

SPLIT TYPE
AIR CONDITIONER
CASSETTE TYPE (50Hz)

SERVICE MANUAL



Indoor unit	Outdoor unit
AUYG12LVLB	AOYG12LALL
AUYG14LVLB	AOYG14LALL
AUYG18LVLB	AOYG18LALL

CONTENTS

SPECIFICATIONS	1
DIMENSIONS	2
REFRIGERANT SYSTEM DIAGRAM ...	4
CIRCUIT DIAGRAM	5
INDOOR PCB CIRCUIT DIAGRAM	6
OUTDOOR PCB CIRCUIT DIAGRAM ..	10
ERROR DETECTION	12
PARTS (DECORATION PANEL)	14
PARTS (INDOOR UNIT)	16
PARTS (OUTDOOR UNIT)	19
ACCESSORIES	21

SPECIFICATIONS

ELECTRICAL DATA

TYPE	Inverter cooling & heating			
DECORATION PANEL	UTG-UFYD-W			
INDOOR UNIT	AUYG12LVLB	AUYG14LVLB	AUYG18LVLB	
OUTDOOR UNIT	AOYG12LALL	AOYG14LALL	AOYG18LALL	
COOLING CAPACITY	3.50 kW	4.30 kW	5.20 kW	
HEATING CAPACITY	4.10 kW	5.00 kW	6.00 kW	
POWER SOURCE	230 V, 50 Hz			
RUNNING CURRENT	Cooling	4.8 A	6.1 A	7.2 A
	Heating	5.1 A	6.1 A	7.4 A
INPUT WATTS	Cooling	1.05 kW	1.33 kW	1.62 kW
	Heating	1.11 kW	1.34 kW	1.66 kW
E.E.R.	Cooling	3.33 kW/kW	3.21 kW/kW	3.21 kW/kW
COP	Heating	3.69 kW/kW	3.71 kW/kW	3.61 kW/kW
MOISTURE REMOVAL		1.2 L/hr	1.5 L/hr	2.2 L/hr
AIR CIRCULATION (HIGH)	Cooling	600 m3/hr	680 m3/hr	680 m3/hr
	Heating	600 m3/hr	800 m3/hr	680 m3/hr
MAXIMUM CURRENT	Cooling	7.5 A	9.0 A	9.0 A
	Heating	10.0 A	12.5 A	12.5 A

FAN MOTOR

INDOOR UNIT, Discrimination	MFF-24RVL			
INDOOR UNIT (cool)	High	650 r.p.m.	730 r.p.m.	730 r.p.m.
	Medium	580 r.p.m.	630 r.p.m.	630 r.p.m.
	Low	520 r.p.m.	540 r.p.m.	540 r.p.m.
	Quiet	460 r.p.m.	460 r.p.m.	460 r.p.m.
INDOOR UNIT (heat)	High	650 r.p.m.	830 r.p.m.	830 r.p.m.
	Medium	580 r.p.m.	730 r.p.m.	730 r.p.m.
	Low	520 r.p.m.	630 r.p.m.	630 r.p.m.
	Quiet	460 r.p.m.	500 r.p.m.	500 r.p.m.
OUTDOOR UNIT, Discrimination	MFE-63NOM			
OUTDOOR UNIT (cool)	770 r.p.m.	820 r.p.m.	860 r.p.m.	
OUTDOOR UNIT (heat)	700 r.p.m.	750 r.p.m.	820 r.p.m.	

NOISE LEVEL

INDOOR UNIT (cool)	High	37 dB	38 dB	38 dB
	Medium	34 dB	34 dB	34 dB
	Low	30 dB	30 dB	30 dB
	Quiet	27 dB	27 dB	26 dB
INDOOR UNIT (heat)	High	37 dB	43 dB	43 dB
	Medium	34 dB	38 dB	38 dB
	Low	31 dB	34 dB	34 dB
	Quiet	29 dB	30 dB	30 dB
OUTDOOR UNIT (cool)		47 dB	49 dB	50 dB
OUTDOOR UNIT (heat)		48 dB	49 dB	50 dB

COMPRESSOR AND REFRIGERANT

COMPRESSOR	DA130A1F-25NA			
WEIGHT (with oil)	9.6 kg			
REFRIGERANT TYPE	R410A			
PRECHARGED	1,150 g	1,250 g	1,250 g	
FULL CHARGE	Pipe length 15 m	1,150 g	1,250 g	1,250 g
	20 m	1,250 g	1,350 g	1,350 g
	25 m	1,350 g	1,450 g	1,450 g
ADDITIONAL CHARGE	20 g/m			
MAXIMUM PIPING HEIGHT	15 m			

DIMENSIONS

PANEL H x W x D	49 x 700 x 700 mm
INDOOR UNIT H x W x D	245 x 570 x 570 mm
OUTDOOR UNIT H x W x D	578 x 790 x 300 mm

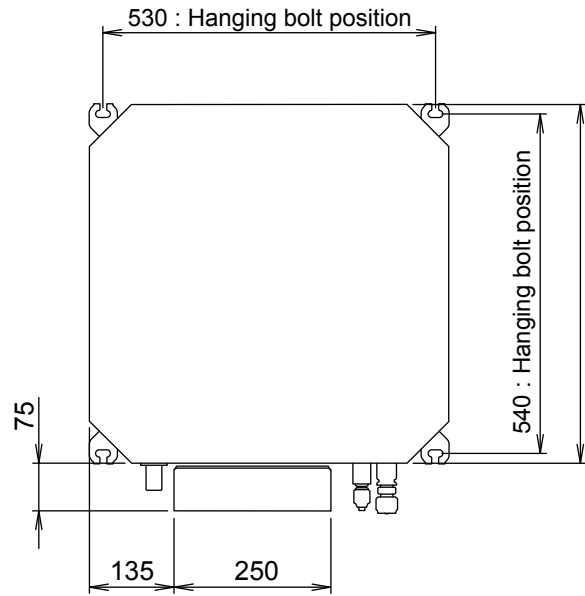
WEIGHT

PANEL Net / Shipping	2.6 kg / 4.5 kg
INDOOR UNIT Net / Shipping	15 kg / 18 kg
OUTDOOR UNIT Net / Shipping	40 kg / 44 kg

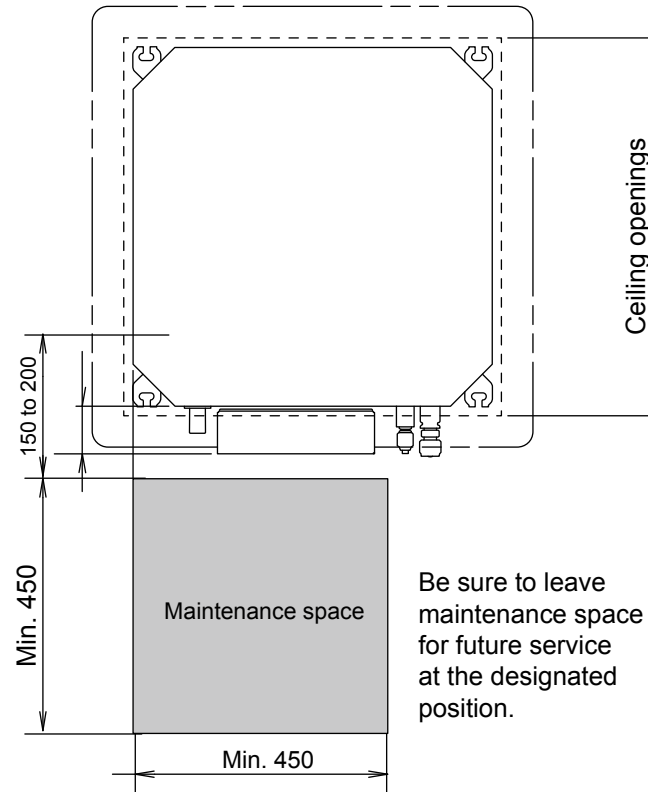
DIMENSIONS

Unit : mm

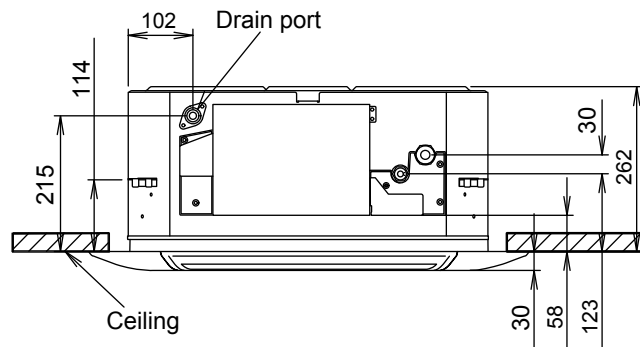
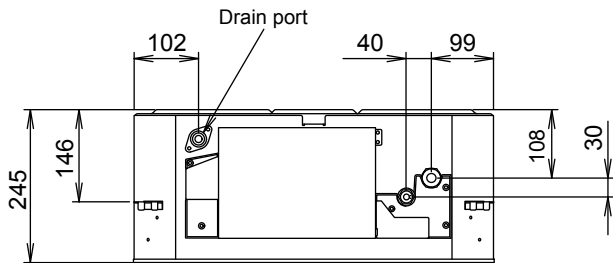
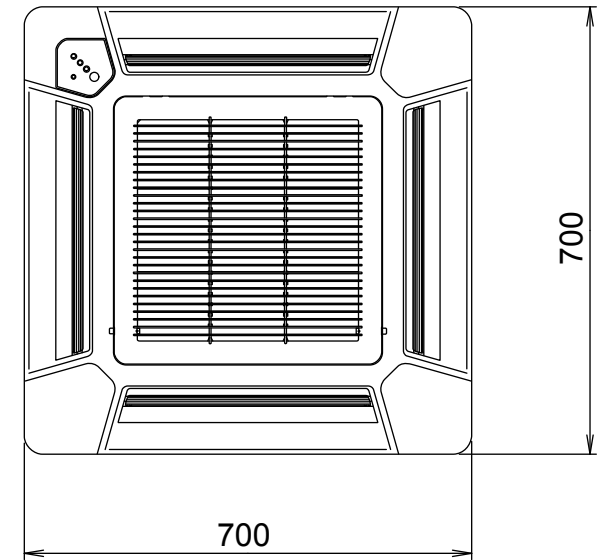
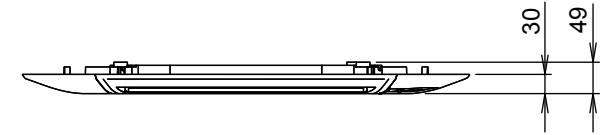
INDOOR UNIT



Decoration panel mounting state

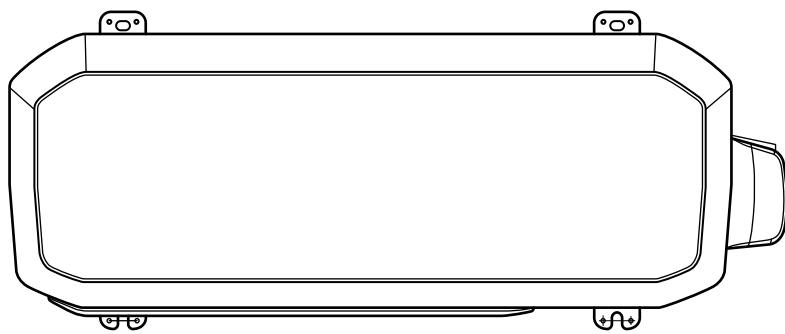


DECORATION PANEL



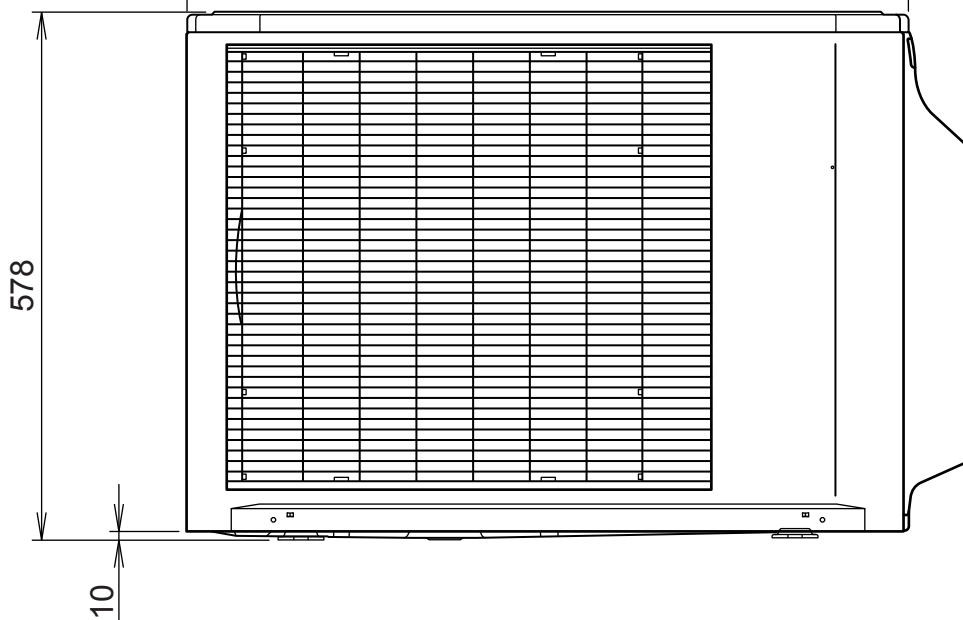
OUTDOOR UNIT

Unit : mm



790

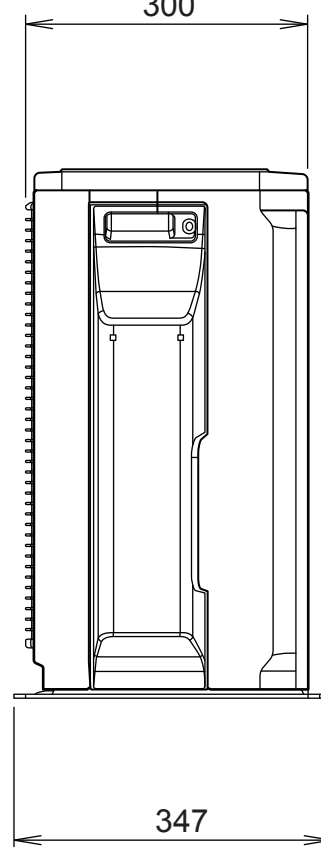
66



578

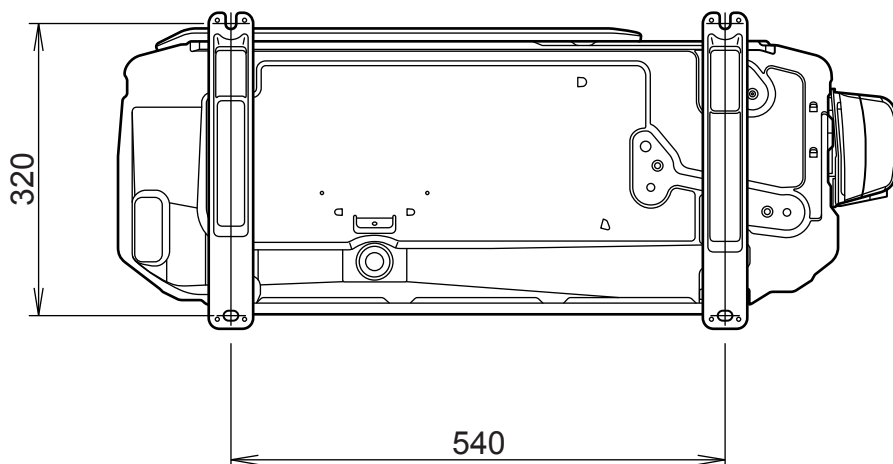
10

300



347

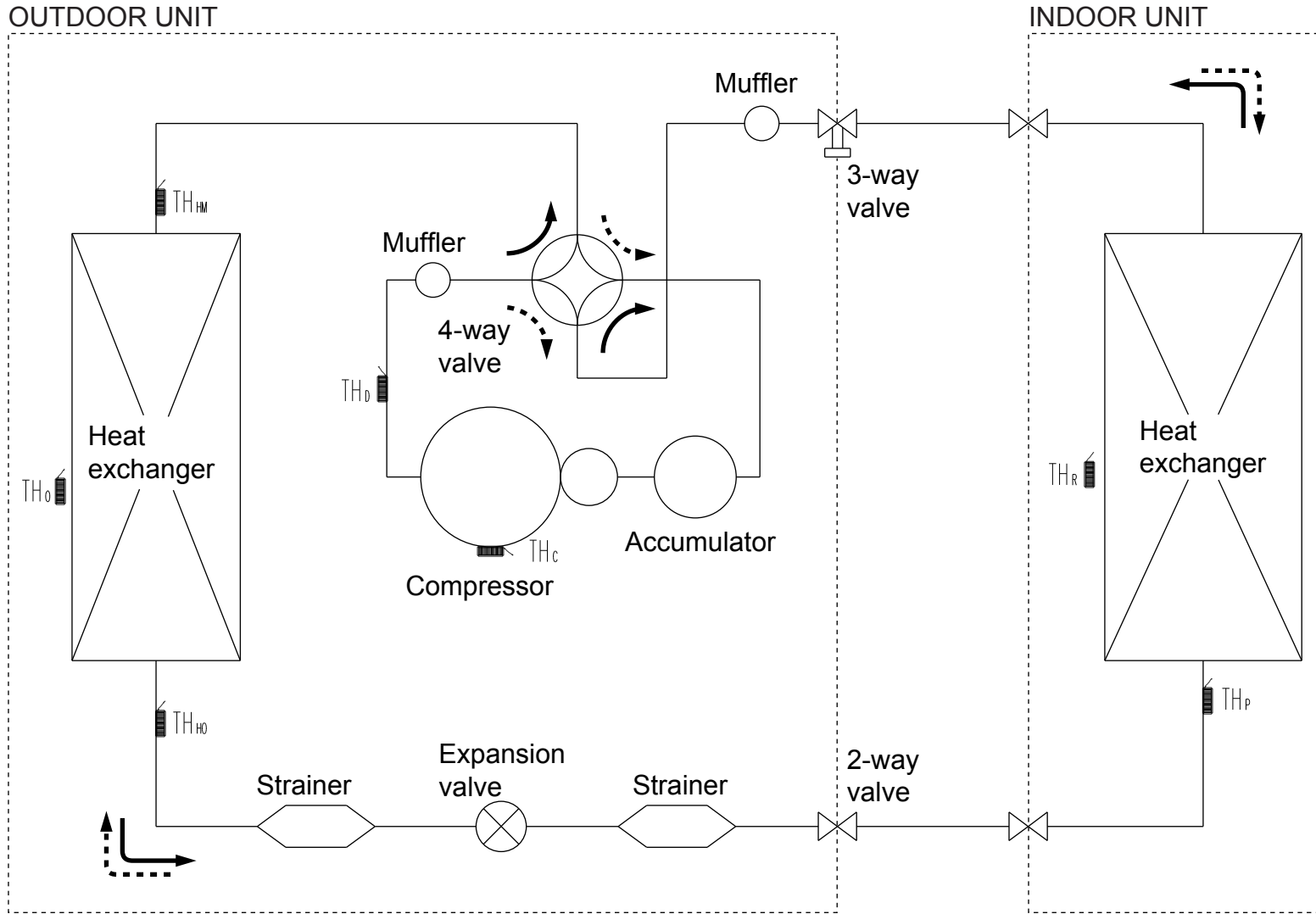
Air flow



320

540

REFRIGERANT SYSTEM DIAGRAM



<Refrigerant direction>

—▶ Cooling

- - -▶ Heating

<Refrigerant pipe diameter>

12

Liquid : 1/4" (6.35 mm)

Gas : 3/8" (9.52 mm)

14, 18

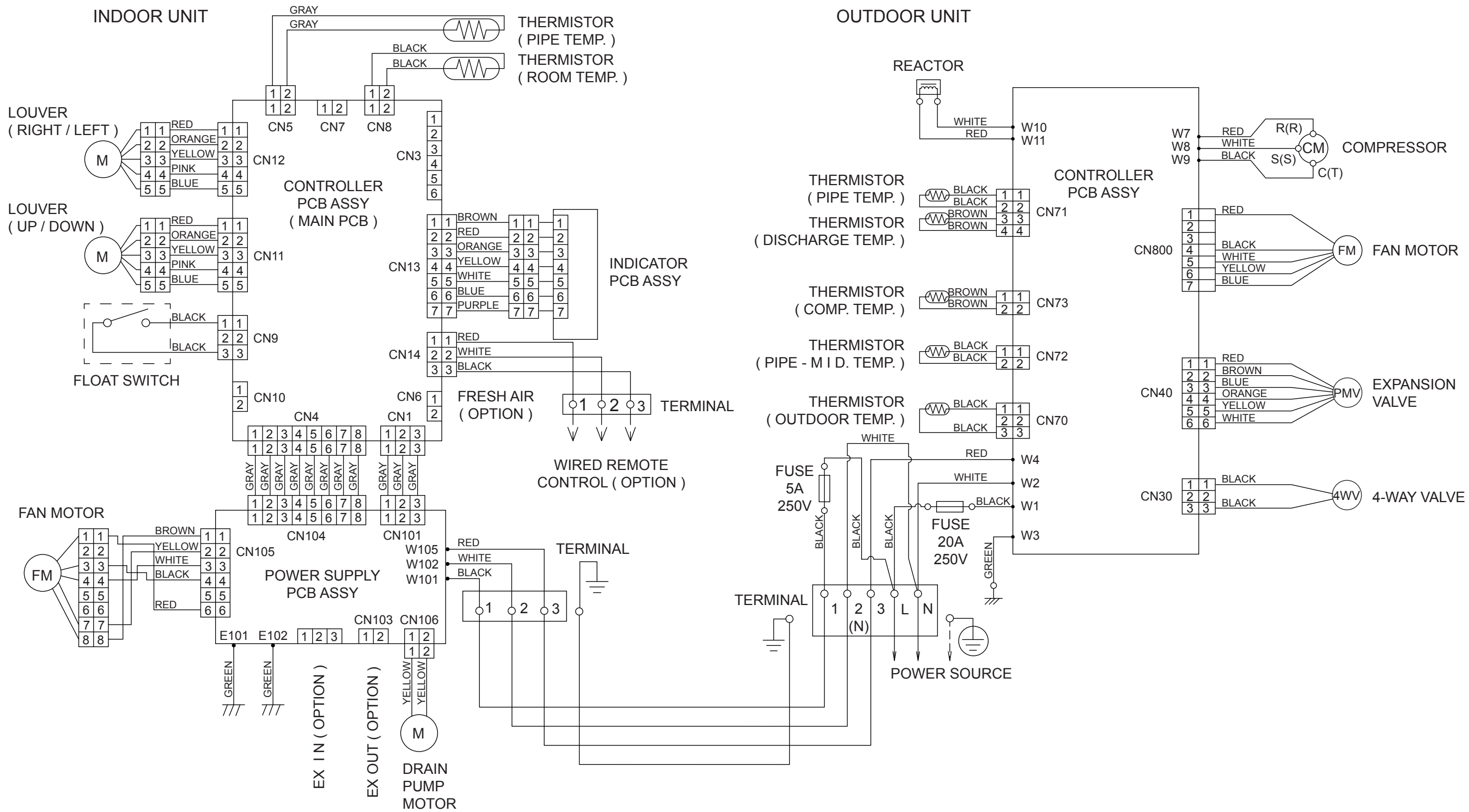
Liquid : 1/4" (6.35 mm)

Gas : 1/2" (12.70 mm)

TH_c : Compressor thermistor
 TH_o : Discharge pipe thermistor
 TH_{HM} : Heat exchanger thermistor (Middle)
 TH_{HO} : Heat exchanger thermistor (Out)
 TH_o : Outdoor thermistor

TH_P : Pipe thermistor
 TH_R : Room thermistor

CIRCUIT DIAGRAM



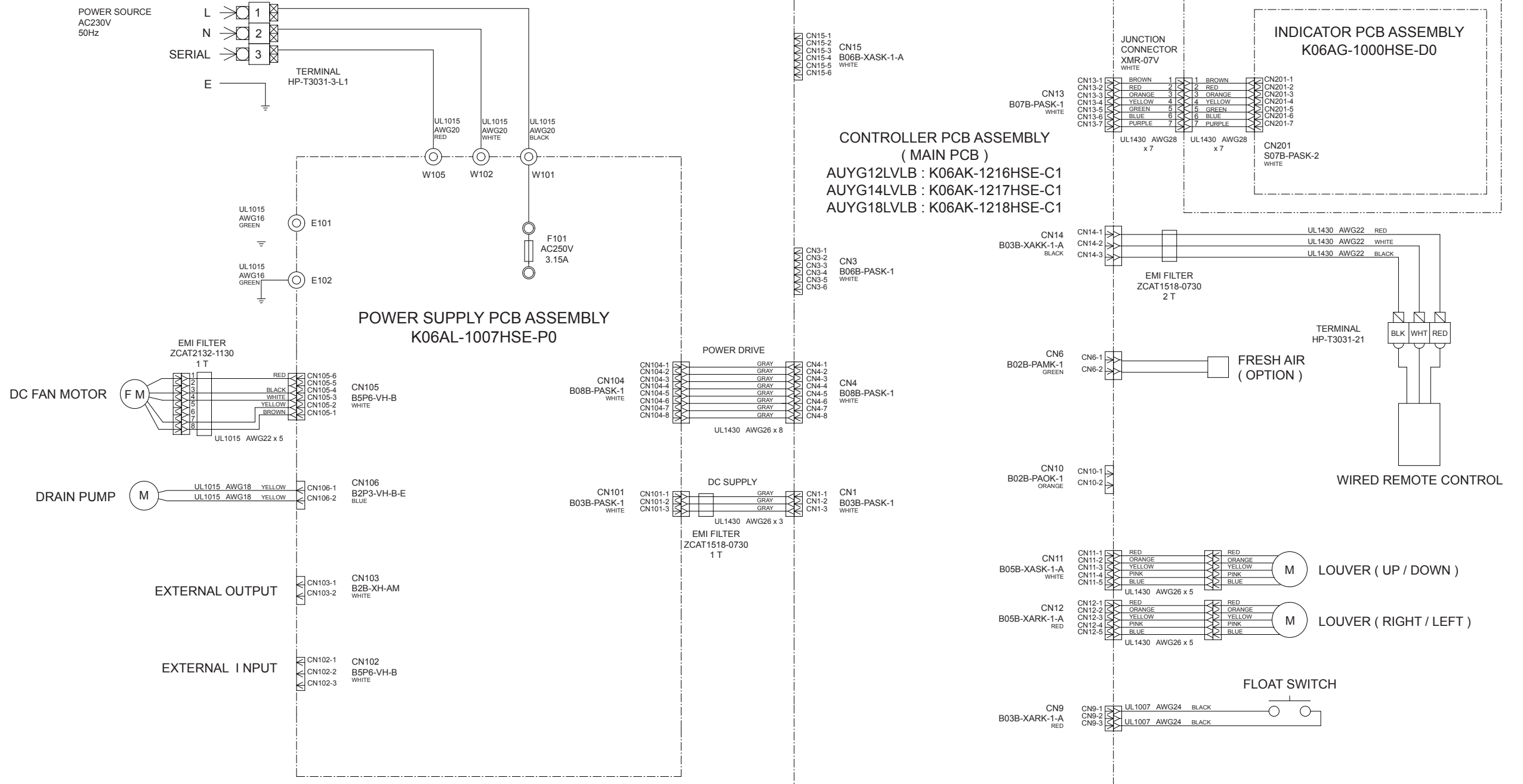
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT

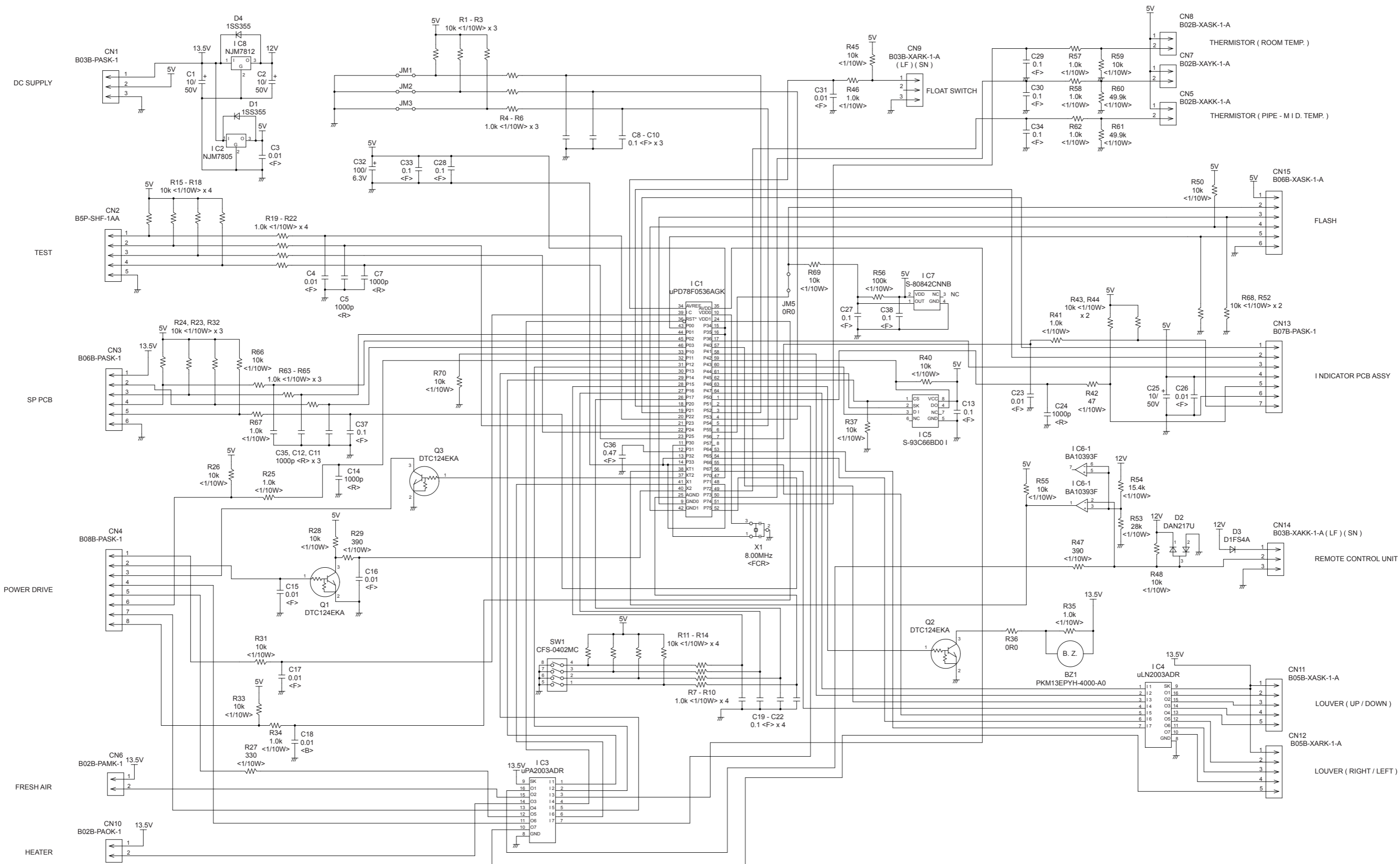
AUYG12LVLB : EZ-0122HHSE

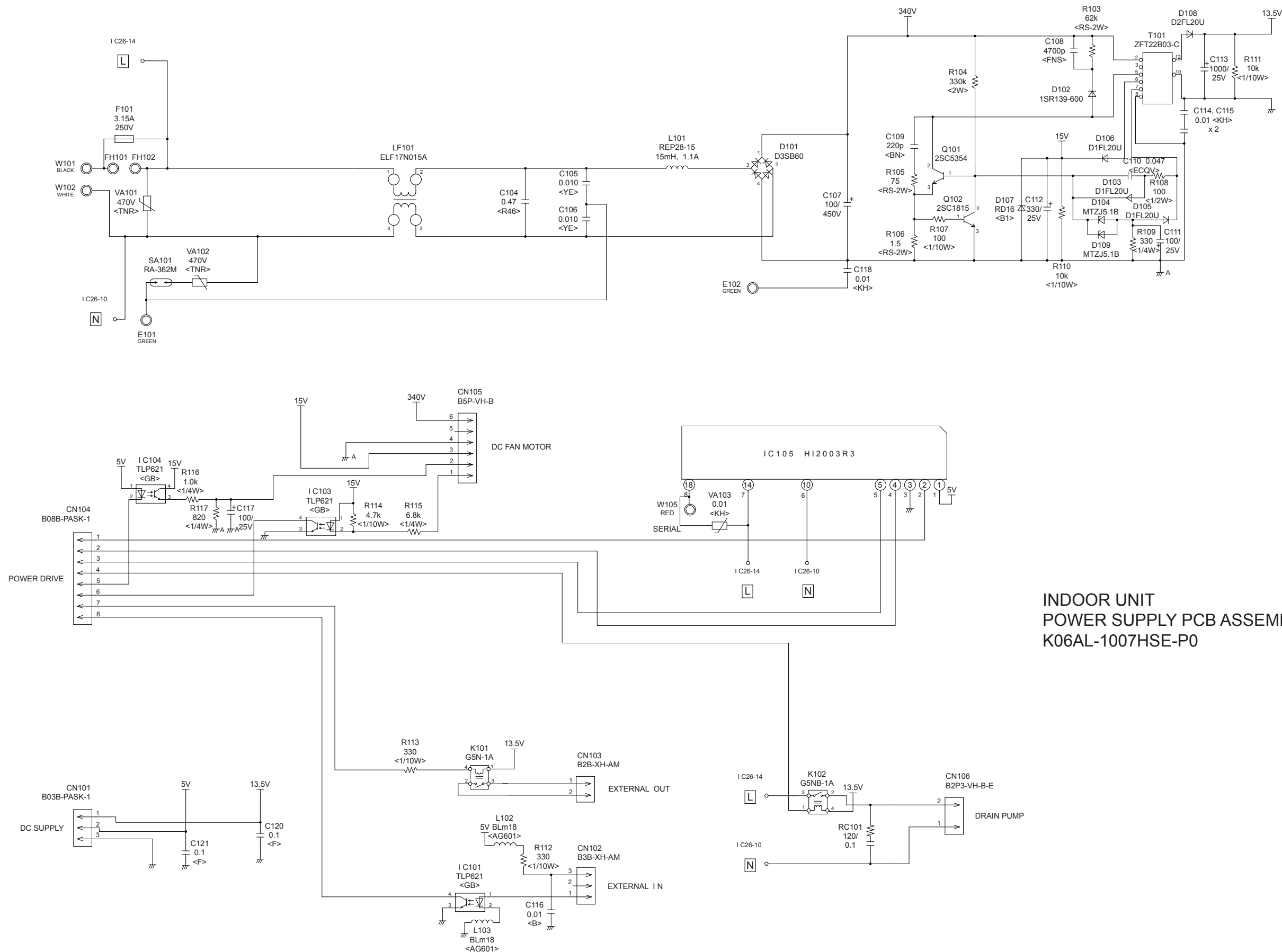
AUYG14LVLB : EZ-0122KHSE

AUYG18LVLB : EZ-0122LHSE



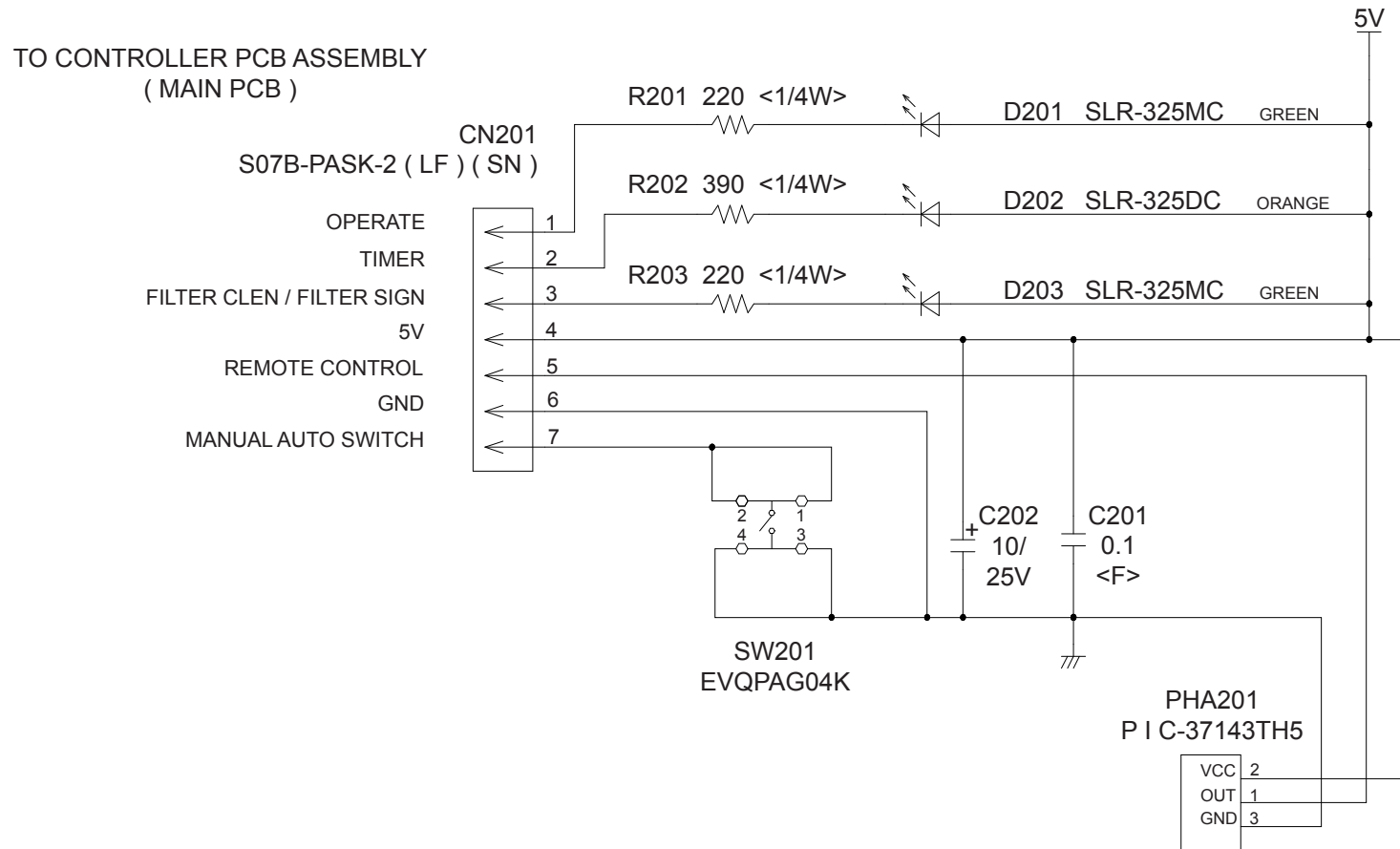
INDOOR UNIT
 CONTROLLER PCB ASSEMBLY (MAIN PCB)
 AUYG12LVLB : K06AK-1216HSE-C1
 AUYG14LVLB : K06AK-1217HSE-C1
 AUYG18LVLB : K06AK-1218HSE-C1





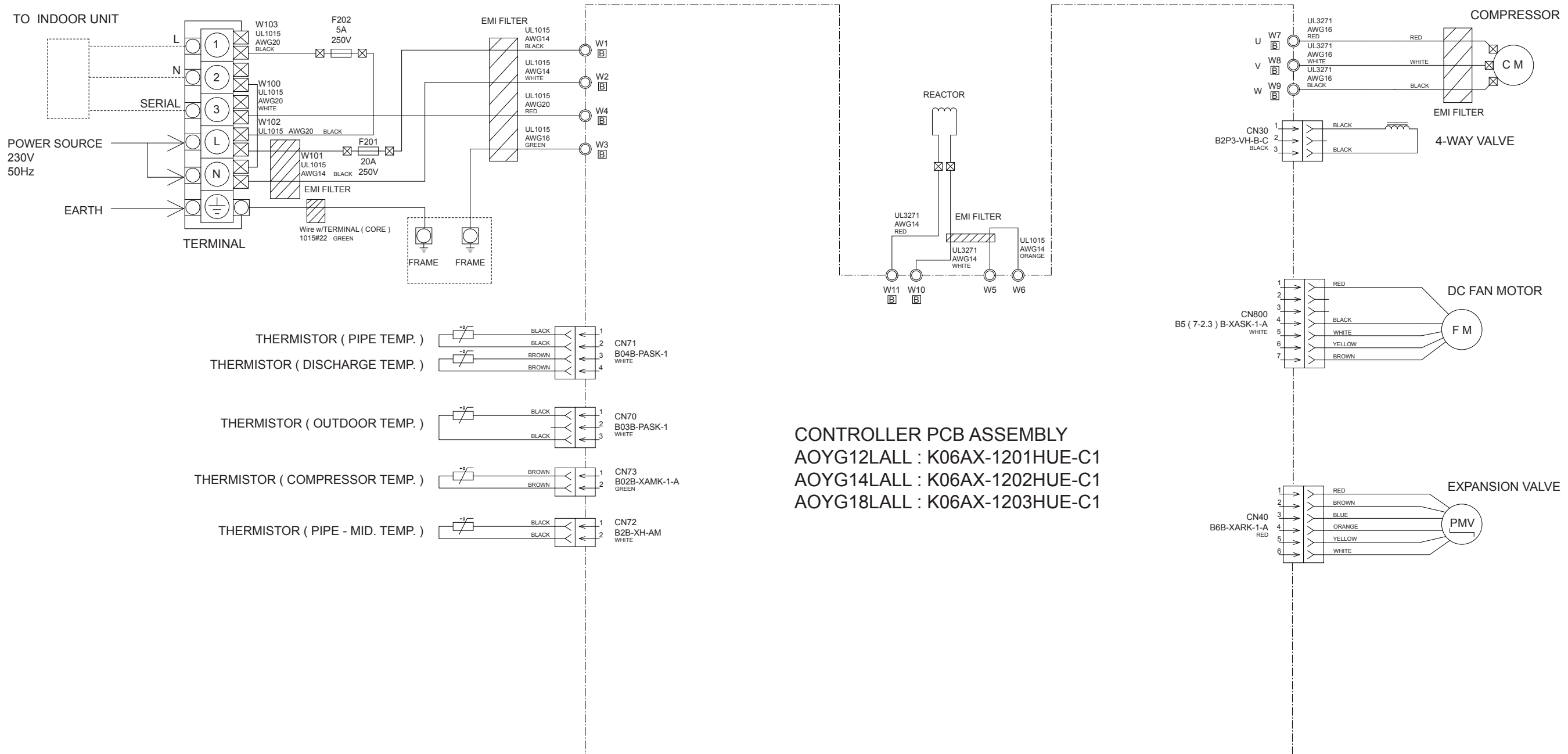
INDOOR UNIT
POWER SUPPLY PCB ASSEMBLY
K06AL-1007HSE-P0

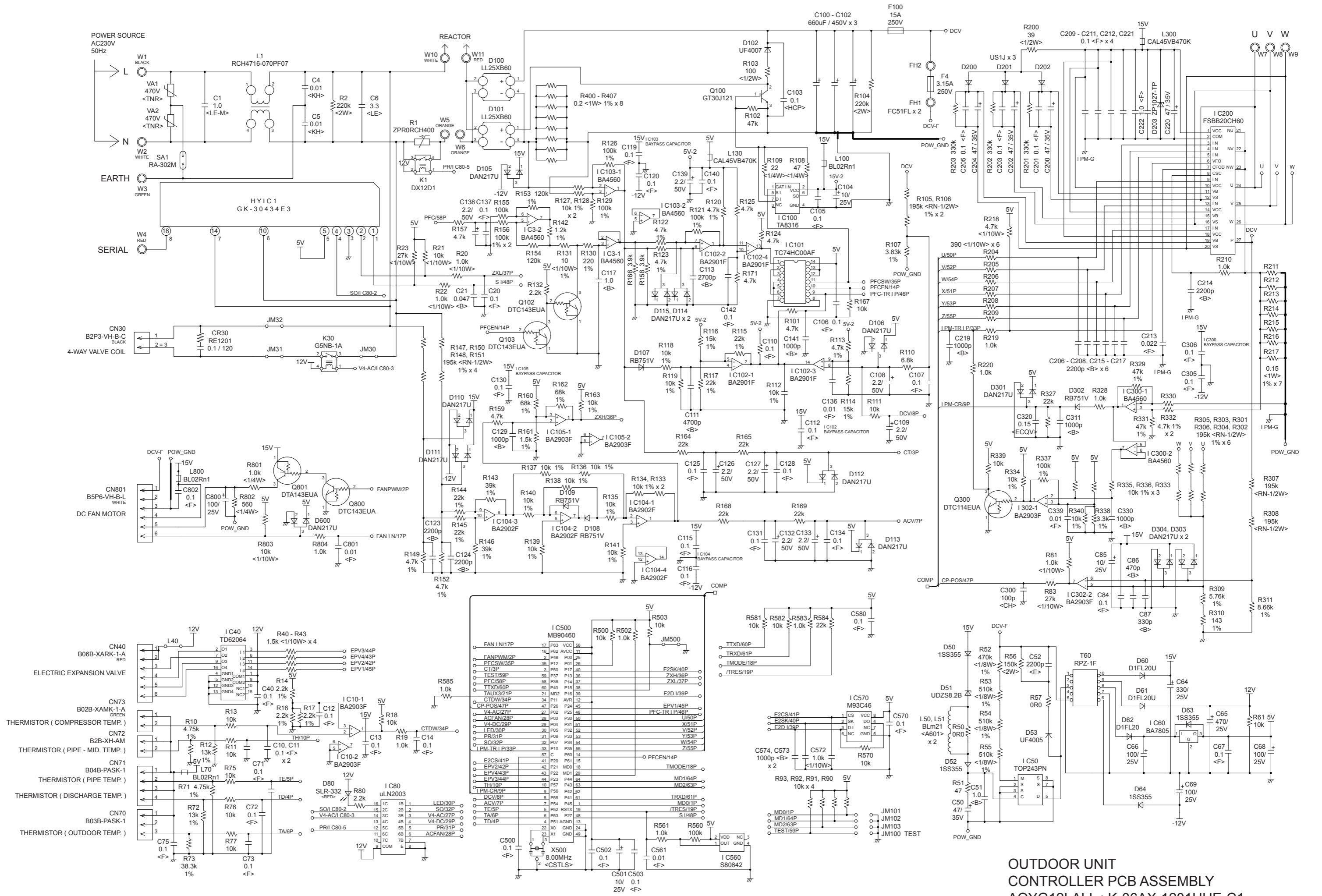
INDOOR UNIT
 INDICATOR PCB ASSEMBLY (OPTION)
 K06AG-1000HSE-D0



OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
 AOYG12LALL : EZ-0121PHUE
 AOYG14LALL : EZ-0121RHUE
 AOYG18LALL : EZ-0121SHUE





OUTDOOR UNIT
CONTROLLER PCB ASSEMBLY
 AOYG12LALL : K-06AX-1201HUE-C1
 AOYG14LALL : K-06AX-1202HUE-C1
 AOYG18LALL : K-06AX-1203HUE-C1

- : 0.5s on / 0.5s off
- ◇ : 0.1s on / 0.1s off
- () : Number of flashing

ERROR DETECTION

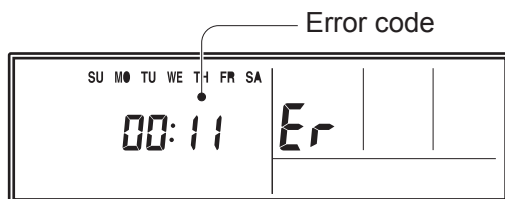
INDOOR UNIT and WIRED REMOTE CONTROL

If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

If you use a wired type remote control, error codes will appear on the remote control display. See the lamp blinking patterns and error codes in the table. An error display is displayed only during running.

This is possible only on a wired remote control.

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



EX. Self-diagnosis

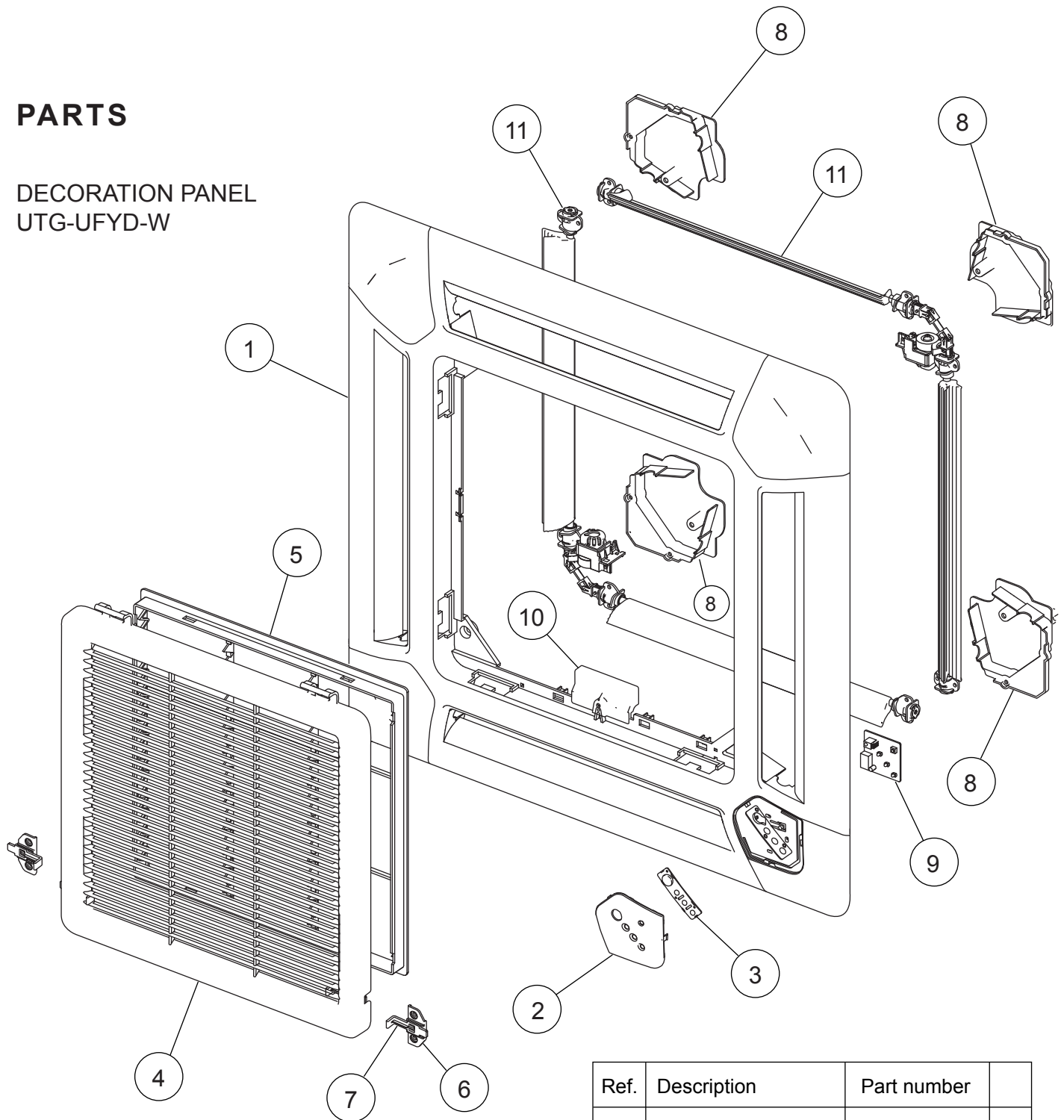
Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
●(1)	●(1)	◇	11	Serial communication error
●(1)	●(2)	◇	12	Wired remote control communication error
●(1)	●(5)	◇	15	Check run unfinished
●(2)	●(1)	◇	21	Unit number or Refrigerant circuit address setting error [Simultaneous Multi]
●(2)	●(2)	◇	22	Indoor unit capacity error
●(2)	●(3)	◇	23	Combination error
●(2)	●(4)	◇	24	• Connection unit number error (indoor slave unit) [Simultaneous Multi] • Connection unit number error (indoor unit or branch unit) [Flexible Multi]
●(2)	●(7)	◇	27	Master unit, slave unit set-up error [Simultaneous Multi]
●(3)	●(2)	◇	32	Indoor unit PCB model information error
●(3)	●(5)	◇	35	Manual auto switch error
●(4)	●(1)	◇	41	Inlet air temp. sensor error
●(4)	●(2)	◇	42	Indoor unit Heat Ex. Middle temp. sensor error
●(5)	●(1)	◇	51	Indoor unit fan motor error
●(5)	●(3)	◇	53	Drain pump error
●(5)	●(7)	◇	57	Damper error
●(5)	●(15)	◇	5U	Indoor unit error
●(6)	●(2)	◇	62	Outdoor unit main PCB model information error or communication error
●(6)	●(3)	◇	63	Inverter error
●(6)	●(4)	◇	64	Active filter error, PFC circuit error
●(6)	●(5)	◇	65	Trip terminal L error
●(6)	●(10)	◇	6A	Display PCB microcomputers communication error
●(7)	●(1)	◇	71	Discharge temp. sensor error
●(7)	●(2)	◇	72	Compressor temp. sensor error
●(7)	●(3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
●(7)	●(4)	◇	74	Outdoor temp. sensor error
●(7)	●(5)	◇	75	Suction Gas temp. sensor error
●(7)	●(6)	◇	76	• 2-way valve temp. sensor error • 3-way valve temp. sensor error
●(7)	●(7)	◇	77	Heat sink temp. sensor error
●(8)	●(2)	◇	82	• Sub-cool Heat Ex. gas inlet temp. sensor error • Sub-cool Heat Ex. gas outlet temp. sensor error
●(8)	●(3)	◇	83	Liquid pipe temp. sensor error
●(8)	●(4)	◇	84	Current sensor error
●(8)	●(6)	◇	86	• Discharge pressure sensor error • Suction pressure sensor error • High pressure switch error
●(9)	●(4)	◇	94	Trip detection
●(9)	●(5)	◇	95	Compressor rotor position detection error (permanent stop)
●(9)	●(7)	◇	97	Outdoor unit fan motor error
●(9)	●(9)	◇	99	4-way valve error
●(10)	●(1)	◇	A1	Discharge temp. error
●(10)	●(3)	◇	A3	Compressor temp. error
●(10)	●(4)	◇	A4	High pressure error
●(10)	●(5)	◇	A5	Low pressure error
●(13)	●(2)	◇	J2	Branch boxes error [Flexible Multi]

OUTDOOR UNIT

Error contents	LED
Thermistor malfunction	on 0.1 sec / off 0.1 sec
Abnormal discharge temperature	on
Current surge protection	on 0.5 sec / off 0.5 sec
CT abnormality	on 2.0 sec / off 2.0 sec
Compressor position detection malfunction	on 0.1 sec / off 2.0 sec
Fan malfunction	on 5.0 sec / off 5.0 sec
PAM voltage abnormality	on 5.0 sec / off 0.1 sec
Timer short	on 1.0 sec / off 1.0 sec
Compressor temperature protection (permanent stop)	on 2.0 sec / off 5.0 sec
PFC surge protection (permanent stop)	on 5.0 sec / off 2.0 sec

PARTS

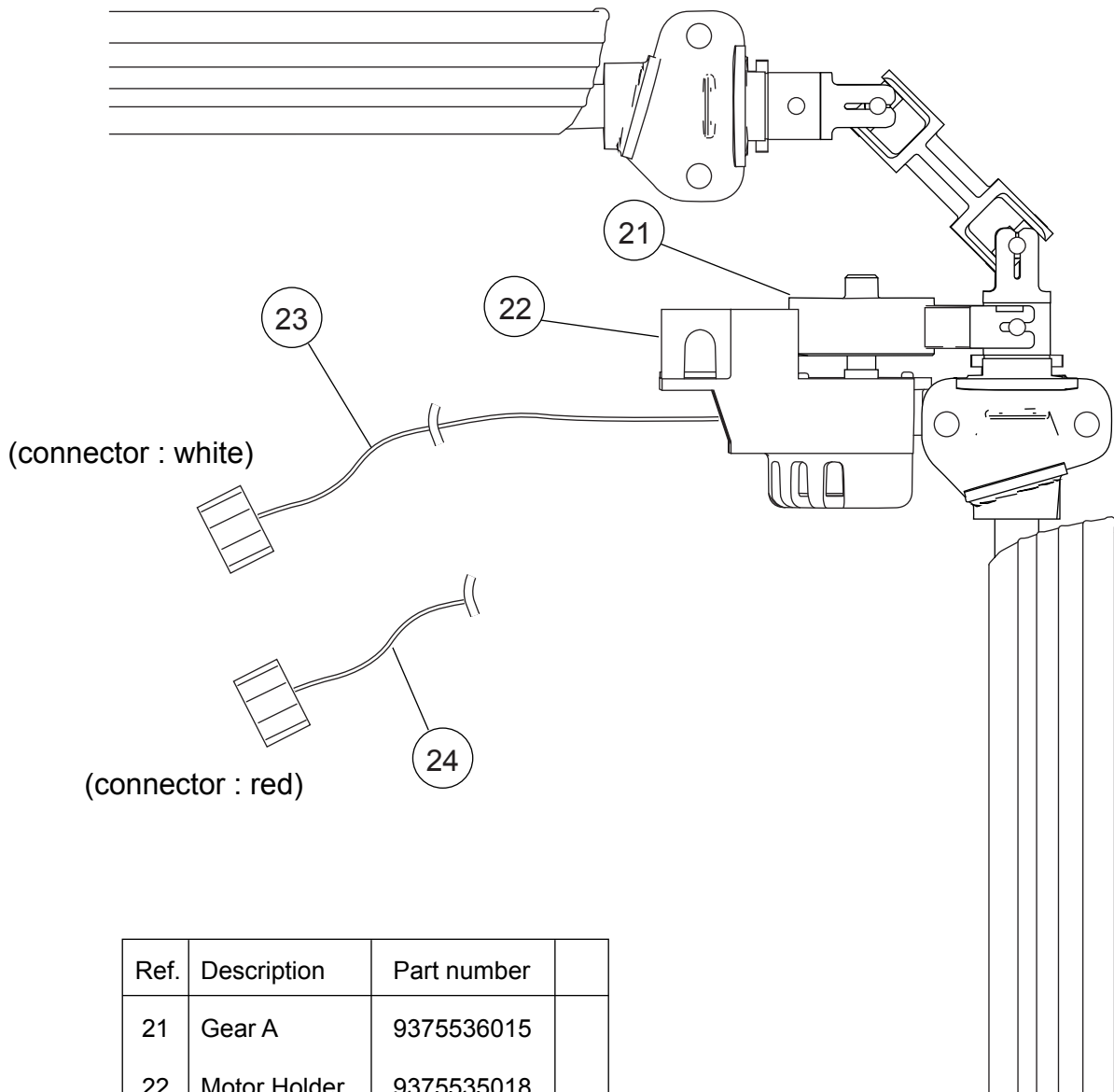
DECORATION PANEL
UTG-UFYD-W



Ref.	Description	Part number
1	Decoration Panel	9375525040
2	Display Panel	9375529123
3	Receiver Window	9375547011
4	Intake Grille	9375531027
5	Long Life Filter	9375533014
6	Hook Bracket	9375546014
7	Grille Hook	9375532024
8	Panel Cover	9375530013
9	Indicator PCB Assy	9707371031
10	Connector Cover	9375549015
11	Flap Total Assy	9377760029

DECORATION PANEL
UTG-UFYD-W

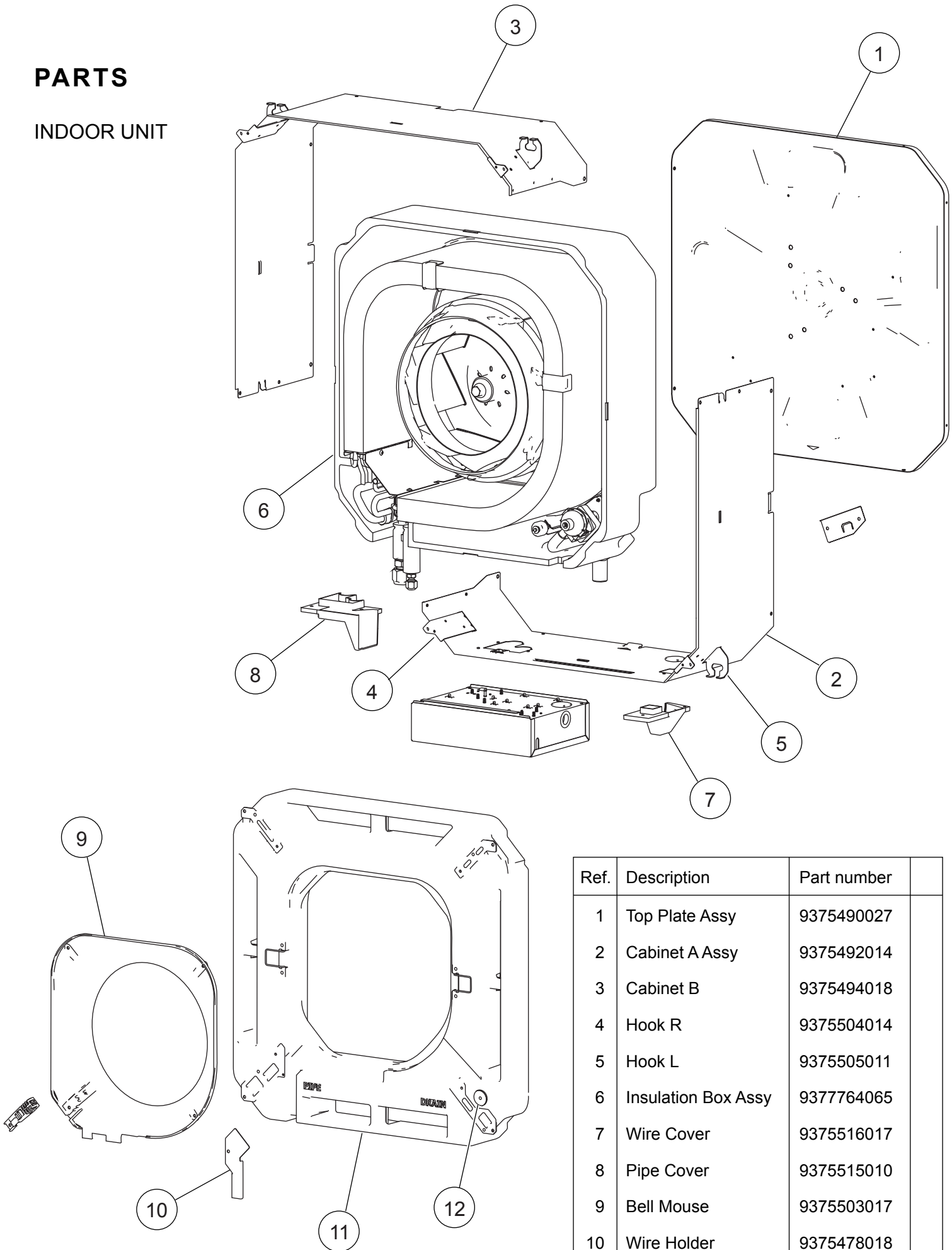
Flap total assy
Motor holder assy



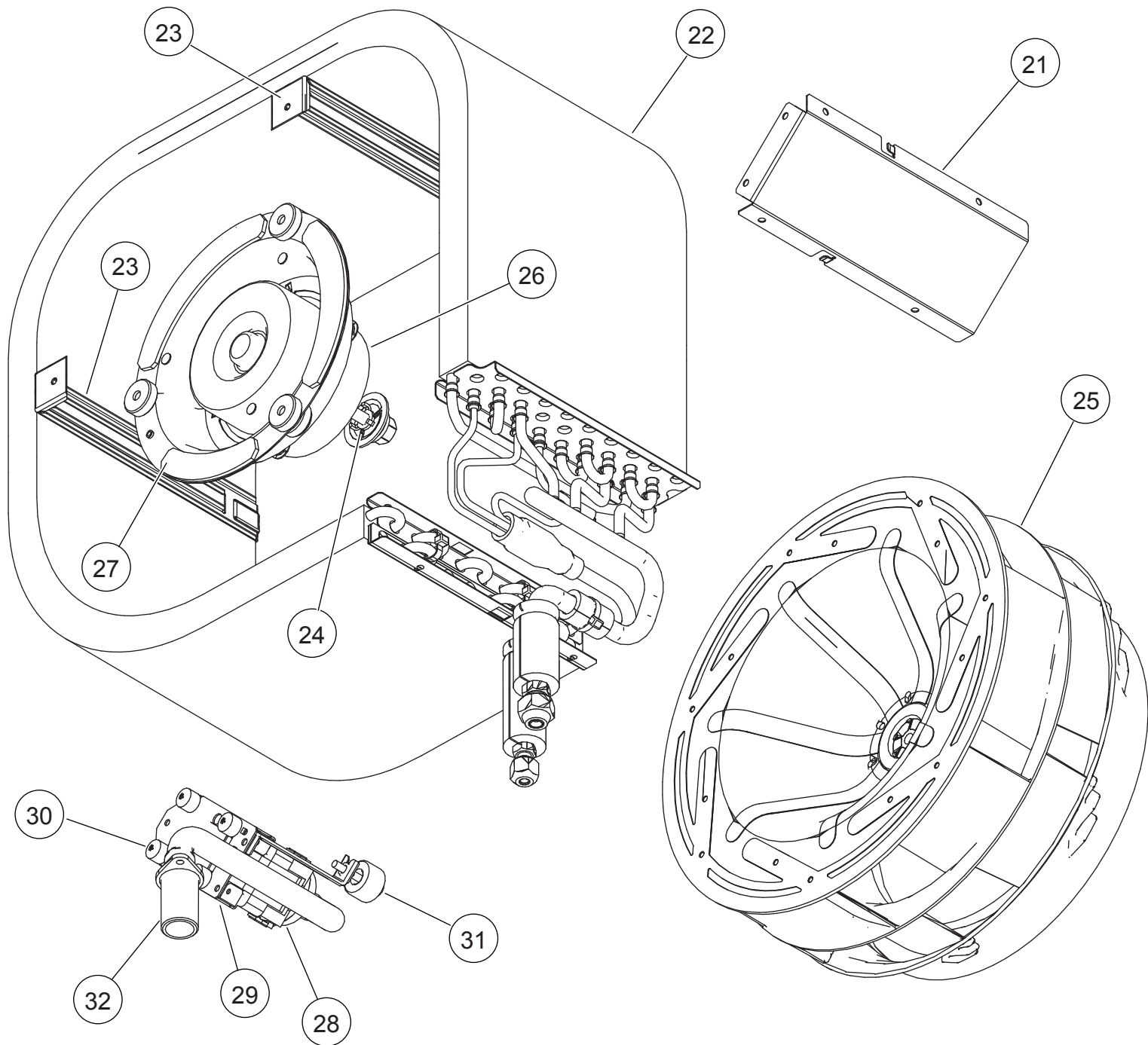
Ref.	Description	Part number	
21	Gear A	9375536015	
22	Motor Holder	9375535018	
23	Step Motor	9900139070	
24	Step Motor	9900139087	

PARTS

INDOOR UNIT



Ref.	Description	Part number
1	Top Plate Assy	9375490027
2	Cabinet A Assy	9375492014
3	Cabinet B	9375494018
4	Hook R	9375504014
5	Hook L	9375505011
6	Insulation Box Assy	9377764065
7	Wire Cover	9375516017
8	Pipe Cover	9375515010
9	Bell Mouse	9375503017
10	Wire Holder	9375478018
11	Drain Pan Sub Assy	9377765024
12	Drain Cap	9375502010

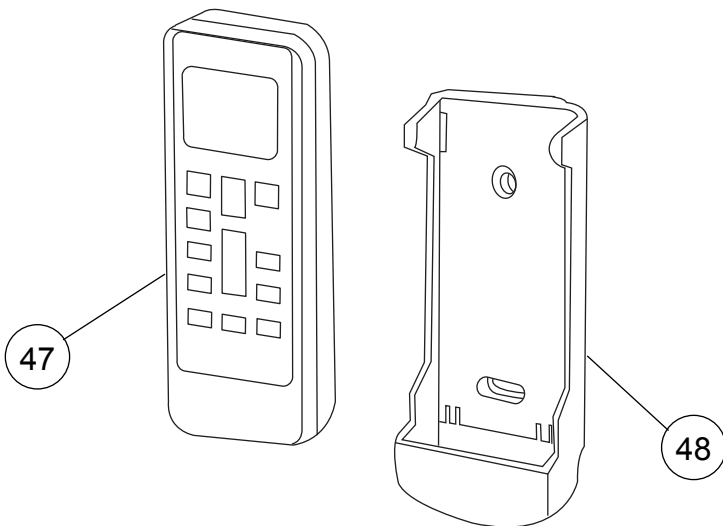
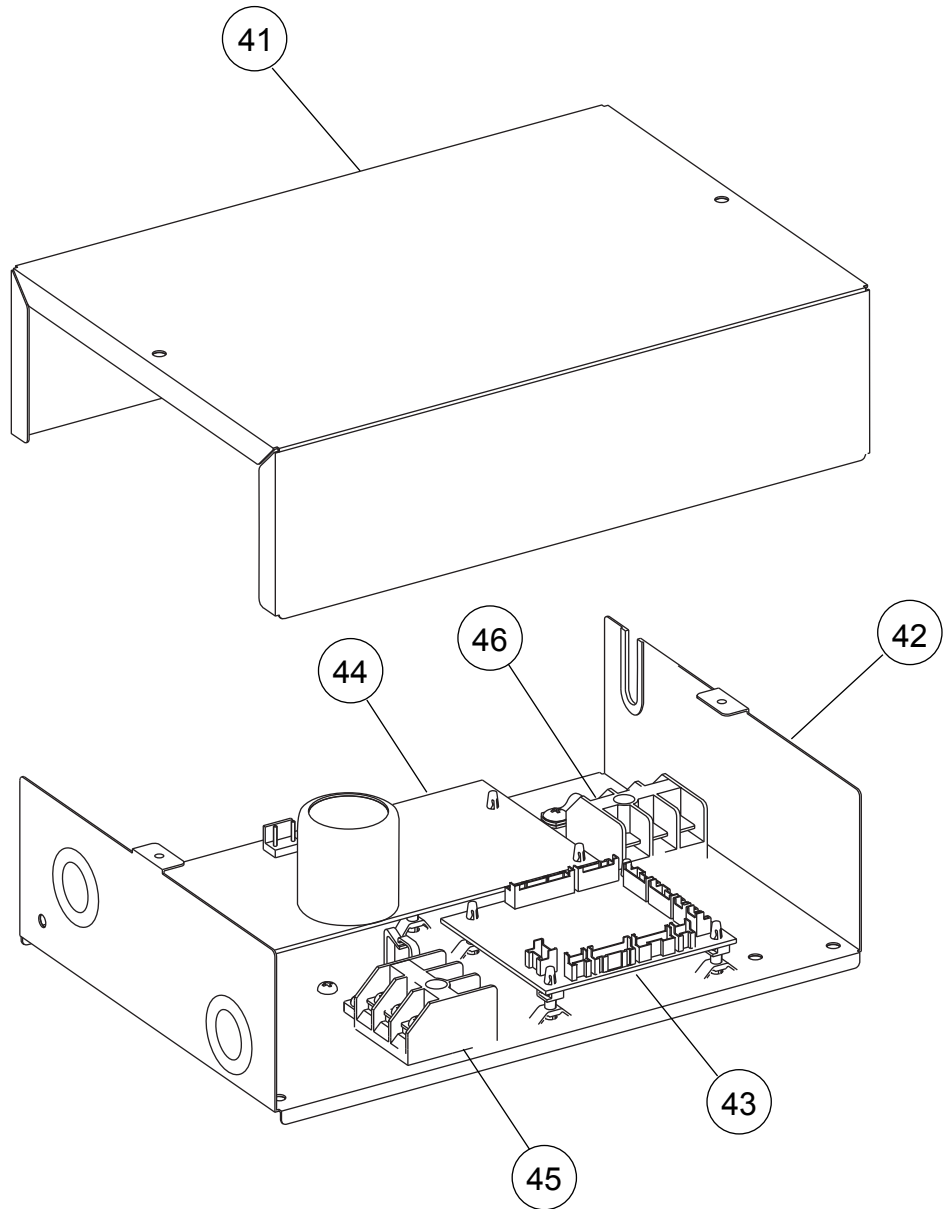


INDOOR UNIT

Ref.	Description	Part number
21	Separate Wall	9375506018
22	Evaporator Total Assy (12)	9375720032
22	Evaporator Total Assy (14, 18)	9375720070
23	Evaporator Holder	9375508012
24	Turbo Fan Washer	9375487010
25	2 Stage Turbo Fan Assy	9375480011
26	Fan Motor	9602436019

Ref.	Description	Part number
27	Fan Motor Holder	9375552015
28	Pump Assy	9900472030
29	Drain Pump Holder B	9375518011
30	Rubber (Pump)	9378426016
31	Float Switch	9900361037
32	Drain Port Sub Assy	9375718015

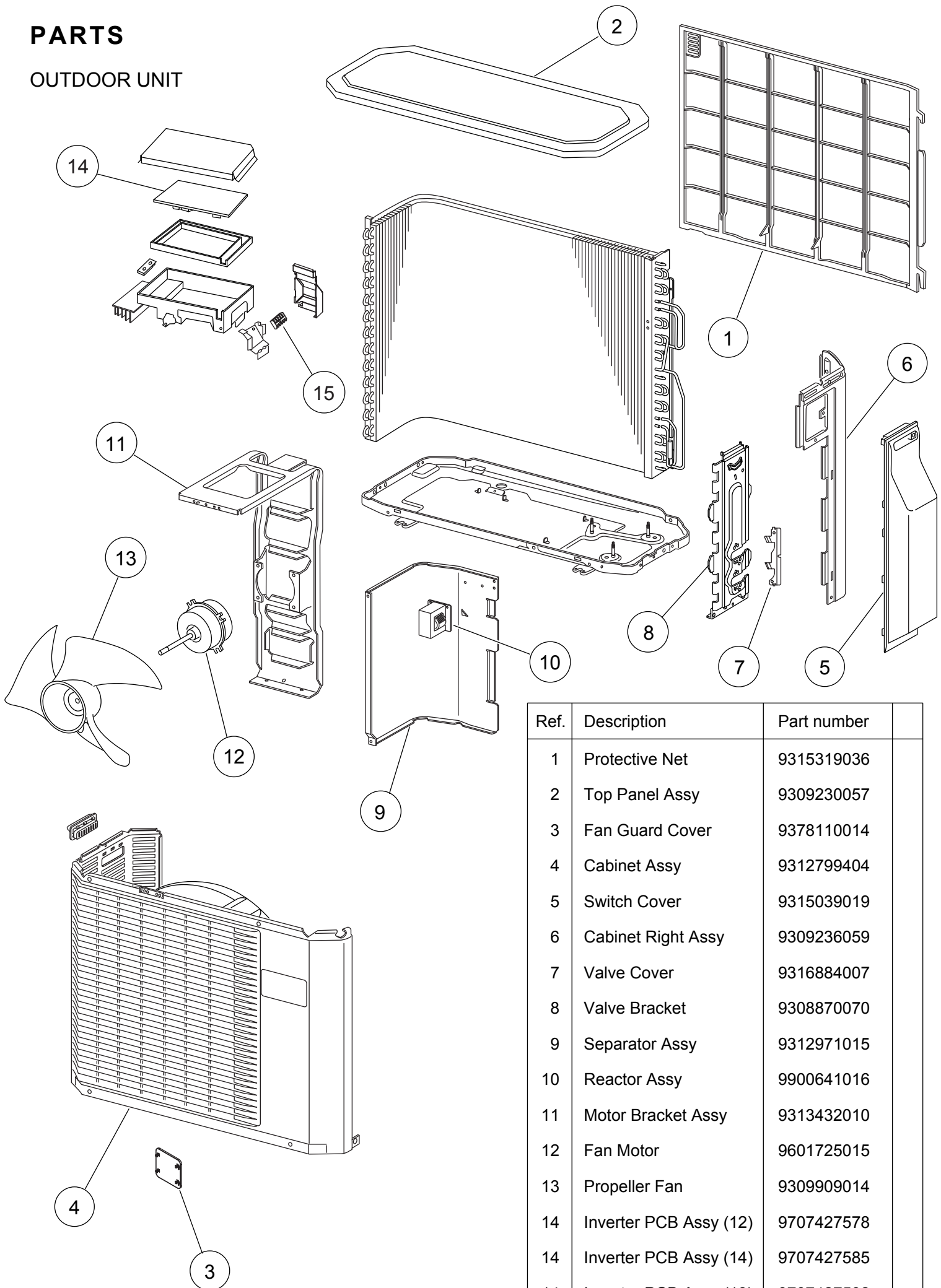
INDOOR UNIT
Control unit



Ref.	Description	Part number
41	Control Box Cover	9375512019
42	Control Box A	9375511012
43	Controller PCB Assy (12)	9709245422
43	Controller PCB Assy (14)	9709245439
43	Controller PCB Assy (18)	9709245446
44	Power Supply PCB Assy	9707398250
45	Terminal	9306489045
46	Terminal	9703345012
47	Remote Control	9379219006
48	Remote Control Holder	9305642045
--	Pipe Thermistor	9703297014
--	Room Thermistor	9900502003

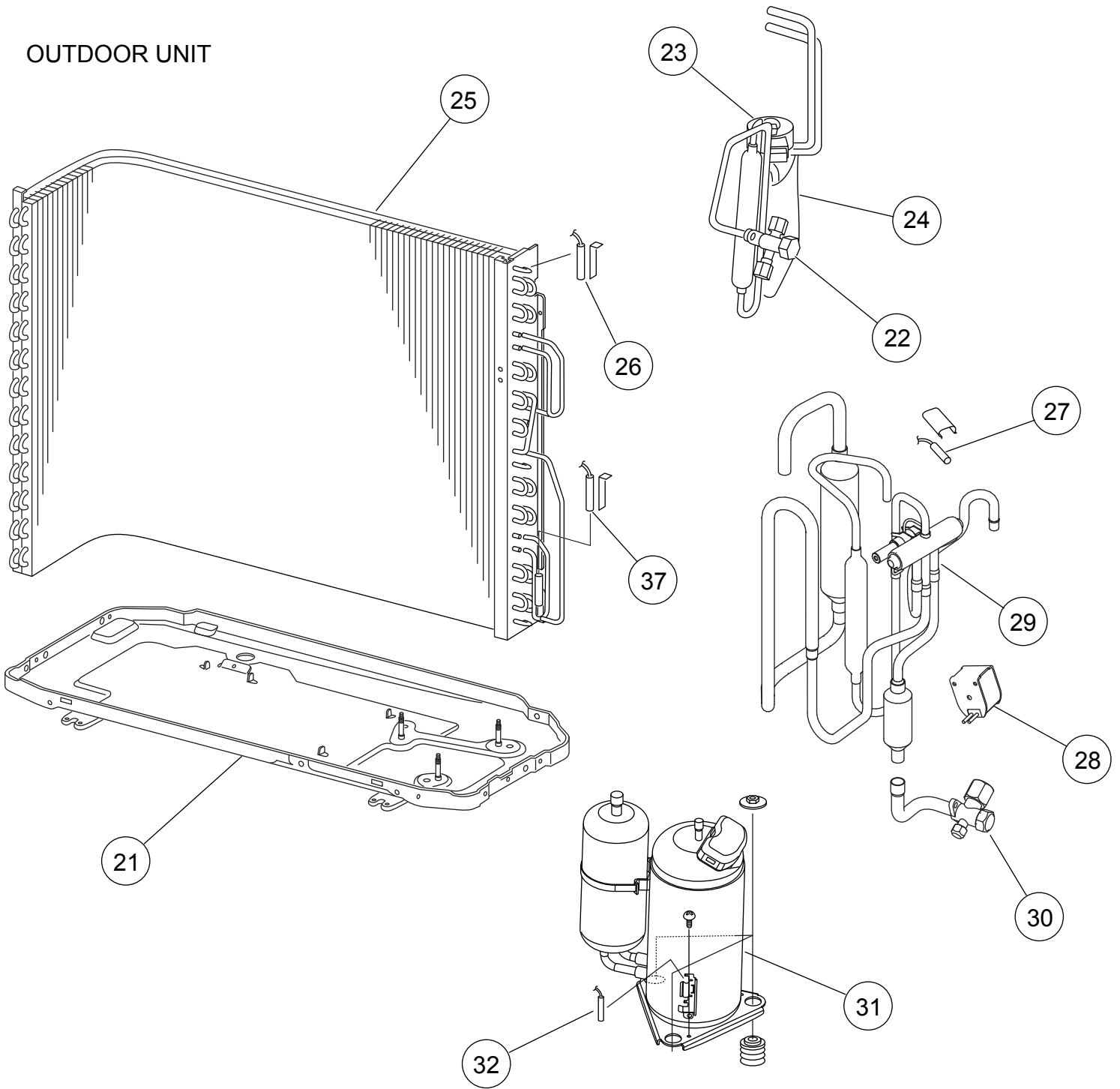
PARTS

OUTDOOR UNIT



Ref.	Description	Part number
1	Protective Net	9315319036
2	Top Panel Assy	9309230057
3	Fan Guard Cover	9378110014
4	Cabinet Assy	9312799404
5	Switch Cover	9315039019
6	Cabinet Right Assy	9309236059
7	Valve Cover	9316884007
8	Valve Bracket	9308870070
9	Separator Assy	9312971015
10	Reactor Assy	9900641016
11	Motor Bracket Assy	9313432010
12	Fan Motor	9601725015
13	Propeller Fan	9309909014
14	Inverter PCB Assy (12)	9707427578
14	Inverter PCB Assy (14)	9707427585
14	Inverter PCB Assy (18)	9707427592
15	Terminal	9703874031

OUTDOOR UNIT





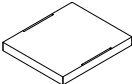
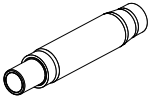

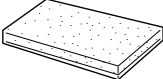
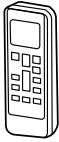




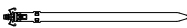


Ref.	Description	Part number
21	Base Assy	9308869081
22	2-way Valve Assy	9970093012
23	Expansion Valve Coil	9900057039
24	Pulse Motor Valve Assy	9311641018
25	Condenser Total Assy	9311381068
26	Heat Exchanger Thermistor	9900403010
27	Thermistor Assy	9900148027

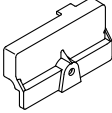



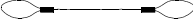


Ref.	Description	Part number
28	Solenoid	9970033018
29	4-way Valve Assy	9315311030
30	3-way Valve Assy	9970092015
31	Compressor Assy	9313763039
32	Compressor Thermistor	9900156046
--	Outdoor Thermistor	9900210045
--	Drain Assy	9303029015

ACCESSORIES

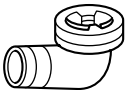
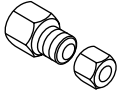
INDOOR UNIT

Name and Shape	Q'ty	Application
Coupler heat insulation (Large) 	1	For indoor side pipe joint (Gas pipe)
Coupler heat insulation (Small) 	1	For indoor side pipe joint (Liquid pipe)
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
Drain hose 	1	For installing drain pipe
Hose Band 	1	For installing drain hose
Drain hose insulation 	1	For installing drain pipe
Remote control 	1	For air conditioner operation
Battery 	2	For remote control
Remote control holder 	1	For installing the remote control
Tapping screw (M3 × 12mm) 	2	For mounting the remote control holder
Binder 	2	For electrical wiring
Wire clasper 	1	For electrical wiring

DECORATION PANEL

Name and Shape	Q'ty	Application
Connector cover 	1	For covering connector
Tapping Screw (M5 × 12 mm) 	4	For mounting decoration panel
Tapping Screw (M4 × 12 mm) 	1	For mounting connector cover
L angle 	2	For mounting the Hook Wire to the Decoration panel
Hook wire 	2	For suspending the Decoration panel
Screw [pitch small] (M4 × 10 mm) 	2	For mounting the Hook Wire (for metals)
Screw [pitch large] (M4 × 10 mm) 	4	For mounting the L angle and Hook wire (for resins)

OUTDOOR UNIT

Name and Shape	Q'ty	Application
Drain pipe 	1	For drain piping work. 9303029015
Adapter assy 	1	To connect 12,000 BTU model 9370244007

1112G3996