

# SERVICE MANUAL

Indoor unit	Outdoor unit
RCG30LRLE	ROG30LETL
RCG36LRLE	ROG36LETL



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# SPECIFICATIONS

## ELECTRICAL DATA

TYPE		Cooling & Heating	
INDOOR UNIT		RCG30LRLE	RCG36LRLE
DECORATION PANEL		UTG-UGYA-W	
OUTDOOR UNIT		ROG30LETL	ROG36LETL
COOLING CAPACITY		8.5 kW	10.0 kW
HEATING CAPACITY		10.0 kW	11.2 kW
POWER SOURCE		230 V, 50 Hz	
RUNNING CURRENT	Cooling	11.6 A	13.7 A
	Heating	12.2 A	13.3 A
INPUT WATTS	Cooling	2.65 kW	3.12 kW
	Heating	2.77 kW	3.02 kW
E.E.R	Cooling	3.21 kW/kW	3.21 kW/kW
COP	Heating	3.61 kW/kW	3.71 kW/kW
MOISTURE REMOVAL		2.5 L/hr	3.5 L/hr
AIRCIRCULATION INDOOR		1,600 m <sup>3</sup> /hr	1,800 m <sup>3</sup> /hr
AIRCIRCULATION OUTDOOR		3,600 m <sup>3</sup> /hr	3,800 m <sup>3</sup> /hr
MAXIMUM CURRENT	Cooling	17.0 A	18.5 A
	Heating	17.0 A	20.0 A

\* The above data are rating at 230 V.

## FAN SPEED

INDOOR UNIT	Discrimination	MFF-54TVM	
	High speed	570 r.p.m.	640 r.p.m.
	Medium speed	510 r.p.m.	510 r.p.m.
	Low speed	470 r.p.m.	470 r.p.m.
	Quiet	420 r.p.m.	420 r.p.m.
OUTDOOR UNIT	Discrimination	MFE-60TVT	
	Speed	850 r.p.m.	900 r.p.m.

## NOISE LEVEL

INDOOR UNIT	High speed	40 dB	43 dB
	Medium speed	38 dB	38 dB
	Low speed	36 dB	36 dB
	Quiet	32 dB	32 dB
OUTDOOR UNIT	Cooling	53 dB	54 dB
	Heating	55 dB	55 dB

## COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, Inverter, 6 poles, DC motor, Twin Rotary	
DISCRIMINATION		N-TF30ND1A	
WEIGHT (with oil)		15.3 kg	
PRECHARGED REFRIGERANT		2,100 g	
REFRIGERANT TYPE		R410A	
MAX PIPE LENGTH		50 m	
MAX PIPE HEIGHT		30 m	
FULL CHARGE	Pipe length	20 m	2,100 g
		30 m	2,500 g
		40 m	2,900 g
		50 m	3,300 g
ADDITIONAL CHARGE		40 g/m	

## DIMENSIONS

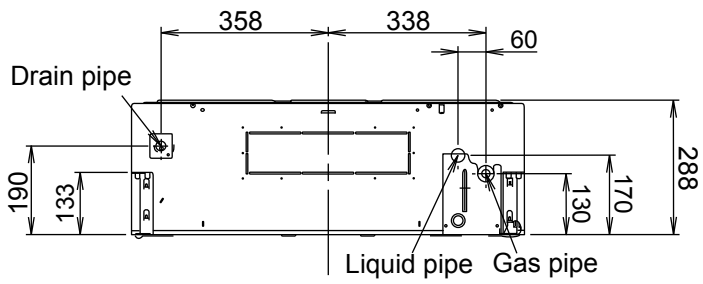
INDOOR UNIT	H x W x D	288 x 840 x 840 mm
DECORATION PANEL	H x W x D	50 x 950 x 950 mm
OUTDOOR UNIT	H x W x D	830 x 900 x 330 mm

## WEIGHT

INDOOR UNIT	Net / Shipping	26 kg / 31 kg
DECORATION PANEL	Net / Shipping	5.5 kg / 8.5 kg
OUTDOOR UNIT	Net / Shipping	61 kg / 68 kg

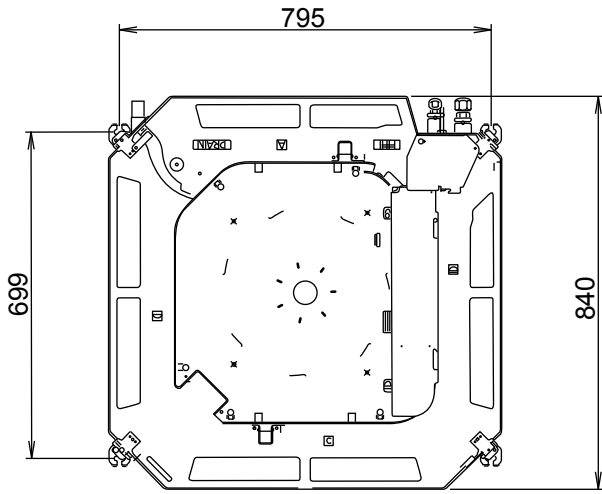
# DIMENSIONS

(Unit : mm)

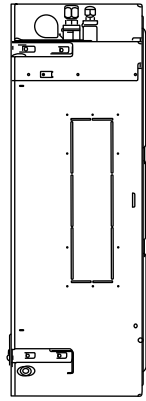


## INDOOR UNIT DECORATION PANEL

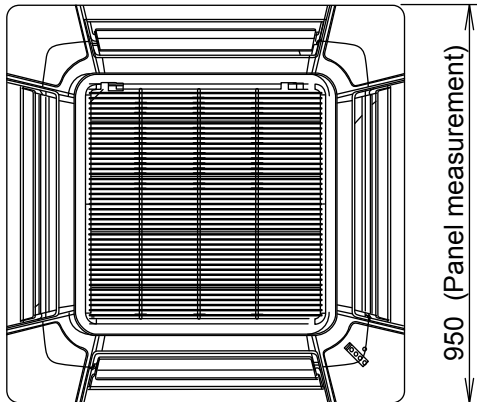
Drain pipe diameter  
Inside : 20 mm  
Outside : 26 mm



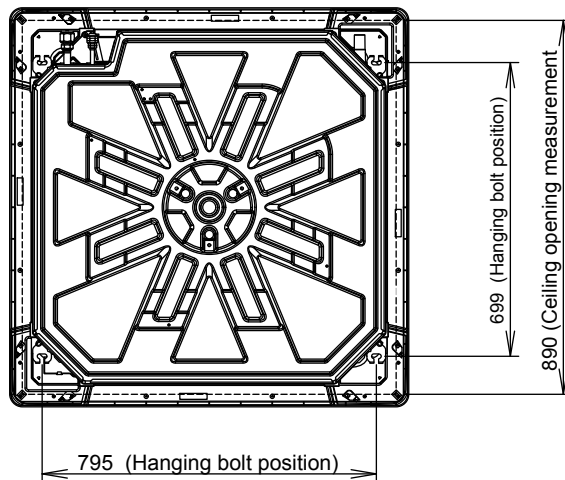
Bottom view



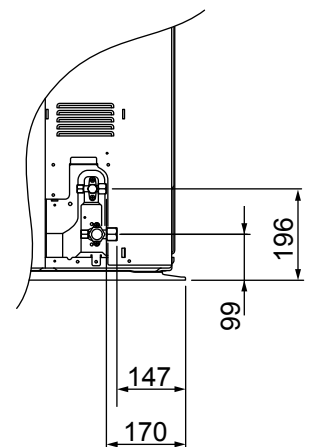
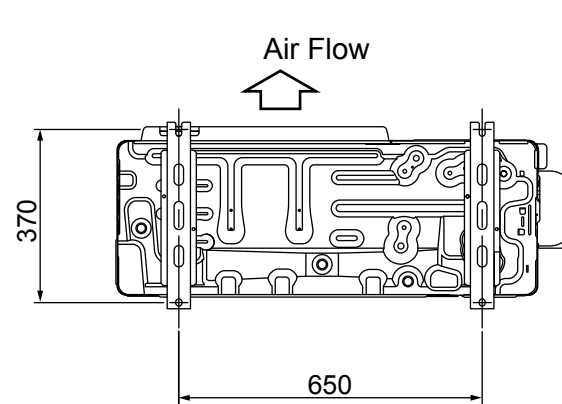
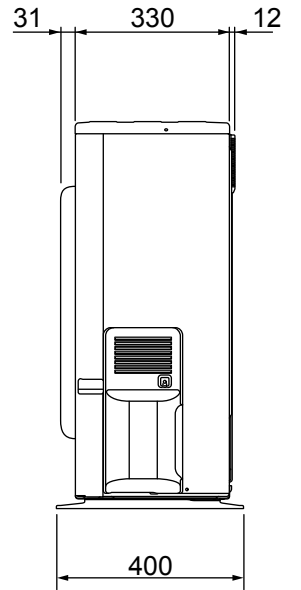
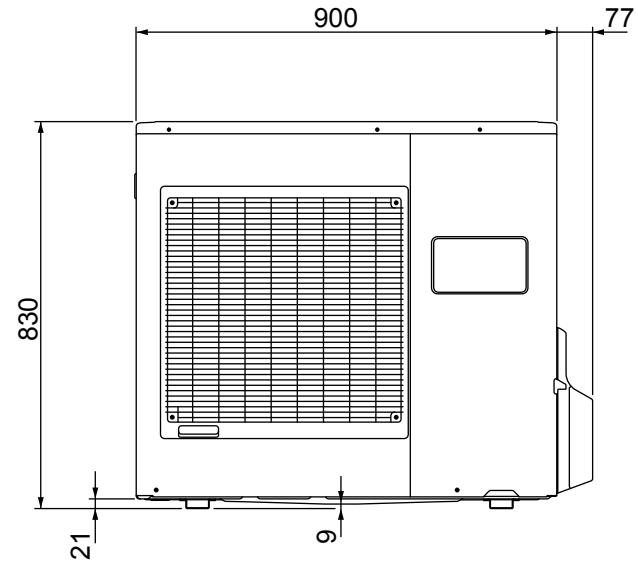
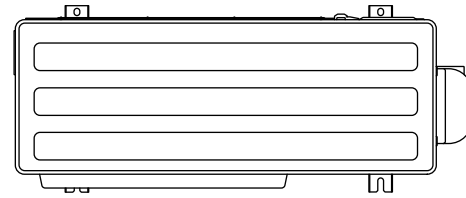
Bottom view



Top view



## OUTDOOR UNIT

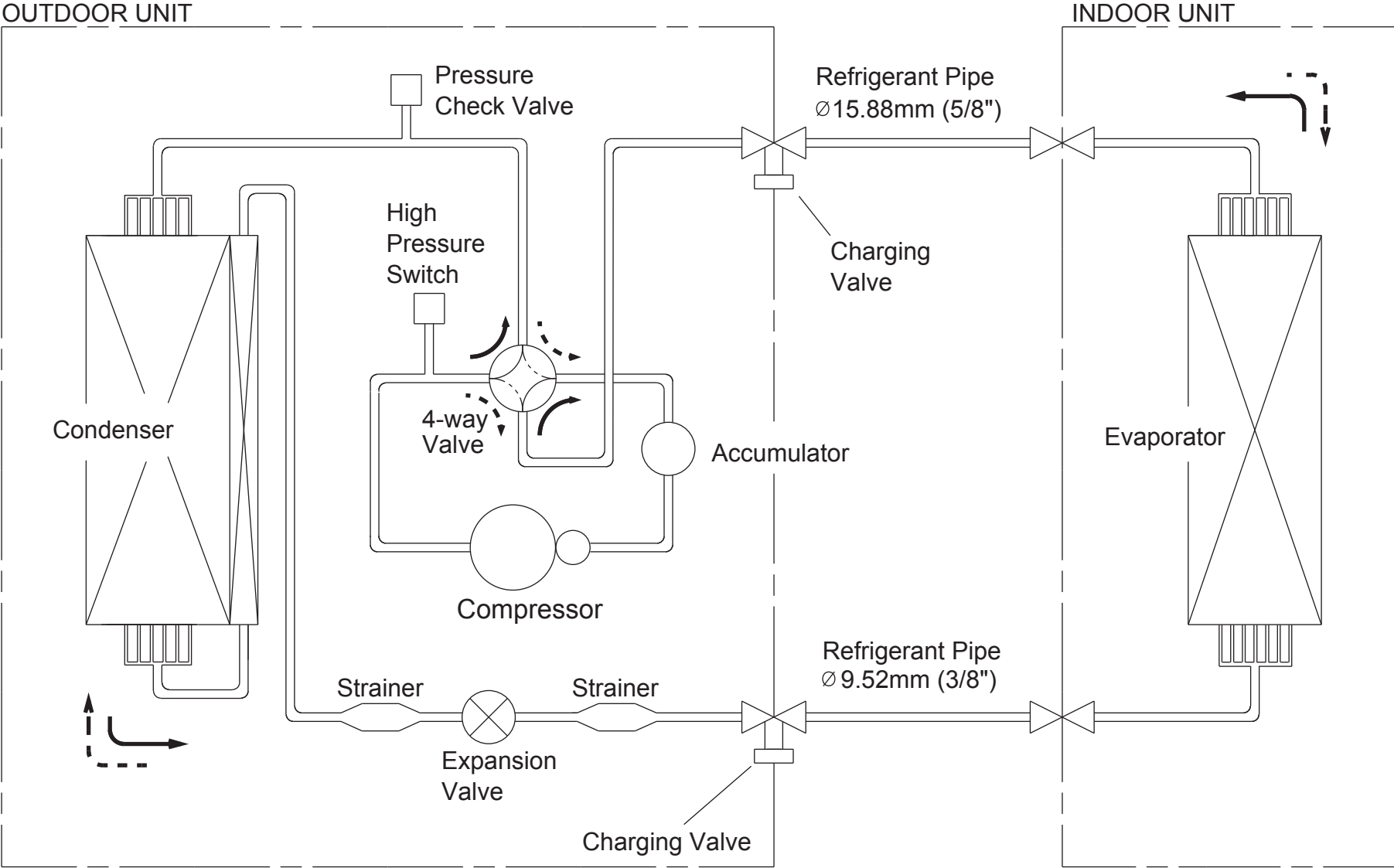


# REFRIGERANT SYSTEM DIAGRAM

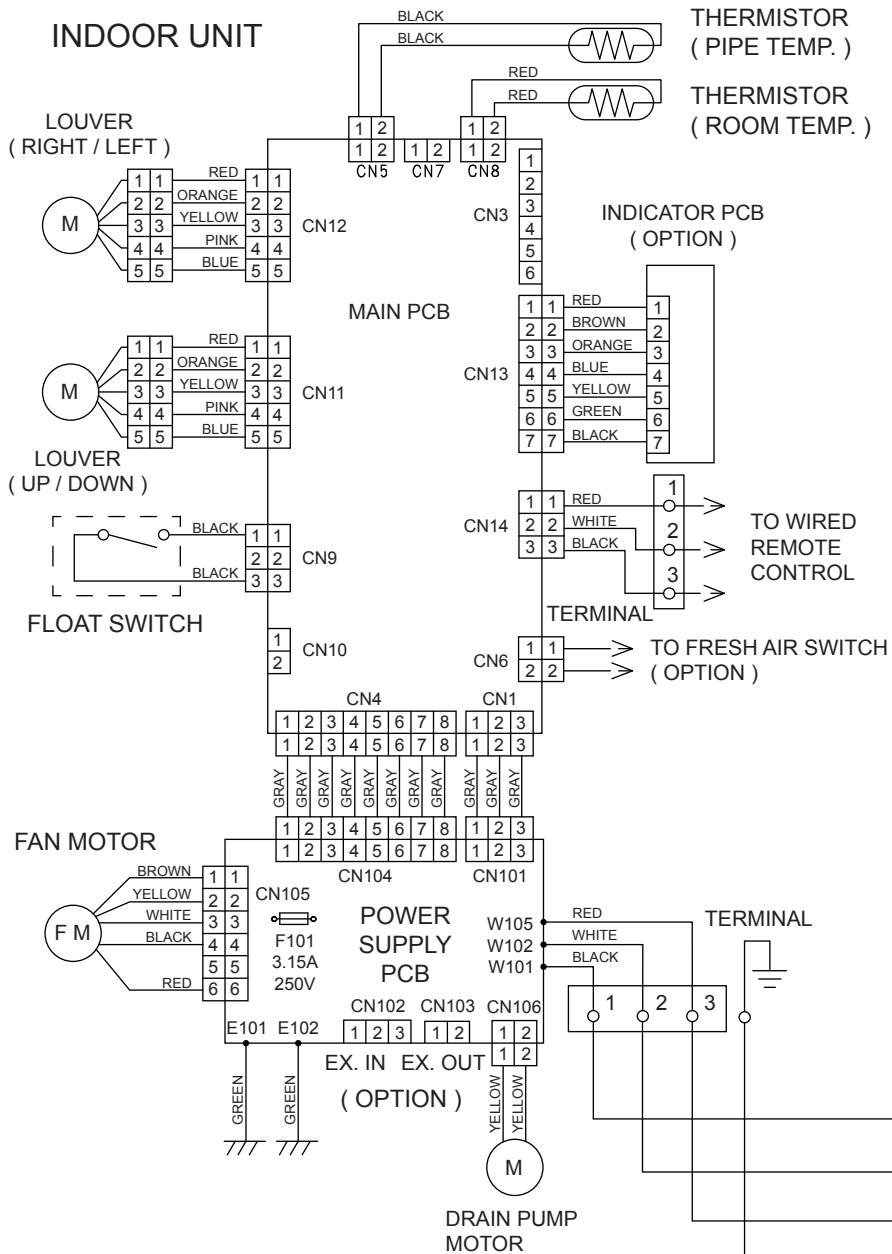
Refrigerant direction

—▶ : Cool

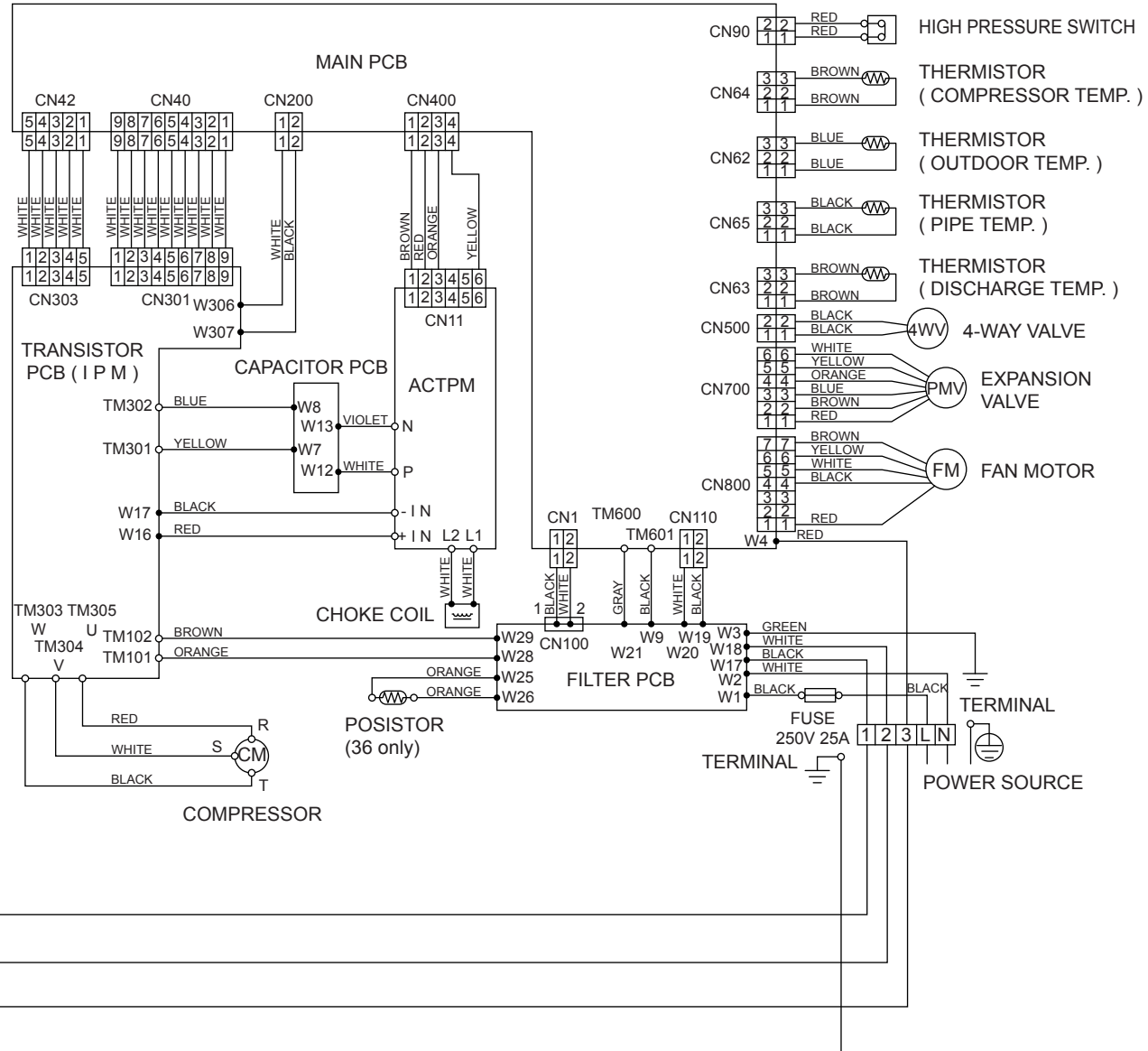
- - -▶ : Heat



# CIRCUIT DIAGRAM

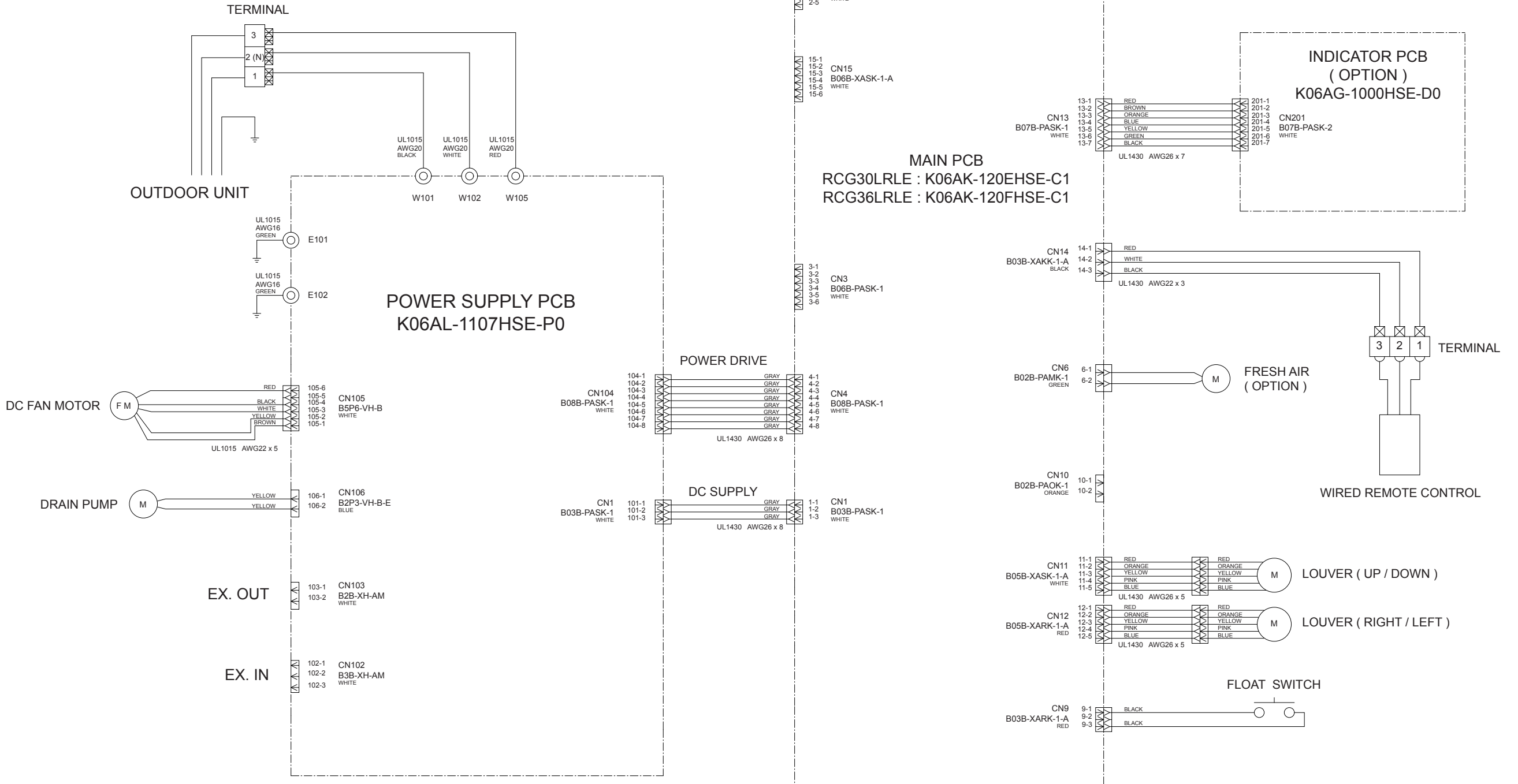


## OUTDOOR UNIT

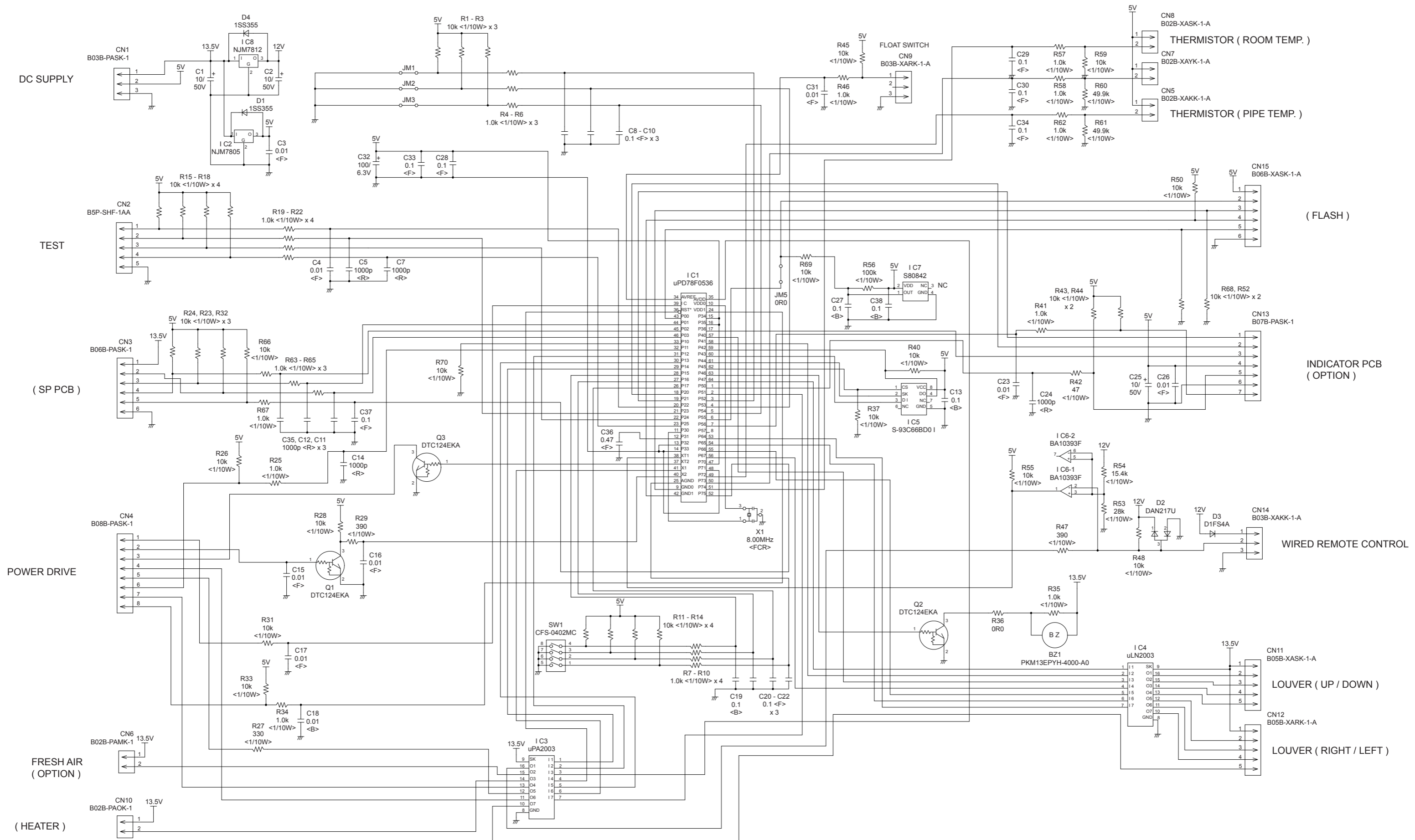


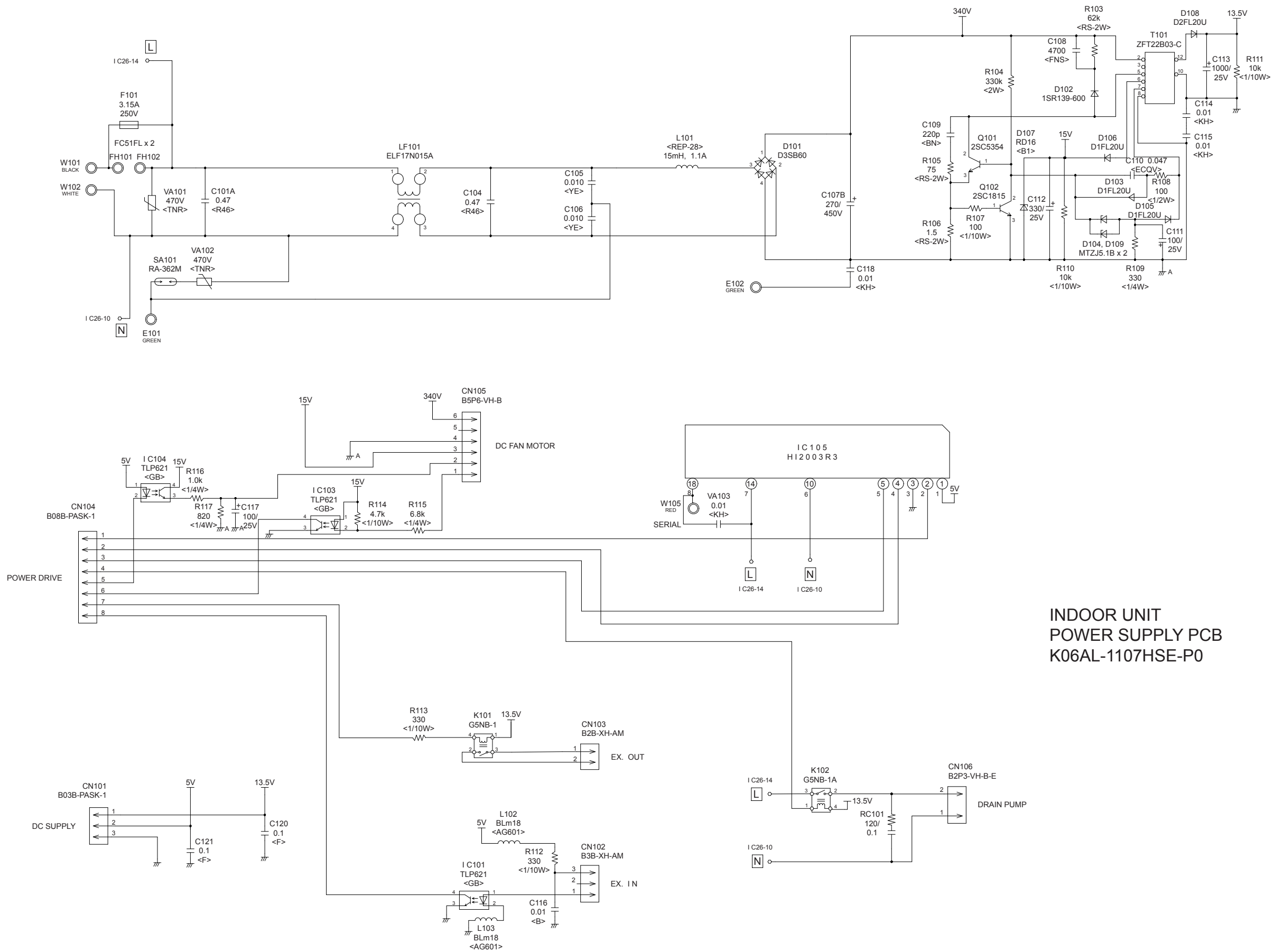
# INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT  
RCG30LRLE : EZ-0121PHSE  
RCG36LRLE : EZ-0121RHSE



INDOOR UNIT  
 MAIN PCB  
 RCG30LRLE : K06AK-120EHSE-C1  
 RCG36LRLE : K06AK-120FHSE-C1

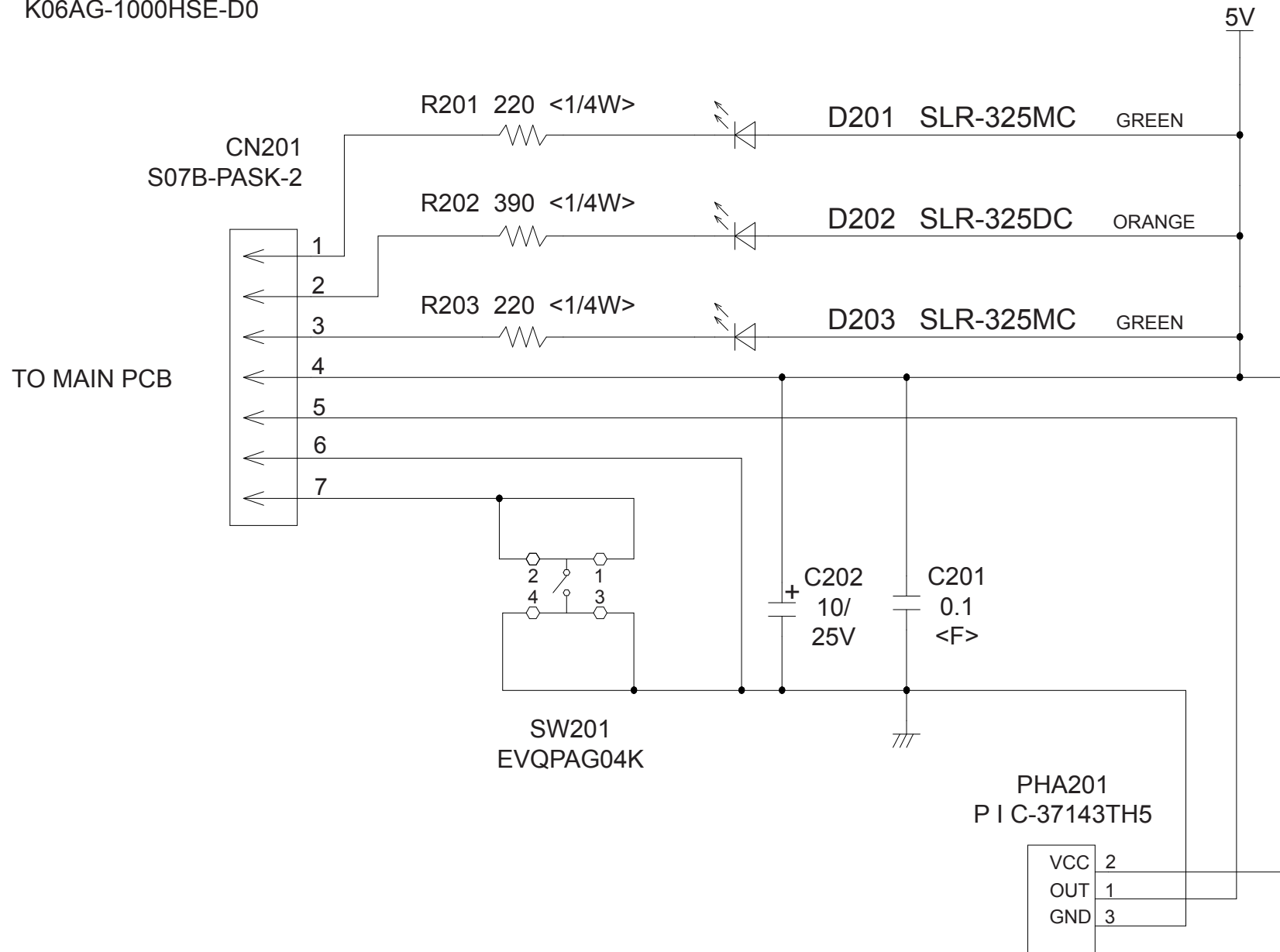




INDOOR UNIT  
POWER SUPPLY PCB  
K06AL-1107HSE-P0

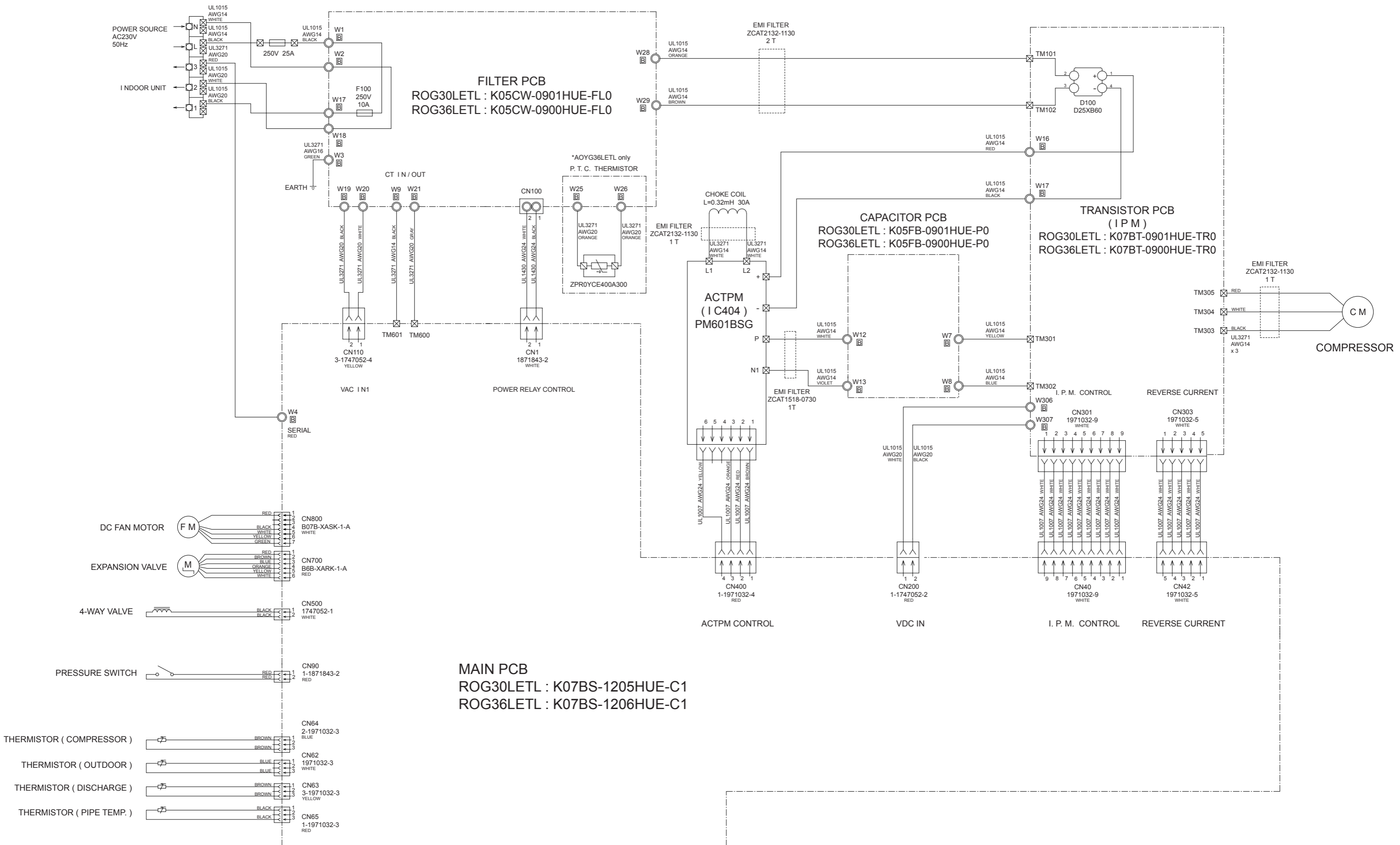


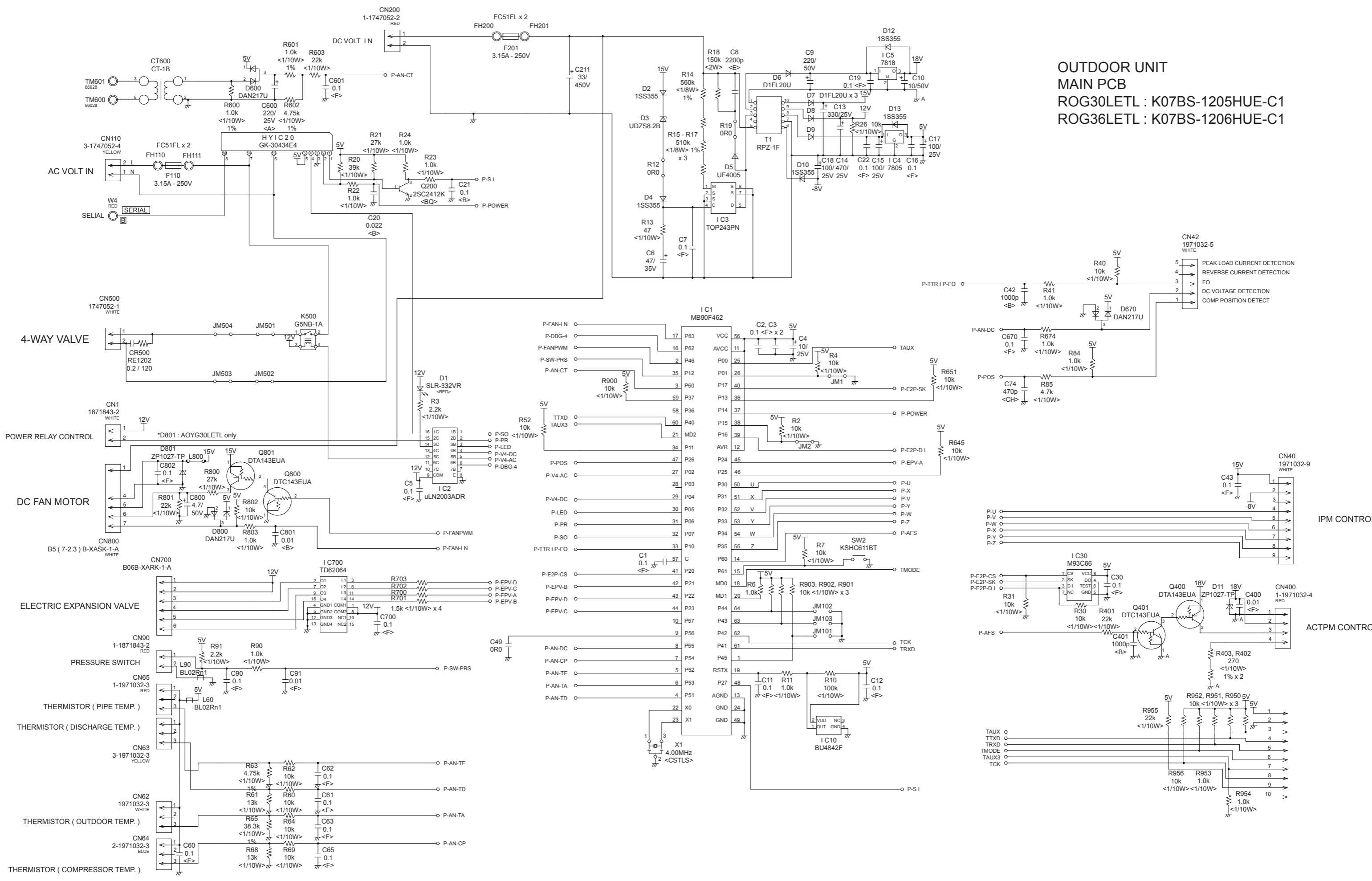
INDOOR UNIT  
 INDICATOR PCB ( OPTION )  
 K06AG-1000HSE-D0



# OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY  
 ROG30LETL : EZ-0121FHUE  
 ROG36LETL : EZ-0121GHUE

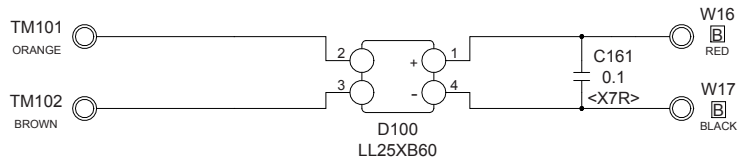




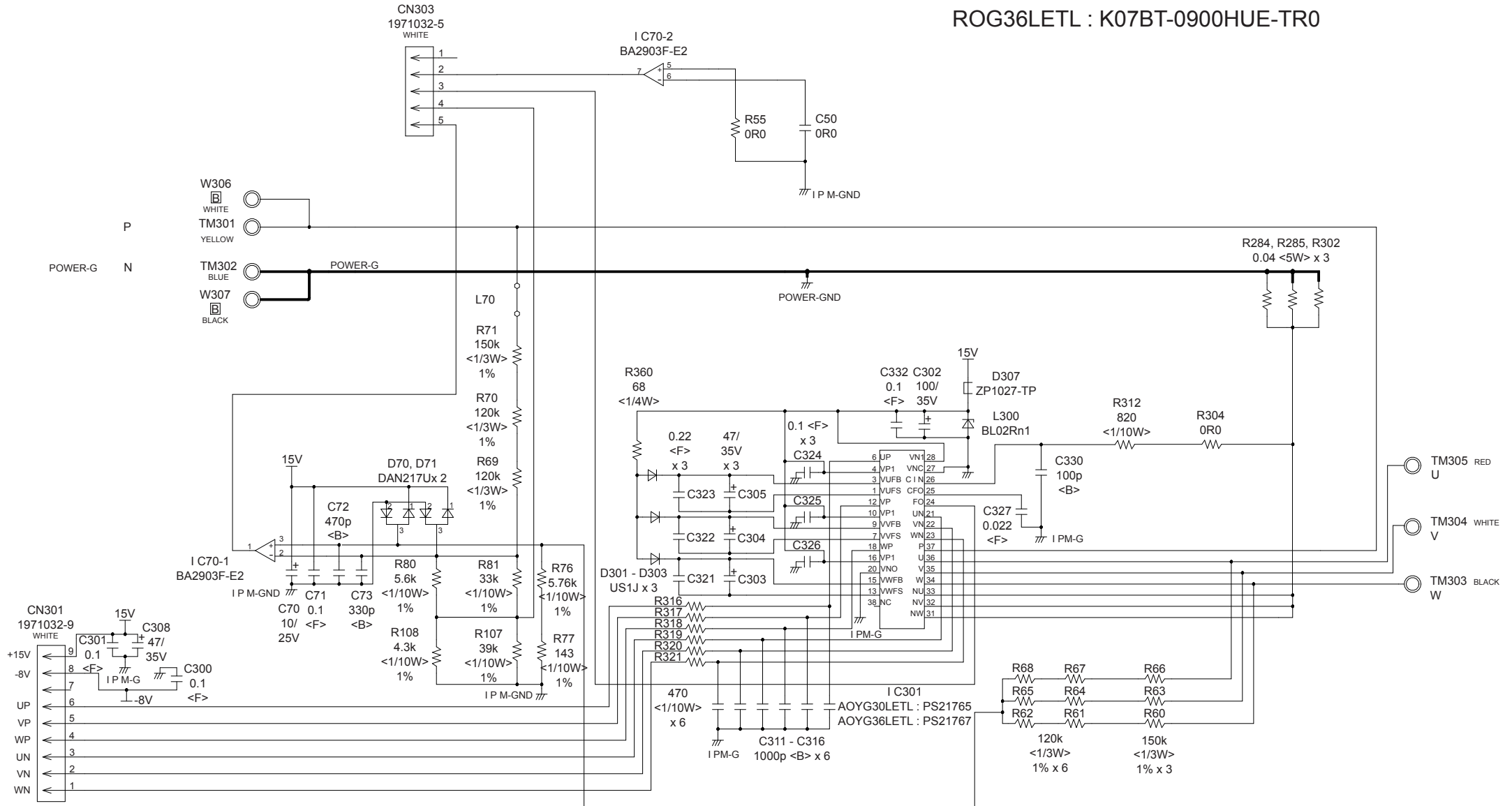
OUTDOOR UNIT  
 MAIN PCB  
 ROG30LETL : K07BS-1205HUE-C1  
 ROG36LETL : K07BS-1206HUE-C1

IPM CONTROL

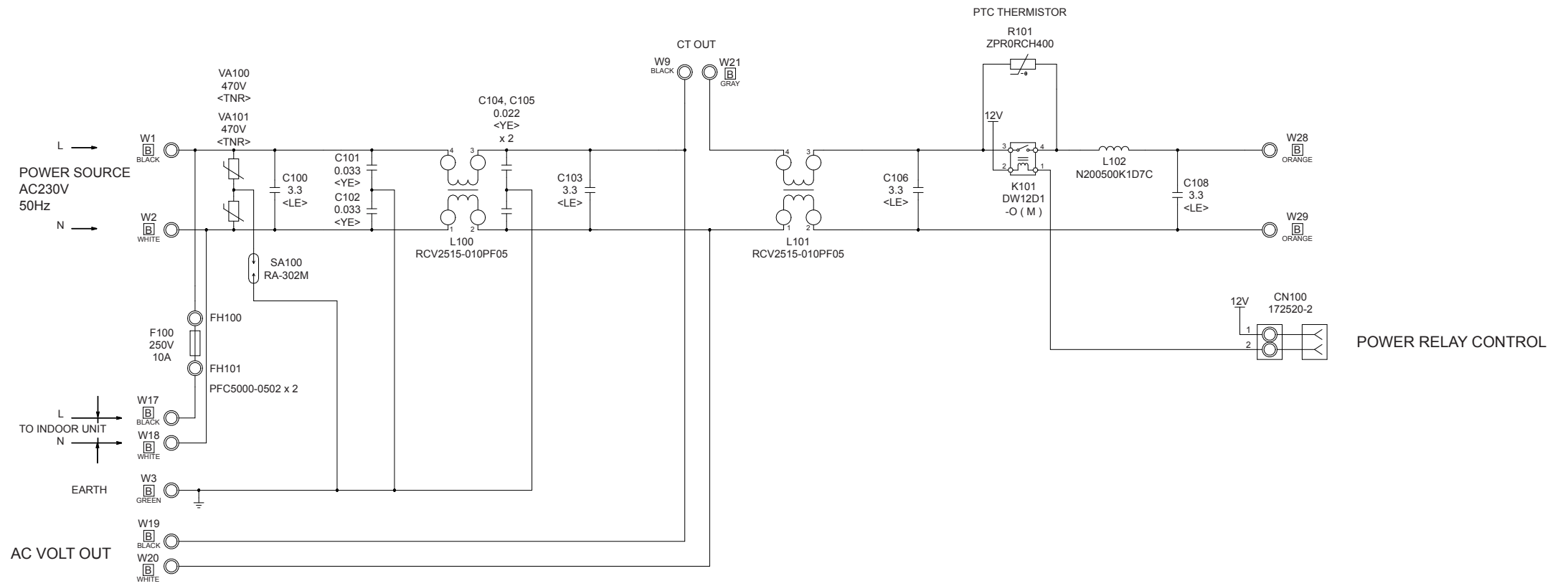
ACTPM CONTROL



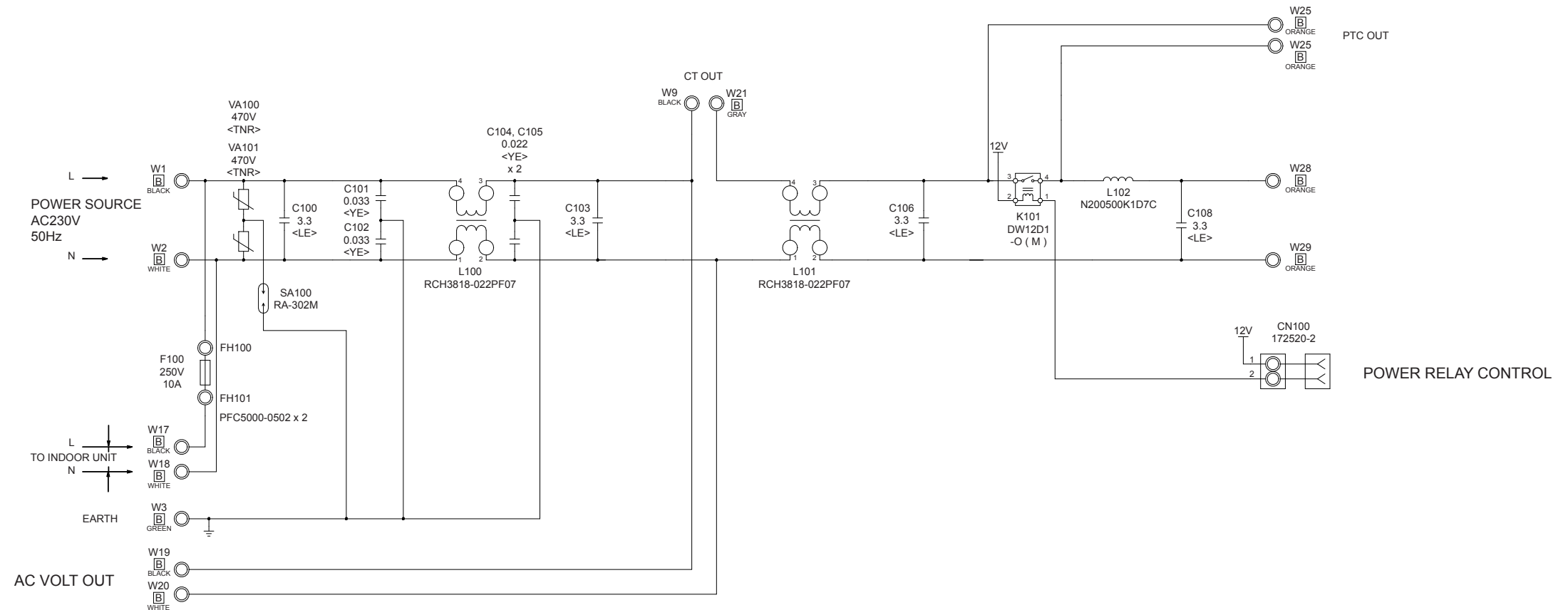
**OUTDOOR UNIT  
TRANSISTOR PCB  
( I P M )  
ROG30LETL : K07BT-0901HUE-TR0  
ROG36LETL : K07BT-0900HUE-TR0**



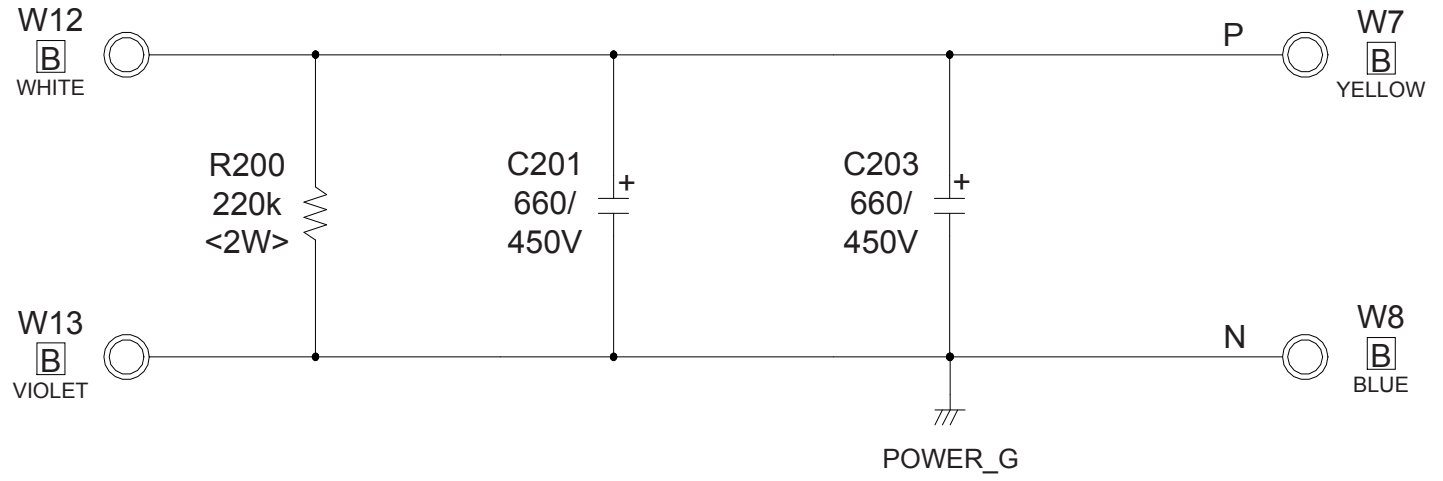
OUTDOOR UNIT  
ROG30LETL  
FILTER PCB  
K05CW-0901HUE-FL0



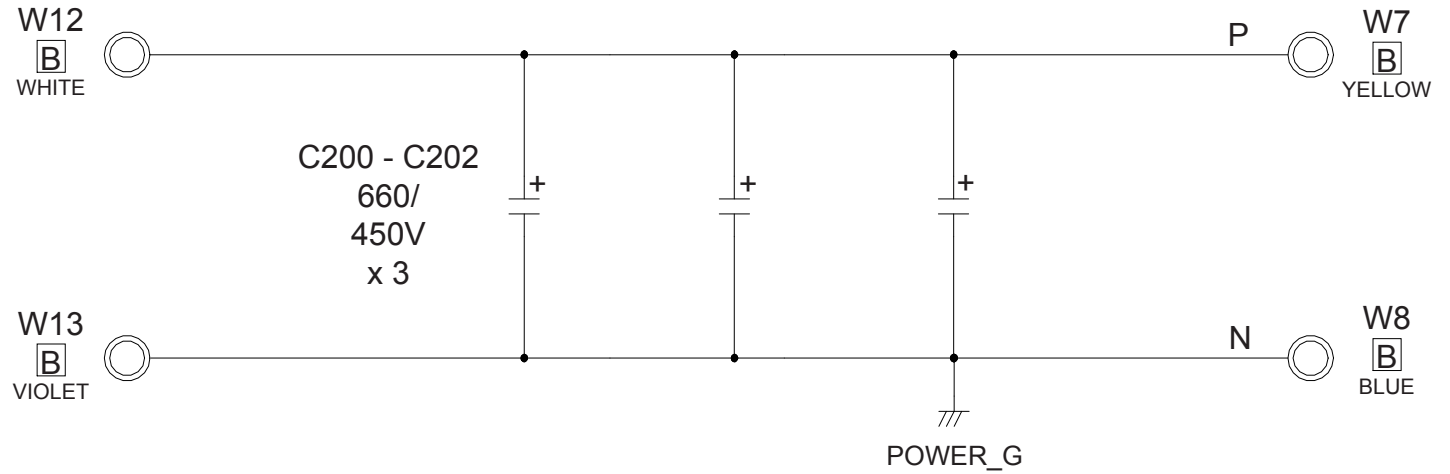
ROG36LETL  
FILTER PCB  
K05CW-0900HUE-FL0



OUTDOOR UNIT  
 ROG30LETL  
 CAPACITOR PCB  
 K05FB-0901HUE-P0



ROG36LETL  
 CAPACITOR PCB  
 K05FB-0900HUE-P0



# ERROR DETECTION

## INDOOR UNIT and WIRED REMOTE CONTROL

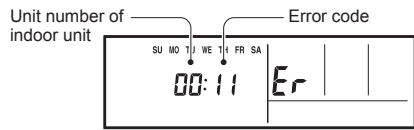
If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

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.

### Remote control

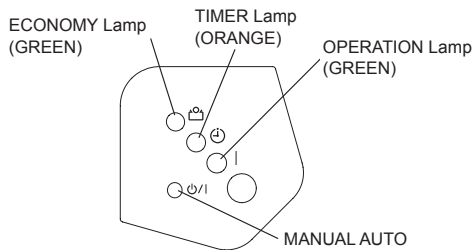
This is possible only on a wired remote control.

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



EX. Self-diagnosis

### Indoor unit display (option)



● : 0.5s on / 0.5s off

◇ : 0.1s on / 0.1s off

( ) : Number of flashing

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)	● (1)	◇	31	Power supply interruption error
● (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 Lerror
● (6)	● (10)	◇	6A	Display PCB microcomputers communication error

Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (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)	● (8)	◇	98	Outdoor unit fan motor 2 error
● (9)	● (9)	◇	99	4-way valve error
● (9)	● (10)	◇	9A	Coil (expansion 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]

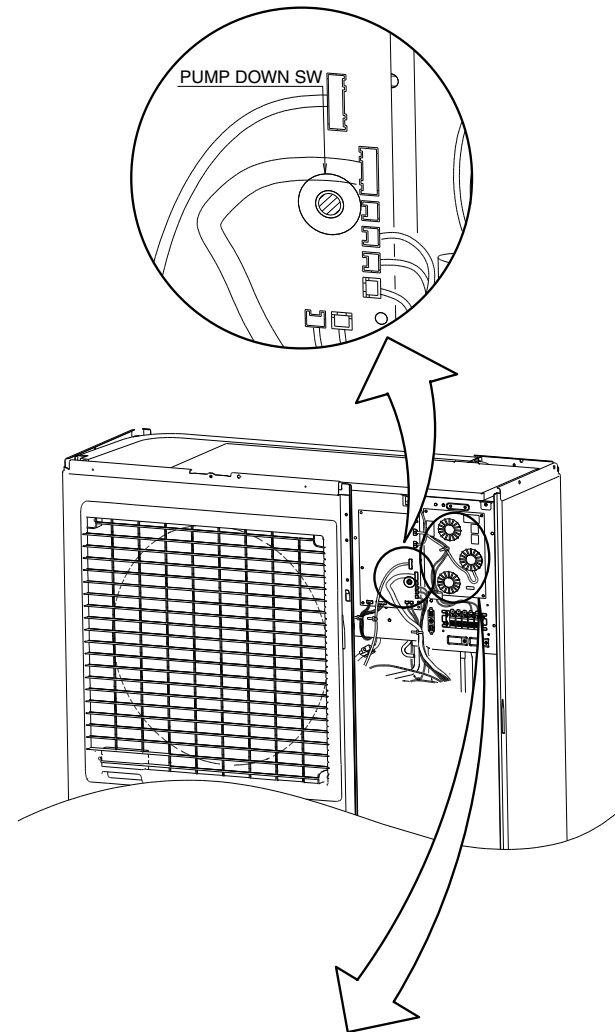
## OUTDOOR UNIT

### SPECIAL INSTALLATION SETTING

#### PUMP DOWN (Refrigerant collecting operation)

Perform the following procedures to collect the refrigerant when moving the indoor unit or the outdoor unit.

- (1) Press the push-button switch on the circuit board once.  
The LED on the circuit board starts flashing (one second ON/one second OFF).  
This indicates the start of PUMP DOWN operation.  
When the switch is pressed while the compressor is in operation, PUMP DOWN operation starts automatically.  
When the switch is pressed while the compressor is in stop, the compressor starts to operate automatically, and then move on to PUMP DOWN operation.
- (2) PUMP DOWN operation continues for about 1 minute.  
When PUMP DOWN operation is completed, the compressor stops automatically.  
Then close the 2-way valve and 3-way valve immediately.
- (3) Turn the power off.



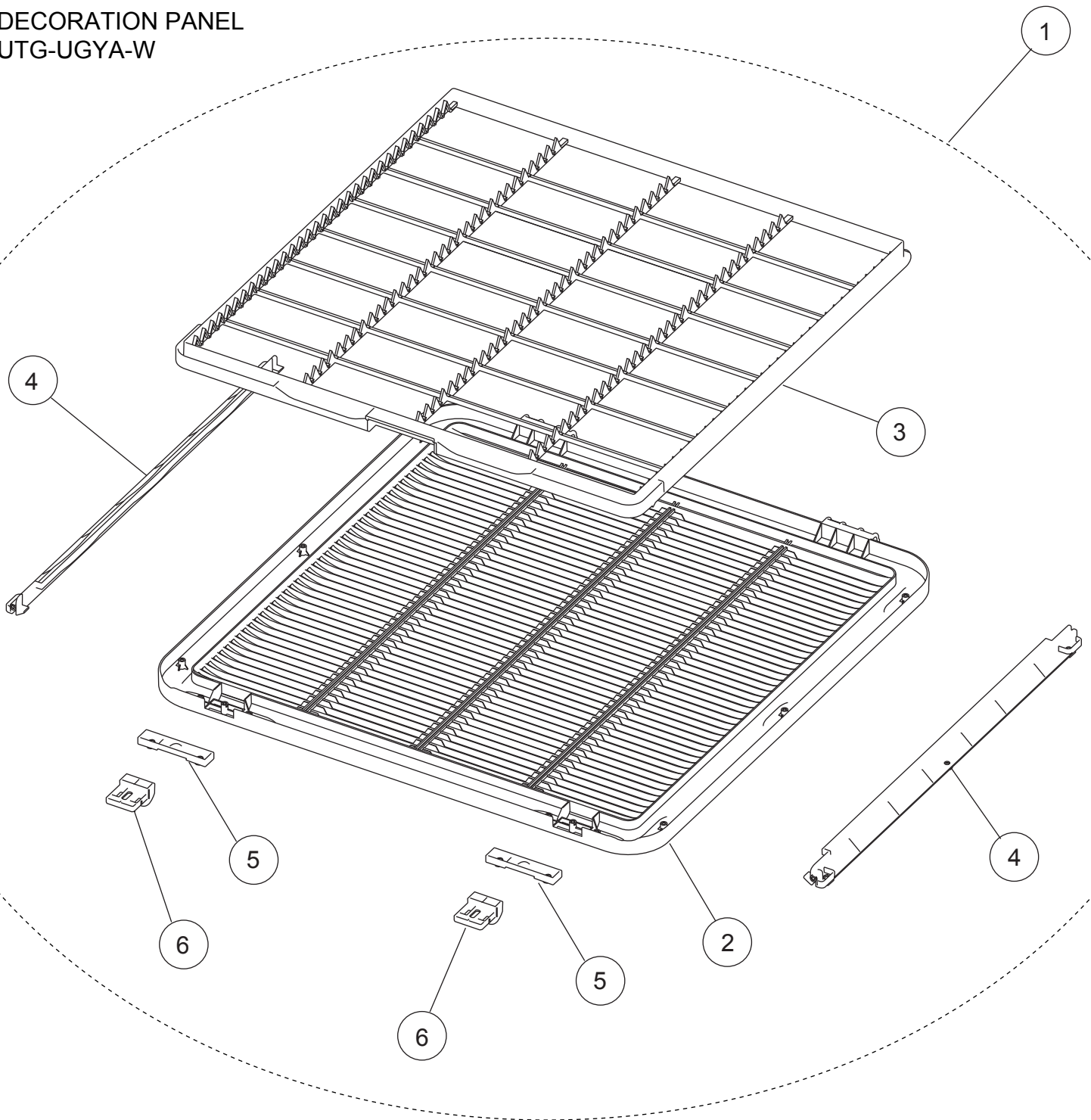
**⚠ DANGER**

This part (Choke coil) generates high voltages.  
Never touch this part.

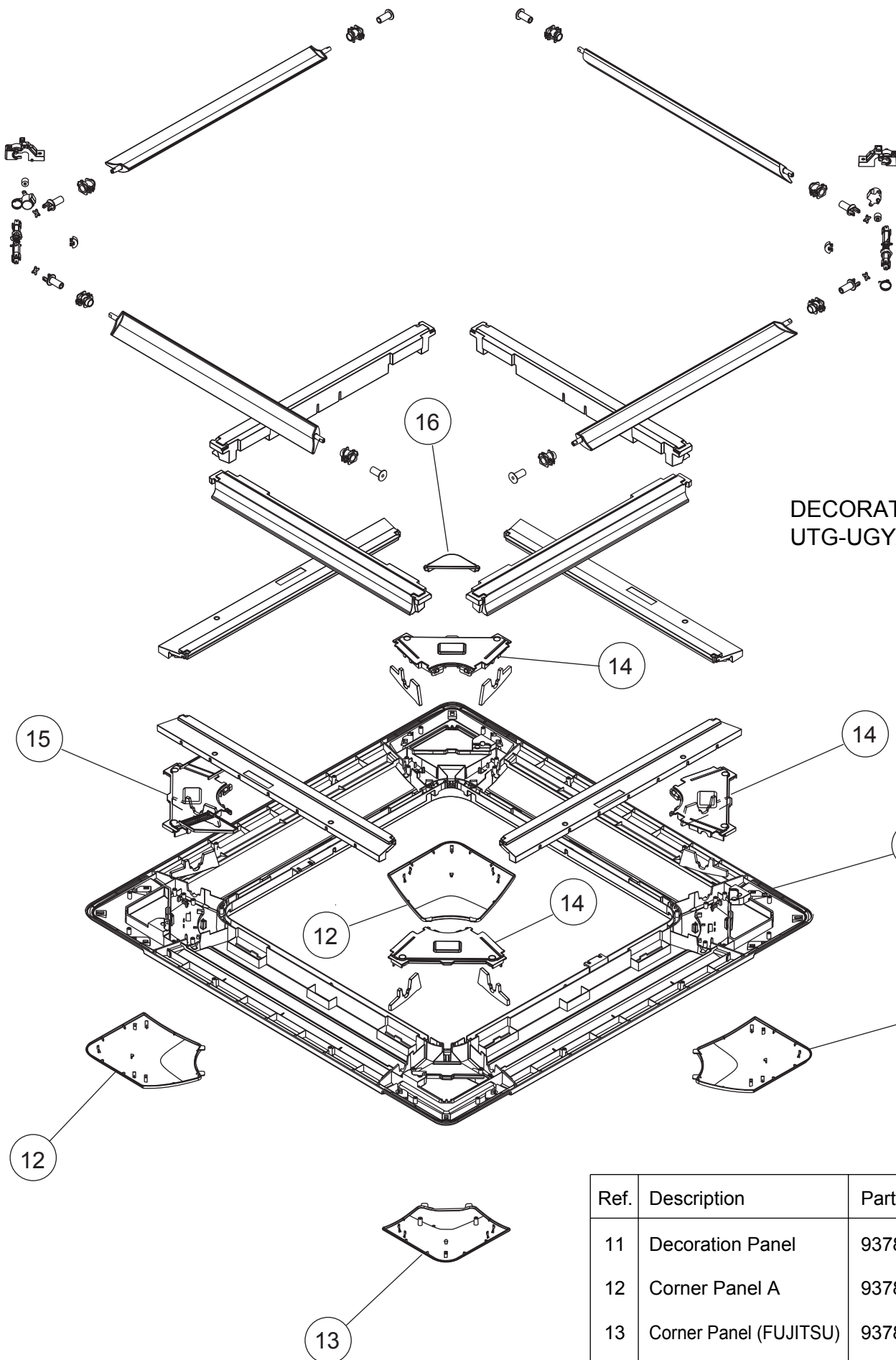


# PARTS

DECORATION PANEL  
UTG-UGYA-W



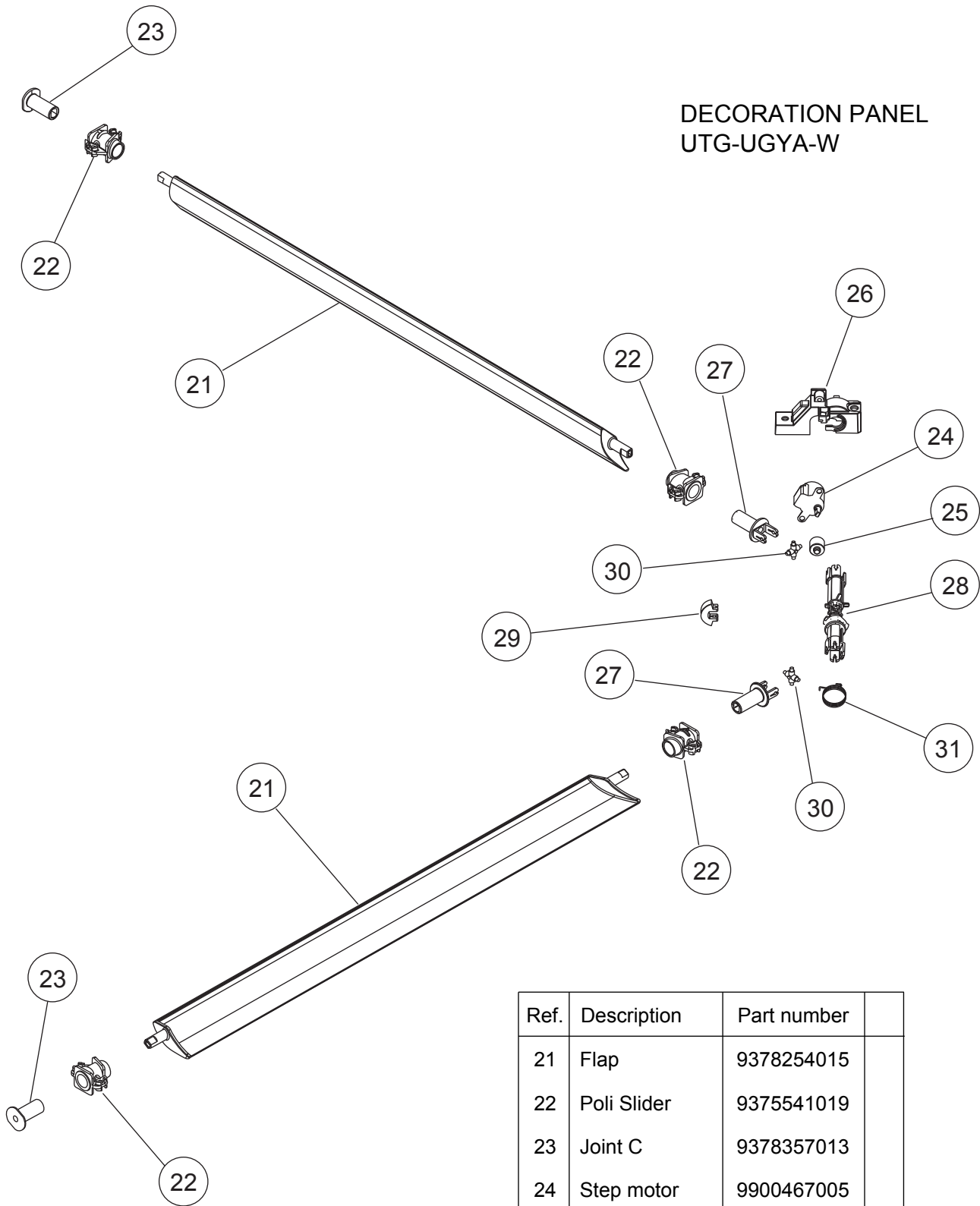
Ref.	Description	Part number
1	Intake Grille Assy	9378565012
2	Intake Grille	9378249011
3	Long Life Filter	9378252011
4	Filter Guide	9378253018
5	Hook Bracket	9378435018
6	Grille Hook	9378250017



DECORATION PANEL  
UTG-UGYA-W

Ref.	Description	Part number
11	Decoration Panel	9378242012
12	Corner Panel A	9378243019
13	Corner Panel (FUJITSU)	9378243026
14	Panel Cover A	9378261013
15	Panel Cover B	9378262010
16	Drain Cover	9378359017

DECORATION PANEL  
UTG-UGYA-W

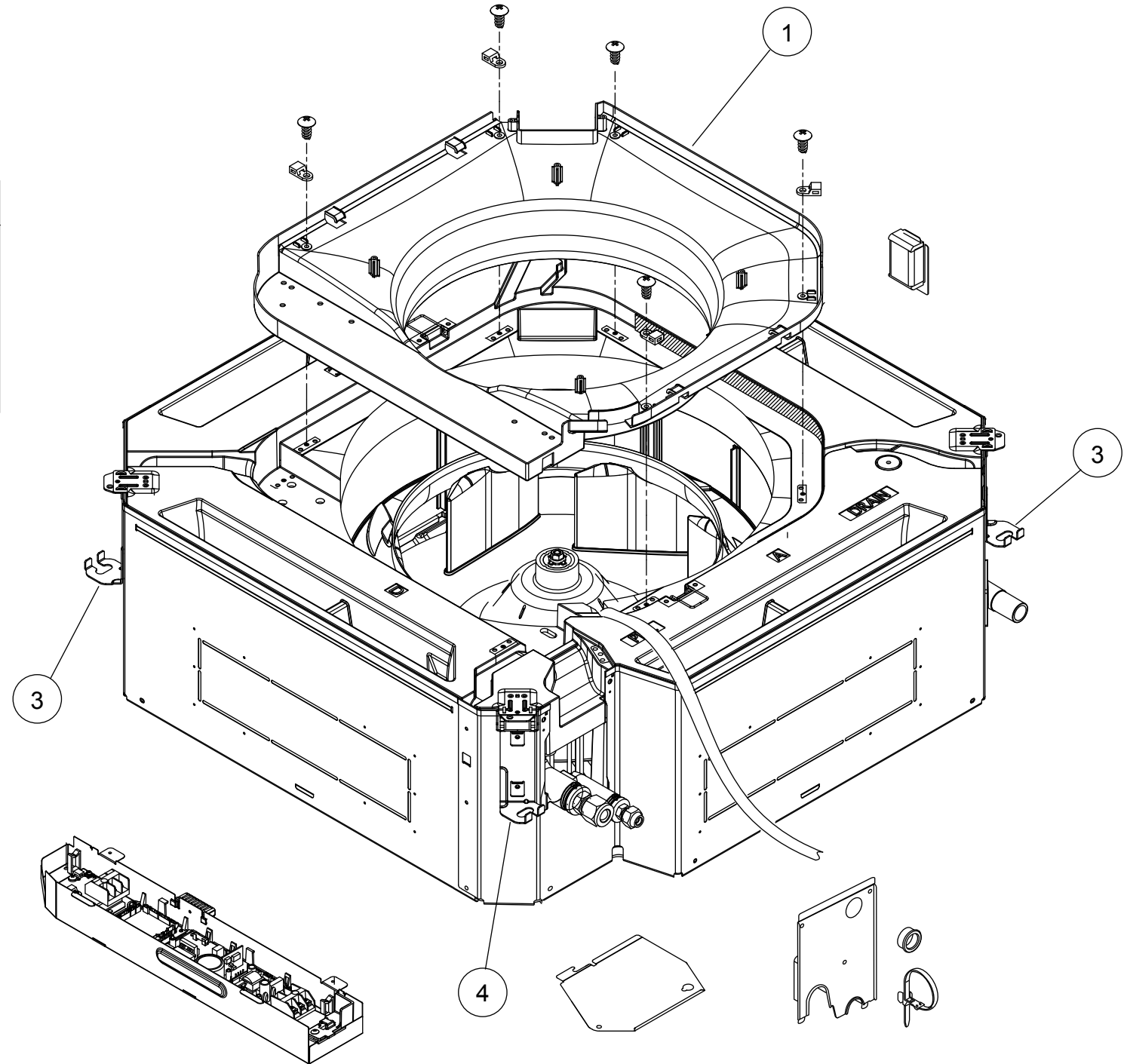
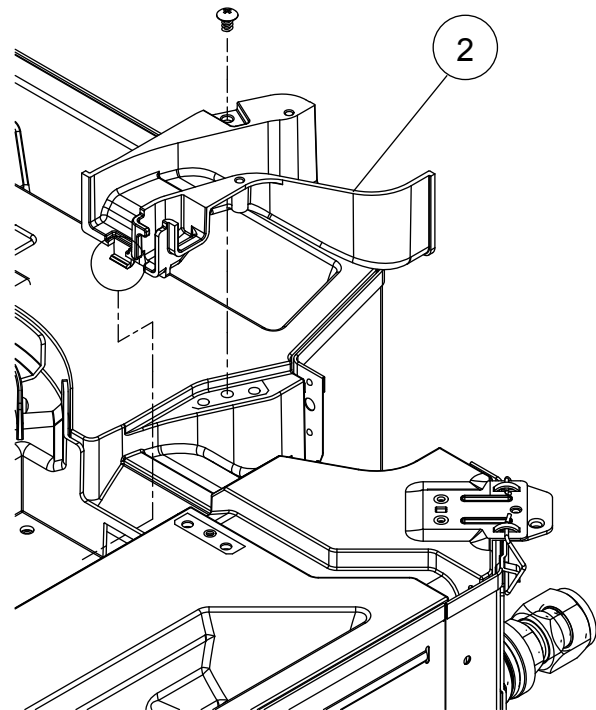


Ref.	Description	Part number
21	Flap	9378254015
22	Poli Slider	9375541019
23	Joint C	9378357013
24	Step motor	9900467005
25	Gear A	9378256019
26	Motor Holder	9378255012
27	Joint A	9378258013
28	Joint B	9378259010
29	Gear B	9378257016
30	Joint Shaft	9378260016
31	Flap Spring	9378356016

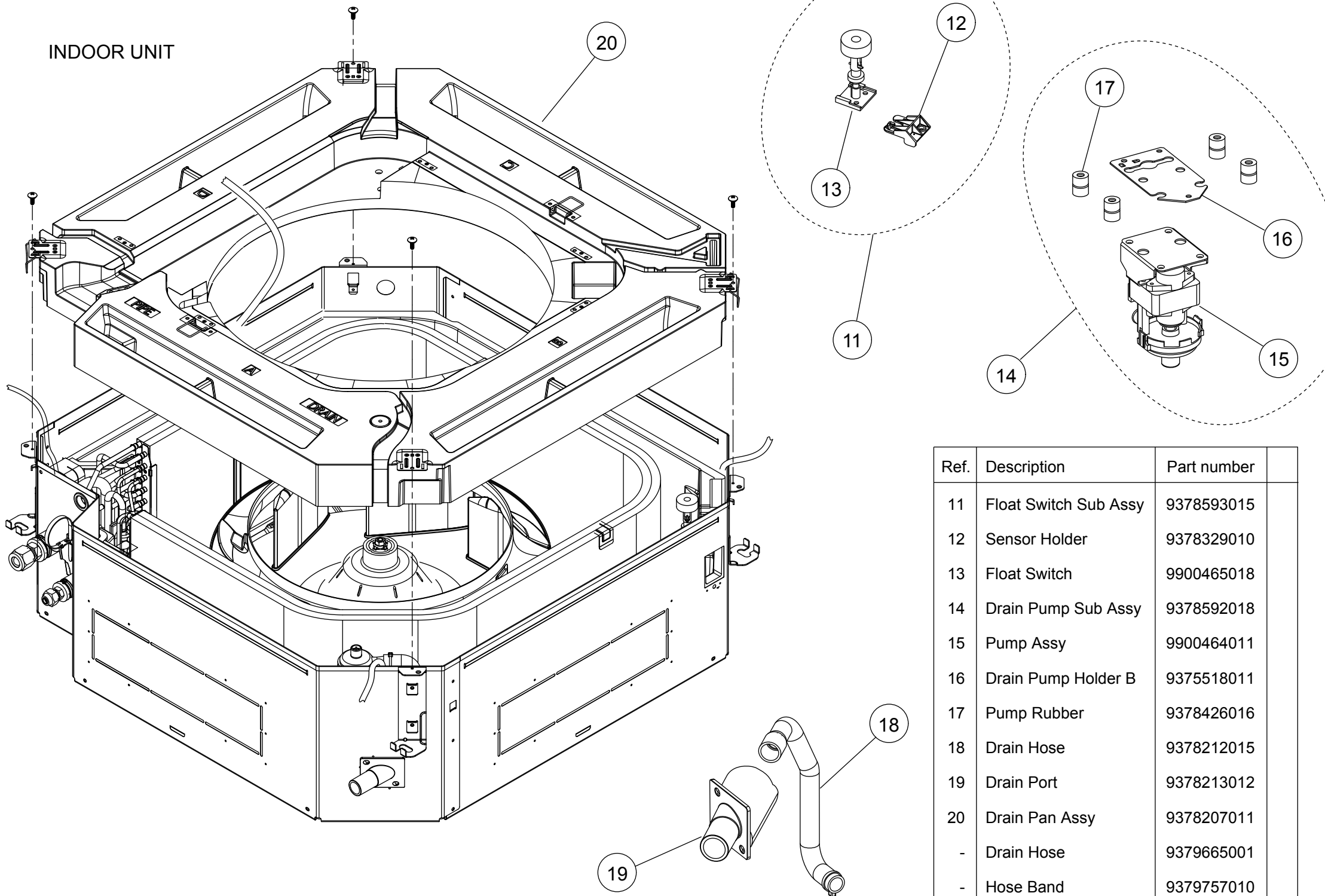
# PARTS

## INDOOR UNIT

Ref.	Description	Part number
1	Bell Mouth	9378227019
2	Terminal Wire Cover	9378548015
3	Hook R	9378197015
4	Hook L	9378198012

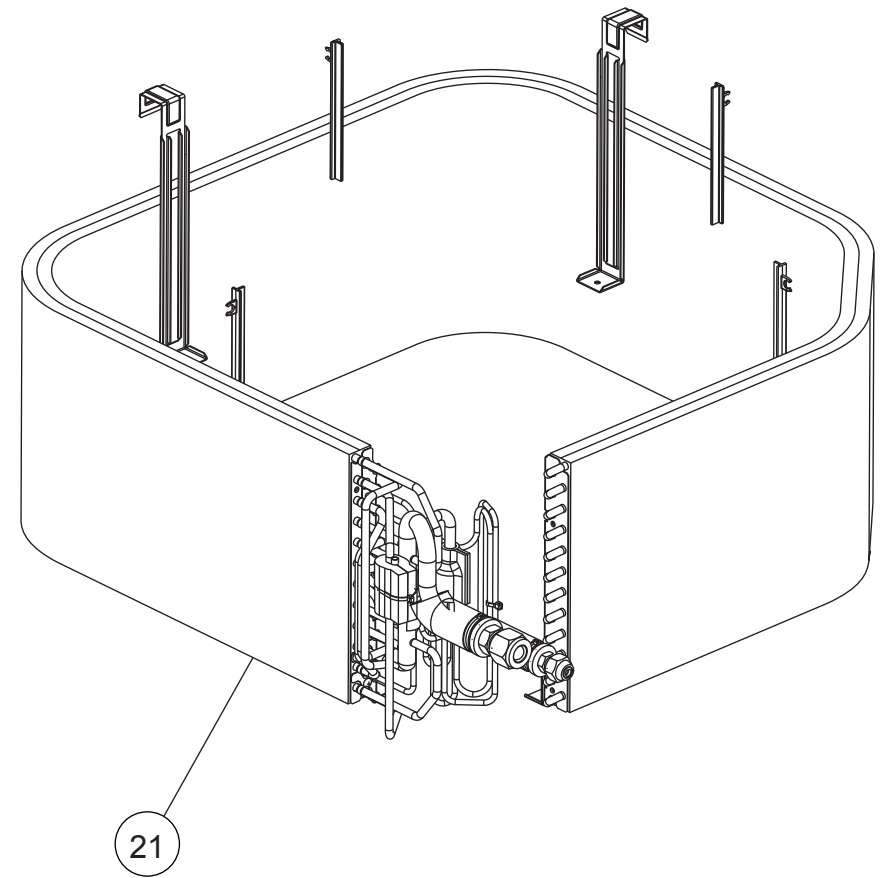
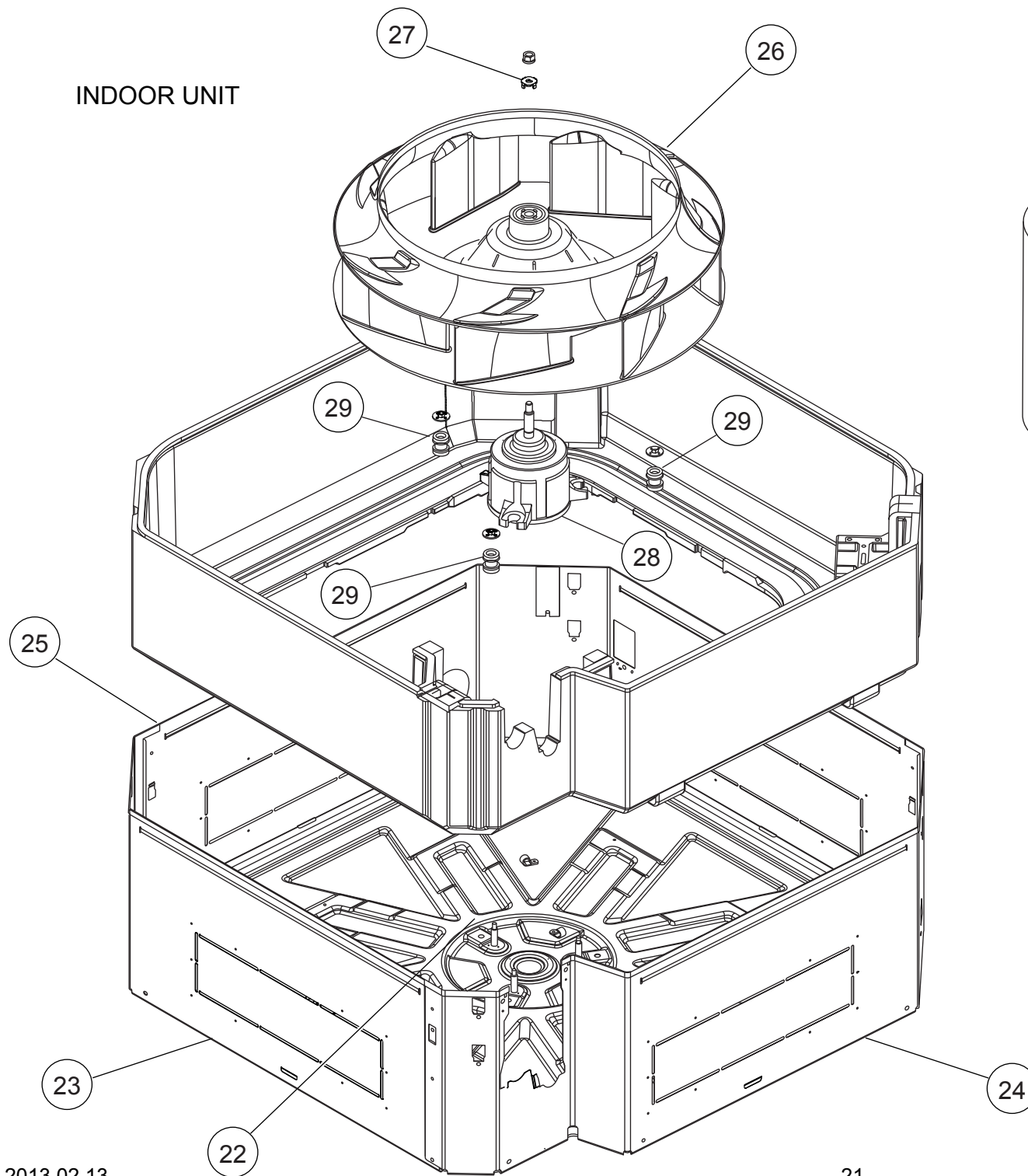


INDOOR UNIT



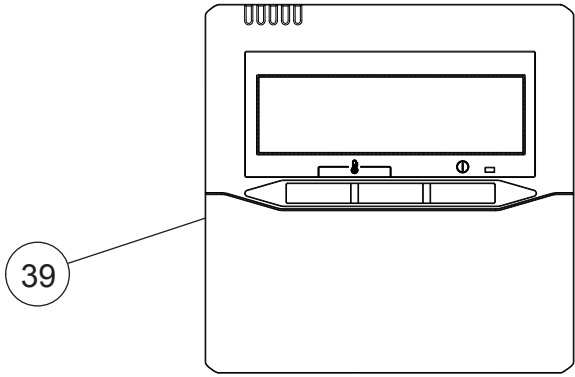
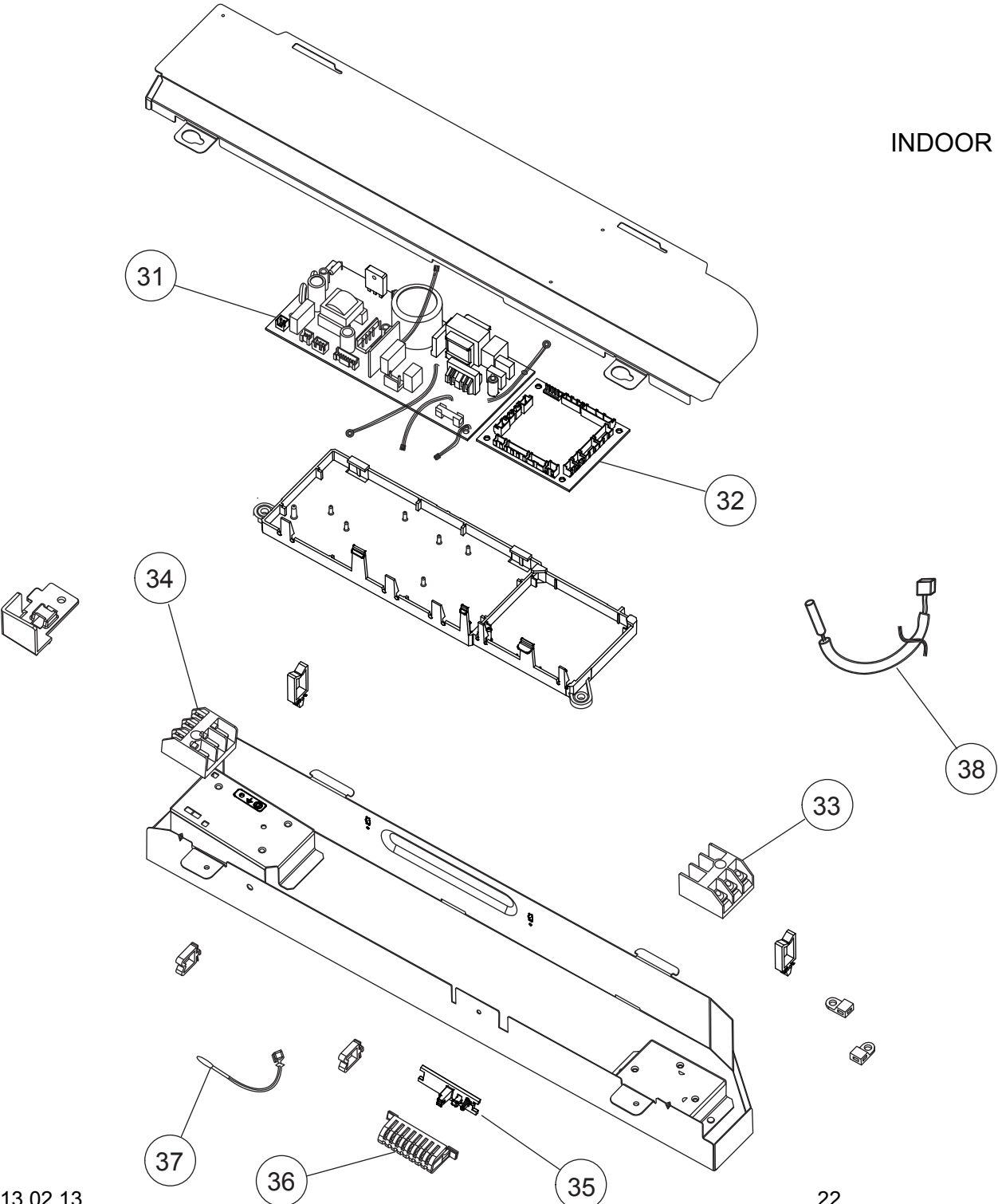
Ref.	Description	Part number
11	Float Switch Sub Assy	9378593015
12	Sensor Holder	9378329010
13	Float Switch	9900465018
14	Drain Pump Sub Assy	9378592018
15	Pump Assy	9900464011
16	Drain Pump Holder B	9375518011
17	Pump Rubber	9378426016
18	Drain Hose	9378212015
19	Drain Port	9378213012
20	Drain Pan Assy	9378207011
-	Drain Hose	9379665001
-	Hose Band	9379757010

INDOOR UNIT



Ref.	Description	Part number
21	Evaporator Total Assy	9378580015
22	Top Plate Assy	9378395015
23	Cabinet A Sub Assy	9378594012
24	Cabinet B Sub Assy	9378595019
25	Cabinet C Sub Assy	9378570016
26	Turbo Fan Assy	9378228016
27	Turbo Fan Washer	9378394018
28	Motor, DC Brushless	9602716005
29	Rubber (Motor)	9378223011

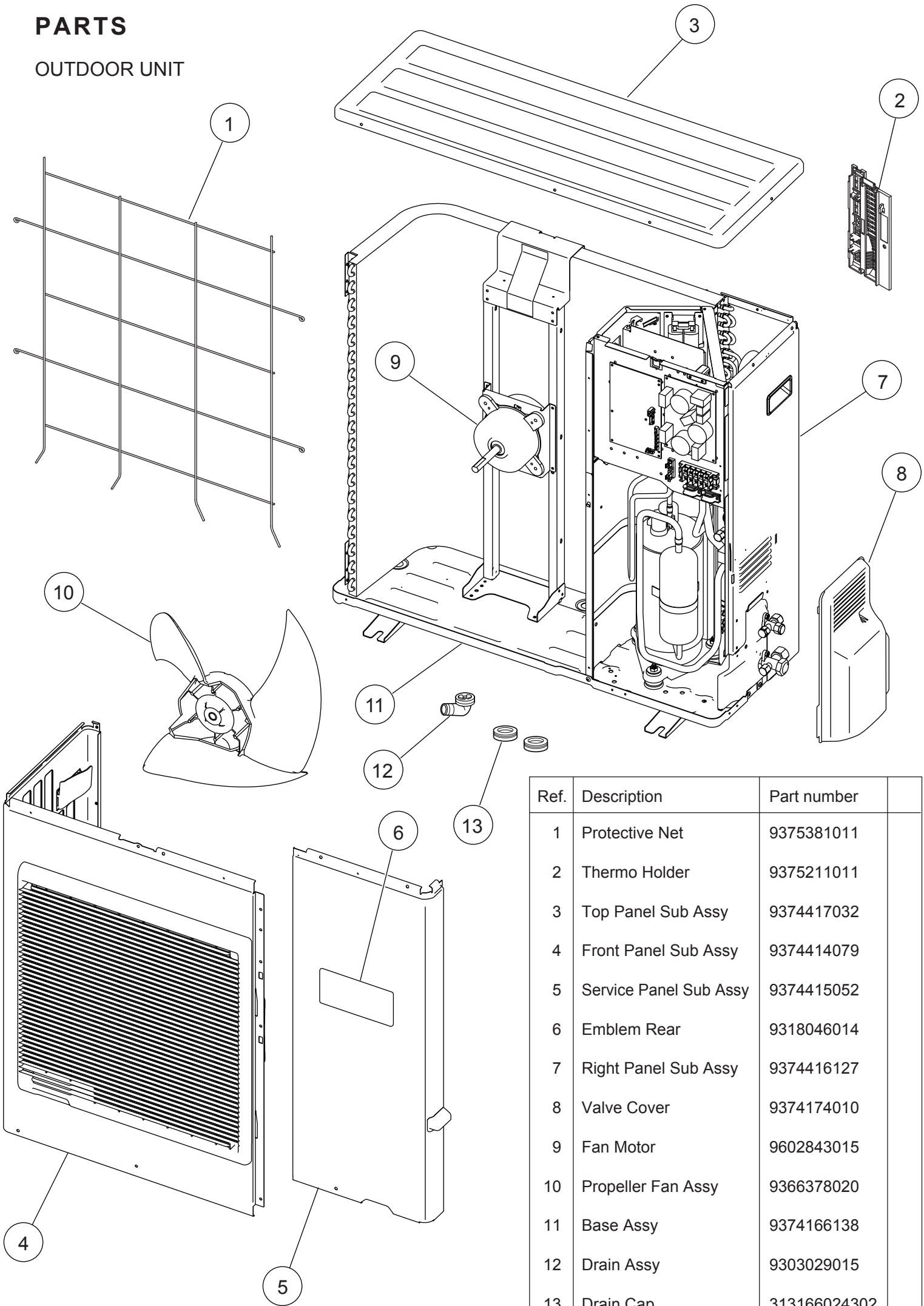
INDOOR UNIT



Ref.	Description	Part number
31	Power Supply PCB	9707398366
32	Main PCB (30)	9709245231
32	Main PCB (36)	9709245248
33	Terminal 3P	9306489045
34	Terminal 3P	9703345012
35	Thermistor Holder A	9378206014
36	Thermistor Holder B	9378330016
37	Room Thermistor	9900445010
38	Pipe Thermistor	9900470012
39	Remote Control	9318593013

# PARTS

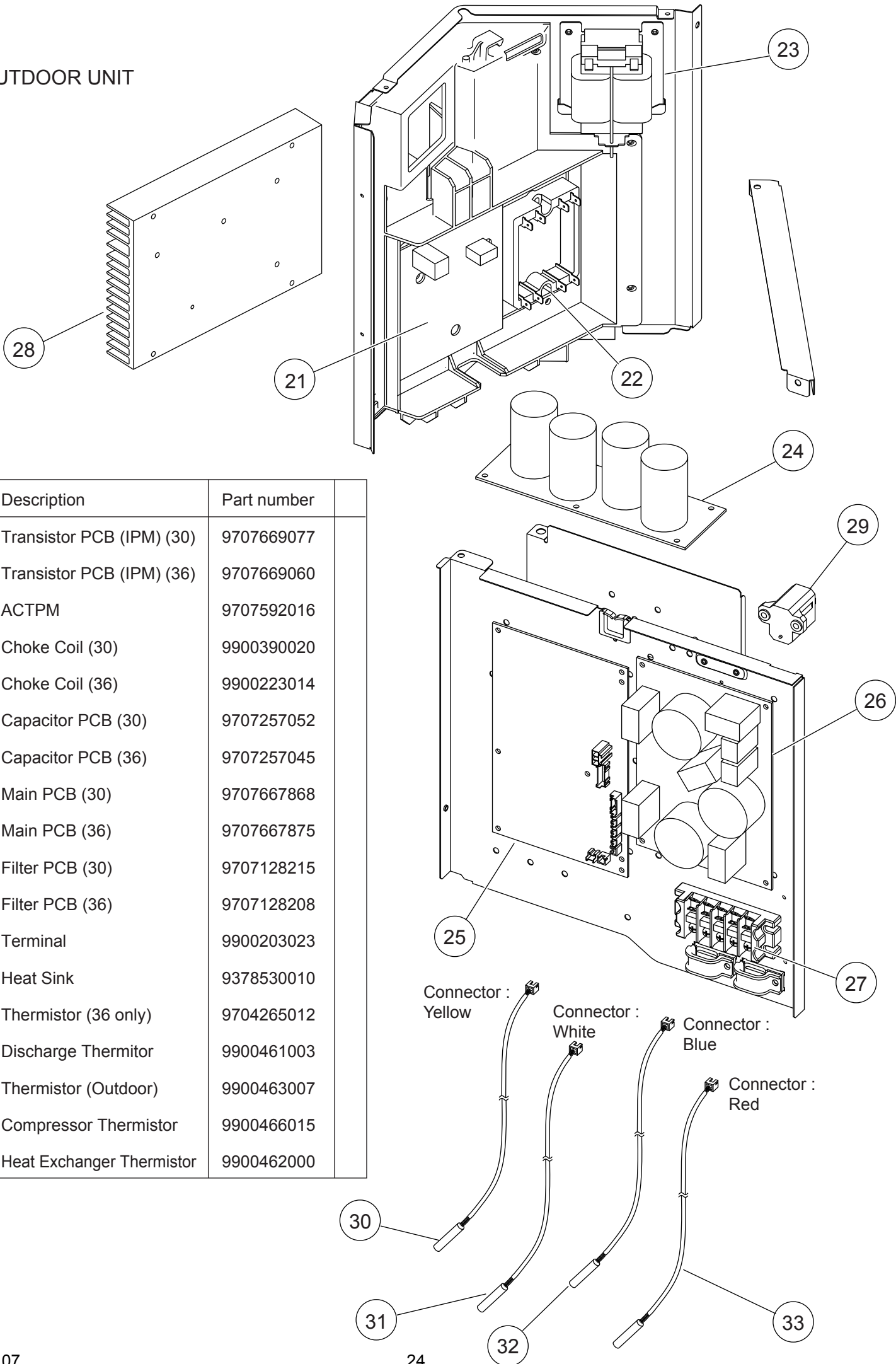
## OUTDOOR UNIT



Ref.	Description	Part number
1	Protective Net	9375381011
2	Thermo Holder	9375211011
3	Top Panel Sub Assy	9374417032
4	Front Panel Sub Assy	9374414079
5	Service Panel Sub Assy	9374415052
6	Emblem Rear	9318046014
7	Right Panel Sub Assy	9374416127
8	Valve Cover	9374174010
9	Fan Motor	9602843015
10	Propeller Fan Assy	9366378020
11	Base Assy	9374166138
12	Drain Assy	9303029015
13	Drain Cap	313166024302

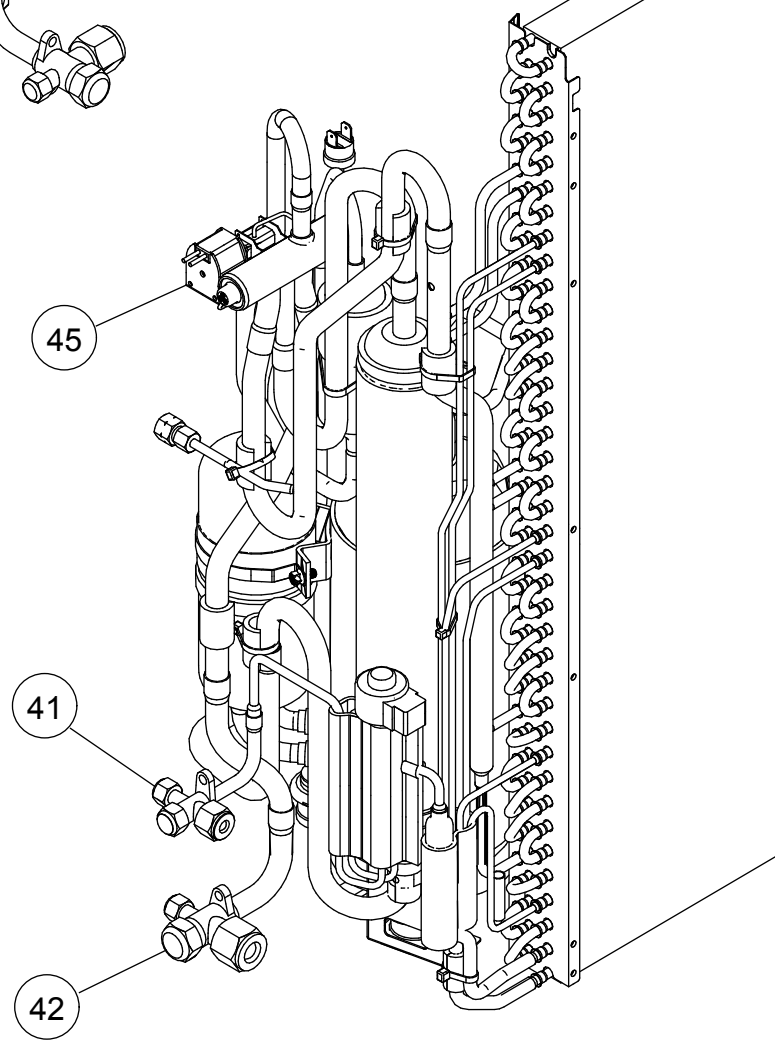
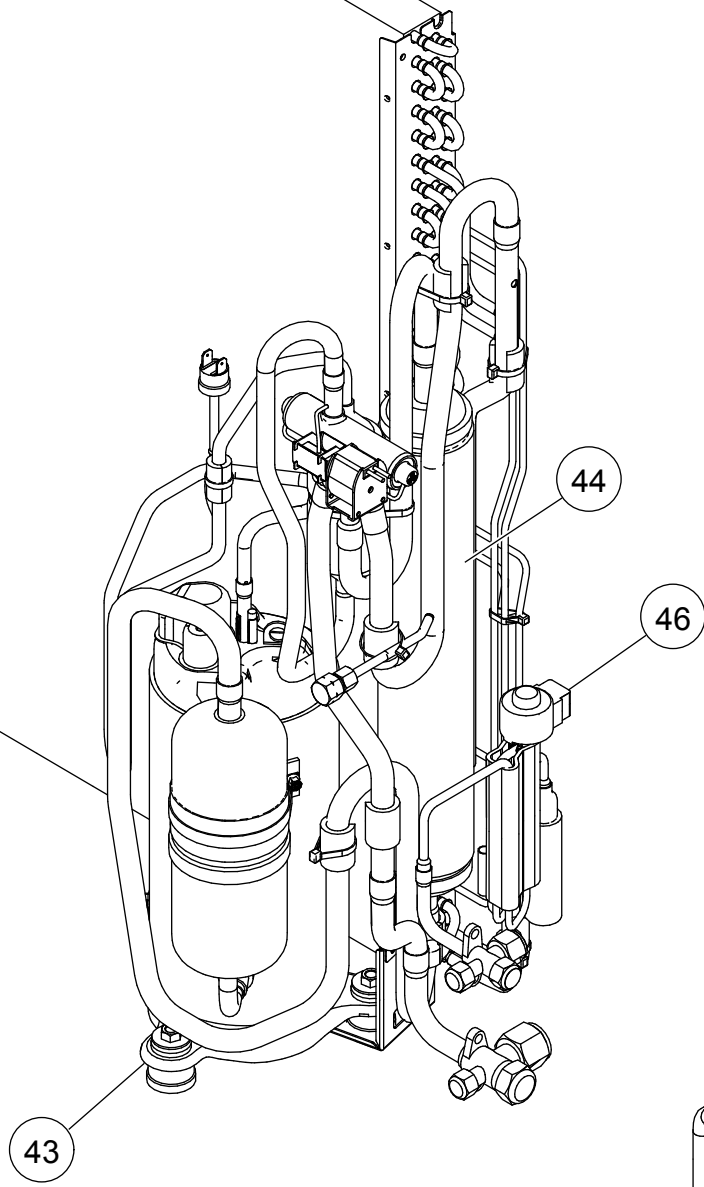


# OUTDOOR UNIT

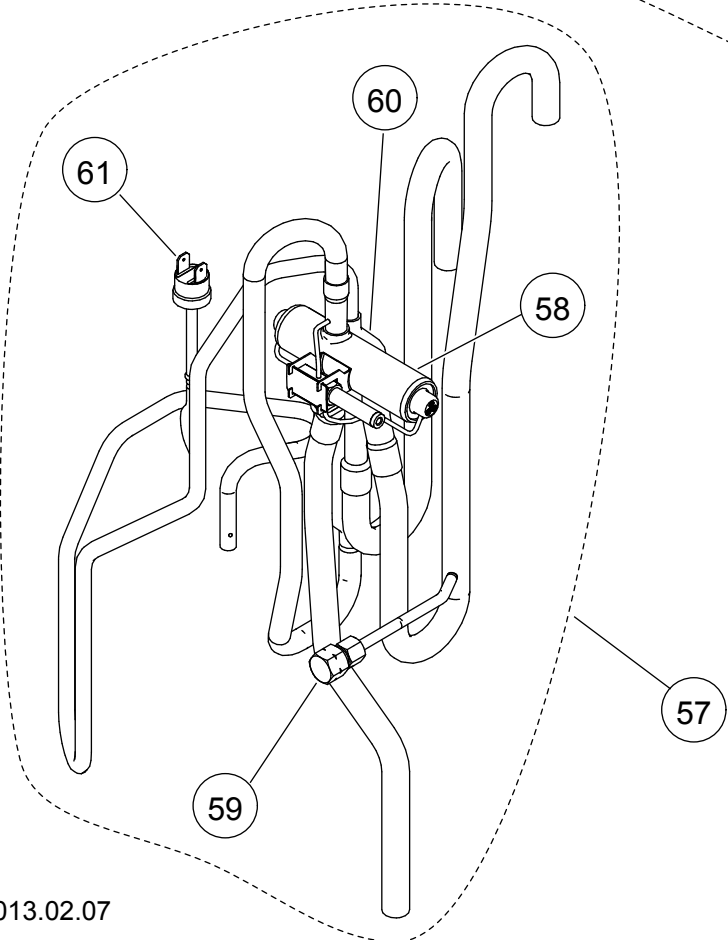
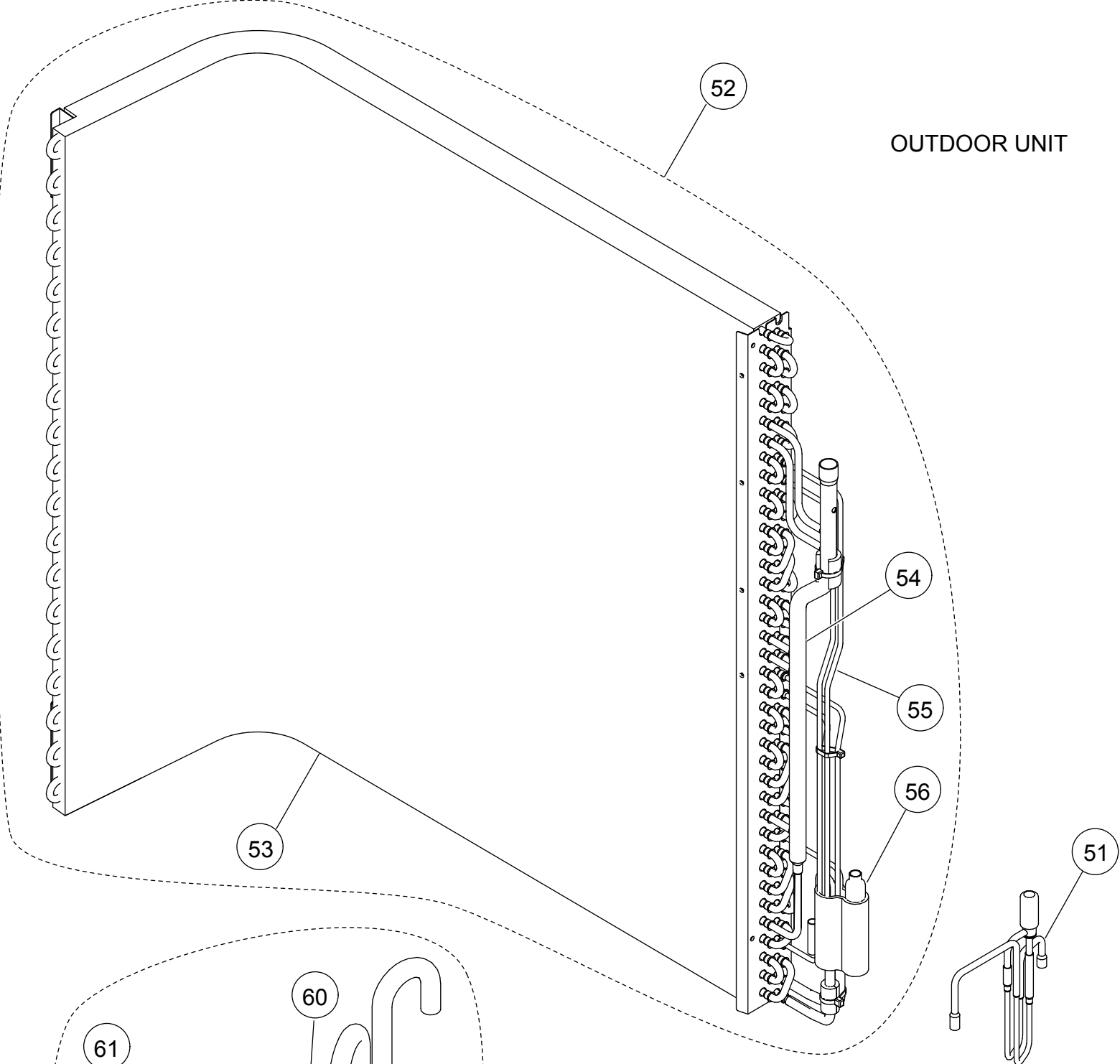


Ref.	Description	Part number
21	Transistor PCB (IPM) (30)	9707669077
21	Transistor PCB (IPM) (36)	9707669060
22	ACTPM	9707592016
23	Choke Coil (30)	9900390020
23	Choke Coil (36)	9900223014
24	Capacitor PCB (30)	9707257052
24	Capacitor PCB (36)	9707257045
25	Main PCB (30)	9707667868
25	Main PCB (36)	9707667875
26	Filter PCB (30)	9707128215
26	Filter PCB (36)	9707128208
27	Terminal	9900203023
28	Heat Sink	9378530010
29	Thermistor (36 only)	9704265012
30	Discharge Thermistor	9900461003
31	Thermistor (Outdoor)	9900463007
32	Compressor Thermistor	9900466015
33	Heat Exchanger Thermistor	9900462000

OUTDOOR UNIT




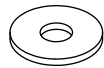
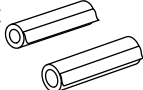
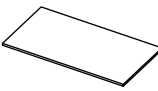
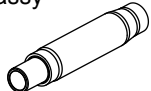


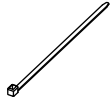
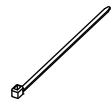
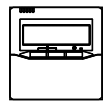


Ref.	Description	Part number
41	3-way Valve Assy	9377958013
42	3-way Valve Assy	9377959010
43	Compressor	9810135001
44	Accumulator	9385005006
45	Solenoid	9970055034
46	Expansion Valve Coil	9900057039







Ref.	Description	Part number
51	Expansion Valve Assy	9370947144
52	Condenser A Sub Assy	9374420308
53	Condenser A Assy	9374433056
54	Inlet Pipe (Cond) A Assy	9373461067
55	Outlet Pipe (Cond) A Assy	9374266104
56	Strainer Assy	9372524015
57	4-way Valve Assy	9374425198
58	4-way Valve	9900164010
59	Check Joint Assy	9372802038
60	Muffer	9372369050
61	Pressure Switch	9900186012

# ACCESSORIES

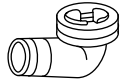

## INDOOR UNIT

Name and Shape	Q'ty	Application
Template (Carton top) 	1	For installing indoor unit
Washer 	8	For installing indoor unit
Coupler heat insulation 	2	For indoor side pipe joint
Insulation 	1	For installing drain pipe
Drain hose assy 	1	For installing drain pipe
Hose band assy 	1	For installing drain pipe
Drain pipe insulation 	1	For installing drain pipe
Binder (Large) 	3	For electrical wiring
Binder (Small) 	1	For electrical wiring
Wired remote control 	1	
Remote Control Cord 	1	For connecting remote control
Tapping screw ( $\phi 4 \times 16$ ) 	2	For installing remote control

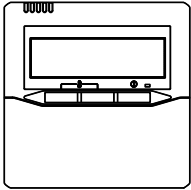
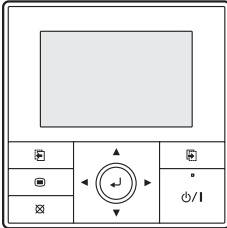
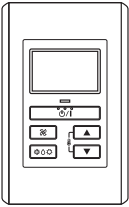
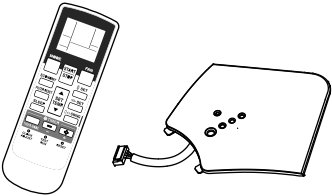
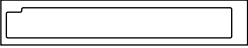
## DECORATION PANEL

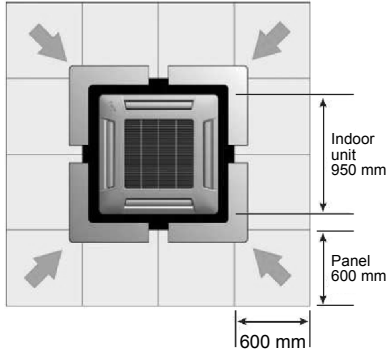
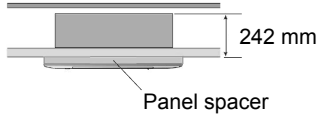
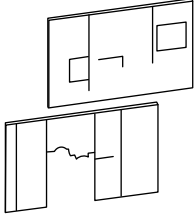
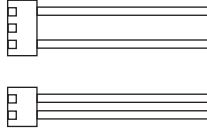

Name and Shape	Q'ty	Application
Hexagon Screw 	4	For mounting decoration panel
Screw 	4	For installing grille holding wire
Strap 	4	For installing corner panel
Grille holding wire 	2	For installing intake grille

## OUTDOOR UNIT

Name and Shape	Q'ty	Application	Part number
Drain pipe 	1	For drain piping work	9303029015
Drain cap 	2		313166024302

## OPTIONAL PARTS

Name and Shape	Application
<p>Wired remote control</p> 	<p>UTY-RNNYM Control unit on wall</p>
<p>High functional wired remote control</p> 	<p>UTY-RVNYM</p>
<p>Simple remote control</p> 	<p>UTY-RSNYM For air conditioner operation</p>
<p>Wireless remote control kit</p> 	<p>UTY-LRHYA2 Wireless remote control and IR receiver unit</p>
<p>Air outlet shutter plate</p> 	<p>UTR-YDZC Install the plate at outlet when carrying out 3-way direction operation.</p>

Name and Shape	Application
<p>Wide panel</p> 	<p>UTG-AGYA-W For ceiling hole</p>
<p>Panel spacer</p> 	<p>UTG-BGYA-W For making up difference</p>
<p>Insulation kit for high humidity</p> 	<p>UTZ-KXGA Install when the under roof condition is expected to be the humidity of over 80% and the temperature of over 30 °C.</p>
<p>Extrenal connect set</p> 	<p>UTY-XWZX Use to connect with various peripheral devices and air conditioner PCB.</p>
<p>Fresh air intake kit</p> 	<p>UTZ-VXGA 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.</p>

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