

# SERVICE MANUAL



Indoor unit		Outdoor unit
RCF09LAL	}	ROM-18LA2
RCF12LAL		
RCF14LAL		
RCF09LAL	}	ROM-24LA2
RCF12LAL		
RCF14LAL		
RCF18LAL		

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# SPECIFICATIONS

## INDOOR UNIT

### ELECTRICAL DATA

TYPE		Inverter multi cooling & heating			
MODEL NAME		RCF09LAL	RCF12LAL	RCF14LAL	RCF18LAL
COOLING CAPACITY		2.7 kW	3.5 kW	4.2 kW	5.2 kW
HEATING CAPACITY		3.3 kW	3.8 kW	4.8 kW	6.0 kW
MOISTURE REMOVAL		0.7 L/hr	1.1 L/hr	1.5 L/hr	1.7 L/hr
AIR CIRCULATION (HIGH)	Cooling	540 m <sup>3</sup> /hr	610 m <sup>3</sup> /hr	680 m <sup>3</sup> /hr	750 m <sup>3</sup> /hr
	Heating	540 m <sup>3</sup> /hr	600 m <sup>3</sup> /hr	700 m <sup>3</sup> /hr	800 m <sup>3</sup> /hr

### FAN MOTOR

DISCRIMINATION		MFF-24RVL			
cool / heat	High speed	590 / 590 r.p.m.	660 / 650 r.p.m.	730 / 740 r.p.m.	790 / 840 r.p.m.
	Med speed	540 / 540 r.p.m.	580 / 580 r.p.m.	630 / 670 r.p.m.	660 / 750 r.p.m.
	Low speed	490 / 490 r.p.m.	520 / 520 r.p.m.	540 / 600 r.p.m.	570 / 650 r.p.m.
	Quiet	440 / 440 r.p.m.	460 / 460 r.p.m.	460 / 480 r.p.m.	460 / 500 r.p.m.

### NOISE LEVEL

cool / heat	High speed	33 dB / 34 dB	37 dB / 37 dB	40 dB / 40 dB	42 dB / 44 dB
	Med speed	31 dB / 32 dB	33 dB / 33 dB	35 dB / 37 dB	37 dB / 41 dB
	Low speed	29 dB / 29 dB	31 dB / 31 dB	32 dB / 34 dB	33 dB / 37 dB
	Quiet	26 dB / 27 dB	27 dB / 28 dB	27 dB / 29 dB	27 dB / 30 dB

### DIMENSIONS

INDOOR UNIT	H x W x D	245 x 570 x 570 mm
PANEL	H x W x D	49 x 700 x 700 mm

### WEIGHT

INDOOR UNIT	Net / Gross	15 kg / 18 kg
PANEL	Net / Gross	2.6 kg / 4.5 kg

## OUTDOOR UNIT

### ELECTRICAL SPECIFICATIONS

TYPE		Cooling & heating multi	
MODEL NAME		ROM-18LA2	ROM-24LA2
COOLING CAPACITY		5.5 kW	5.8 kW
HEATING CAPACITY		6.3 kW	6.4 kW
POWER SUPPLY		230 V	230 V
FREQUENCY		50 Hz	50 Hz
RUNNING CURRENT	Cooling	7.3 A	7.6 A
	Heating	7.3 A	7.2 A
INPUT	Cooling	1.65 kW	1.73 kW
	Heating	1.65 kW	1.64 kW
EER	Cooling	3.33 kW/kW	3.35 kW/kW
	Heating	3.82 kW/kW	3.90 kW/kW
AIR CIRCULATION HIGH		2,800 m <sup>3</sup> /hr	2,800 m <sup>3</sup> /hr
MAX CURRENT		10.5 A	12.5 A

### FAN MOTOR

DISCRIMINATION	MFB24JTAT
HIGH SPEED (COOL)	780 r.p.m.
HIGH SPEED (HEAT)	780 r.p.m.

### NOISE LEVEL

COOL	49 dB(A)
HEAT	50 dB(A)

### MEASUREMENT

DIMENSIONS	H x W x D	650 x 830 x 320 mm
WEIGHT	Net / Gross	56 kg / 62 kg

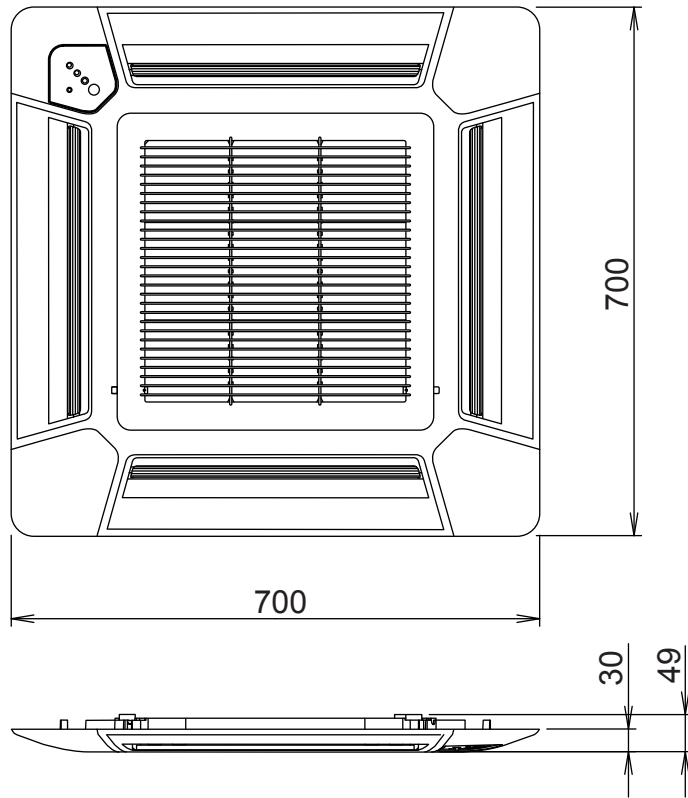
### COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE	Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION	TNB220FPCMT
WEIGHT (with oil)	14.1 kg
STANDARD REFRIGERANT	1,900 g
REFRIGERANT TYPE	R410A
ADDITIONAL CHARGE	Chargeless
MAX PIPE LENGTH (each unit)	20 m
MAX PIPE LENGTH (total)	30 m
MIN. PIPE LENGTH (each unit)	5 m
MIN. PIPE LENGTH (total)	10 m
MAX ELEVATION (between indoor units)	10 m
MAX ELEVATION (between indoor and outdoor)	10 m

# OUTLINE AND DIMENSIONS

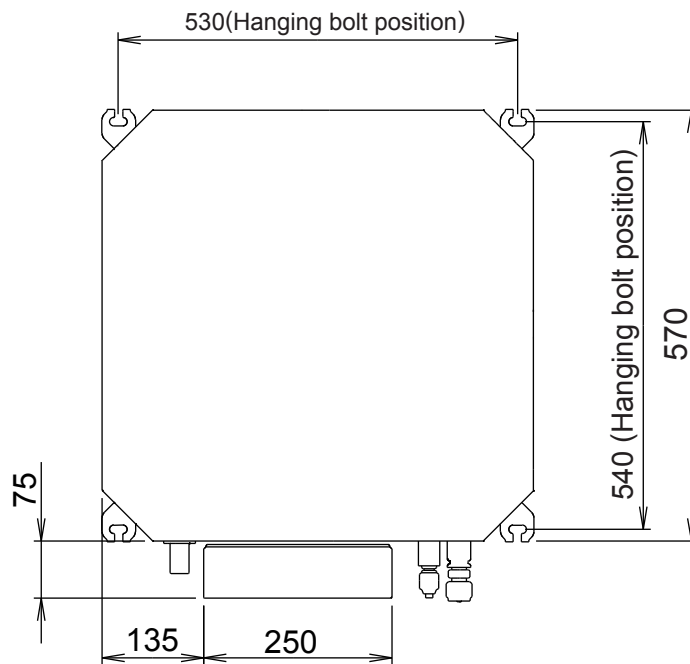
Unit : mm

DECORATION PANEL

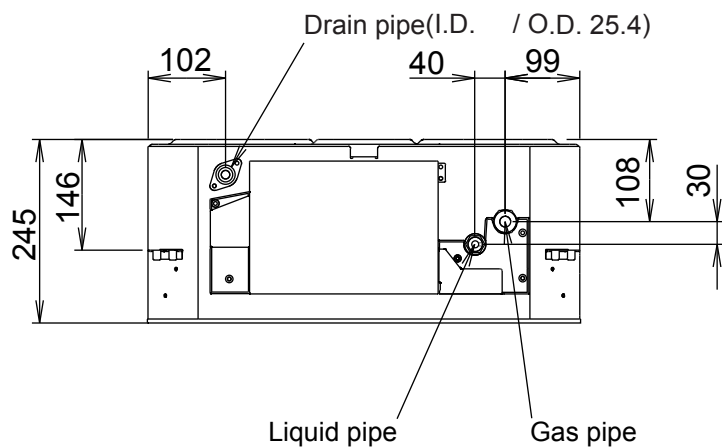


INDOOR UNIT

TOP VIEW

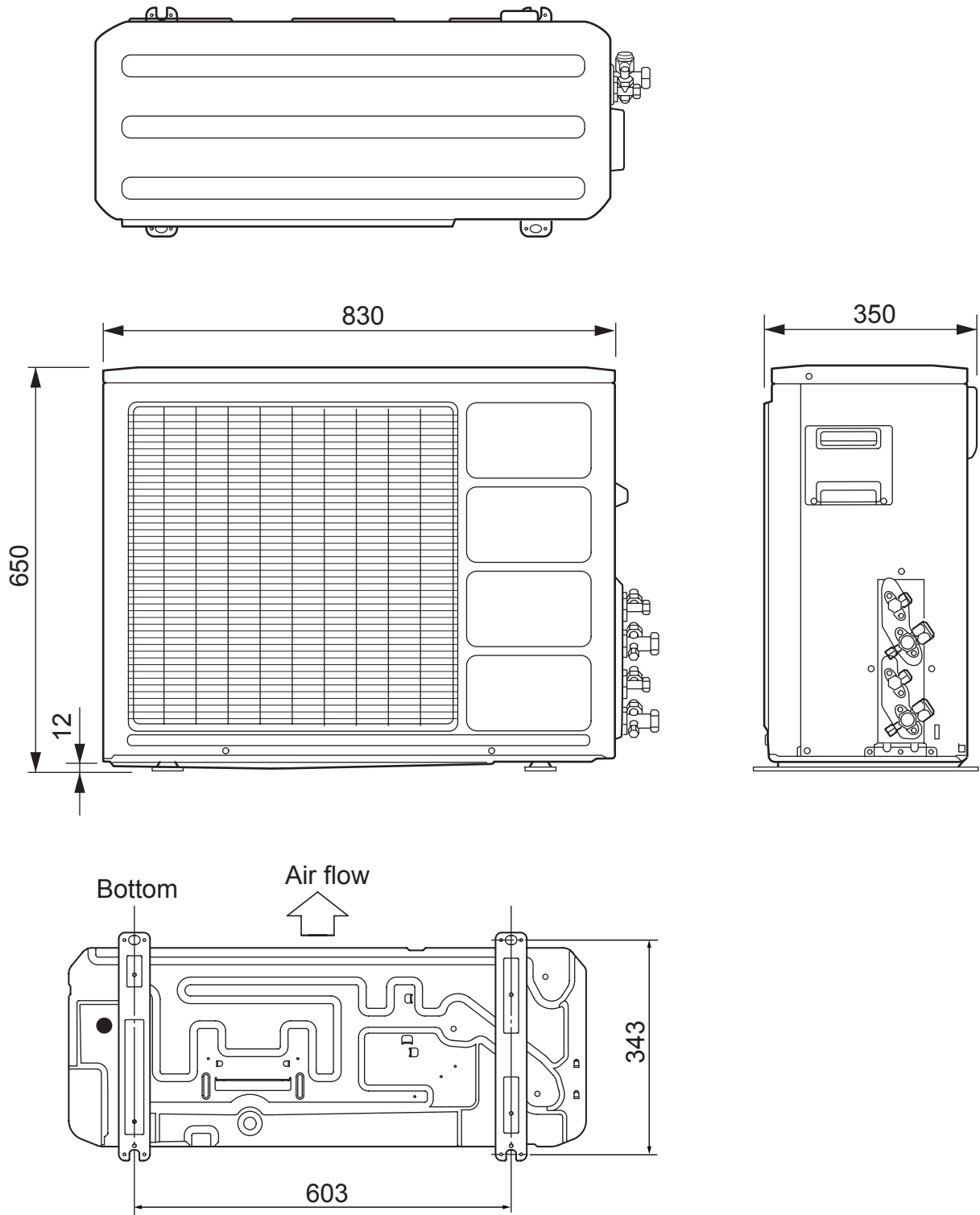


SIDE VIEW

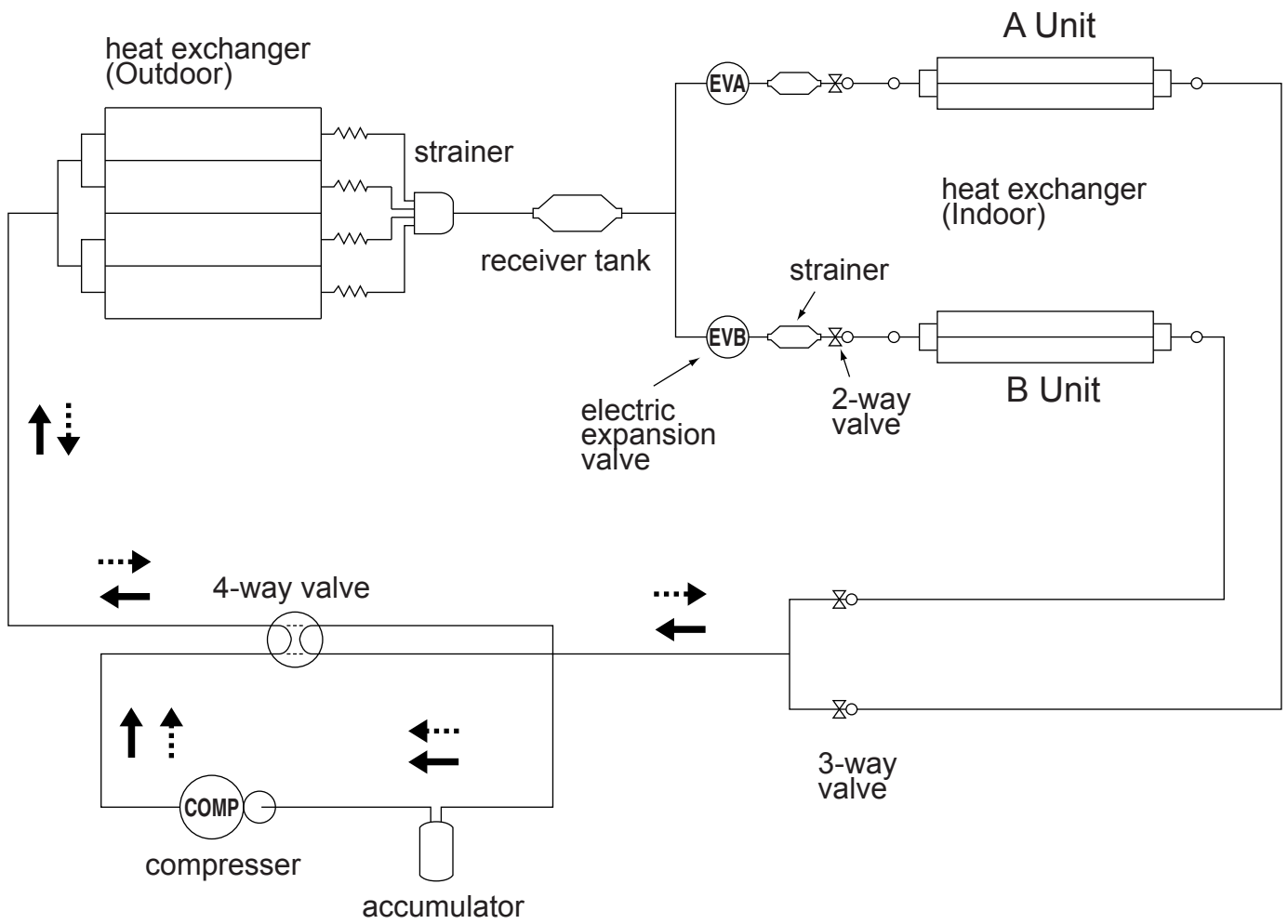


# OUTDOOR UNIT

Unit : mm



# REFRIGERANT SYSTEM DIAGRAM

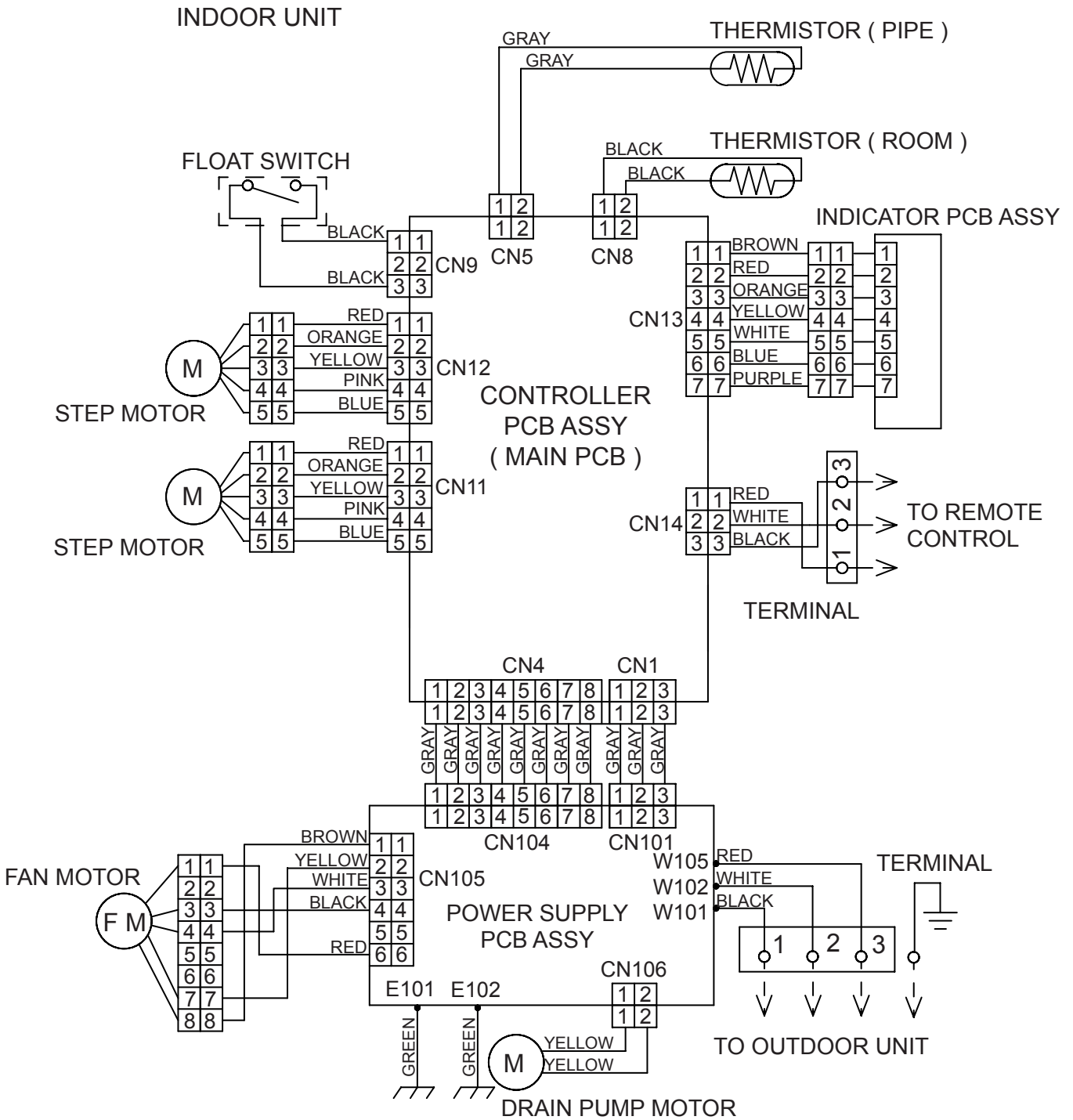


Refrigerant direction

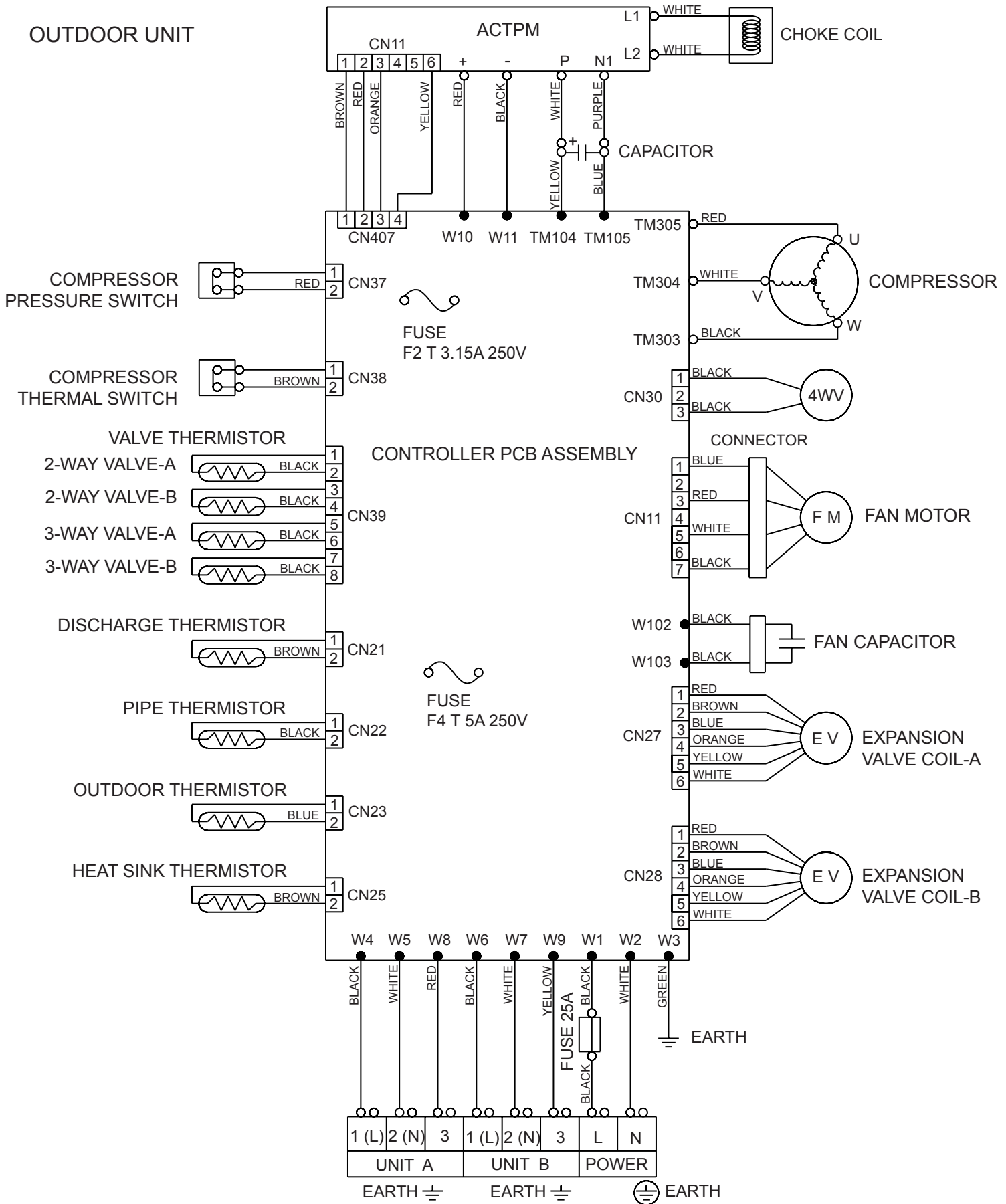
←···· HEAT

← COOL

# CIRCUIT DIAGRAM



OUTDOOR UNIT

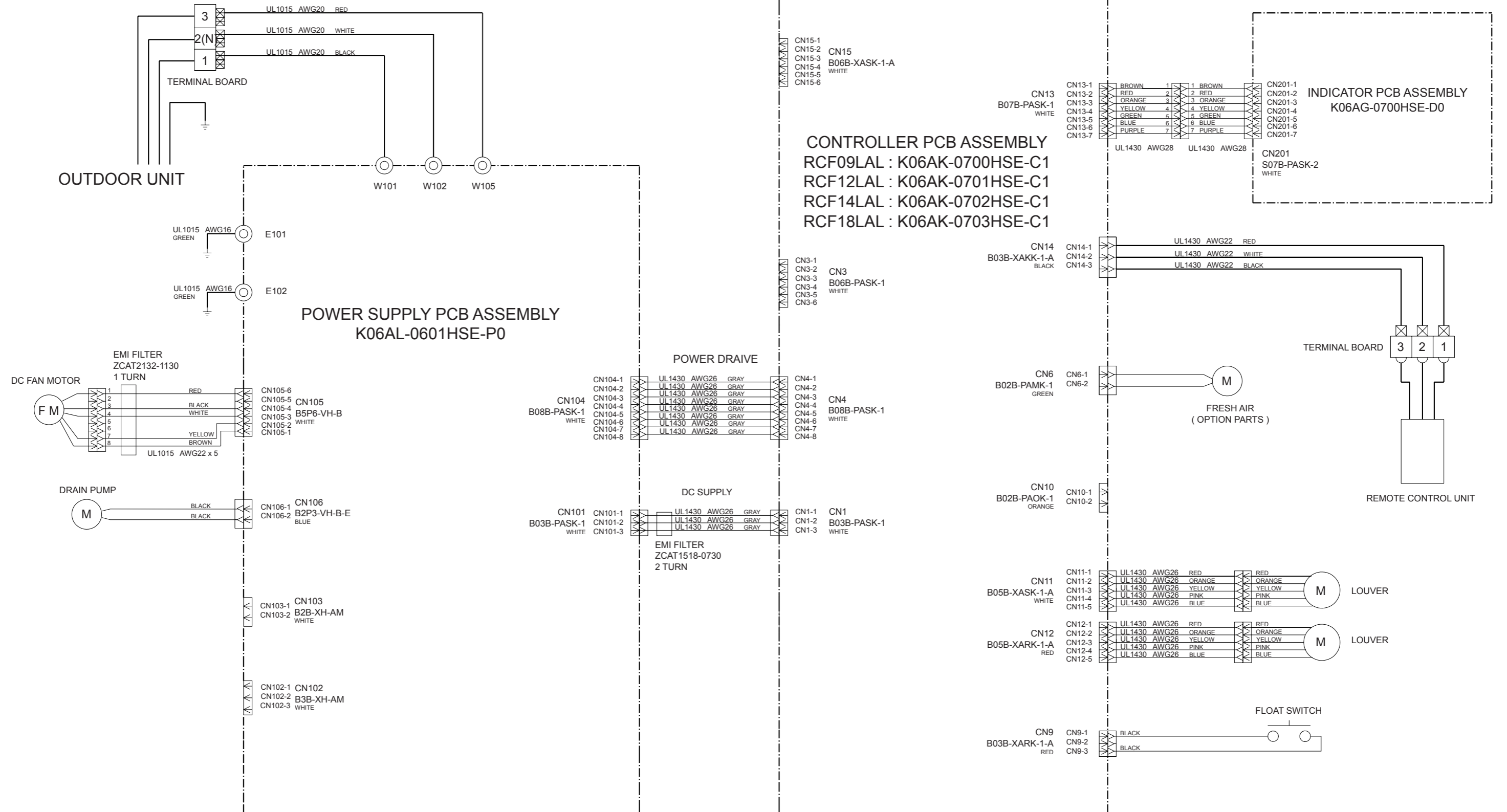




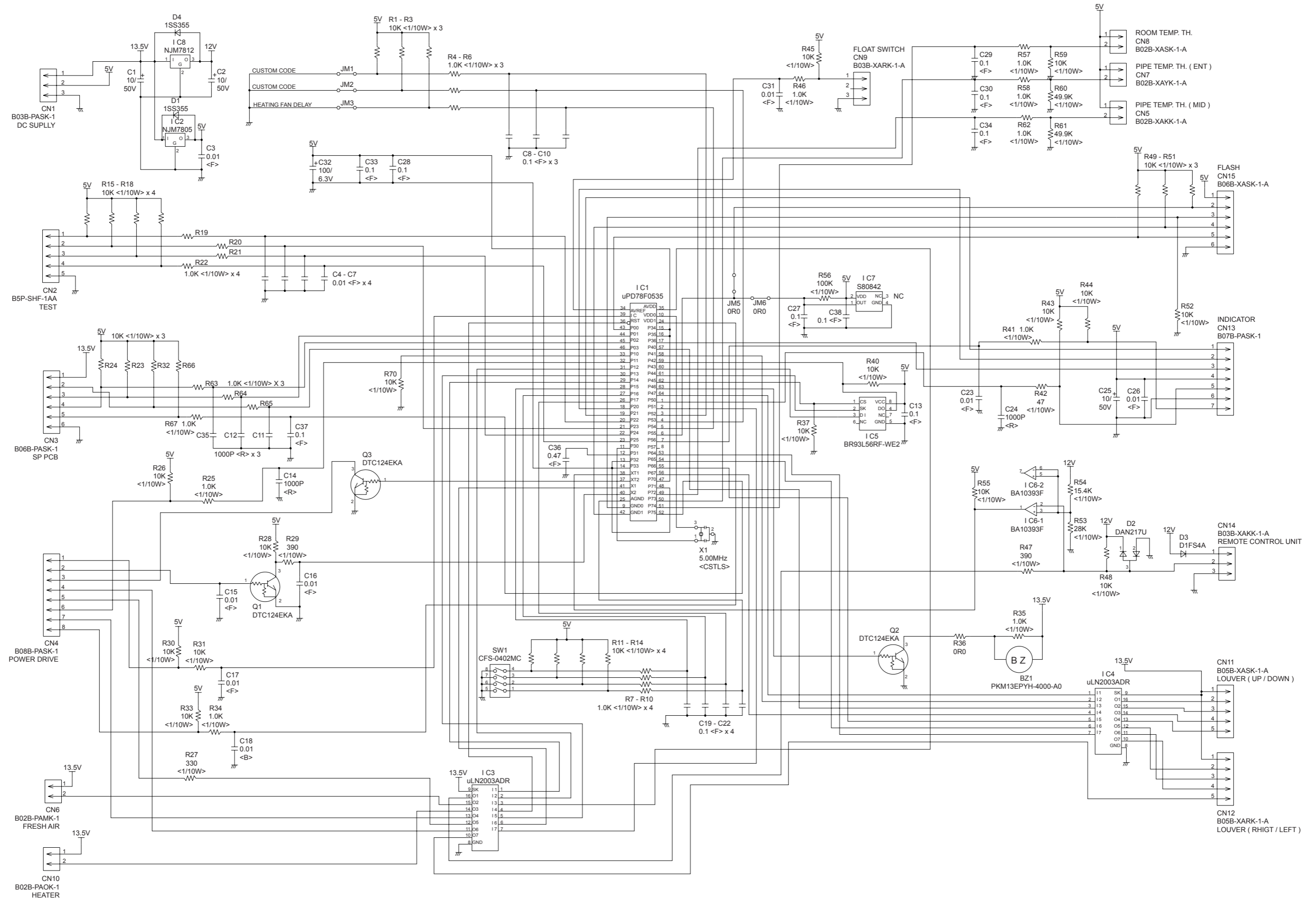
# INDOOR PCB CIRCUIT DIAGRAM

## CONTROL UNIT

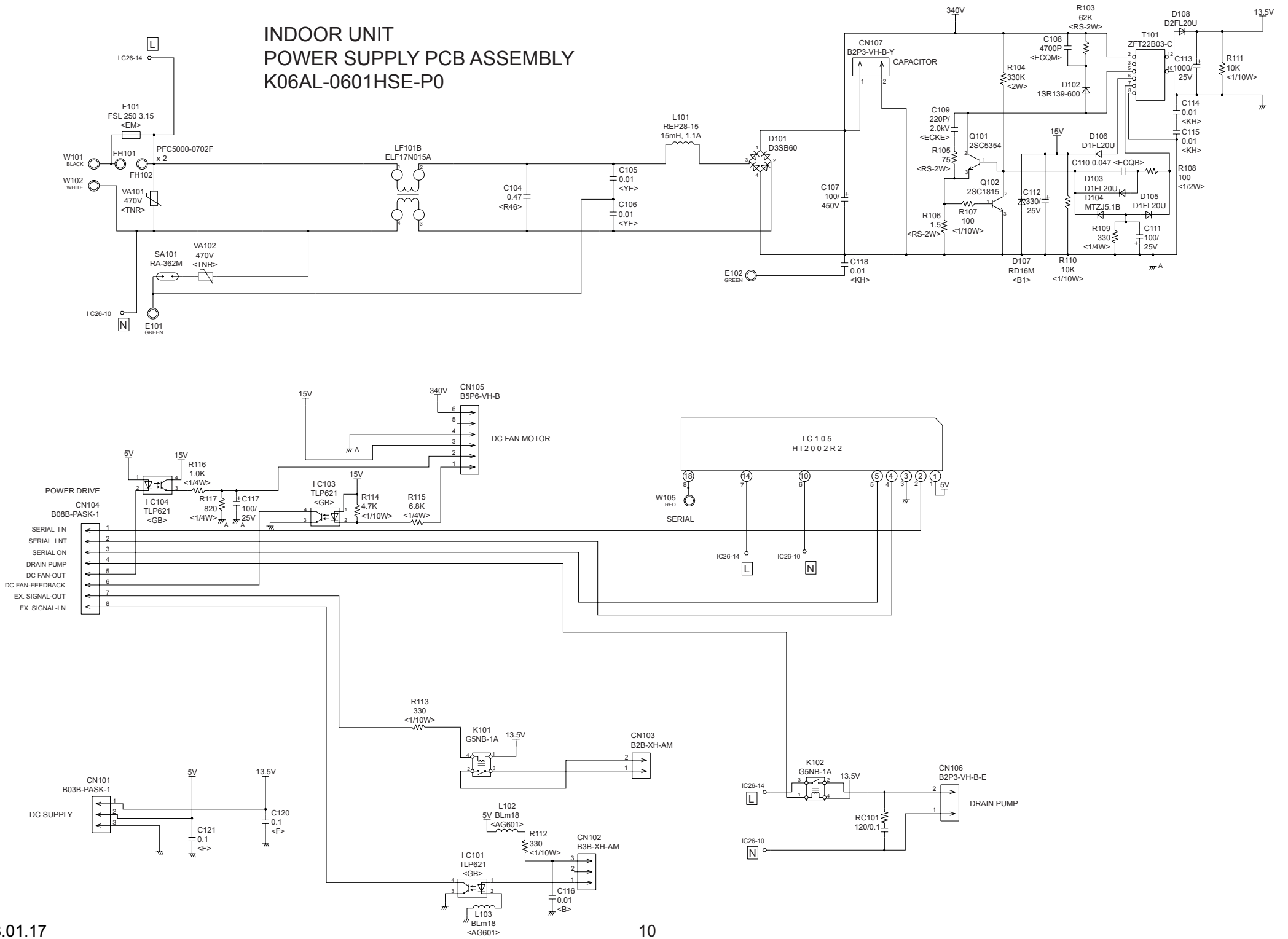
RCF09LAL : EZ-0070FHSE  
 RCF12LAL : EZ-0070GHSE  
 RCF14LAL : EZ-0070HHSE  
 RCF18LAL : EZ-0070KHSE



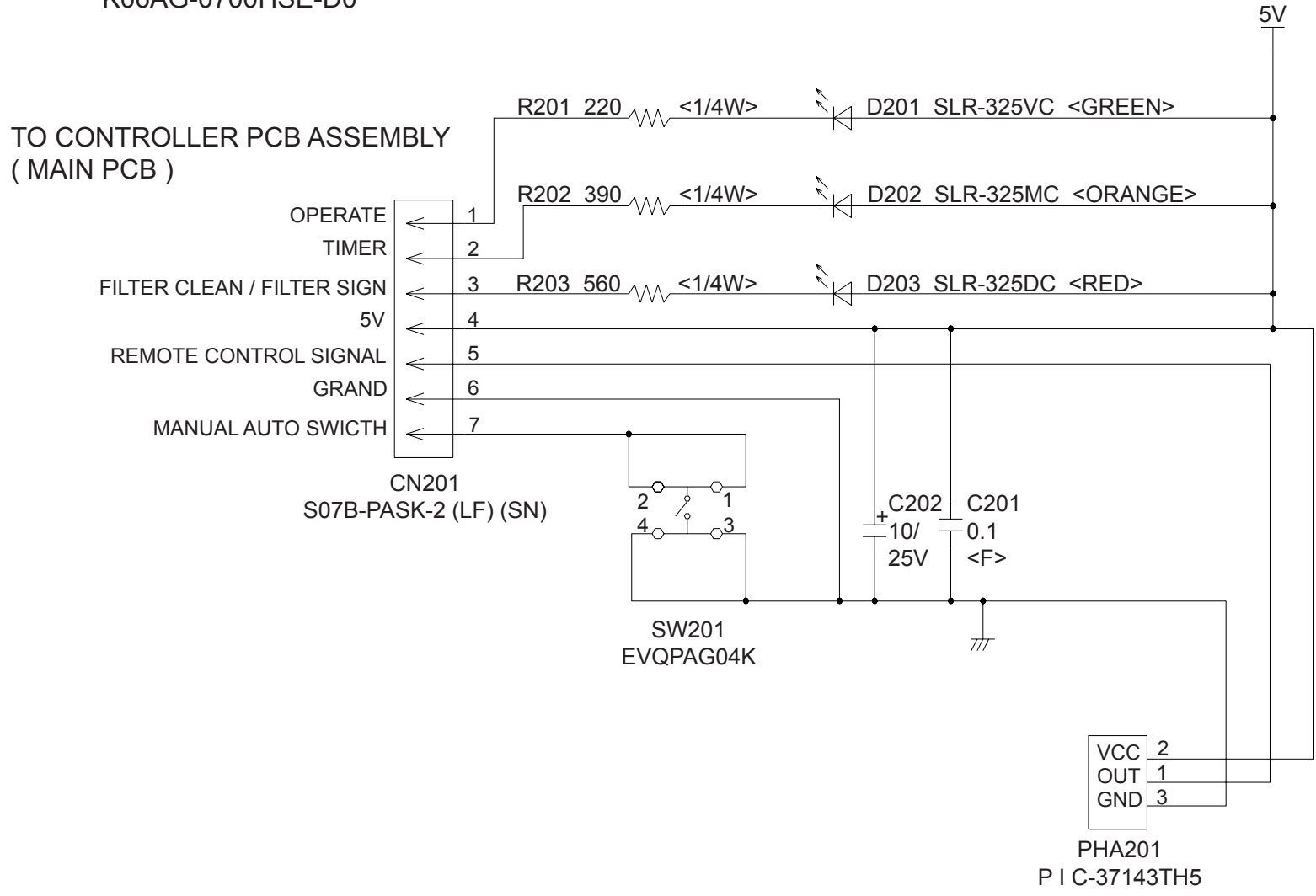
**CONTROLLER PCB ASSEMBLY**  
**RCF09LAL : K06AK-0700HSE-C1**  
**RCF12LAL : K06AK-0701HSE-C1**  
**RCF14LAL : K06AK-0702HSE-C1**  
**RCF18LAL : K06AK-0703HSE-C1**



# INDOOR UNIT POWER SUPPLY PCB ASSEMBLY K06AL-0601HSE-P0



INDOOR UNIT  
 INDICATOR PCB ASSEMBLY  
 K06AG-0700HSE-D0



# OUTDOOR PCB CIRCUIT DIAGRAM

## INVERTER ASSEMBLY

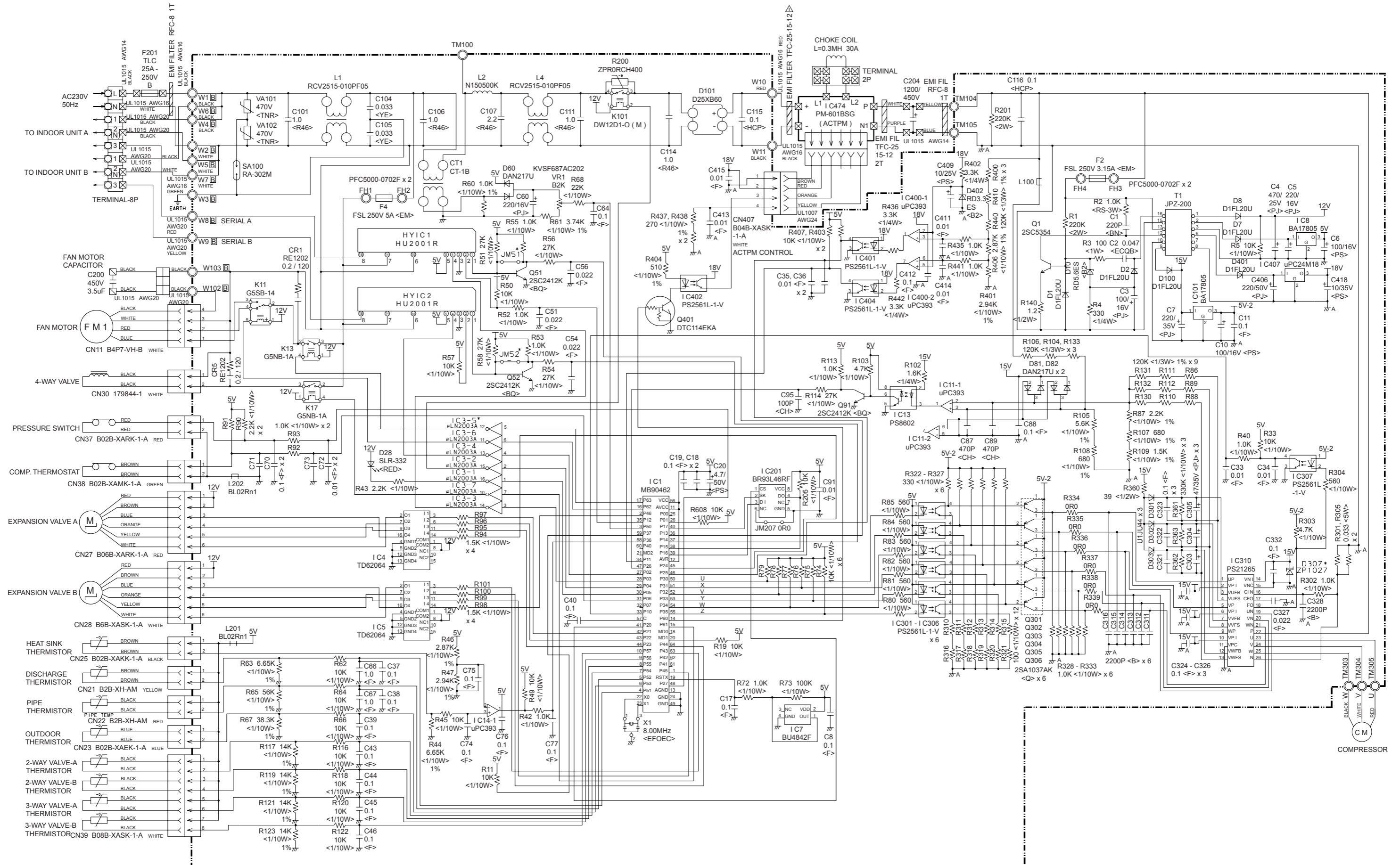
ROM-18LA2 : EZ-0056HUE

ROM-24LA2 : EZ-0037HUE

## CONTROLLER PCB ASSEMBLY

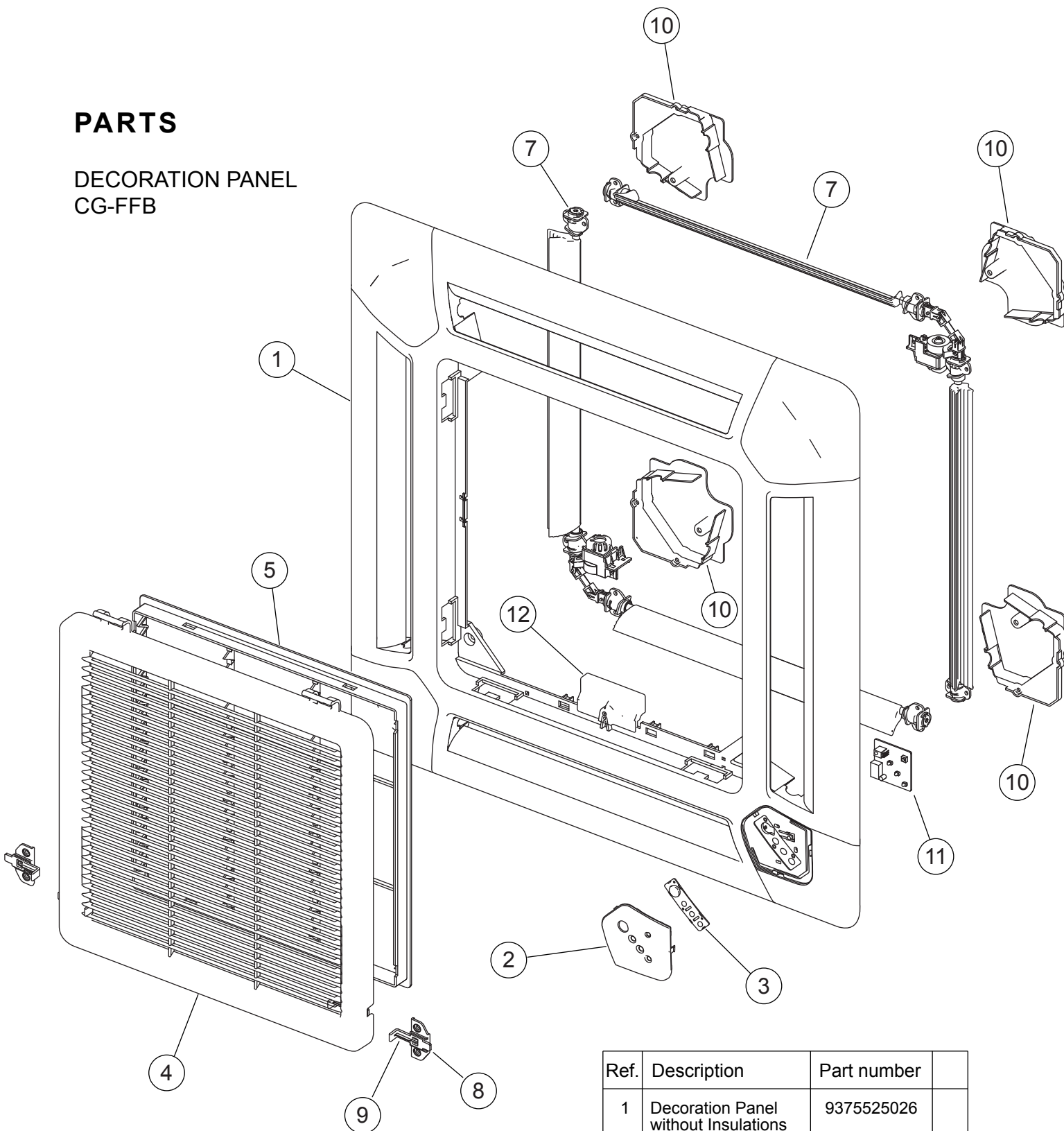
ROM-18LA2 : K06DY-0602HUE-C1

ROM-18LA2 : K06DY-0600HUE-C1



# PARTS

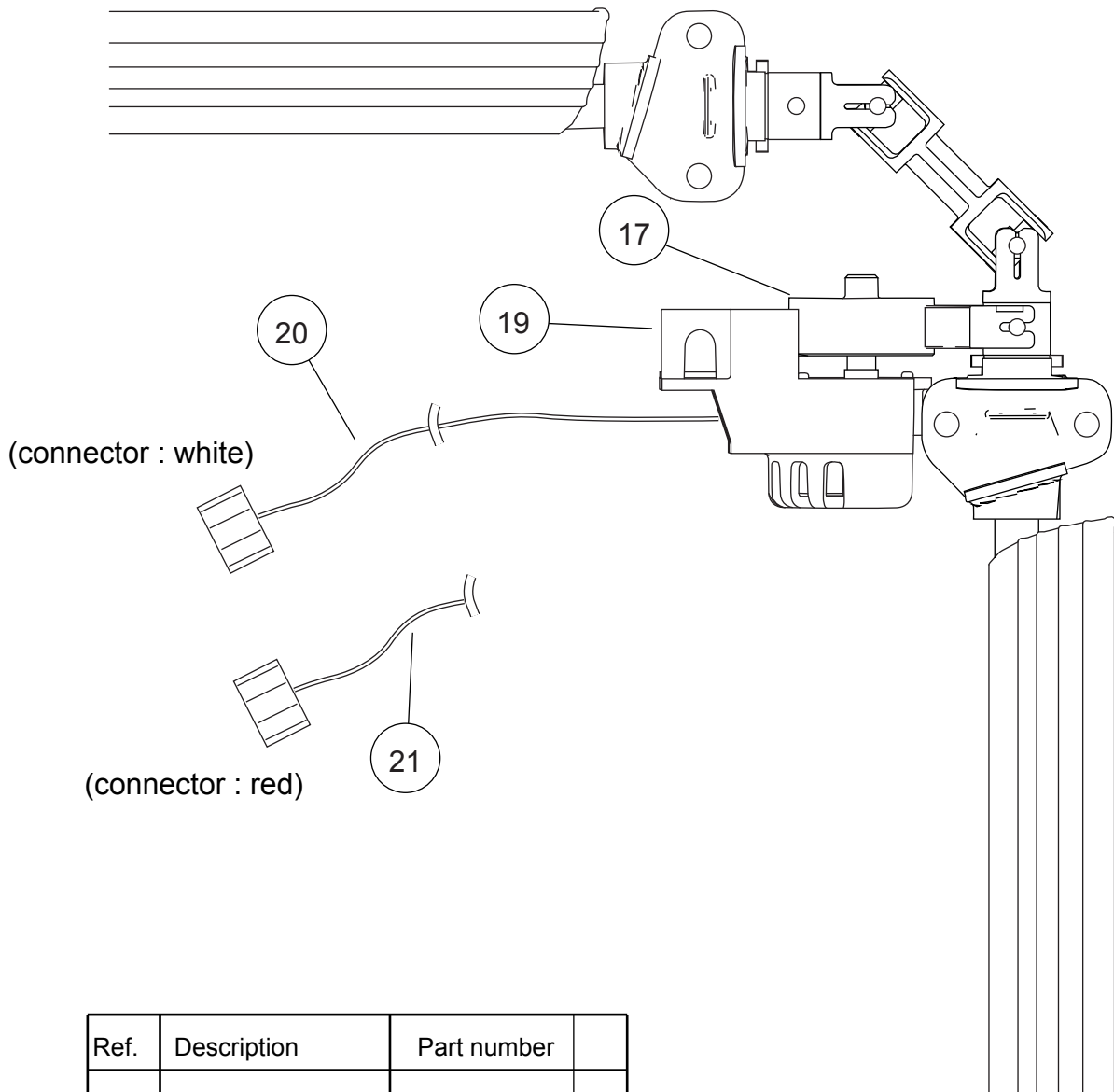
DECORATION PANEL  
CG-FFB



Ref.	Description	Part number
1	Decoration Panel without Insulations	9375525026
2	Display Panel	9375529079
3	Receiver Window	9375547011
4	Intake Grille	9375531027
5	Long Life Filter	9375533014
7	Flap Total Assy	9377760029
8	Hook Bracket	9375546014
9	Grille Hook	9375532024
10	Panel Cover without Insulations	9375530013
11	Indicator PCB Assy	9707371024
12	Connector Cover	9375549015

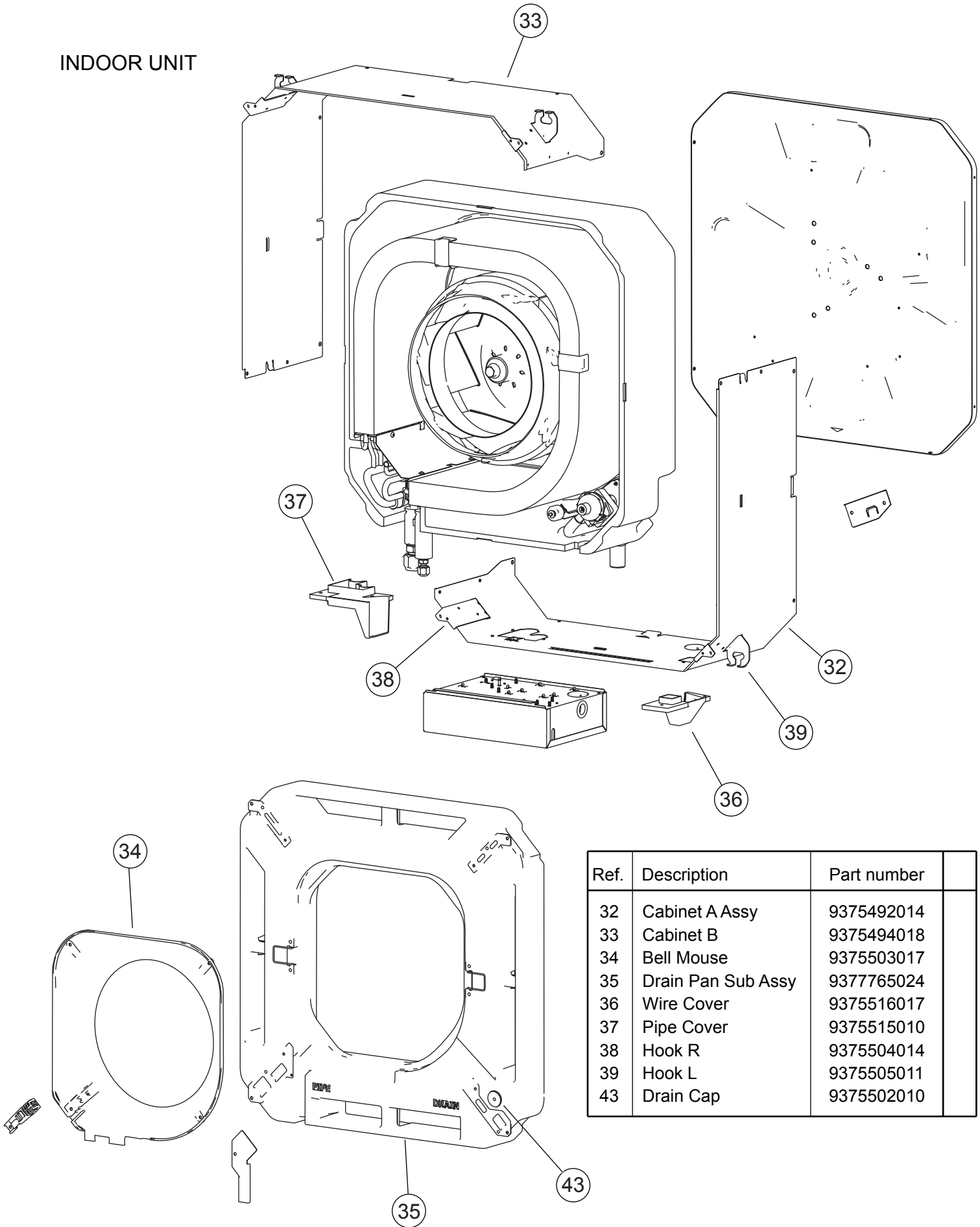


DECORATION PANEL  
 CG-FFB  
 Flap total assy  
 Motor holder assy



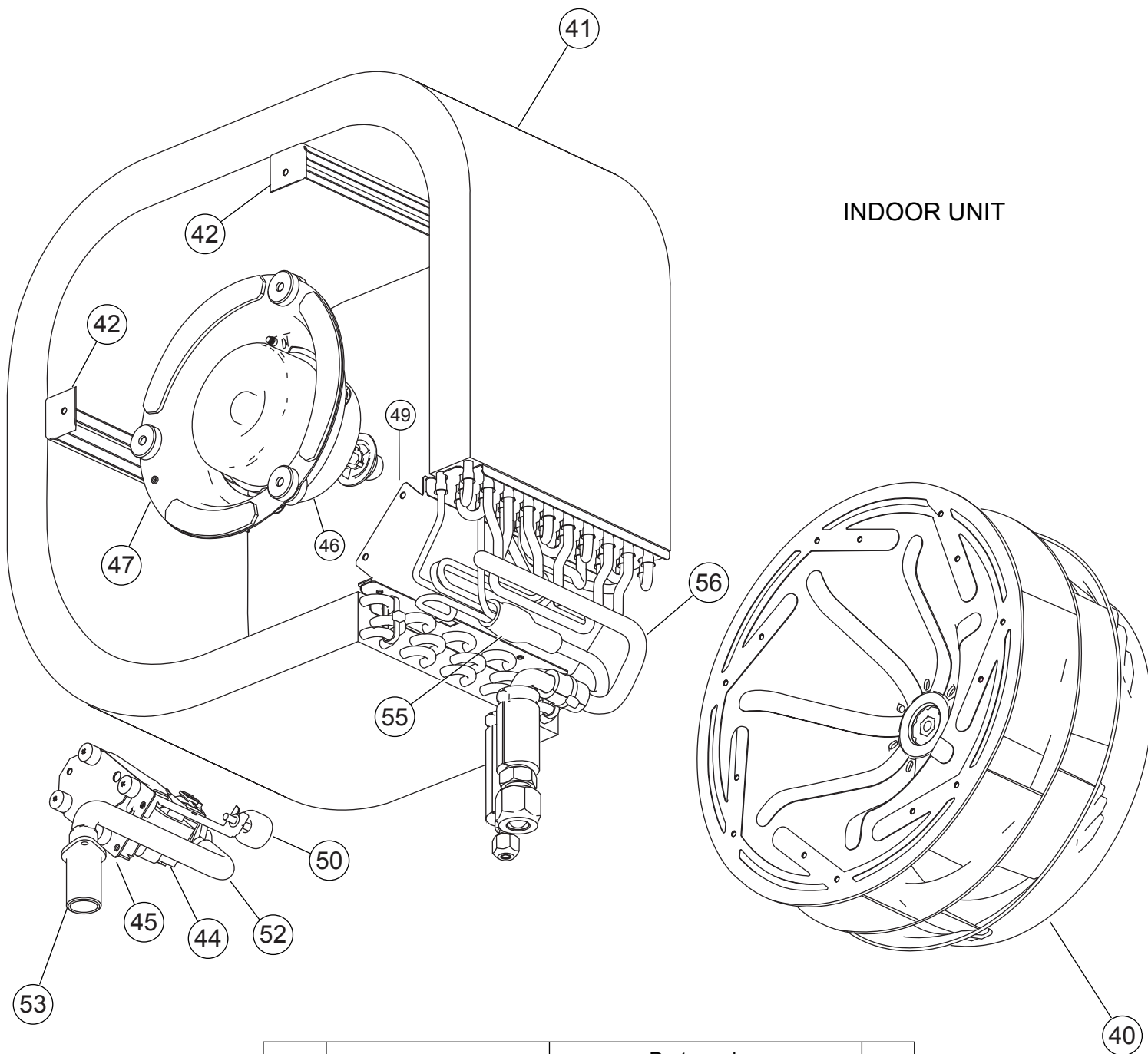
Ref.	Description	Part number	
17	Gear A	9375536015	
19	Motor Holder	9375535018	
20	Step Motor (white connector)	9900139070	
21	Step Motor (red connector)	9900139087	

INDOOR UNIT



Ref.	Description	Part number
32	Cabinet A Assy	9375492014
33	Cabinet B	9375494018
34	Bell Mouse	9375503017
35	Drain Pan Sub Assy	9377765024
36	Wire Cover	9375516017
37	Pipe Cover	9375515010
38	Hook R	9375504014
39	Hook L	9375505011
43	Drain Cap	9375502010

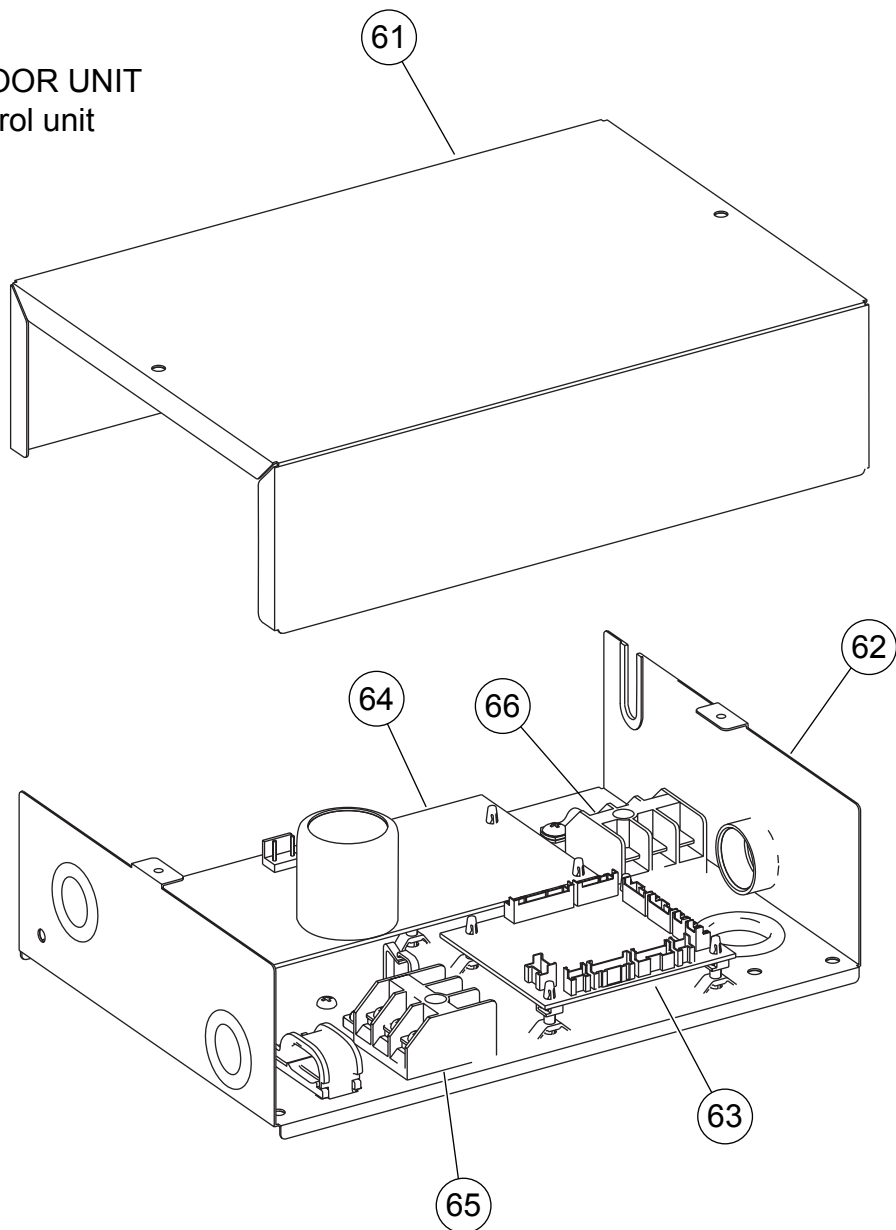




INDOOR UNIT

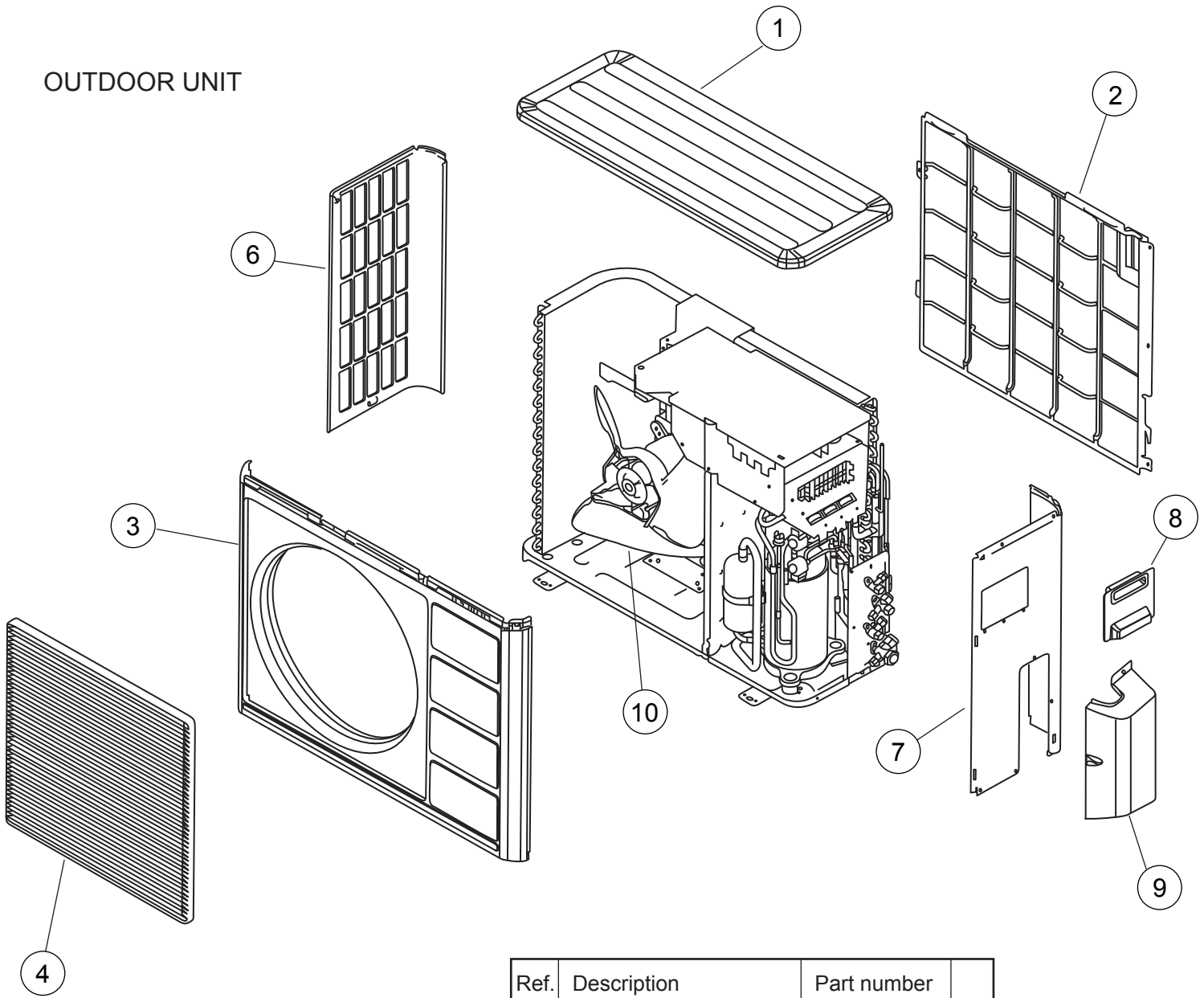
Ref.	Description	Part number	
		RCF09LAL RCF12LAL	RCF14LAL RCF18LAL
40	2 Stage Turbo Fan Assy	9375480011	9375480011
41	Evaporator Assy	9372585085	9372585054
42	Evaporator Holder	9375508012	9375508012
44	Pump Assy	9900360047	9900360047
45	Drain Pump Holder B	9375518011	9375518011
46	Fan Motor	9602436019	9602436019
47	Fan Motor Holder	9375552015	9375552015
49	Separate Wall	9375506018	9375506018
50	Float Switch	9900361037	9900361037
52	Drain Hose	9375519018	9375519018
53	Drain Port	9375520014	9375520014
55	Distributor Assy	9371325316	9371325316
56	Coupling Pipe Assy	9373038412	9373038368

INDOOR UNIT  
Control unit



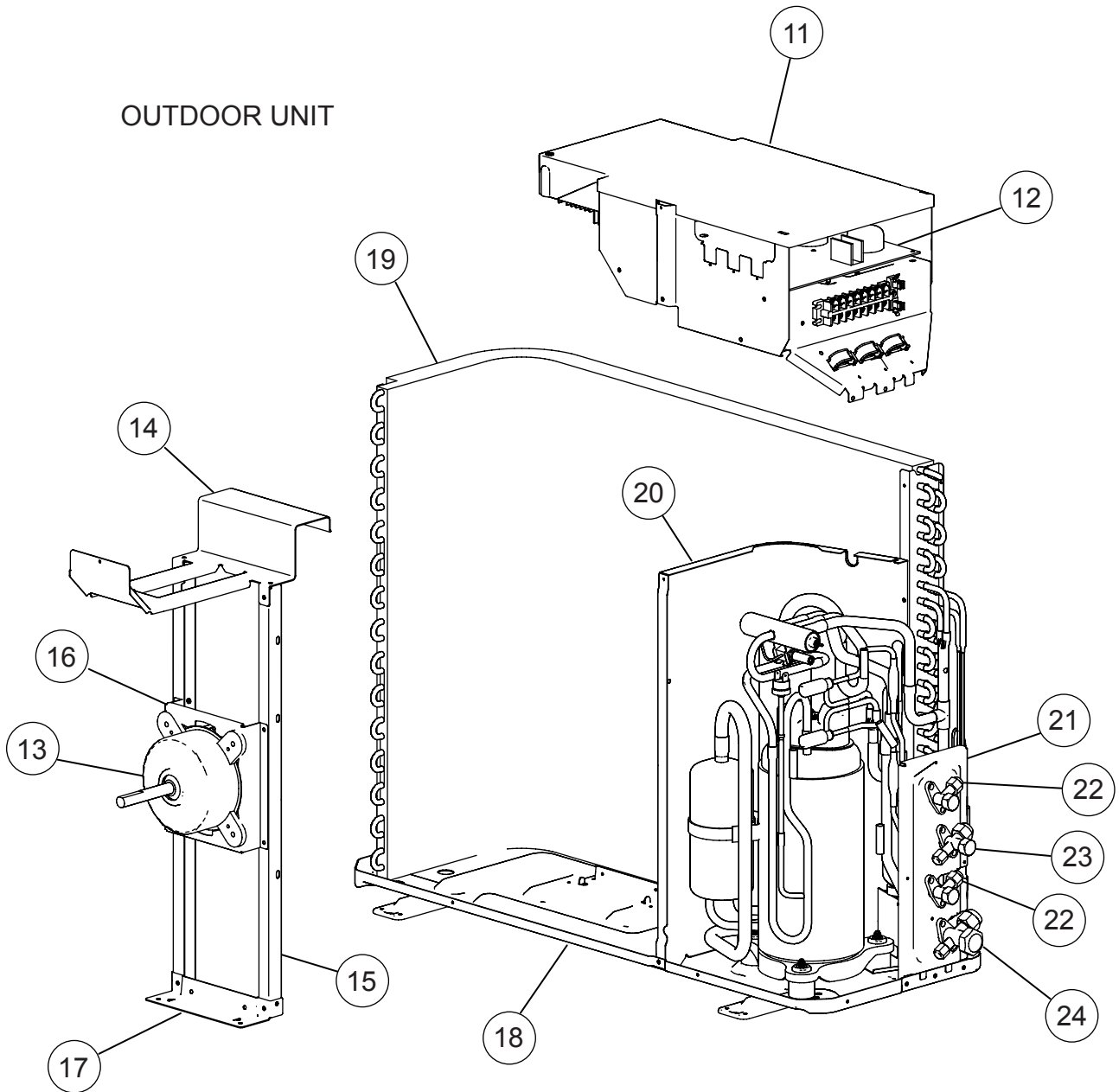
Ref.	Description	Part number	
61	Control Box Cover	9375512019	
62	Control Box A	9375511012	
63	Controller PCB Assy (09)	9707393194	
63	Controller PCB Assy (12)	9707393200	
63	Controller PCB Assy (14)	9707393217	
63	Controller PCB Assy (18)	9707393224	
64	Power Supply PCB Assy	9707398021	
65	Terminal	9306489045	
66	Terminal	9703345012	
--	Pipe Thermistor	9703297014	
--	Room Thermistor	9703299223	

# OUTDOOR UNIT



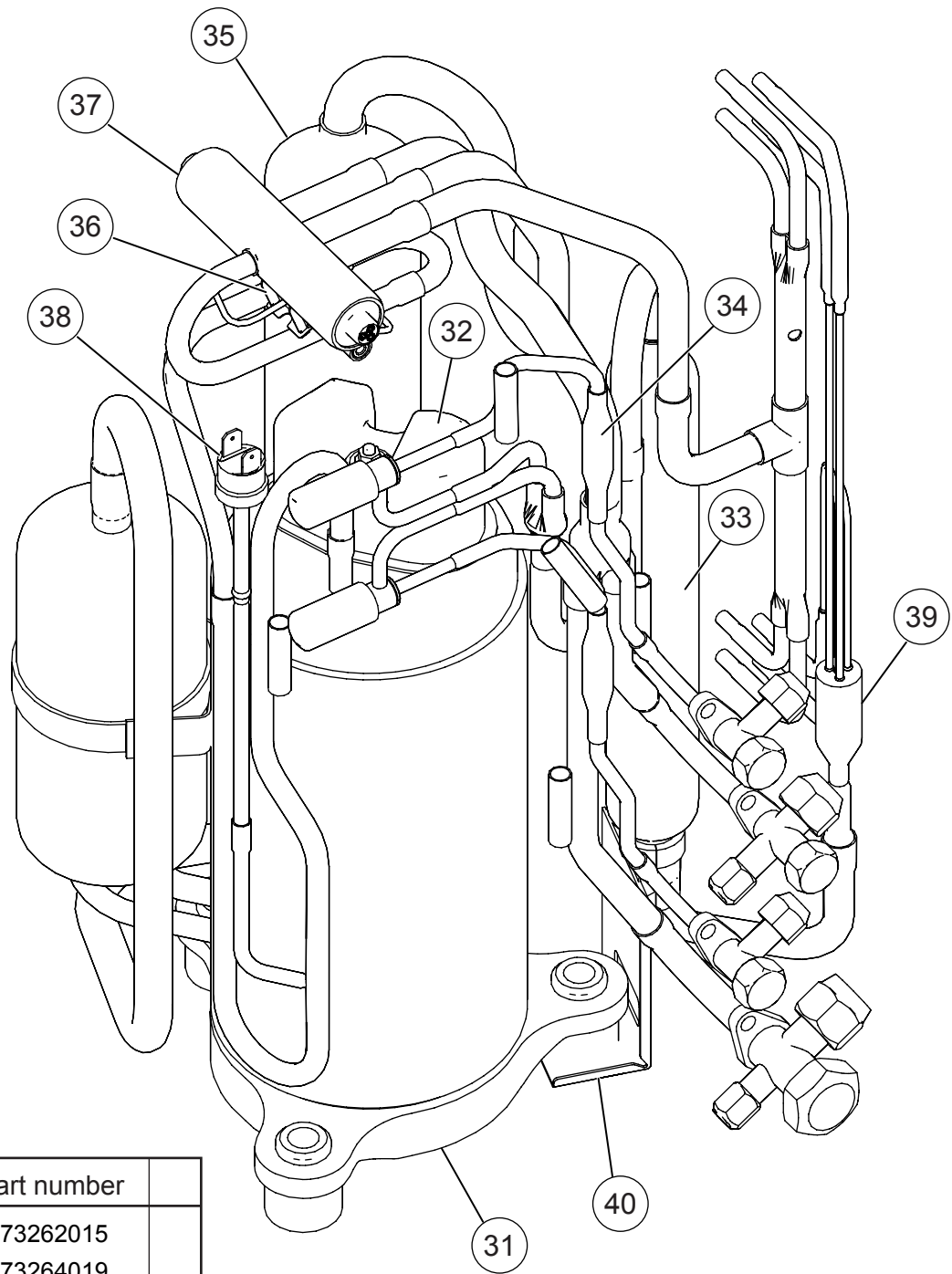
Ref.	Description	Part number
1	Top Panel	9371925011
2	Protective Net	9371934013
3	Front Panel	9371924014
4	Fan Guard	9371187013
6	Side Panel L	9371926018
7	Side Panel R Sub Assy	9372306048
8	Connecteur Cover	9366398004
9	Valve Cover	9372796016
10	Propeller Fan Assy	9366378013

# OUTDOOR UNIT



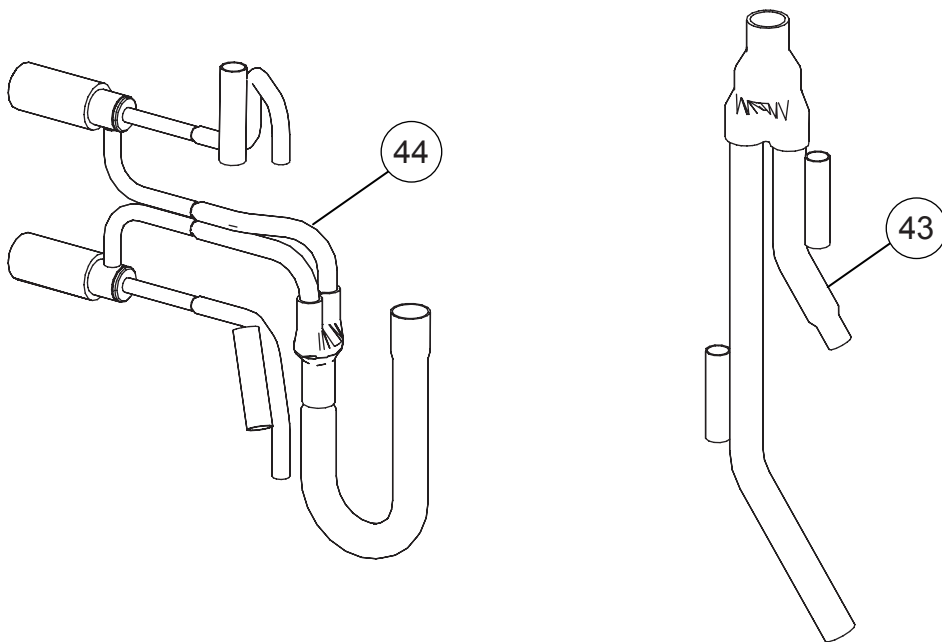
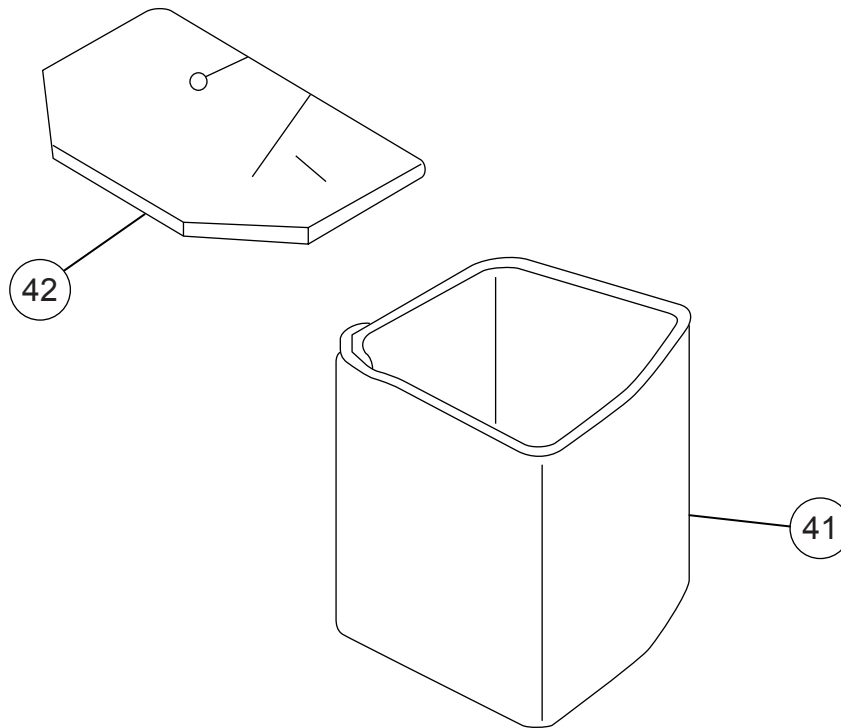
Ref.	Description	Part number	Ref.	Description	Part number
11	Control Cover	9372792018	--	Heat Exchanger Thermistor	9704220059
12	Controller PCB Assy (18LMAK2)	9707560039	--	Thermistor Outdoor	9703516047
12	Controller PCB Assy (24LMAM2)	9707560015	--	Thermistor Heat Sink	9900195014
13	Motor Induct	9601671046	--	Relay	9900117016
14	Motor Bracket Top	9371931012	--	ACTPM	9703457012
15	Motor Bracket	9371929019	--	Capacitor for PCB	9705387010
16	Motor Bracket Center	9371930015	--	Fan Capacitor	9900270049
17	Motor Bracket Bottom	9371932019	--	Fuse	0600086039
18	Base Assy	9371920078	--	Terminal 8P	9900203047
19	Condenser Assy	9372181096	--	Fuse Holder	0501454012
20	Separate Wall	9372795019	--	Terminal 2P	9701971015
21	Valve Plate	9371928036			
22	2-Way Valve	9372204054			
23	3-Way Valve	9372205044			
24	3-Way Valve	9372205051			

OUTDOOR UNIT



Ref.	Description	Part number
31	Compressor Assy	9373262015
32	Terminal Cover (Comp)	9373264019
33	Receiver Tank Assy	9373426011
34	Strainer Assy	9366602019
35	Accumulator	9368391003
36	Solenoid	9900165079
37	4-Way Valve	9900163013
38	Pressure Switch Assy	9373729044
39	Capillary Assy	9373729211
40	Accum Support Assy	9372252017
--	Thermal Switch	9377956019
--	Gasket (Comp)	9373266013
--	Compressor Pressure Switch	9900186012
--	Compressor Thermal Switch	9373263012
--	Thermistor Valve	9900194017
--	Thermistor Discharge	9704219039
--	Special Nut M8 (Comp)	9355091008
--	Thermister Holder Pipe	313714262805




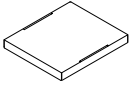
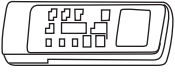
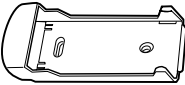

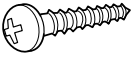
# OUTDOOR UNIT






Ref.	Description	Part number	
41	Compressor Cover A	9373730019	
42	Compressor Cover B	9373730026	
43	Joint Pipe (3Way) Assy	9373729129	
44	Expansion Valve Assy	9373729068	

# STANDARD ACCESSORIES



## INDOOR UNIT

Name and Shape	Q'ty	Application
Coupler heat insulation 	2	For indoor side pipe joint
Special nut A (large flange) 	4	For installing indoor unit
Special nut B (small flange) 	4	For installing indoor unit
Template (Carton top) 	1	For ceiling openings cutting Also used as packing
Remote control 	1	For air conditioner operation
Remote control holder 	1	For installing remote control on the wall
Battery 	2	For remote control
Tapping screw 	2	For mounting the remote control holder

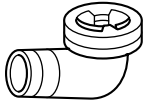
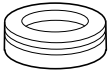
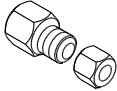
## DECORATION PANEL

Name and Shape	Q'ty	Application
Connector cover 	4	For covering connector
Screw 	4	For mounting decoration panel
Screw 	1	For mounting connector cover

## OPTIONAL PARTS

Name and Shape	Summary
Wired remote control UTB-* YD 	Unit control is performed by wired remote control.
Air outlet shutter plate UTR-YDZB 	Install the plate at outlet when carrying out 3-way direction operation.

## 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 → 9.52 mm (1/2 in.) (3/8 in.) 	1	For use when connecting models 9-12 to outdoor port A	9370244007



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