

SERVICE MANUAL



Indoor unit	Outdoor unit
RCG12LVLB	ROG12LALL
RCG14LVLB	ROG14LALL
RCG18LVLB	ROG18LALL

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Inverter cooling & heating		
DECORATION PANEL		CG-UFFD		
INDOOR UNIT		RCG12LVLB	RCG14LVLB	RCG18LVLB
OUTDOOR UNIT		ROG12LALL	ROG14LALL	ROG18LALL
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	800 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

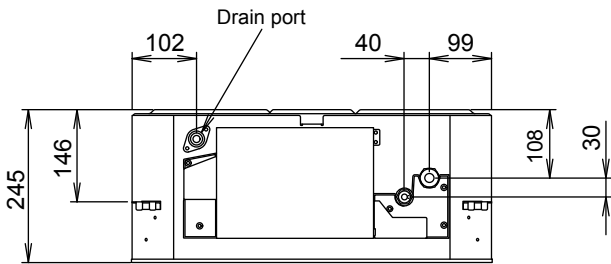
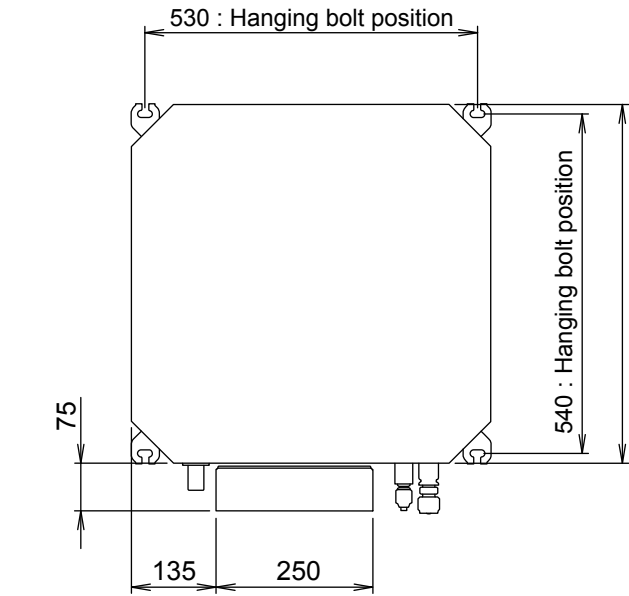
WEIGHT

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

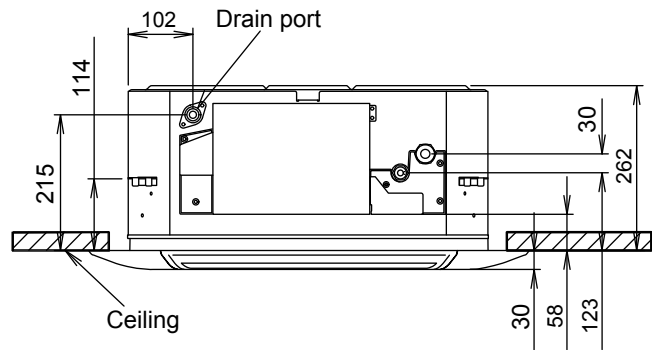
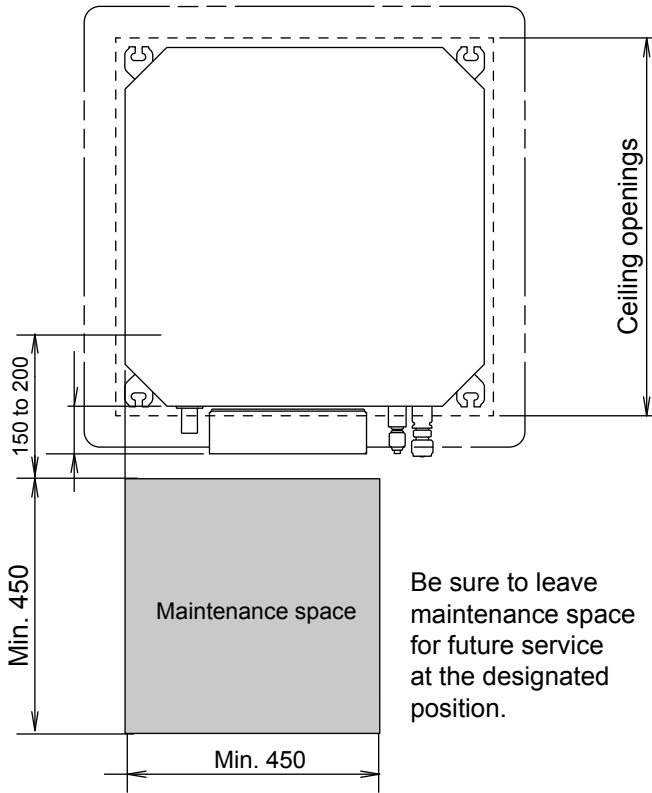
DIMENSIONS

Unit : mm

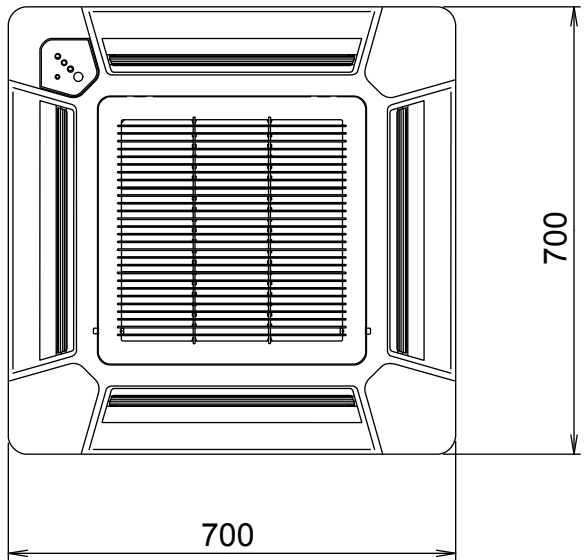
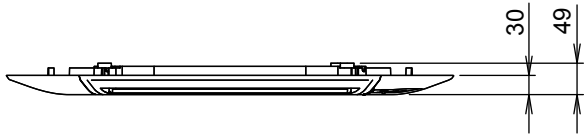
INDOOR UNIT



Decoration panel mounting state

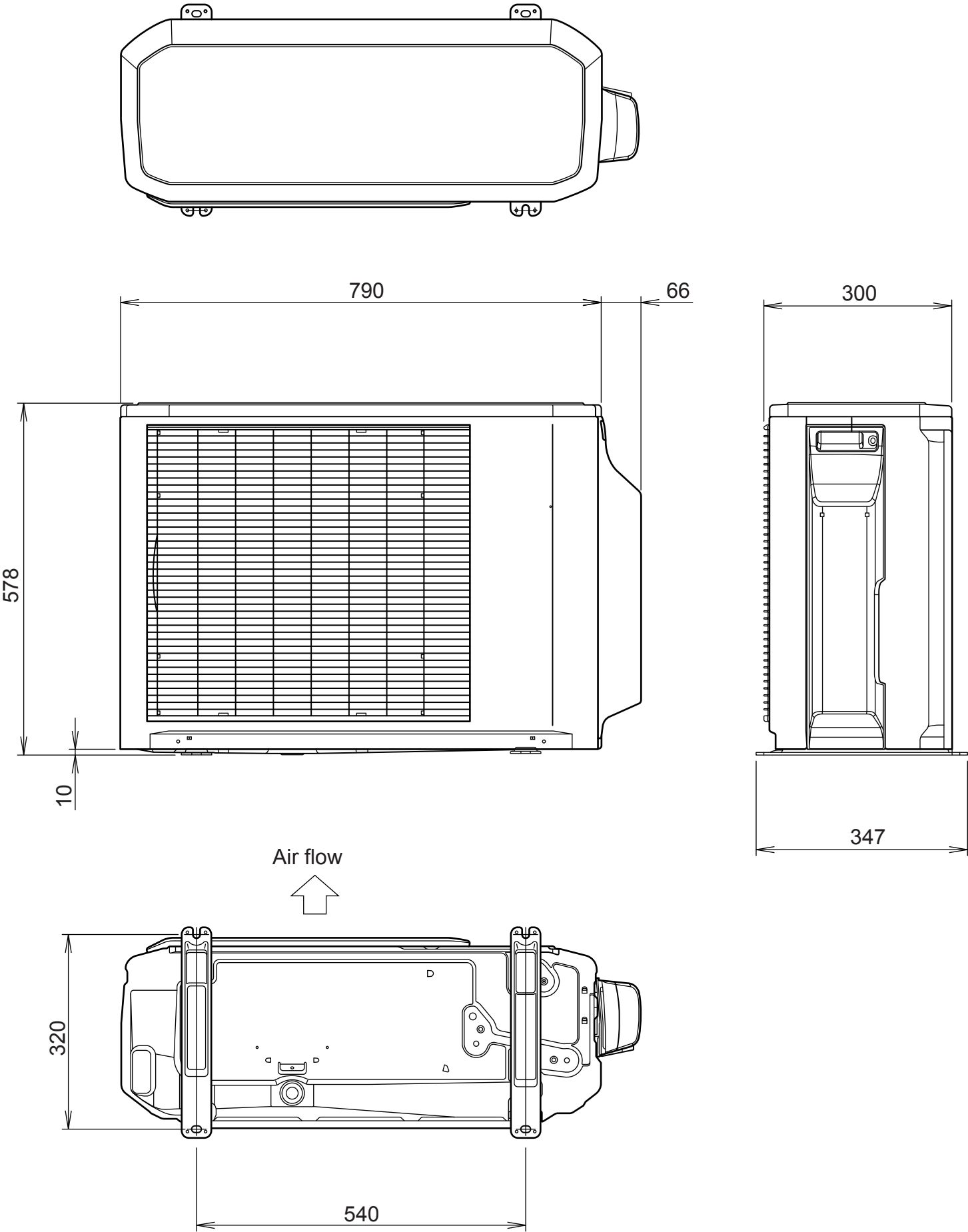


DECORATION PANEL

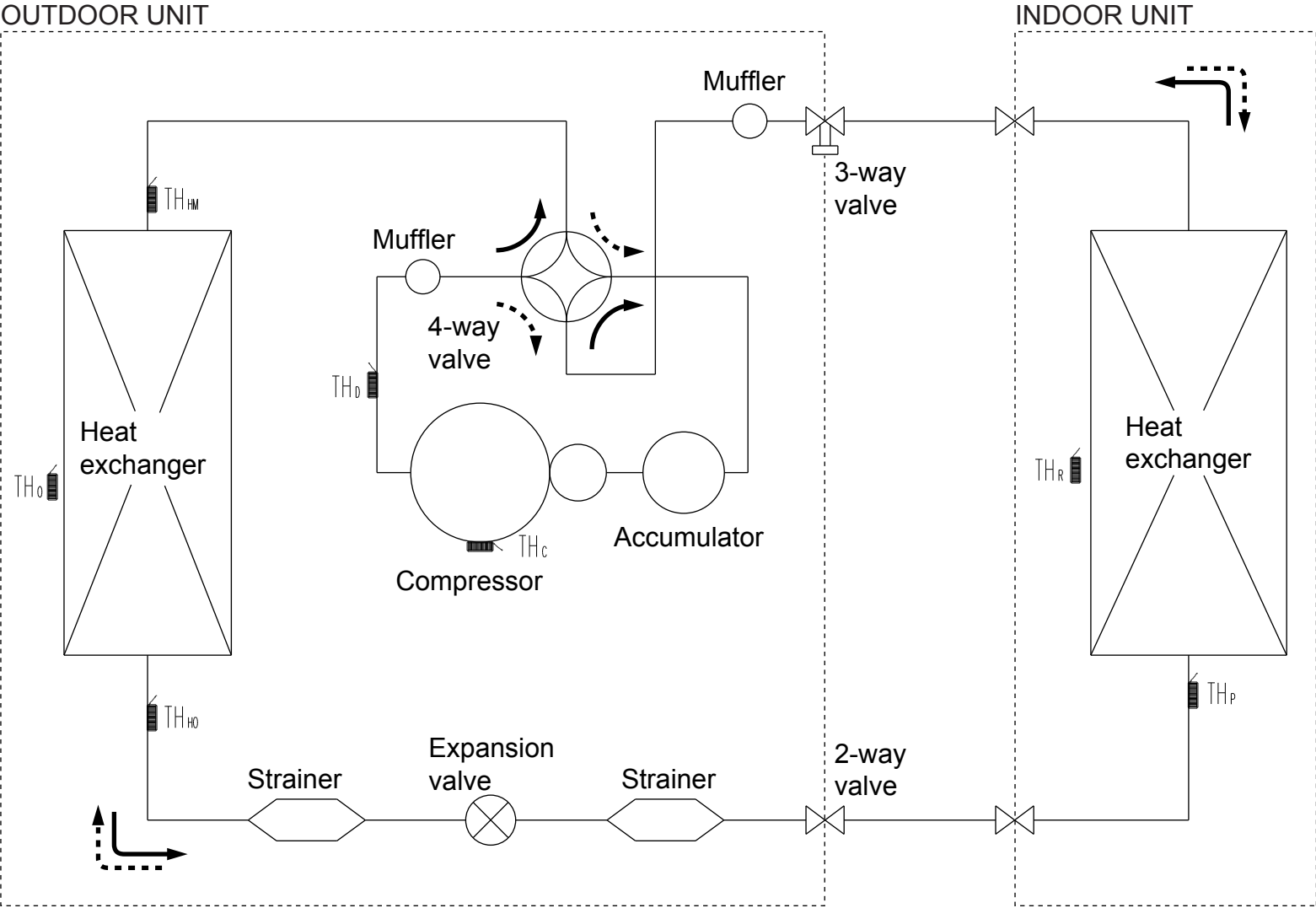


OUTDOOR UNIT

Unit : mm



REFRIGERANT SYSTEM DIAGRAM



<Refrigerant direction>

→ Cooling
.....> Heating

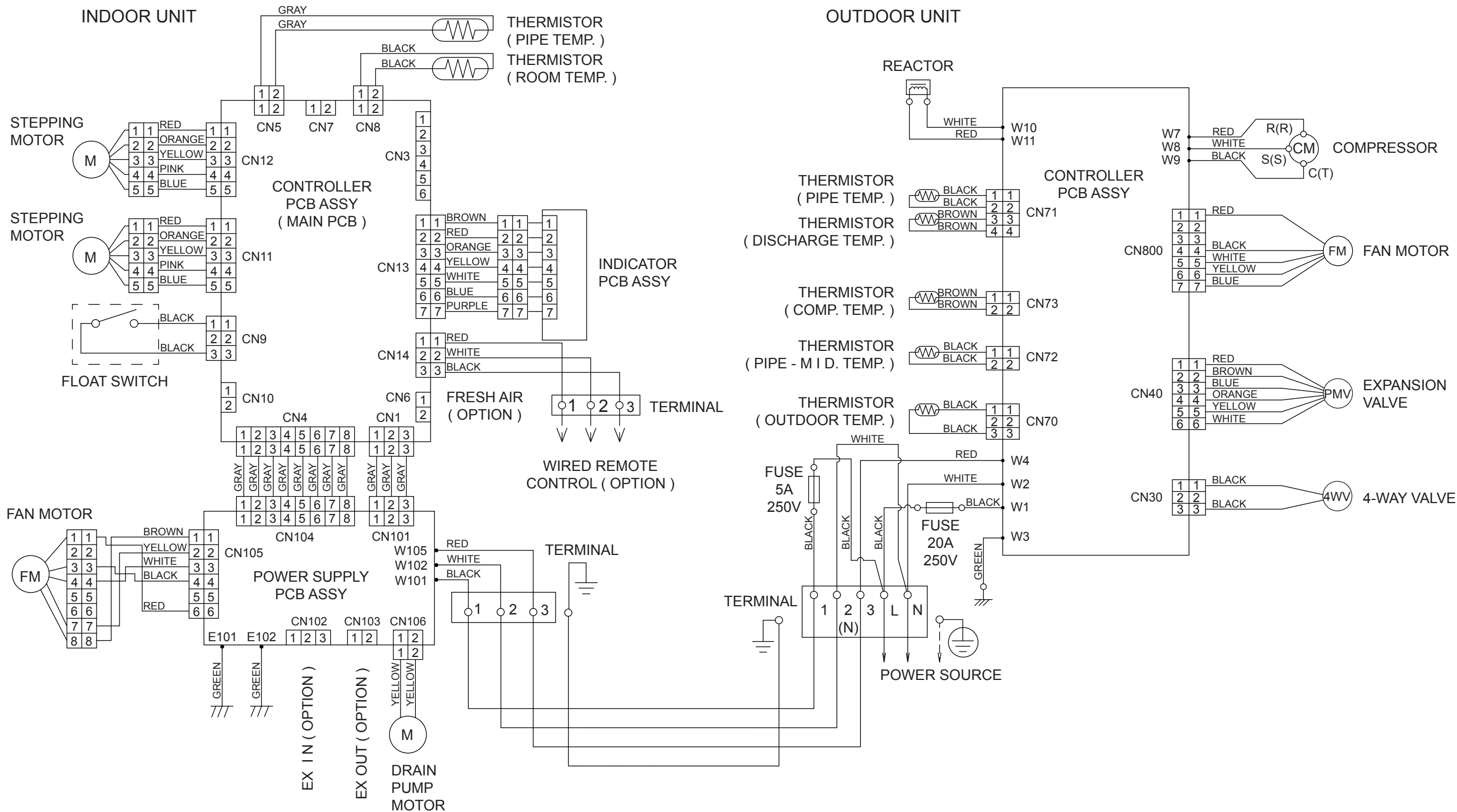
<Refrigerant pipe diameter>

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_D : Discharge pipe thermistor
 TH_{HM} : Heat exchanger thermistor (Middle)
 TH_{HO} : Heat exchanger thermistor (Out)
 TH_O : Outdoor thermistor

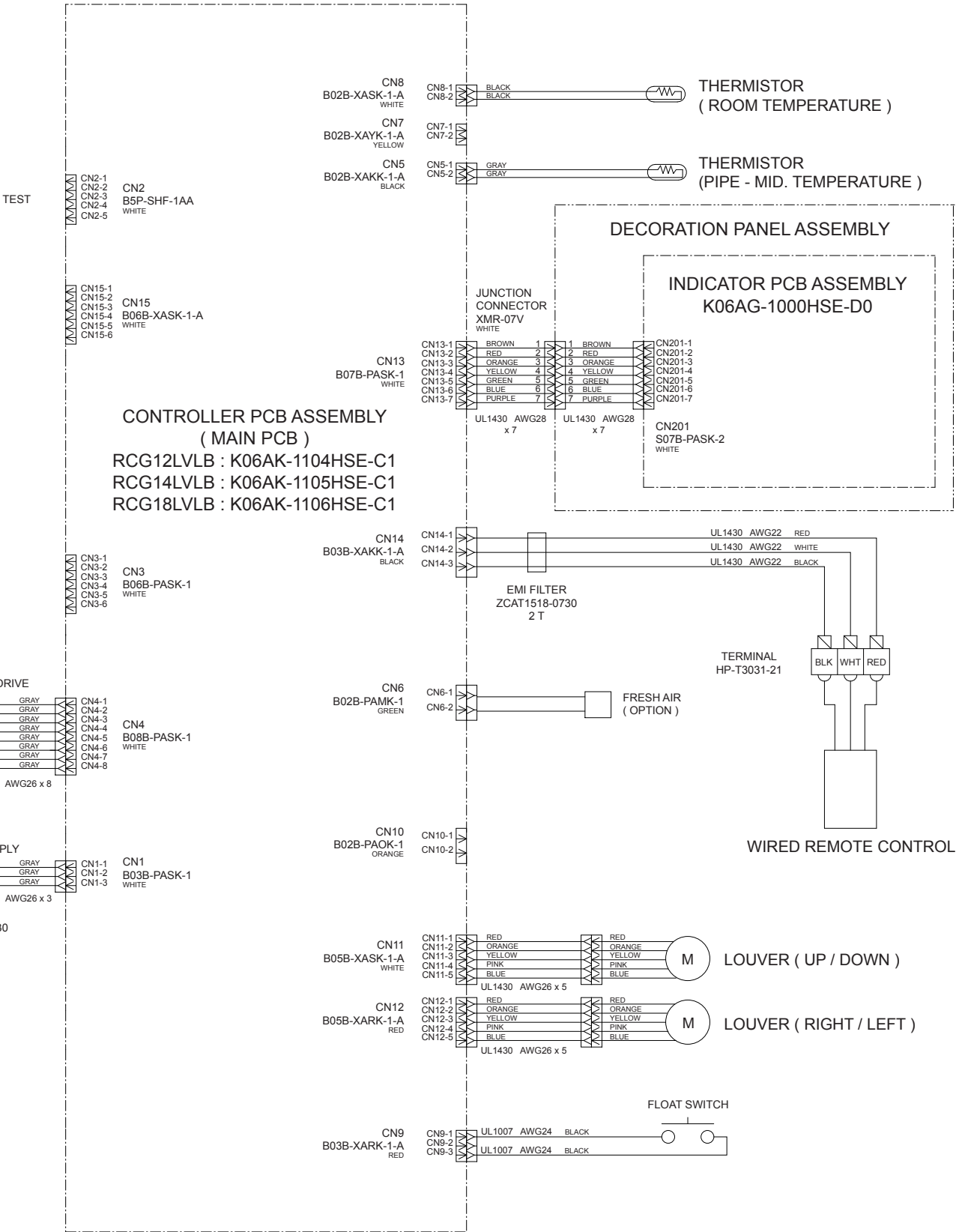
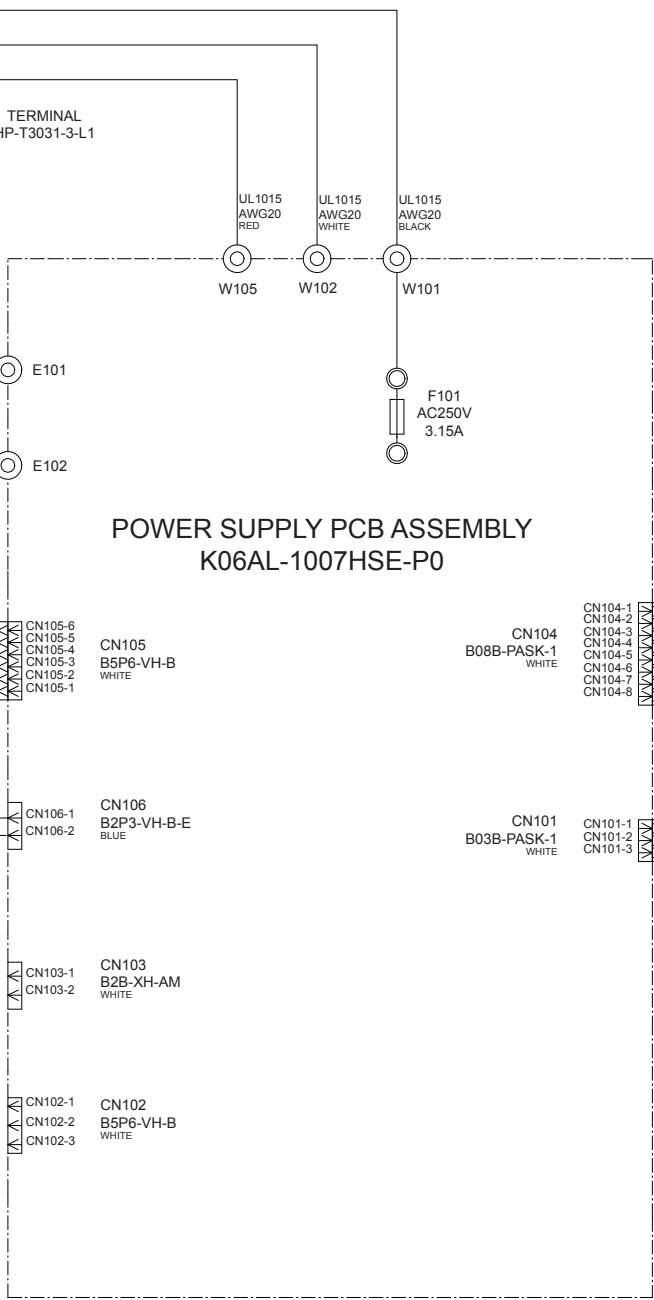
TH_P : Pipe thermistor
 TH_R : Room thermistor

CIRCUIT DIAGRAM



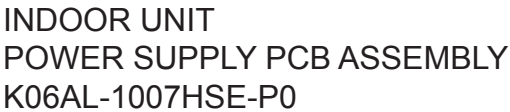
INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT
RCG12LVLB : EZ-01113HSE
RCG14LVLB : EZ-01114HSE
RCG18LVLB : EZ-01115HSE

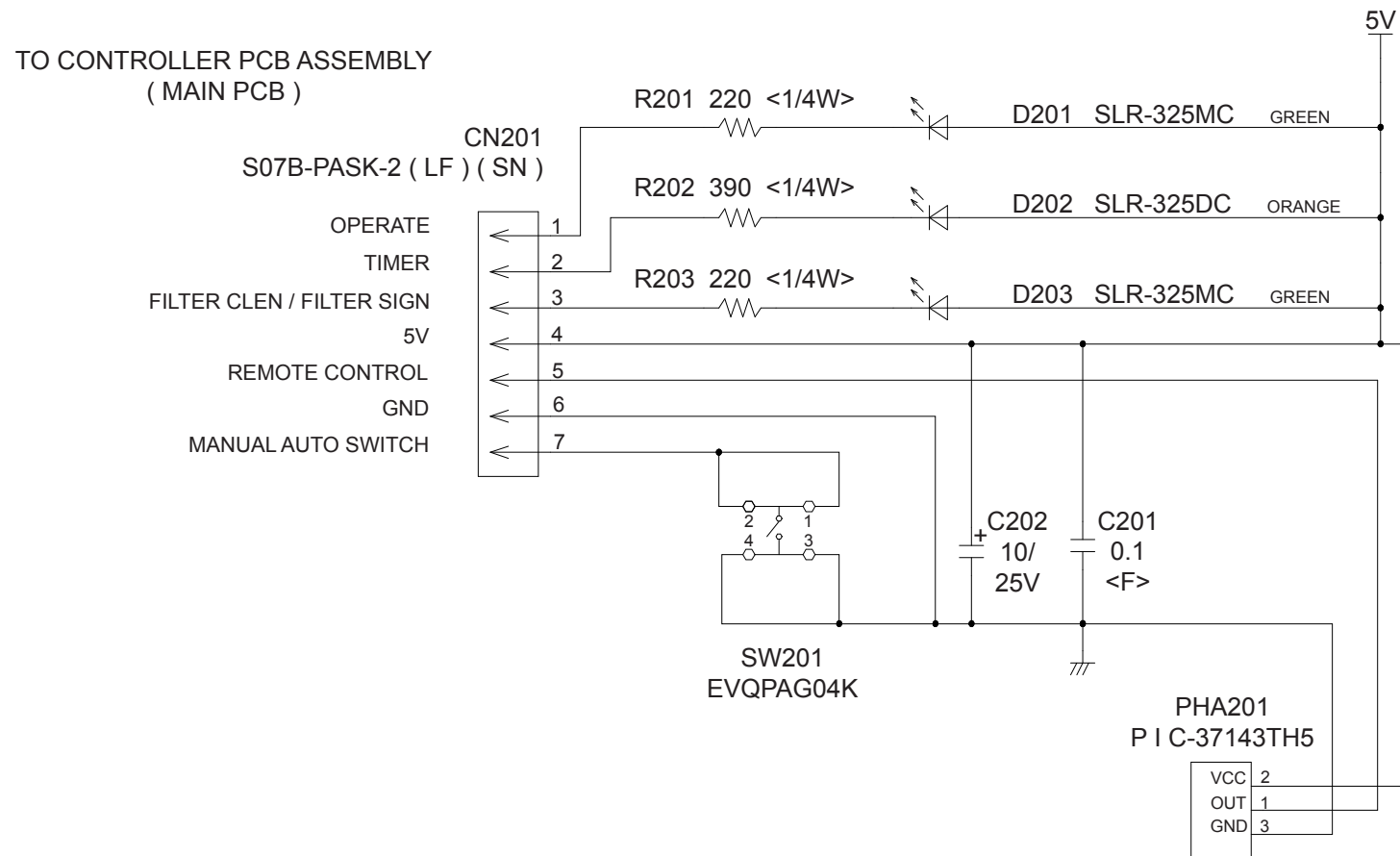


RCG18LVLB : K06AK-1106HSE-C1



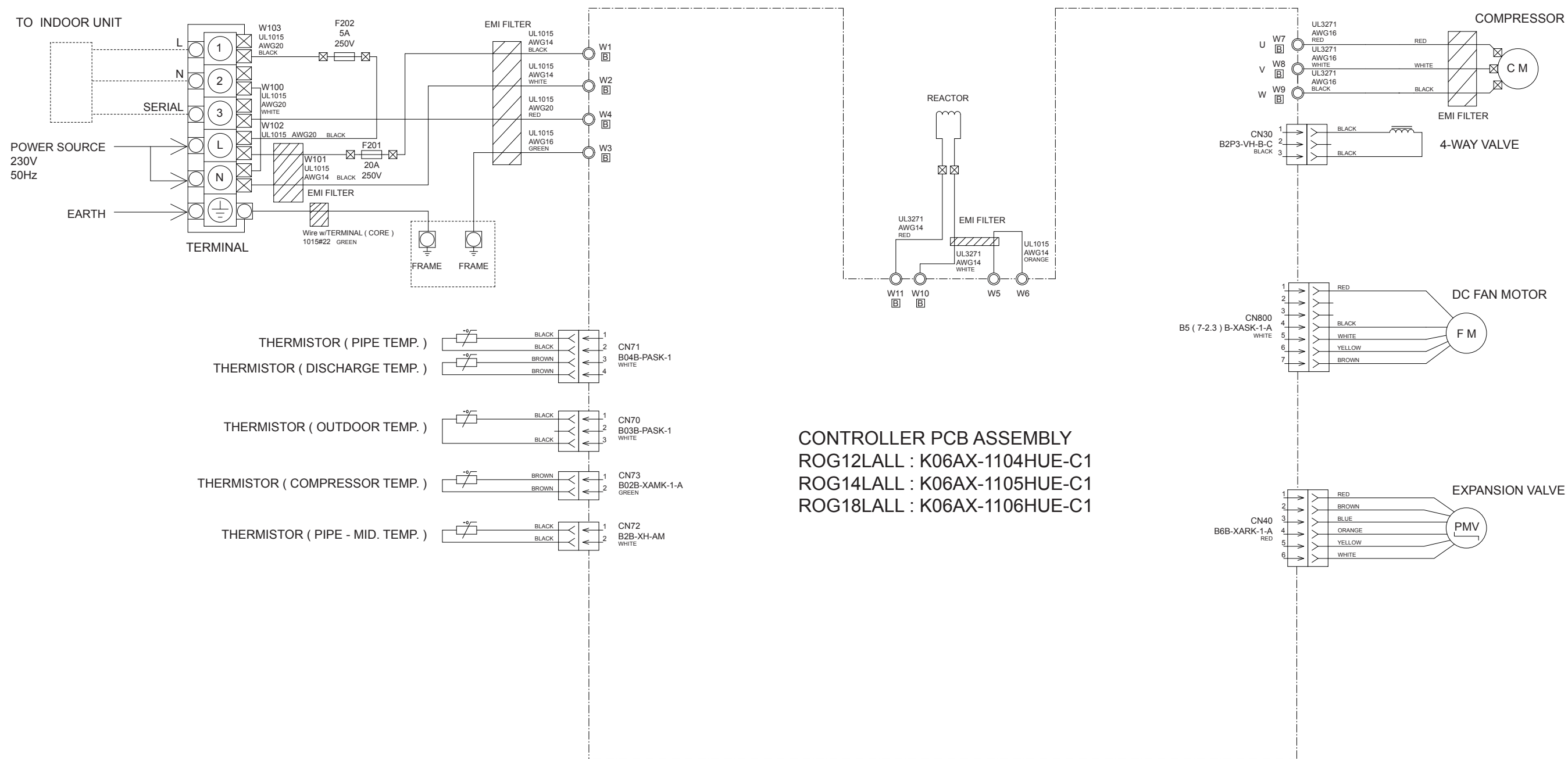


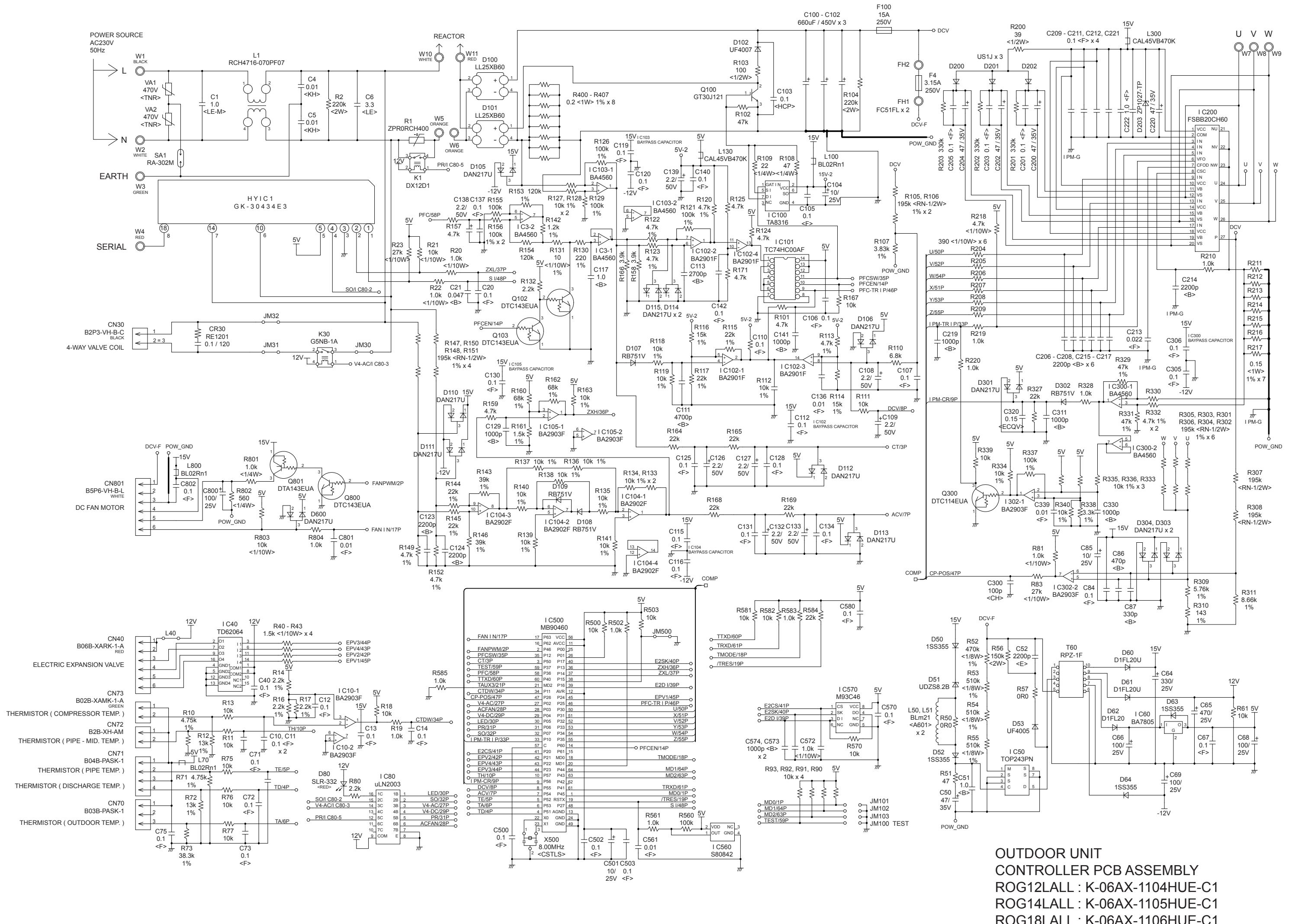
INDOOR UNIT
INDICATOR PCB ASSEMBLY (OPTION)
K06AG-1000HSE-D0



OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY
ROG12LALL : EZ-0111FHUE
ROG14LALL : EZ-0111GHUE
ROG18LALL : EZ-0111HHUE





OUTDOOR UNIT
CONTROLLER PCB ASSEMBLY
ROG12LALL : K-06AX-1104HUE-C1
ROG14LALL : K-06AX-1105HUE-C1
ROG18LALL : K-06AX-1106HUE-C1

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

ERROR DETECTION

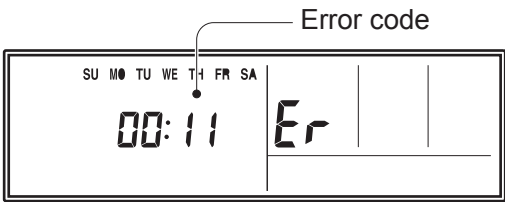
INDOOR UNIT and WIRED REMOTE CONTROL

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.)

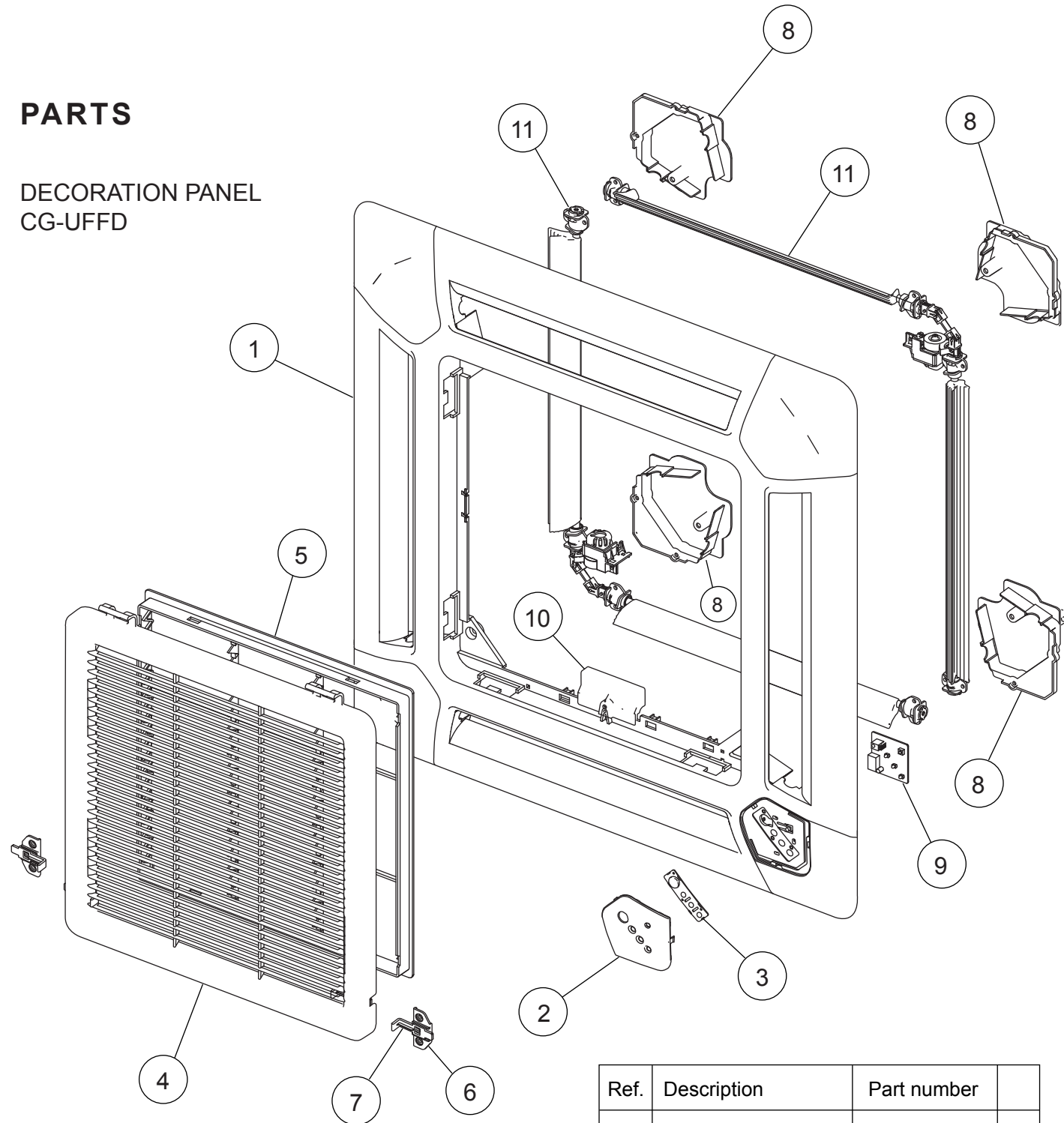


EX. Self-diagnosis

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]

PARTS

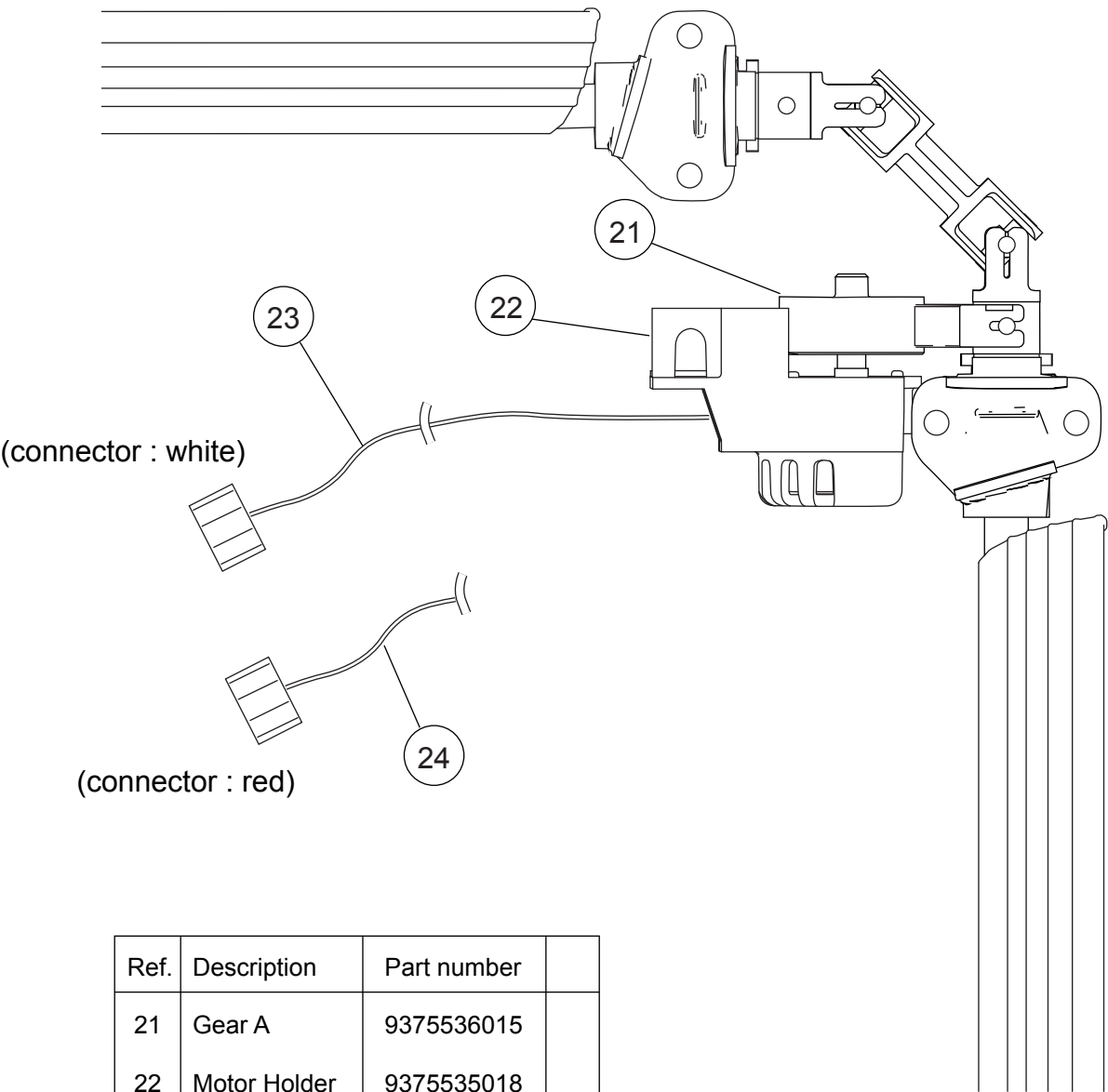
DECORATION PANEL
CG-UFFD



Ref.	Description	Part number
1	Decoration Panel	9375525057
2	Display Panel	9375529147
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
CG-UFFD

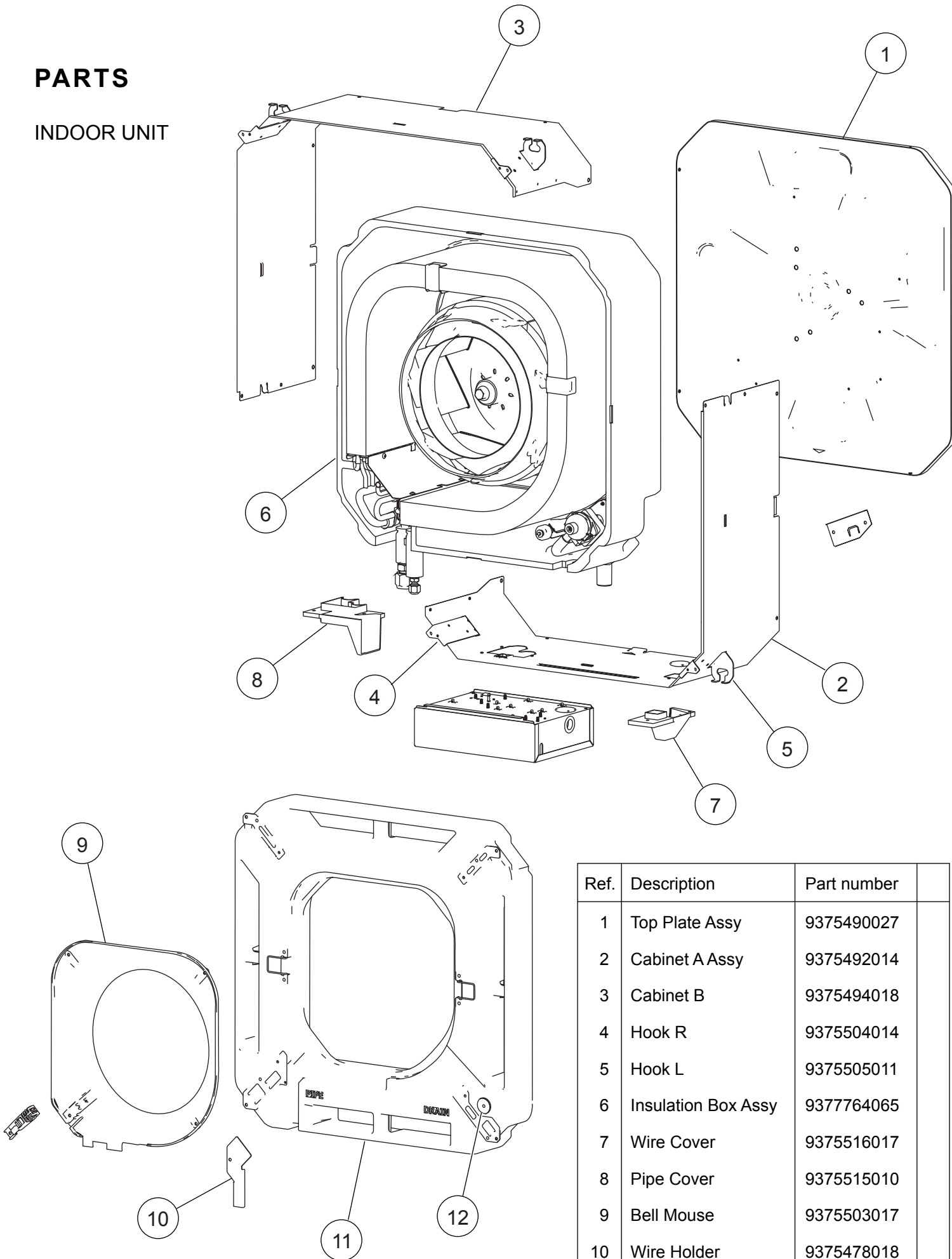
Flap total assy
Motor holder assy



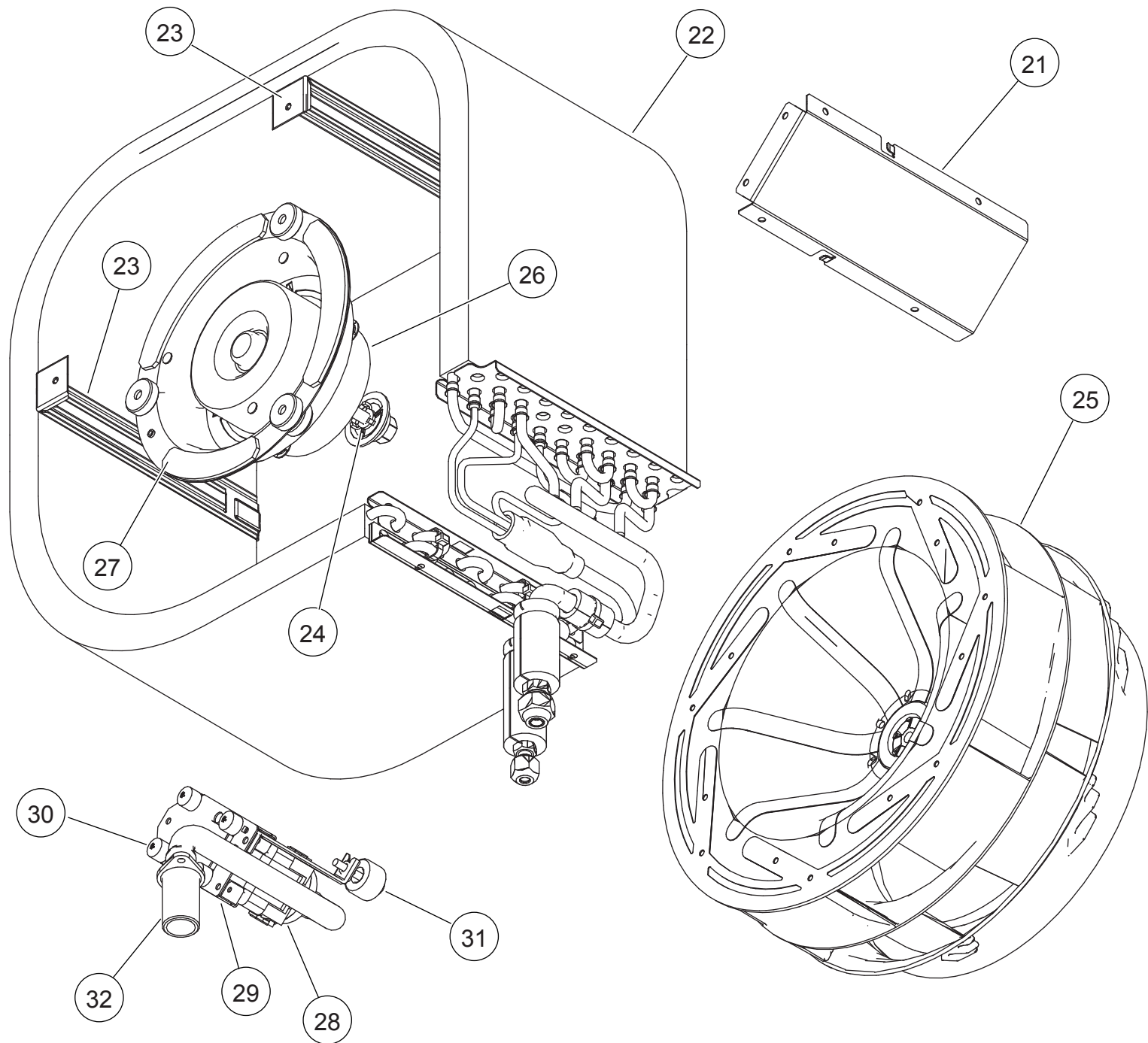
Ref.	Description	Part number	
21	Gear A	9375536015	
22	Motor Holder	9375535018	
23	Step Motor	9900139070	
24	Step Motor	9900139087	

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	

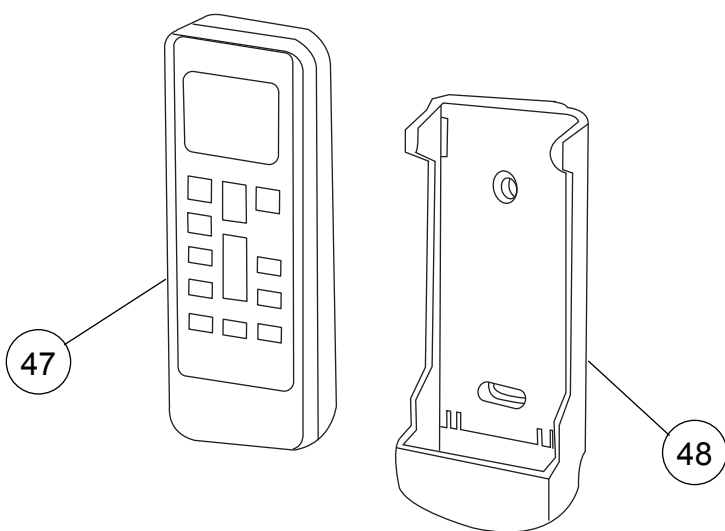
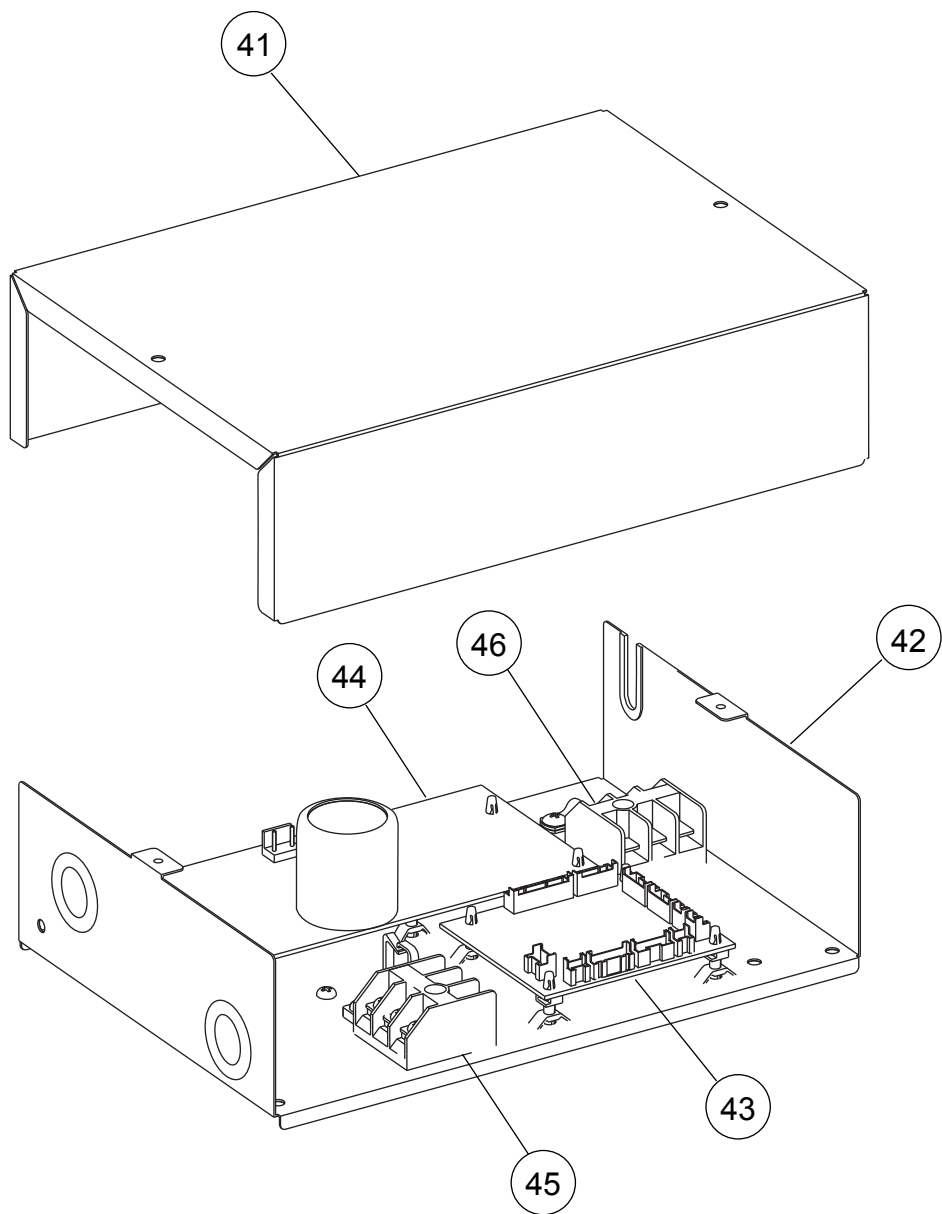


INDOOR UNIT

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	

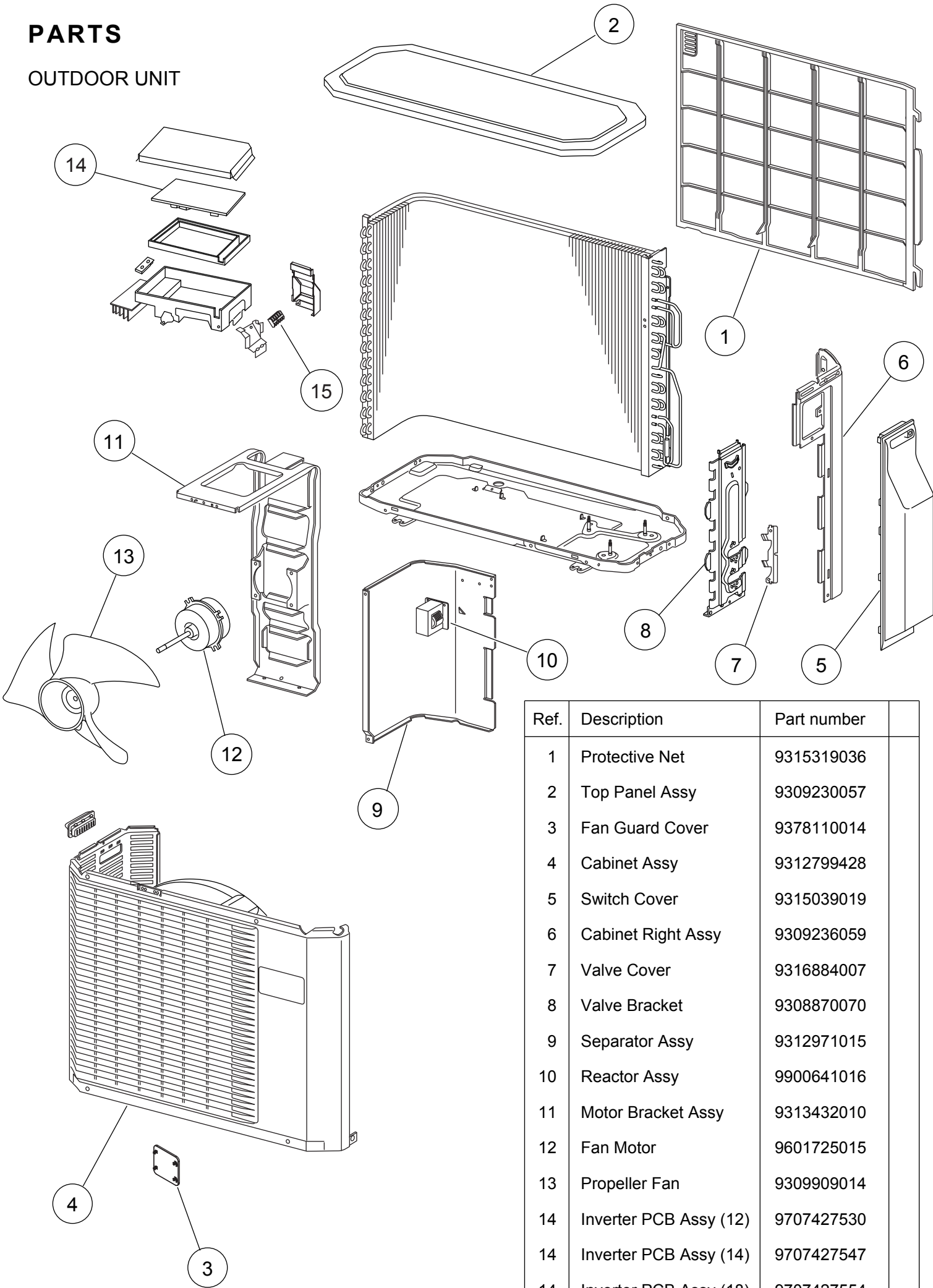
INDOOR UNIT
Control unit



Ref.	Description	Part number	
41	Control Box Cover	9375512019	
42	Control Box A	9375511012	
43	Controller PCB Assy (12)	9707393927	
43	Controller PCB Assy (14)	9707393934	
43	Controller PCB Assy (18)	9707393941	
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	

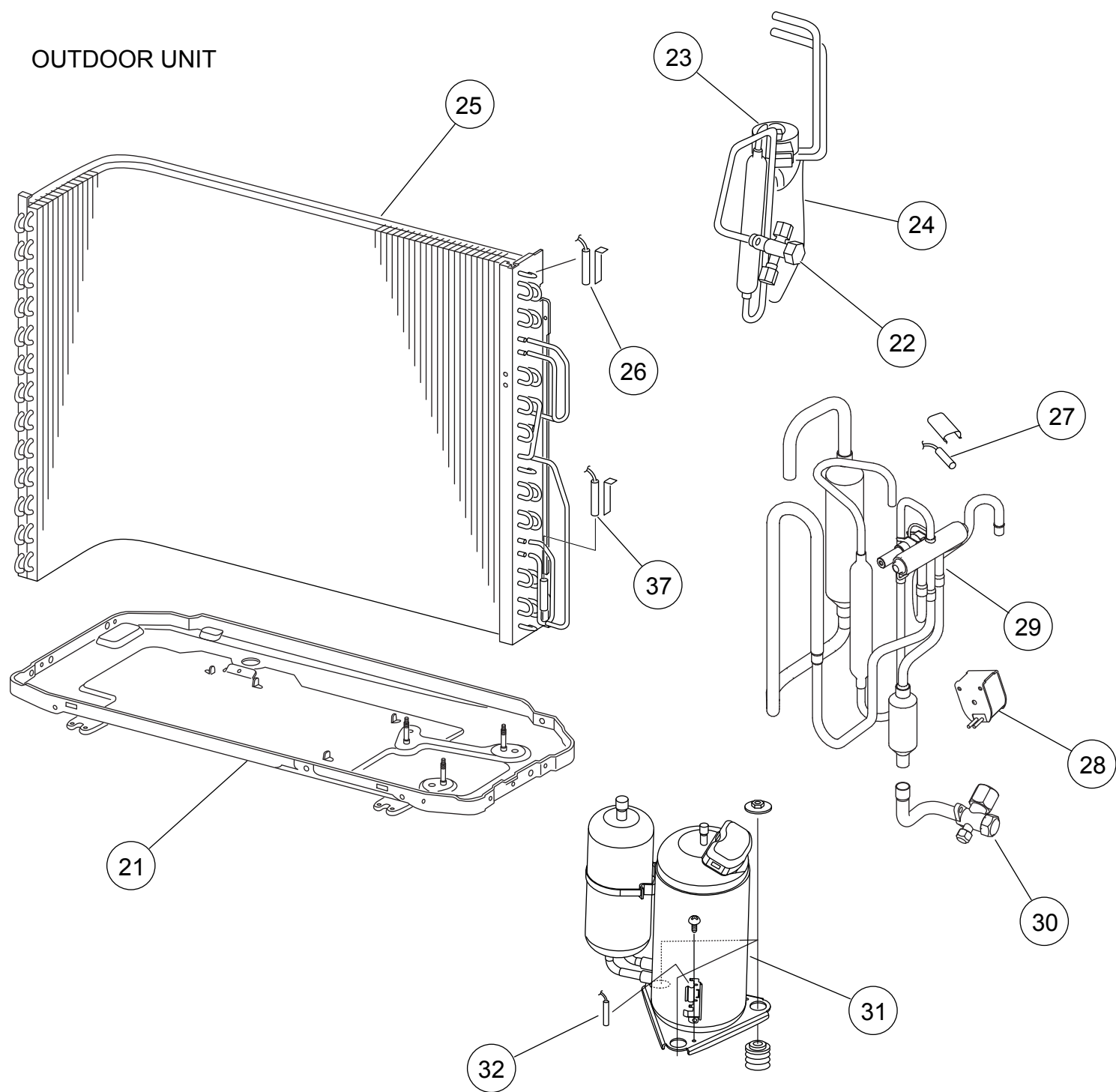
PARTS

OUTDOOR UNIT



Ref.	Description	Part number	
1	Protective Net	9315319036	
2	Top Panel Assy	9309230057	
3	Fan Guard Cover	9378110014	
4	Cabinet Assy	9312799428	
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)	9707427530	
14	Inverter PCB Assy (14)	9707427547	
14	Inverter PCB Assy (18)	9707427554	
15	Terminal	9703874031	

OUTDOOR UNIT

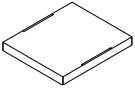
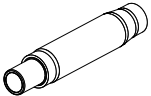
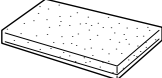
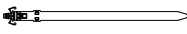


Ref.	Description	Part number	
21	Base Ass'y	9308869081	
22	2-way Valve Ass'y	9970093012	
23	Expansion Valve Coil	9900057039	
24	Pulse Motor Valve Ass'y	9311641018	
25	Condenser Total Ass'y	9311381068	
26	Heat Exchanger Thermistor	9900403010	
27	Thermistor Ass'y	9900148027	

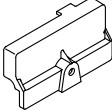
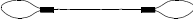
Ref.	Description	Part number	
28	Solenoid	9970033018	
29	4-way Valve Ass'y	9315311030	
30	3-way Valve Ass'y	9970092015	
31	Compressor Ass'y	9313763039	
32	Compressor Thermistor	9900156046	
--	Outdoor Thermistor	9900210045	
--	Drain Ass'y	9303029015	

ACCESSORIES

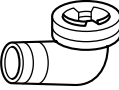
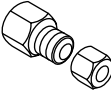
INDOOR UNIT

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 clammer 	1	For electrical wiring

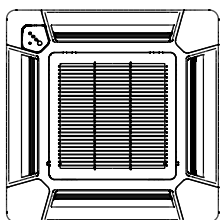
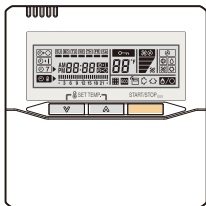
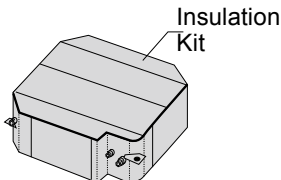
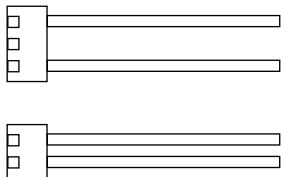
DECORATION PANEL

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

OPTIONAL PARTS

Exterior	Parts name	Model number	Summary
	Decoration panel	CG-UFFD	Ceiling dirt by discharged wind was made diff cult to cling by reviewing the shape of the LOUVER.
	Wired remote controller	UTY-RNNXM	Unit control is performed by wired remote controller
	Simple remote controller	UTY-RSNXM	Unit control is performed by simple remote controller
	Air outlet shutter plate	UTR-YDZB	Air outlet shutter plate is installed at the air outlet when 3-way direction is performed.
	Insulation kit for high humidity	UTZ-KXGC	Install when the under roof condition is expected to be the humidity of over 80 % and the temperature of over 30 °C
	Fresh air intake kit	UTZ-VXAA	It can be taken in fresh air of up to 10% of "high" air volume of the indoor unit by attaching Fresh Air Intake Kit to cassette type indoor unit.
	Extrenal connect set	UTY-XWZX	Use to connect with various peripheral devices and air conditioner PC board.

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