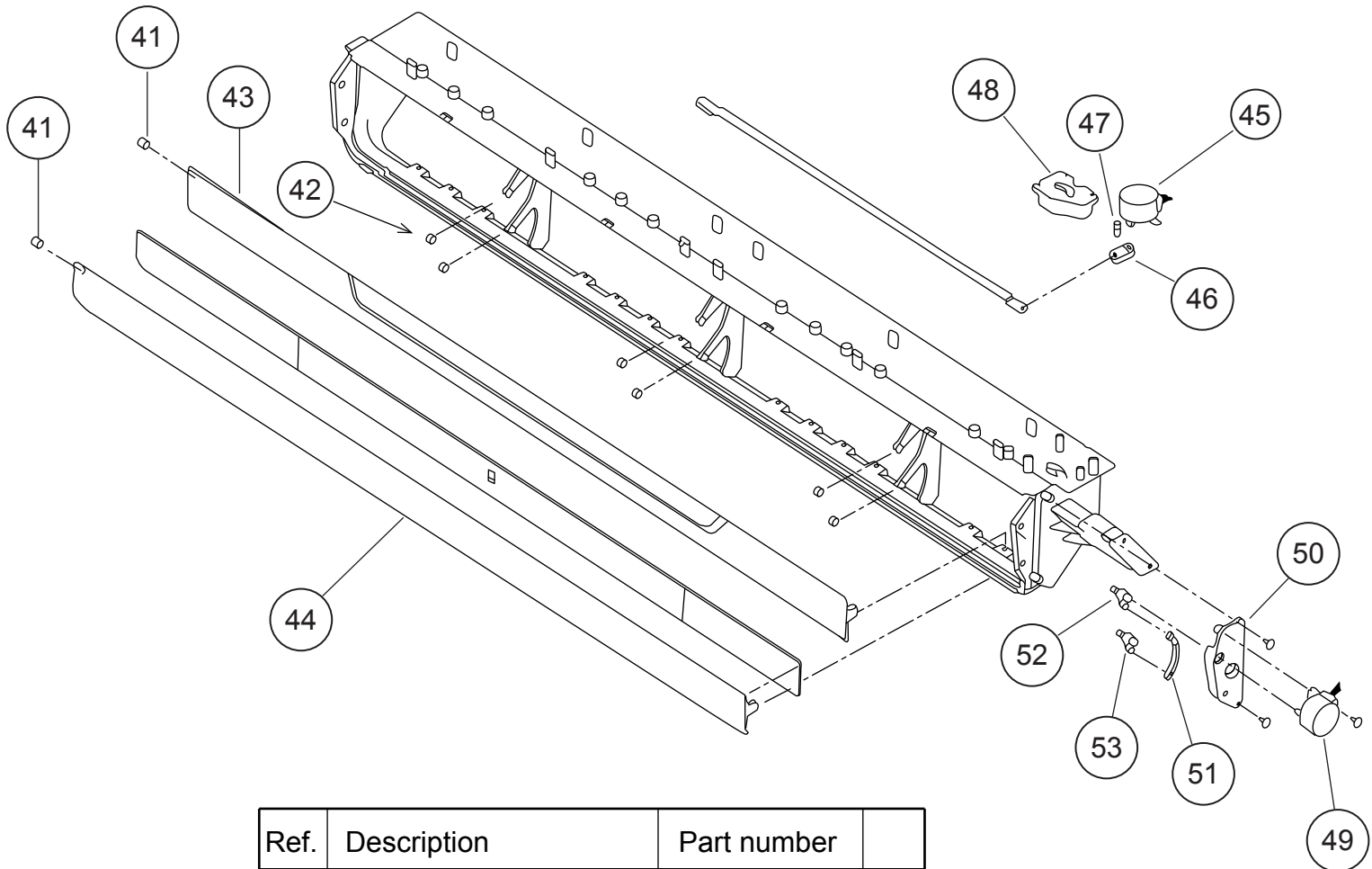
Ref.	Description	Part number	
21	Air Filter	9358567029	
22	Grill F	9358532027	
23	Arm Bracket	9359281009	
24	Grille Support	9358602003	
25	Filter Bracket	9358607008	

INDOOR UNIT
Kit (Flap base)



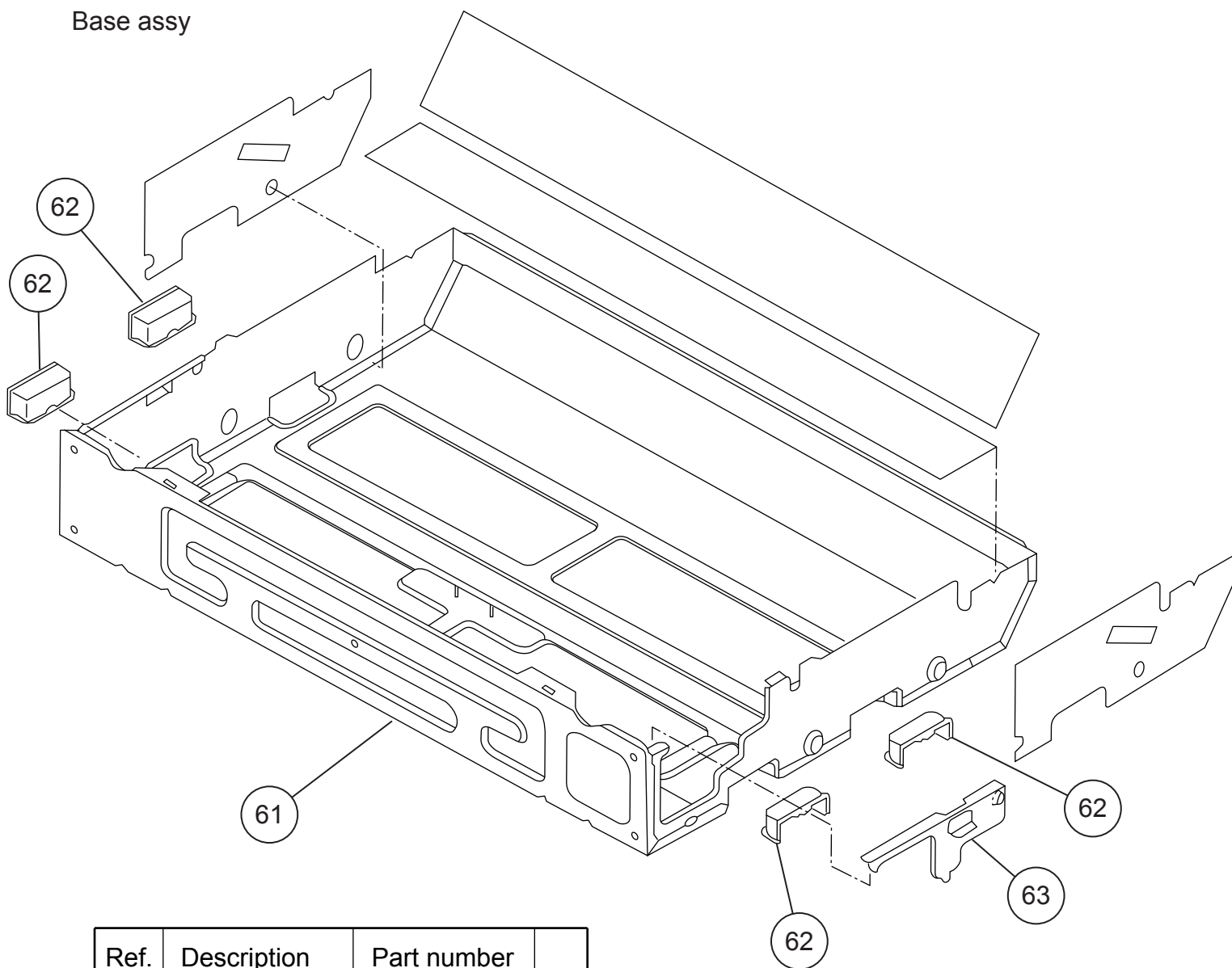
Ref.	Description	Part number	
31	Kit (Flap Base)	9372670033	
32	Flap Base	9358537022	
33	Protect Cover	9358564011	
34	Support Stay	9358599006	
35	Louver	9358561027	
36	Bushing B	9358554005	
37	Louver Stopper	9358555002	
38	Louver Rod	9358559017	
39	Motor Rod	9358560013	

INDOOR UNIT
Flap base sub assy

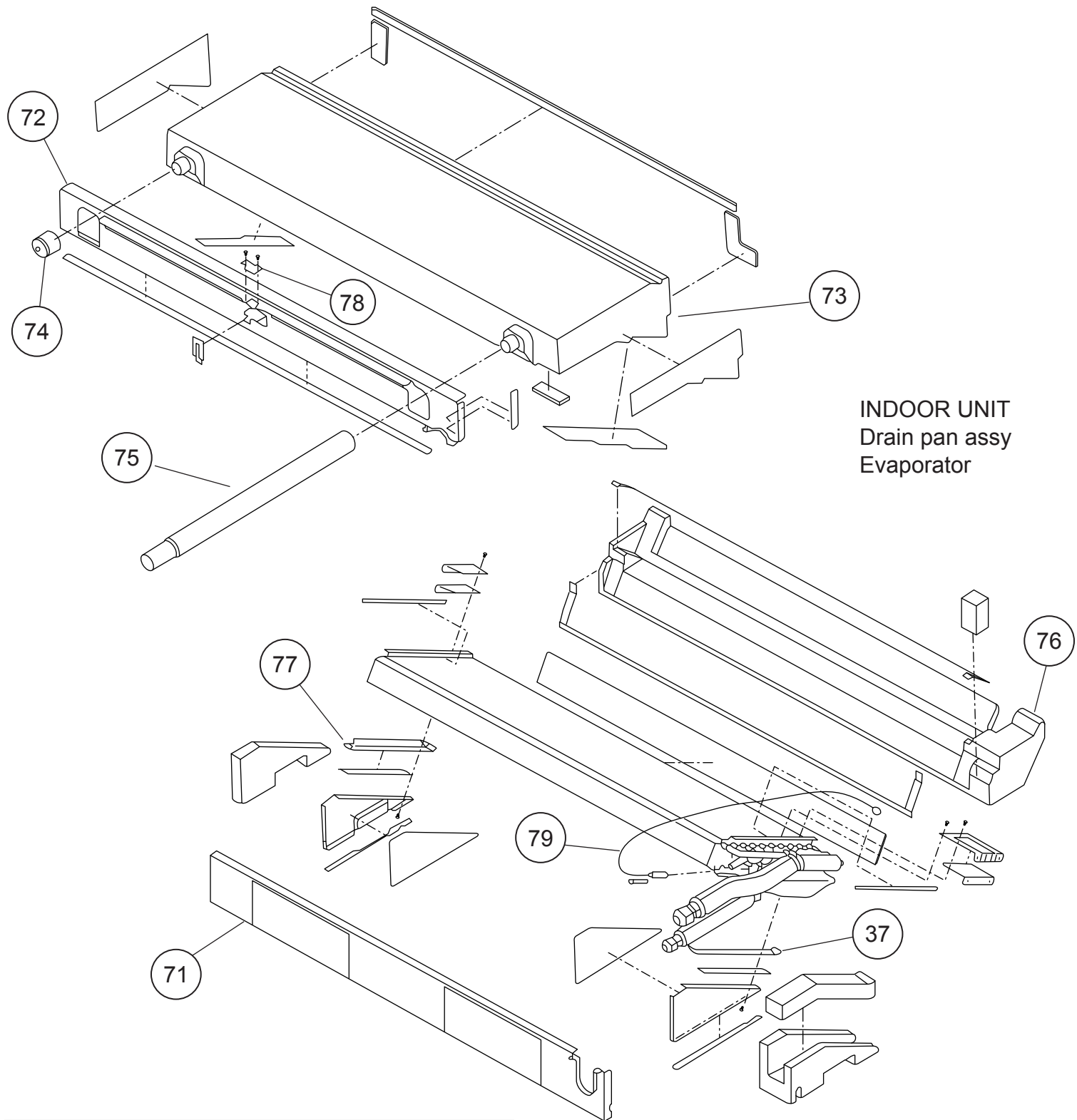


Ref.	Description	Part number	
41	Bushing	9357942001	
42	Bushing C	9358553008	
43	Flap (Upper) F	9358538029	
44	Kit (Flap Lower)	9372671023	
45	Step Motor H	9900297015	
46	Louver Link	9358556009	
47	Louver Shaft	9358557006	
48	Louver Link Cover	9358558010	
49	Step Motor-V	9900362010	
50	Motor Base	9358562017	
51	Motor Rod-A (Step V)	9358550007	
52	Flap Link-Upper (Step V)	9358551004	
53	Flap Link-Lower (Step V)	9358552001	

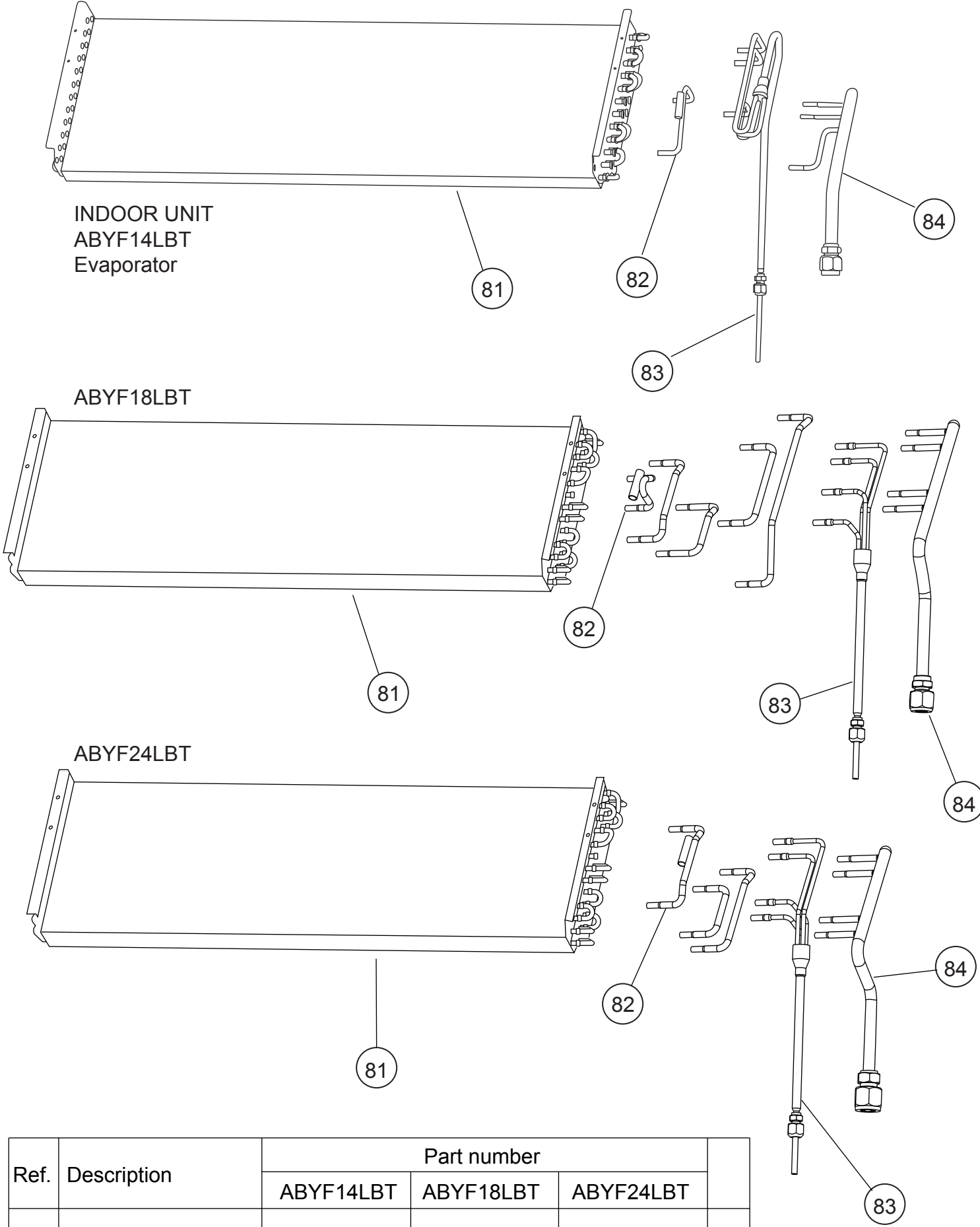
INDOOR UNIT
Base assy



Ref.	Description	Part number	
61	Base Assy	9359061014	
62	Cap	9358563007	
63	Base Bracket	9358586006	

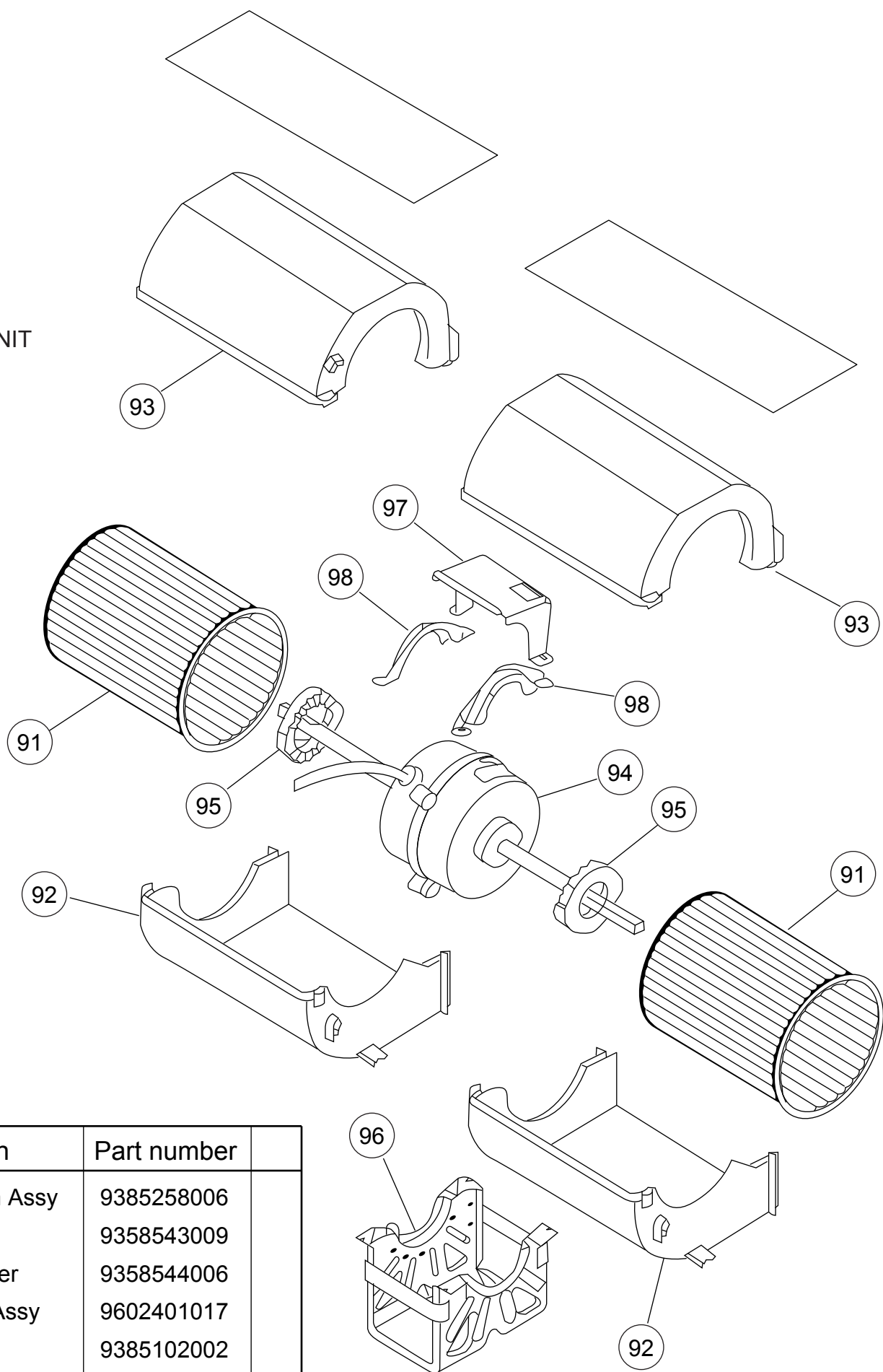


Ref.	Description	Part number	
71	Kit (Separate Wall A)	9372666012	
72	Kit (Separate Wall B)	9373448013	
73	Kit (Drain Pan Assy)	9372669013	
74	Drain Cap	9358746004	
75	Drain Hose Assy	9359242000	
76	Kit (Insulation Flap Base)	9372672013	
77	Kit (Dew Proof Plate)	9372673010	
78	Catch	9359096009	
79	Pipe Thermistor	9900022020	

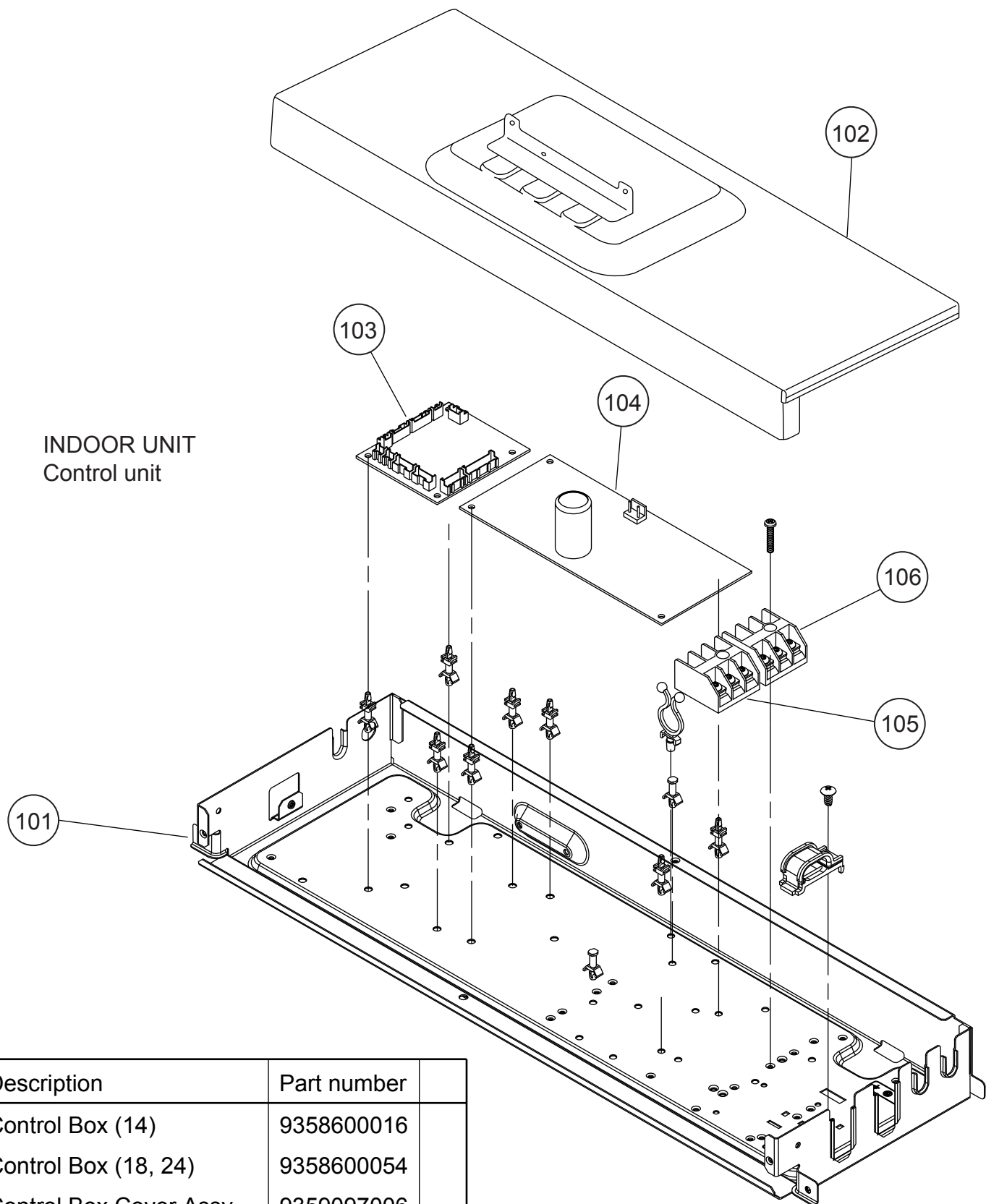


Ref.	Description	Part number		
		ABYF14LBT	ABYF18LBT	ABYF24LBT
81	Evaporator Assy	9362513029	9362513043	9362513050
82	Bypass Pipe Assy	9373032014	9377819017	9377821010
83	Distributor Assy	9373034018	9371325354	9371325361
84	Coupling Pipe Assy	9373038061	9373038382	9373038399

INDOOR UNIT
Fan motor



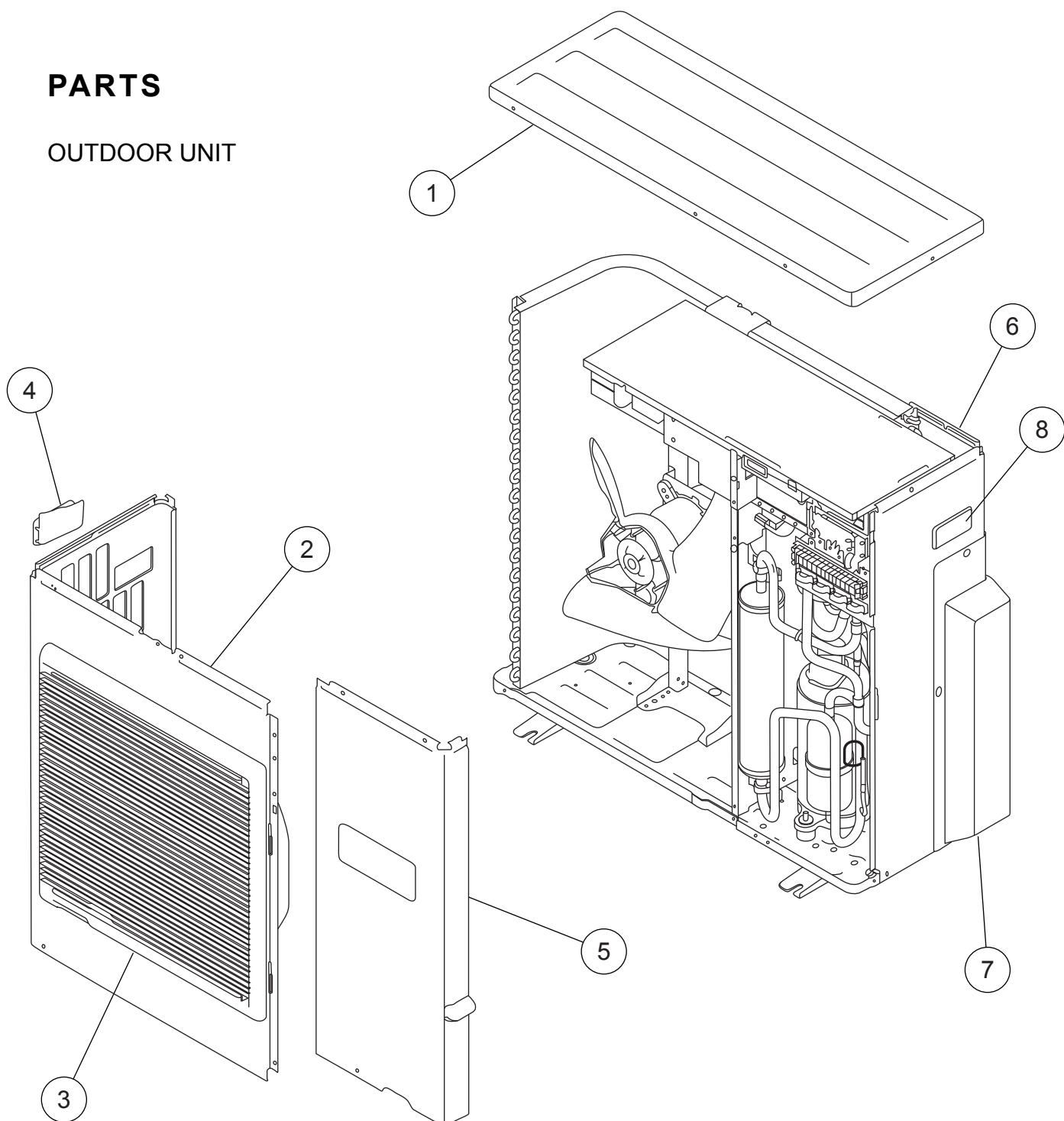
Ref.	Description	Part number	
91	Sirocco Fan Assy	9385258006	
92	Casing	9358543009	
93	Casing Cover	9358544006	
94	Fan Motor Assy	9602401017	
95	Rubber	9385102002	
96	Motor Fixing Table	9358591000	
97	Protector	9359282006	
98	Motor Fixture	9358594001	



Ref.	Description	Part number
101	Control Box (14)	9358600016
101	Control Box (18, 24)	9358600054
102	Control Box Cover Assy	9359097006
103	Controller PCB Assy (14)	9707393330
103	Controller PCB Assy (18)	9707393569
103	Controller PCB Assy (24)	9707393545
104	Power Supply PCB Assy (14)	9707398014
104	Power Supply PCB Assy (18, 24)	9707398113
105	Terminal 3P	9306489045
106	Terminal 3P	9703345012
--	Room Thermistor Assy	9703299087

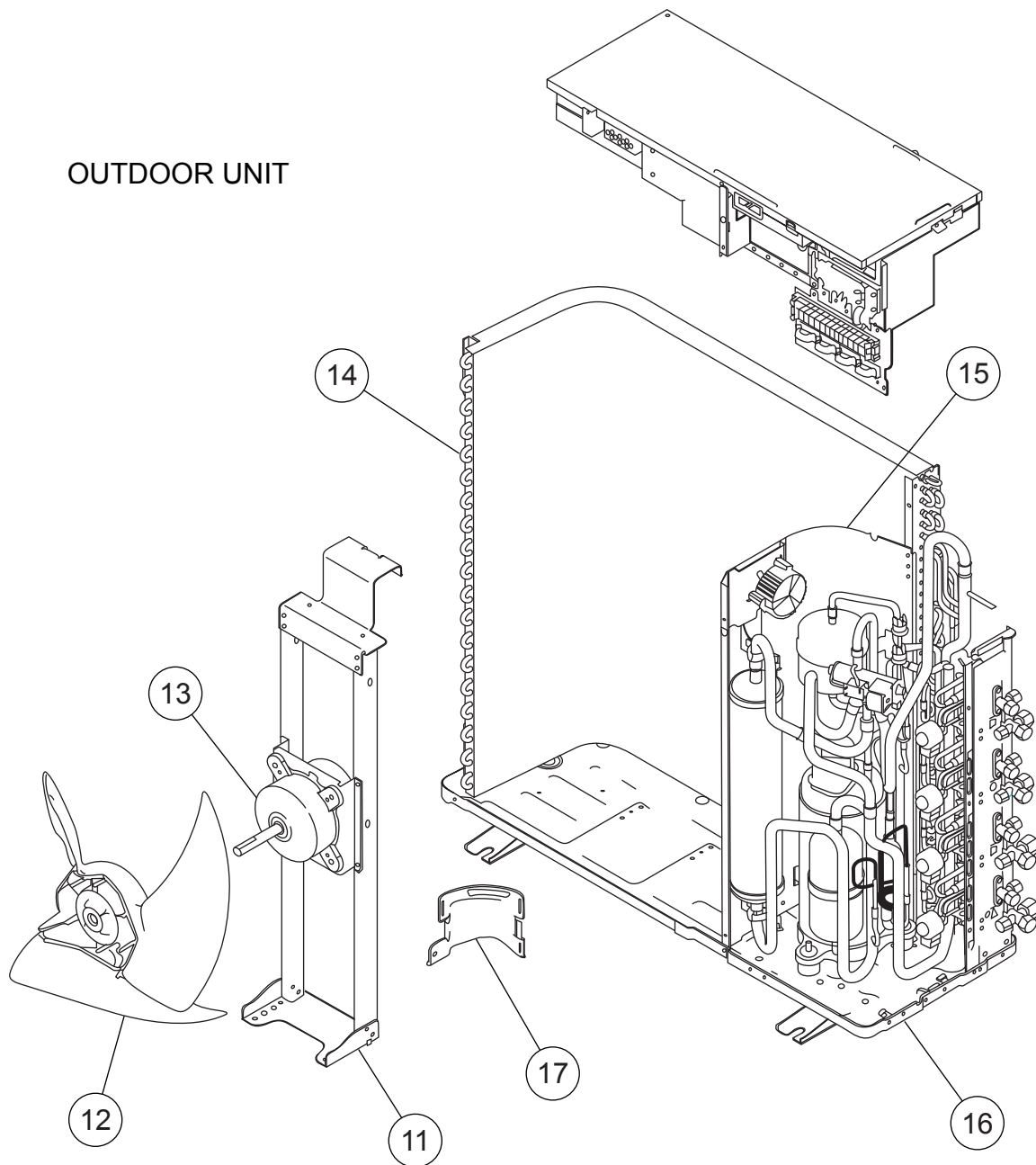
PARTS

OUTDOOR UNIT



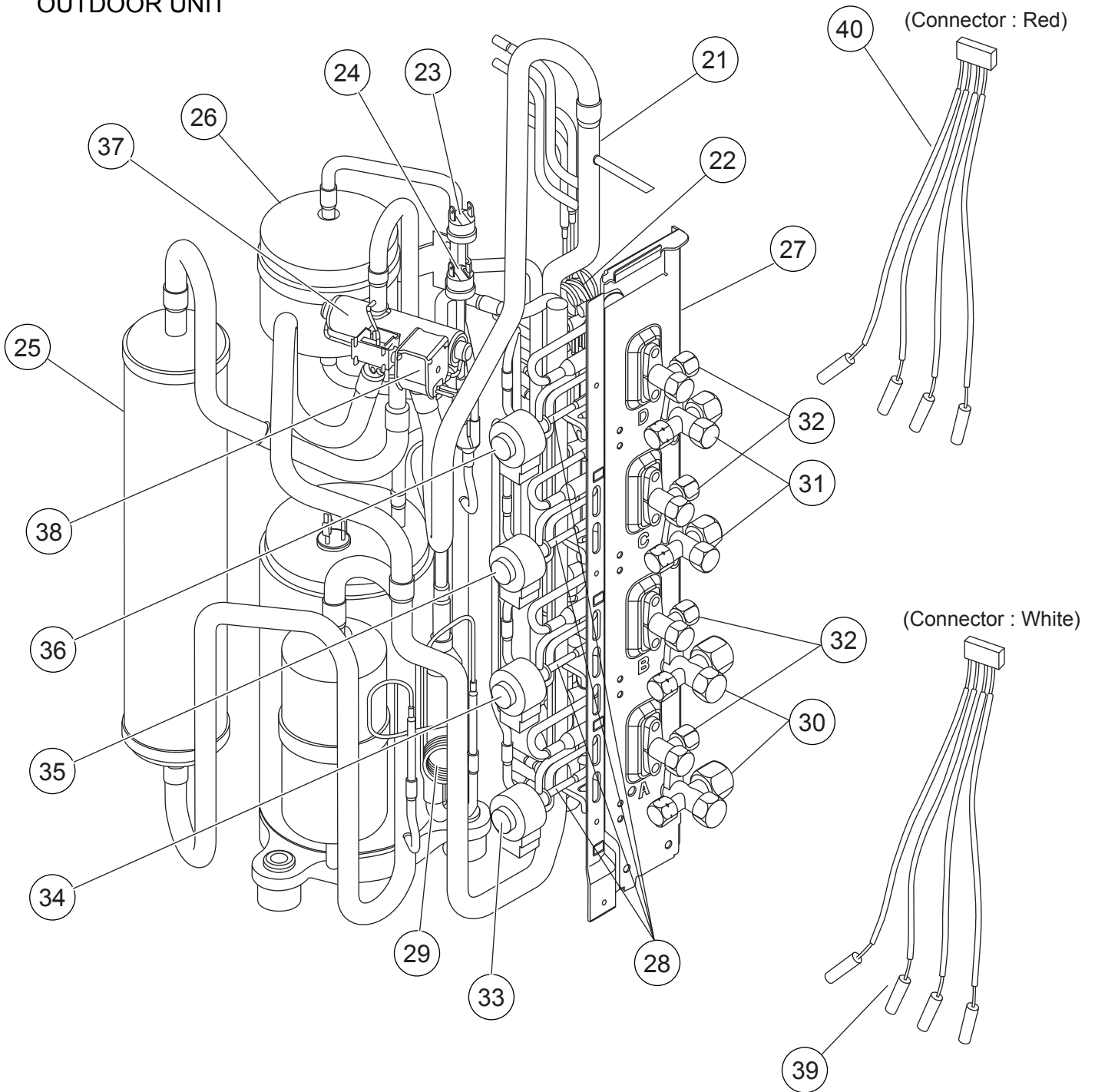
Ref.	Description	Part number	
1	Top Panel Sub Assy	9374417025	
2	Front Panel	9374094066	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Assy	9374415038	
6	Right Panel M	9374599028	
7	Valve Cover Sub Assy	9374827015	
8	Grip	9374172016	
--	Emblem Rear	9351355005	
--	Protective Net	9375381011	

OUTDOOR UNIT



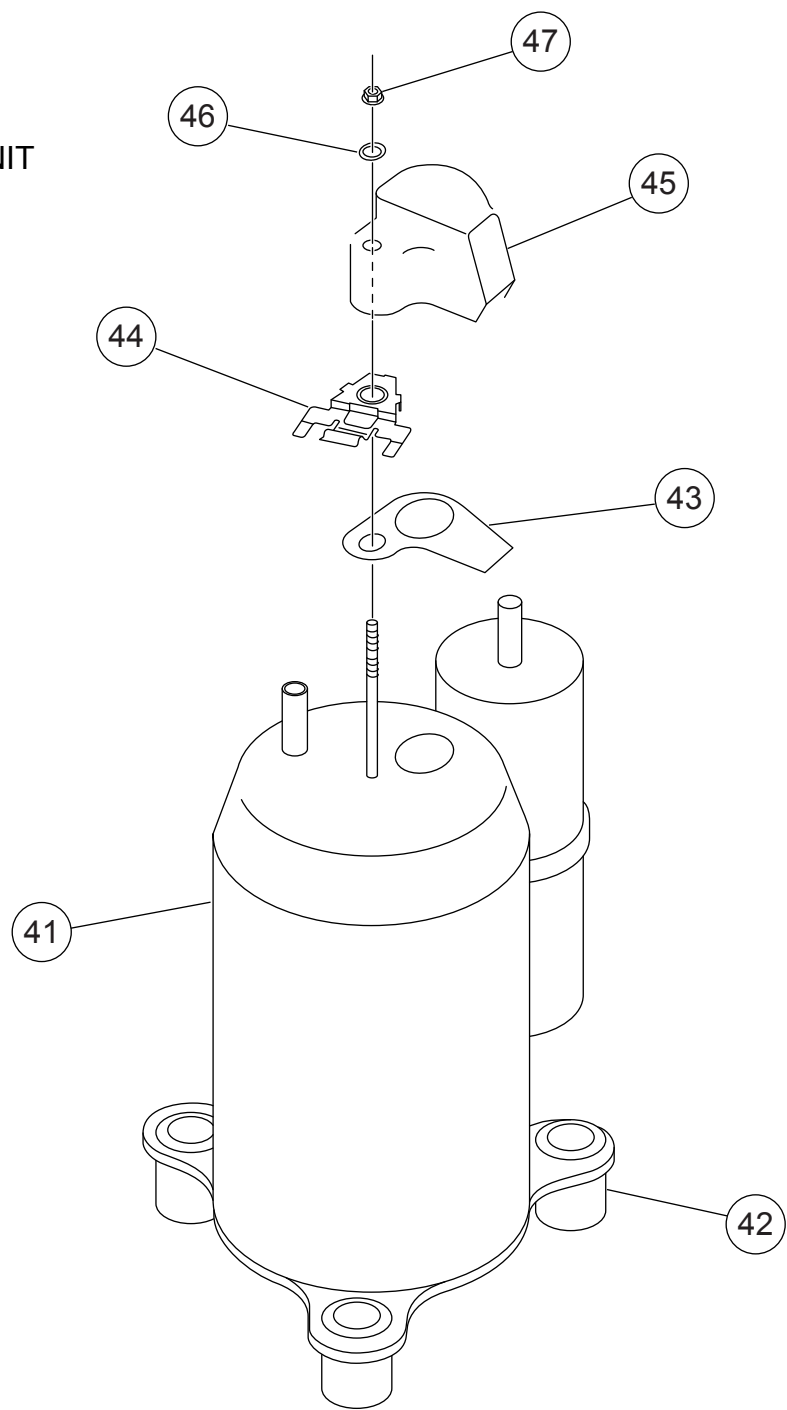
Ref.	Description	Part number	
11	Motor Bracket Sub Assy	9374418053	
12	Propeller Fan Assy	9366378020	
13	Fan Motor	9601882015	
14	Condenser A Assy	9374433056	
15	Separate Wall Assy	9374629022	
16	Base Assy	9374166084	
17	Cap Foot	9374345014	
--	Drain Assy	9303029015	
--	Drain Cap	313166024302	

OUTDOOR UNIT



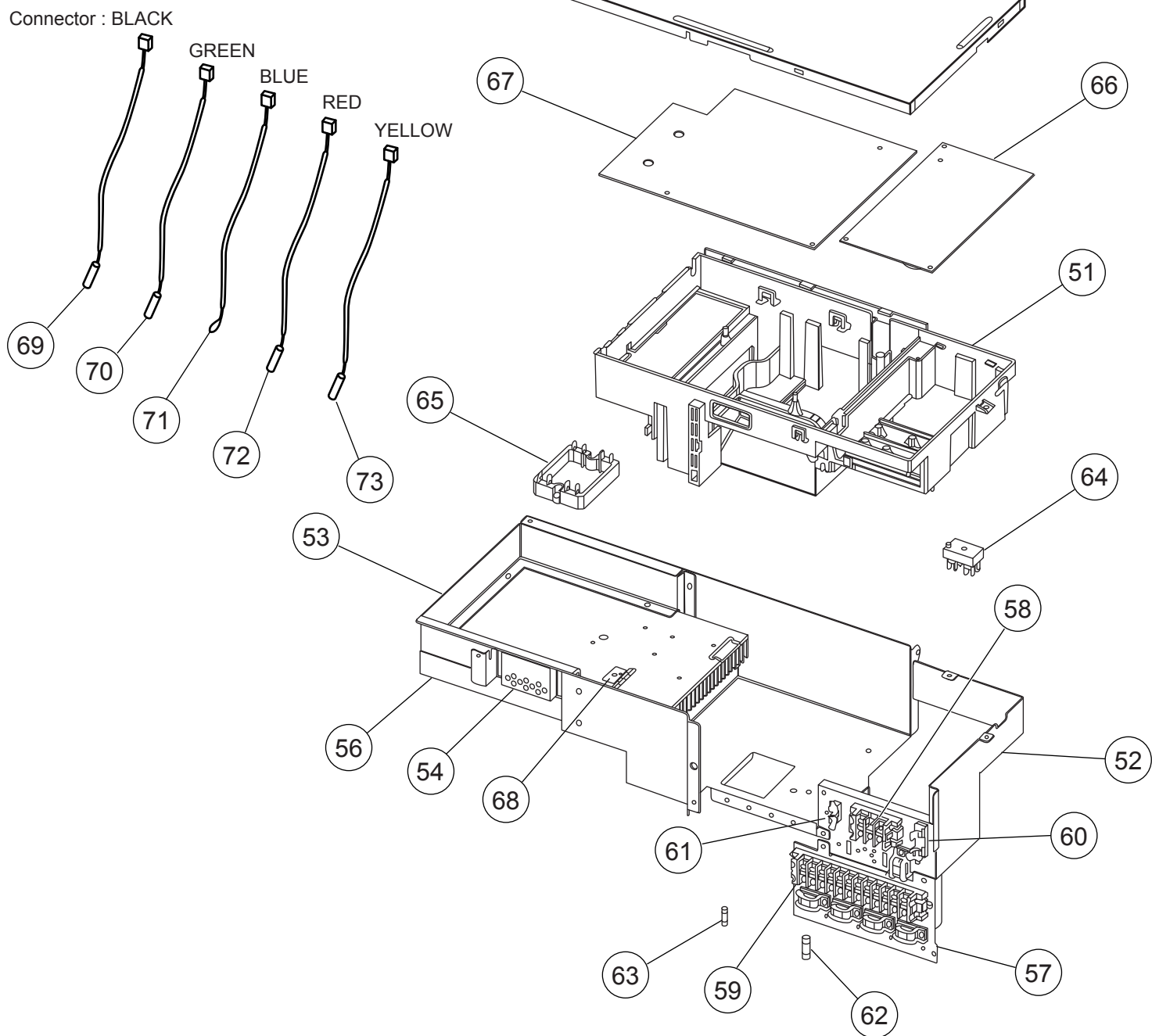
Ref.	Description	Part number	Ref.	Description	Part number
21	Inlet Pipe (Cond) A Assy	9373461067	32	2-Way Valve Assy	9372204054
22	Outlet Pipe (Cond) A Assy	9374266067	33	Expansion Valve Coil (A, Red)	9900057084
23	Pressure Switch A Assy	9367726028	34	Expansion Valve Coil (B, White)	9900057053
24	Pressure Switch B Assy	9367727025	35	Expansion Valve Coil (C, Green)	9900057060
25	Accumulator Sub Assy	9374426072	36	Expansion Valve Coil (D, Blue)	9900057077
26	Receiver Tank Sub Assy	9373426028	37	4-Way Valve Assy	9374425044
27	Valve Plate A Assy	9374628025	38	Solenoid	9900165055
28	Expansion Valve Assy	9370947106	39	Pipe Thermistor (White)	9900322014
29	Capillary Assy	9372197370	40	Pipe Thermistor (Red)	9900289010
30	3-Way Valve Assy (1/2")	9372205051	--	Strainer	9372524015
31	3-Way Valve Assy (3/8")	9372205044	--	Strainer	9366602019

OUTDOOR UNIT
Compressor



Ref.	Description	Part number	
41	Compressor Assy	9377946010	
42	Rubber Seat	9377951014	
43	Terminal Packing	9377948014	
44	Holder	9377952011	
45	Terminal Cover	9377947017	
46	Washer (Rubber)	9377949011	
47	Frang Nut	9377950017	
--	Compressor Cover A	9374430055	
--	Compressor Cover B	9374431052	
--	Compressor Cover C	9372067048	

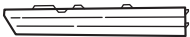
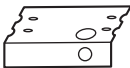
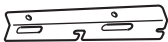
OUTDOOR UNIT
Inverter assy

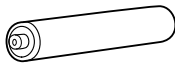
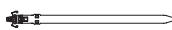


Ref.	Description	Part number		Ref.	Description	Part number	
51	Inverter Box A	9374603015		63	Fuse (Small)	0600376116	
52	Inverter Box B Assy	9374625017		64	Terminal	9701971015	
53	Inverter Box C	9374605019		65	ACTPM	9703457012	
54	Inverter Box Duct	9374609017		66	Power Supply PCB Assy	9705647039	
55	Inverter Box Cover	9374608010		67	Controller PCB Assy	9705642058	
56	Heat Sink A	9374607013		68	Holder (Thermo)	9372797013	
57	Inverter Box D	9374606016		69	Heat Sink Thermistor	9900311018	
58	Terminal (3P)	9900203016		70	Compressor Thermistor	9900156022	
59	Terminal (12P)	9358660164		71	Thermistor (Outdoor)	9703516078	
60	Fuse Holder (Big)	0501454012		72	Heat Exchanger Thermistor	9704220059	
61	Fuse Holder (Small)	0501456016		73	Discharge Pipe Thermistor	9704219114	
62	Fuse (Big)	0600086039					

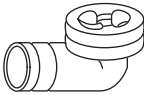
ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Application
Cosmetic Panel-L 	1	9358536025
Cosmetic Panel-R 	1	9358535028
Screw (M4 x 10) 	2	0700009037
Installation template 	1	For positioning the indoor unit. For under ceiling type. 9359107002
Hanger bracket (left) 	1	For suspending the indoor unit from ceiling. 9358596005
Hanger bracket- (right) 	1	9358595008
Anchor bolt (M12) 	4	313806339400
Special nut 		
Spring washer 	4	0700007125
Wall bracket 	2	For suspending the indoor unit on the wall. 9358597002
Screw (M4 x 20) 	6	For fixing the wall bracket. 0700076107

Name and Shape	Q'ty	Application
Coupler heat insulator (large) 	1	For indoor side pipe joint. (Large pipe) 9378173552
Coupler heat insulator (small) 	1	For indoor side pipe joint. (Small pipe) 9378173736
Nylon fastener (large) 	1	For fixing the drain hose. 312300787605
Nylon fastener (middle) 	2	(18 and 24 only) For electrical wiring 313035356905
Drain hose 	1	9359242000
Insulation (drain hose) 	1	Adhesive type 70 x 230 9359225003
VT wire 	1	For fixing the drain hose L 280 mm 313806350303
Remote control 	1	For air conditioner operation 9315885012
Remote control holder 	1	For installing remote control on the wall 9305642045
Battery 	2	For remote control 0600185541
Screw (M3 x 12) 	2	For mounting the remote control holder 0700019098
Wire clammer 	1	(18 and 24 only) For electrical wiring 0600429010

OUTDOOR UNIT

Name and Shape	Q'ty	Application
Drain pipe 	1	For outdoor unit drain piping work (May not be supplied, depending on the model.)
Drain cap 	2	
Putty 	1	For filling in a gap at the entrance of connection cords.
Adapter E (1/4" → 3/8") 6.35mm → 9.52mm 	1	For connecting a pipe with different diameter to the outdoor unit.
Adapter G (1/2" → 5/8") 12.7mm → 15.88mm 	1	
Adapter D (1/2" → 3/8") 12.7mm → 9.52mm 	2	