

SPLIT TYPE  
AIR CONDITIONER  
DUCT TYPE (50Hz)

# SERVICE MANUAL

Indoor unit	Outdoor unit
ARYG30LMLE	AOYG30LETL
ARYG36LMLE	AOYG36LETL



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# SPECIFICATIONS

## ELECTRICAL DATA

TYPE		Cooling & Heating	
INDOOR UNIT		ARYG30LMLE	ARYG36LMLE
OUTDOOR UNIT		AOYG30LETL	AOYG36LETL
COOLING CAPACITY		8.5 kW	9.4 kW
HEATING CAPACITY		10.0 kW	11.2 kW
POWER SOURCE		230 V 50 Hz	230 V 50 Hz
RUNNING CURRENT	Cooling	11.6 A	13.0 A
	Heating	11.7 A	13.6 A
INPUT WATTS	Cooling	2.65 kW	2.96 kW
	Heating	2.68 kW	3.10 kW
E.E.R.	Cooling	3.21 kW/kW	3.18 kW/kW
C.O.P.	Heating	3.73 kW/kW	3.61 kW/kW
STARTING CURRENT		12.2 A	13.7 A
MOISTURE REMOVAL		2.5 L/hr	3.0 L/hr
AIRCIRCULATION INDOOR	Cooling	1,900 m <sup>3</sup> /hr	1,900 m <sup>3</sup> /hr
	Heating	2,100 m <sup>3</sup> /hr	2,100 m <sup>3</sup> /hr
AIRCIRCULATION OUTDOOR		3,600 m <sup>3</sup> /hr	3,800 m <sup>3</sup> /hr
MAXIMUM CURRENT		17.0 A	20.0 A

## FAN SPEED

INDOOR UNIT	Discrimination	MFG-45RVN	MFG-45RVN
	High (cooling)	1,130 r.p.m.	1,130 r.p.m.
	High (heating)	1,270 r.p.m.	1,270 r.p.m.
	Medium	980 r.p.m.	980 r.p.m.
	Low	790 r.p.m.	790 r.p.m.
	Quiet	630 r.p.m.	630 r.p.m.
OUTDOOR UNIT	Discrimination	MFE-60TVT	MFE-60TVT
	Speed	850 r.p.m.	900 r.p.m.

## NOISE LEVEL

INDOOR UNIT	High (cooling)	39 dB	39 dB
	High (heating)	42 dB	42 dB
	Medium	35 dB	35 dB
	Low	30 dB	30 dB
	Quiet	26 dB	26 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, 2-cylinder 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	270 x 1,135 x 700 mm
OUTDOOR UNIT	H x W x D	830 x 900 x 330 mm

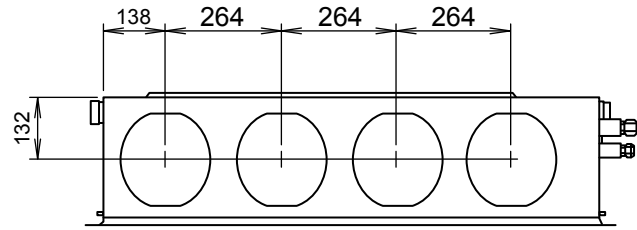
## WEIGHT

INDOOR UNIT	Shipping / Net	47 kg / 40 kg
OUTDOOR UNIT	Shipping / Net	68 kg / 61 kg

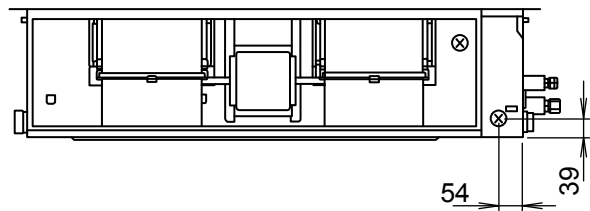
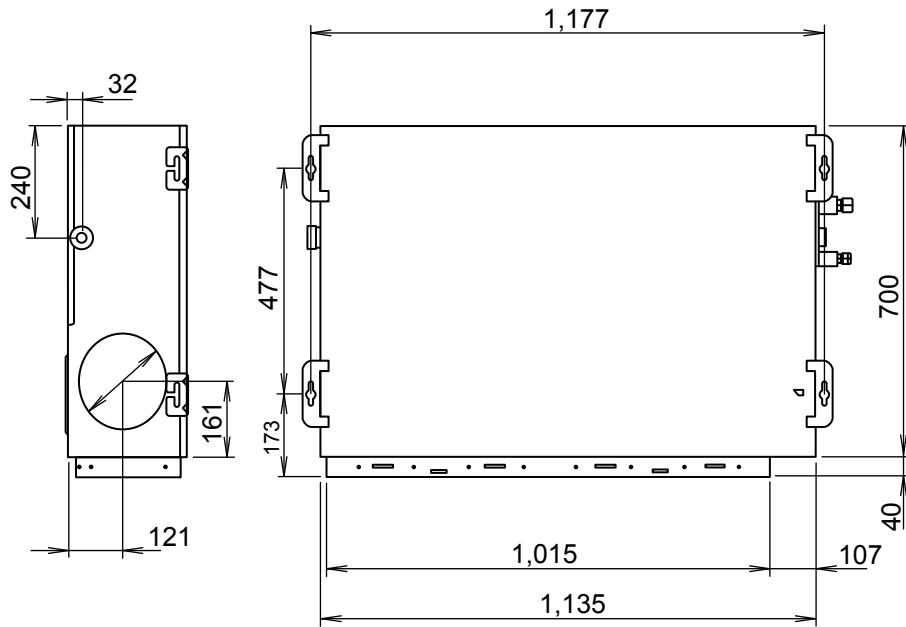
# DIMENSIONS

(Unit : mm)

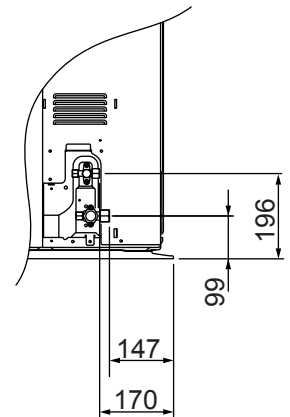
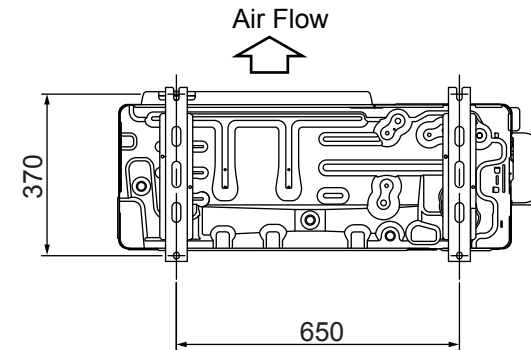
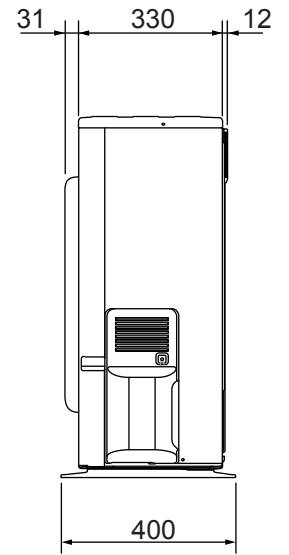
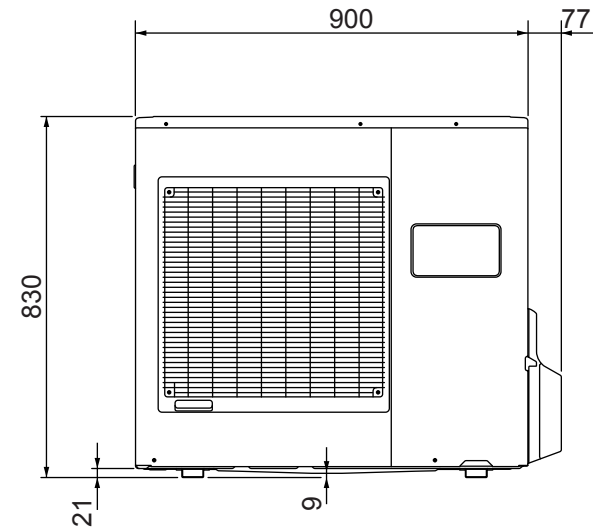
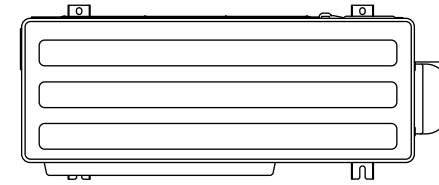
## INDOOR UNIT



Drain pipe diameters  
inside : 35.7 mm  
outside : 38.1 mm



## OUTDOOR UNIT

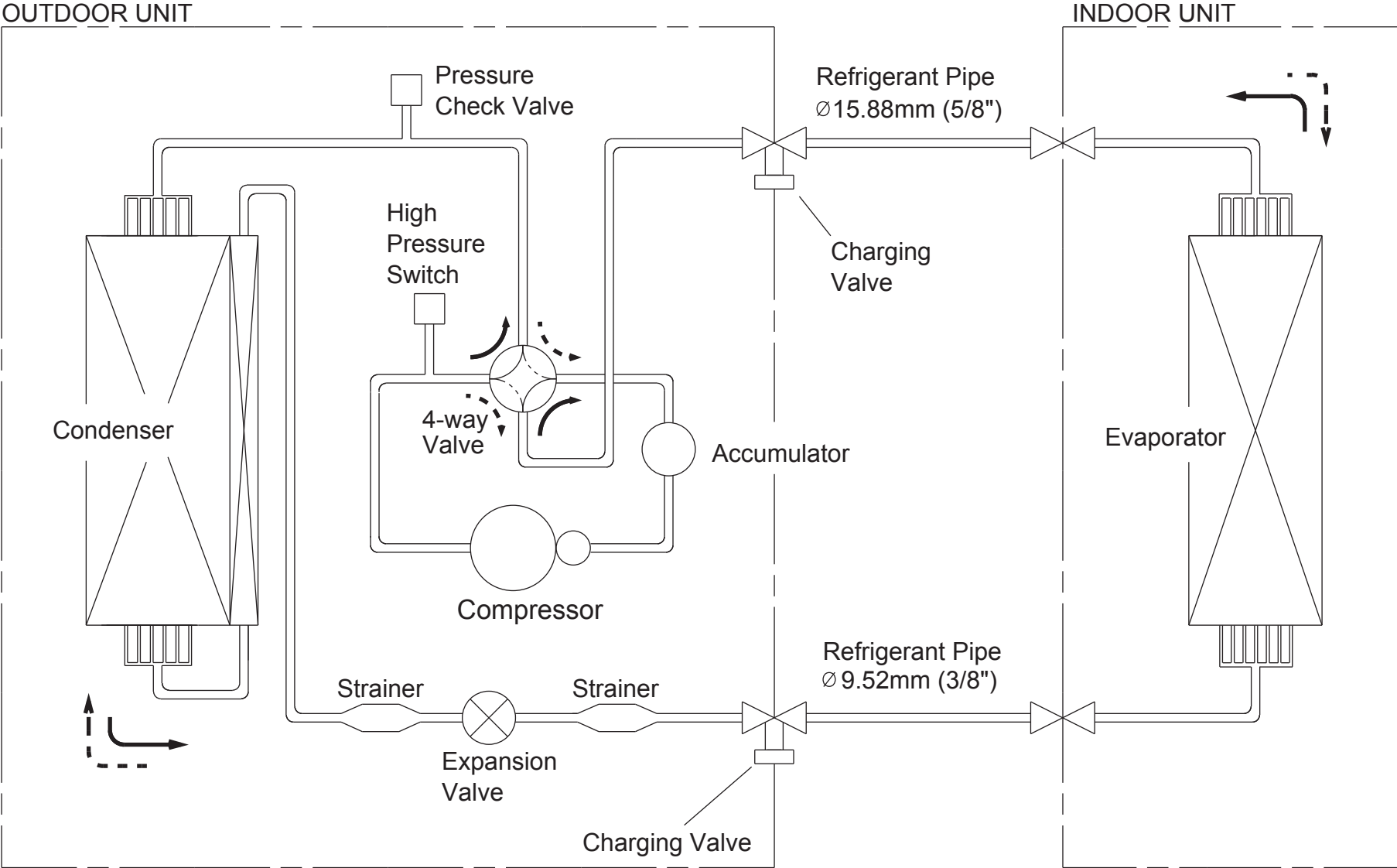


# REFRIGERANT SYSTEM DIAGRAM

Refrigerant direction

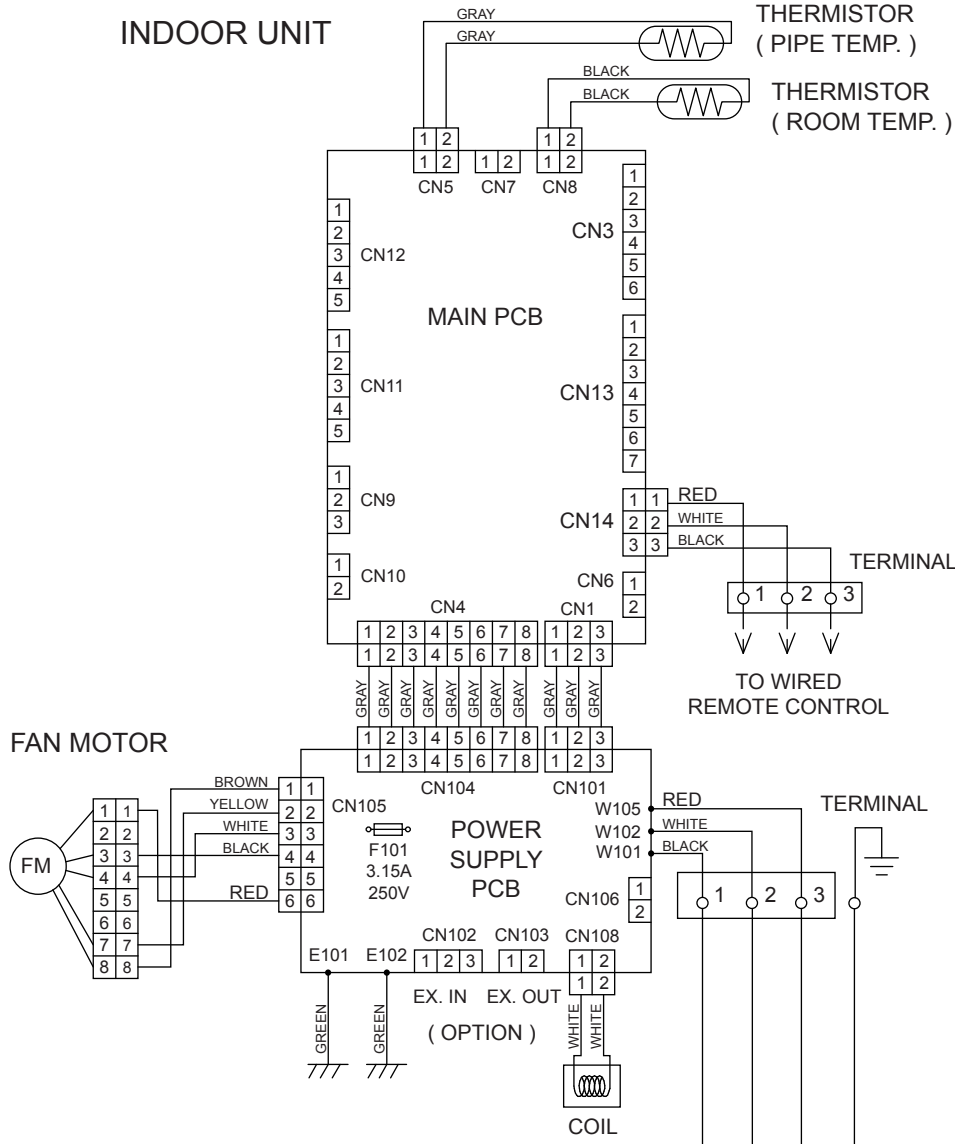
—▶ : Cool

- - -▶ : Heat

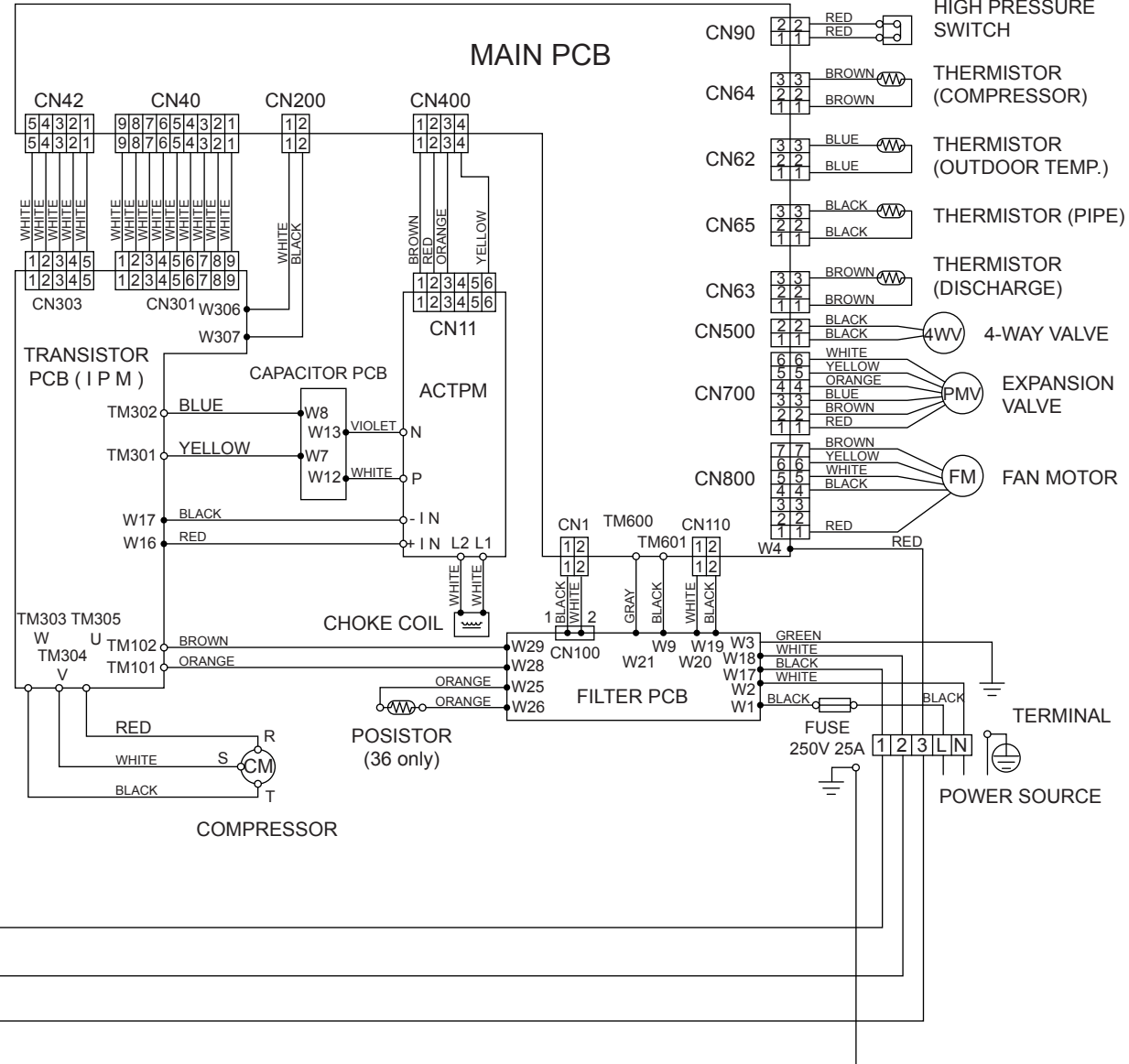


# CIRCUIT DIAGRAM

## INDOOR UNIT

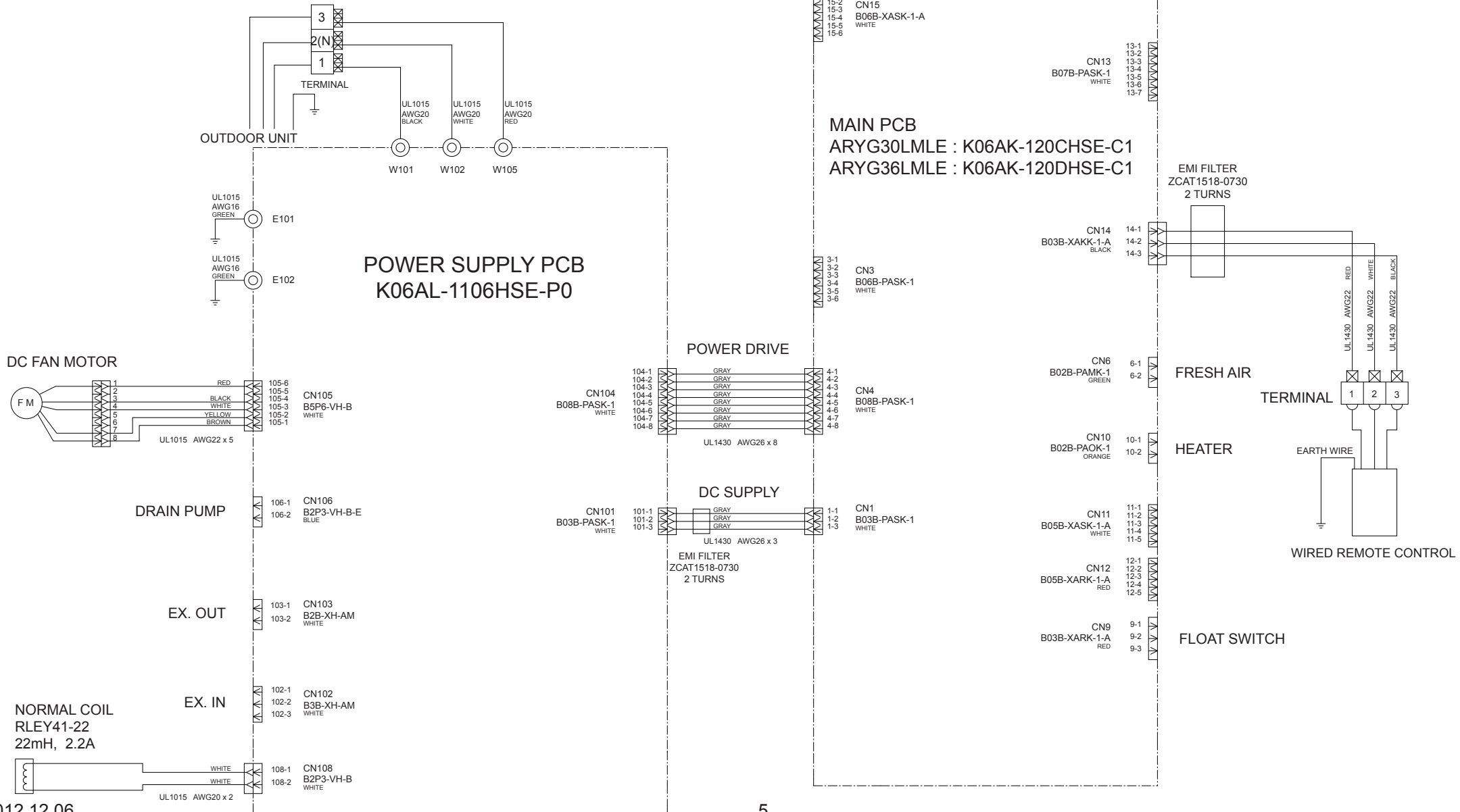


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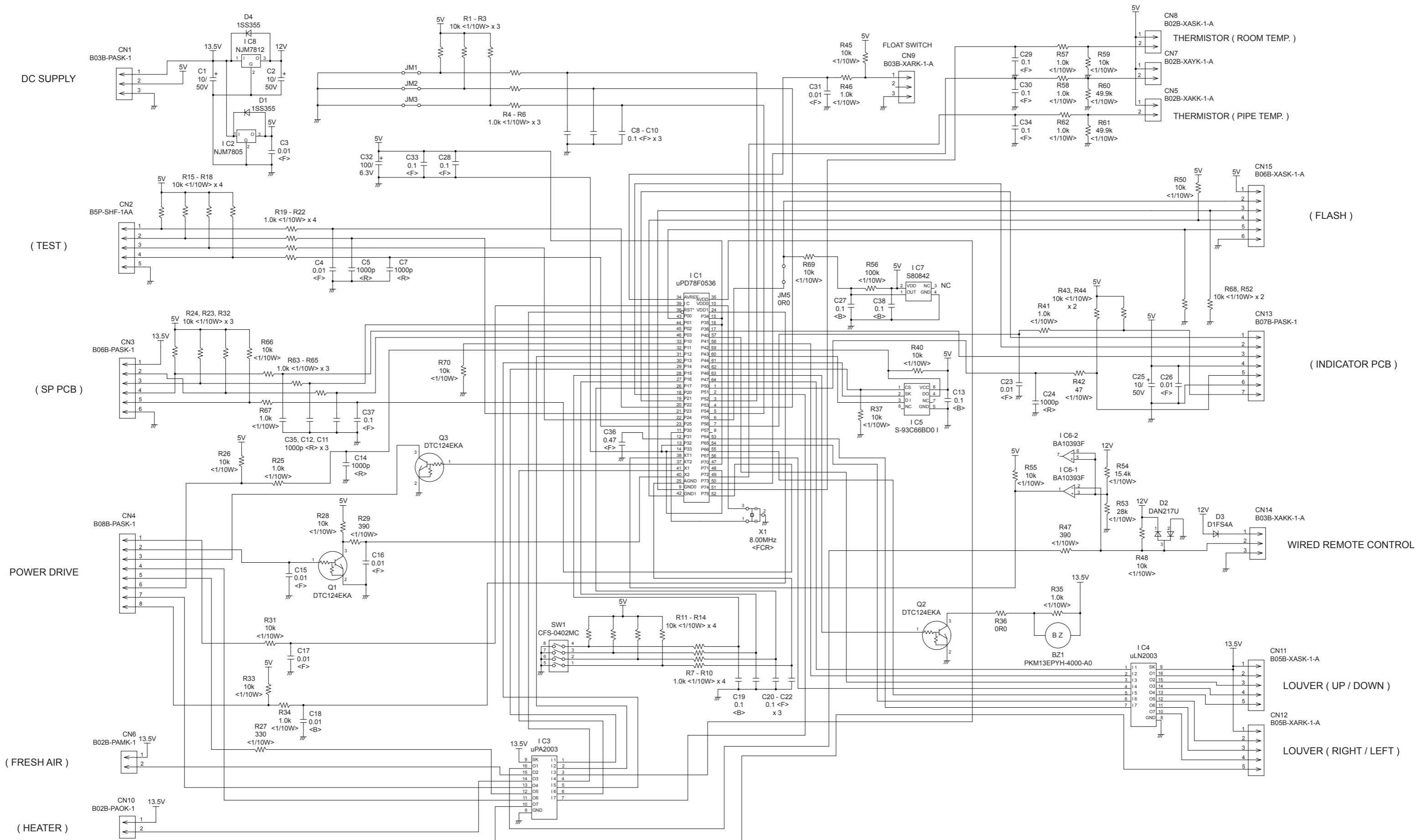


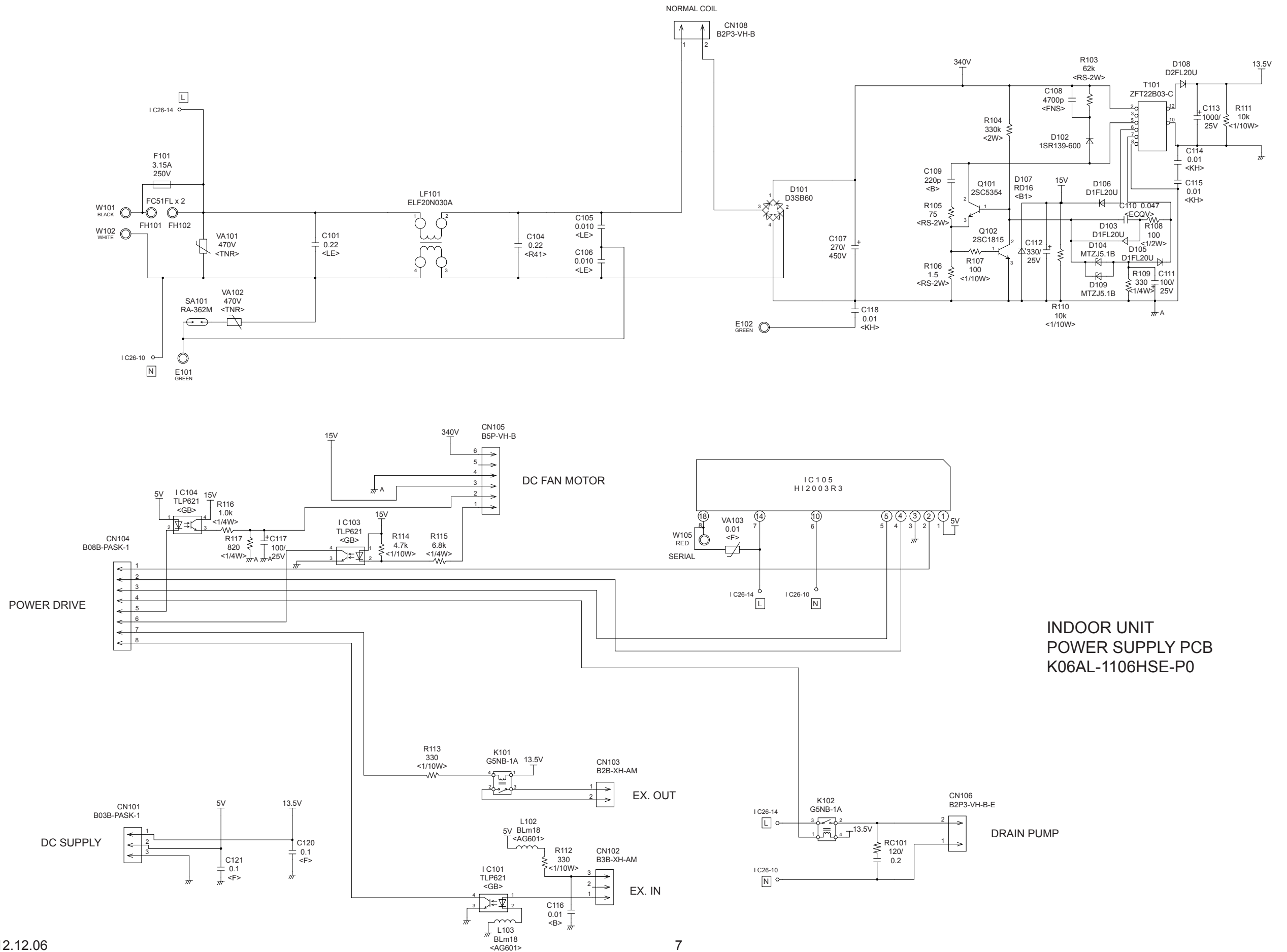
# INDOOR PCB CIRCUIT DIAGRAM

CONTROL UNIT  
 ARYG30LMLE : EZ-0121LHSE  
 ARYG36LMLE : EZ-0121MHSE



INDOOR UNIT  
 MAIN PCB  
 ARYG30LMLE : K06AK-120CHSE-C1  
 ARYG36LMLE : K06AK-120DHSE-C1

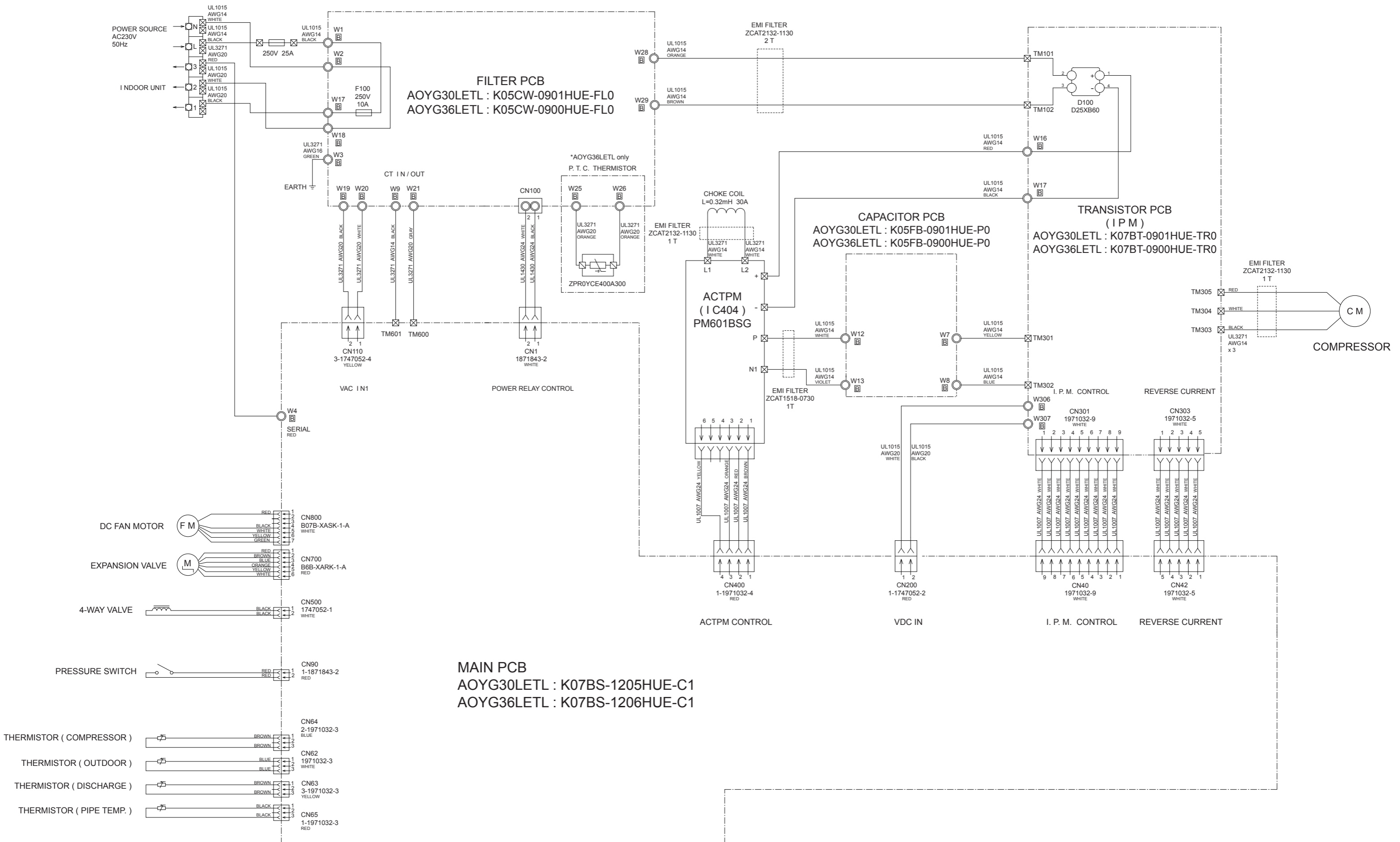


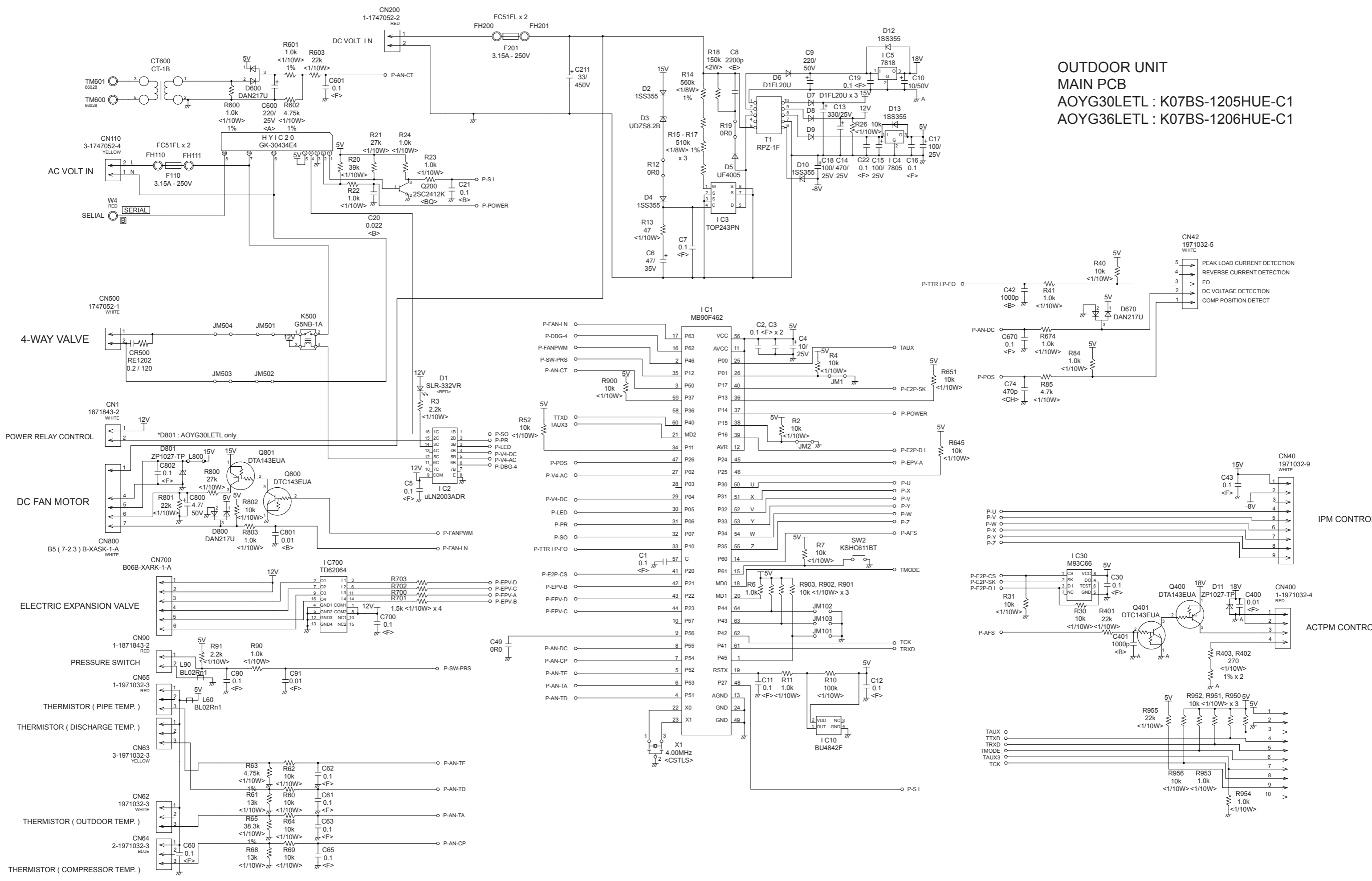




# OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY  
 AOYG30LETL : EZ-0121FHUE  
 AOYG36LETL : EZ-0121GHUE

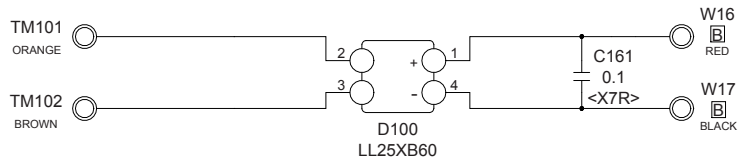




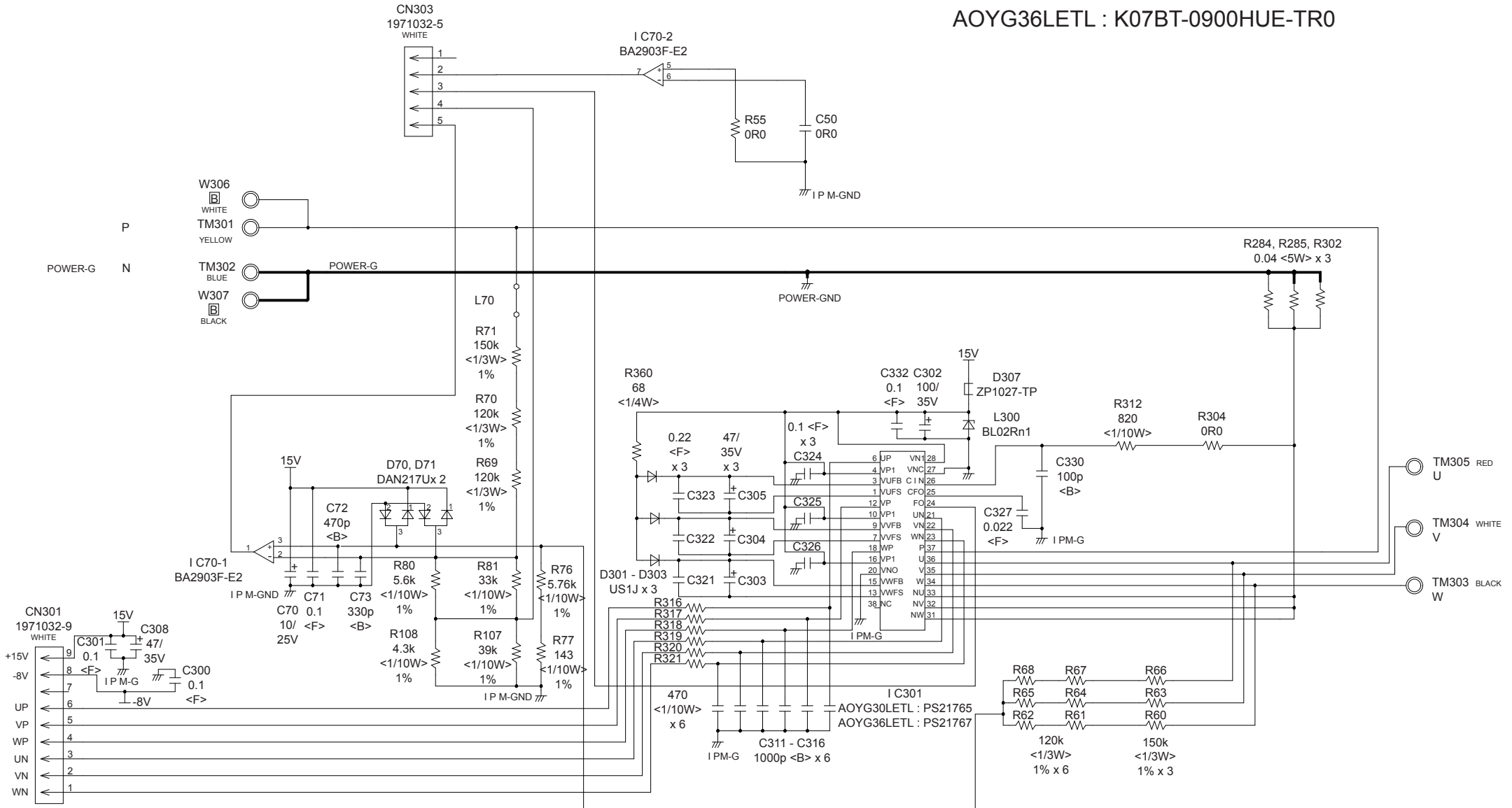
OUTDOOR UNIT  
 MAIN PCB  
 AOYG30LETL : K07BS-1205HUE-C1  
 AOYG36LETL : K07BS-1206HUE-C1

IPM CONTROL

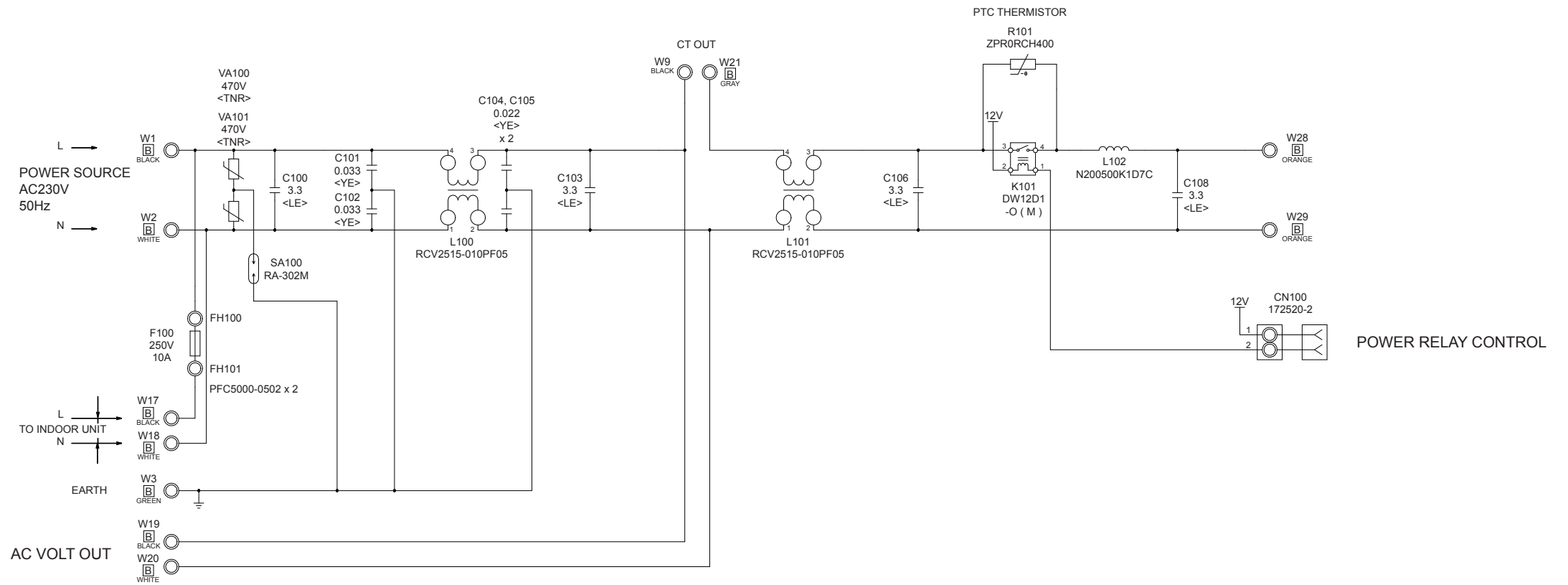
ACTPM CONTROL



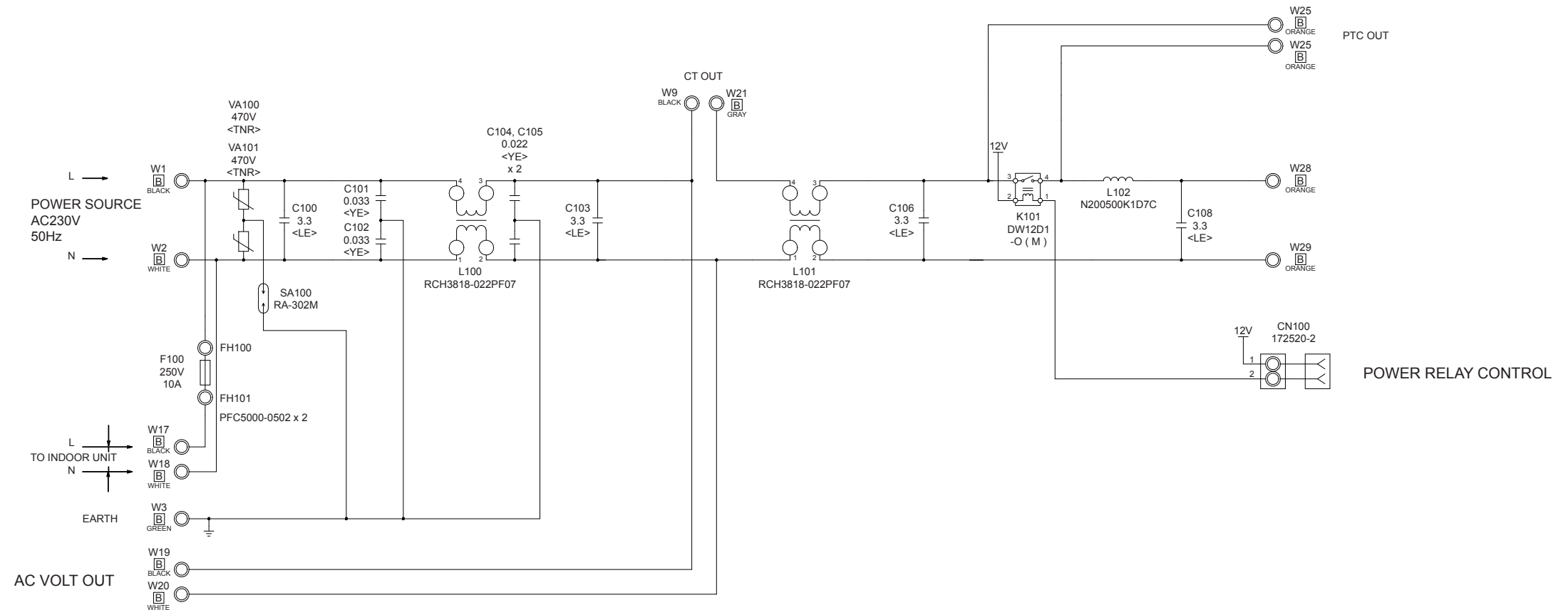
**OUTDOOR UNIT  
TRANSISTOR PCB  
( I P M )  
AOYG30LETL : K07BT-0901HUE-TR0  
AOYG36LETL : K07BT-0900HUE-TR0**



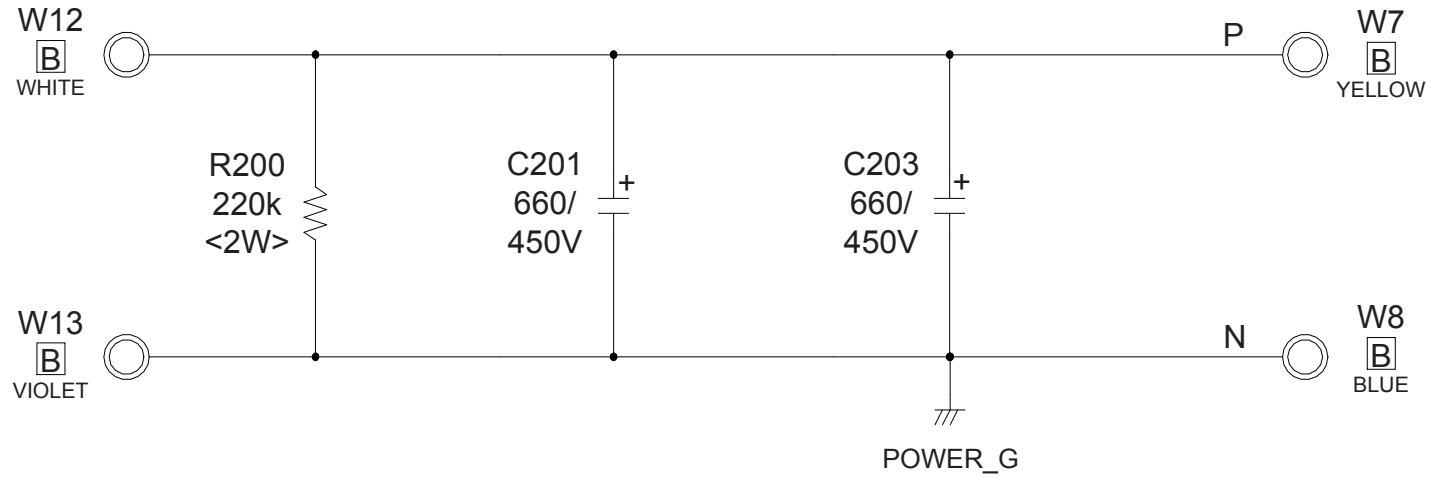
OUTDOOR UNIT  
AOYG30LETL  
FILTER PCB  
K05CW-0901HUE-FL0



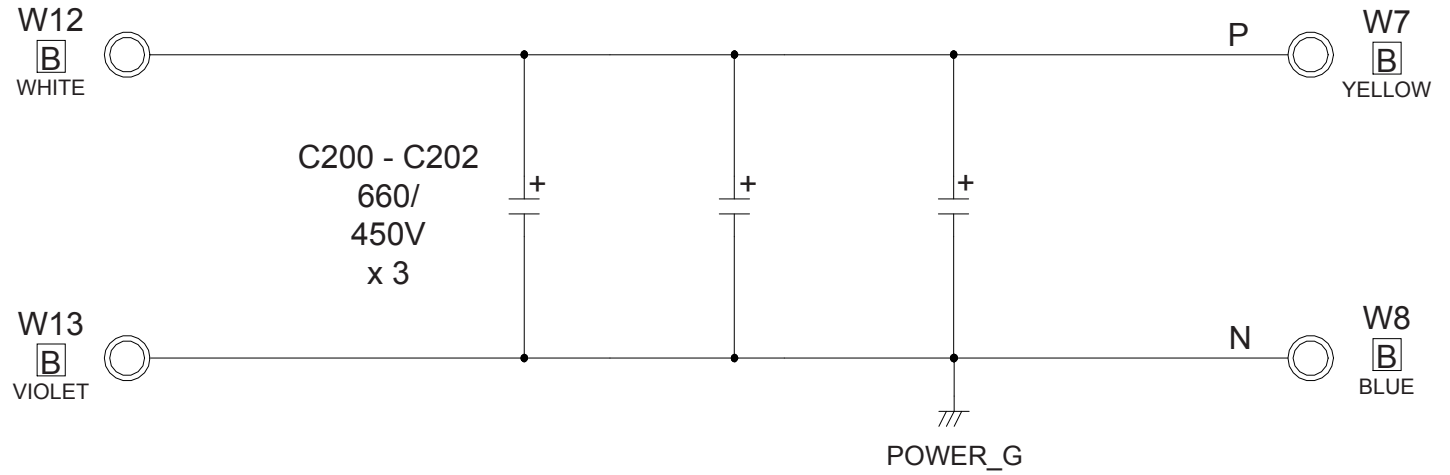
AOYG36LETL  
FILTER PCB  
K05CW-0900HUE-FL0



OUTDOOR UNIT  
 AOYG30LETL  
 CAPACITOR PCB  
 K05FB-0901HUE-P0



AOYG36LETL  
 CAPACITOR PCB  
 K05FB-0900HUE-P0



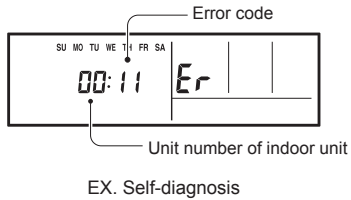
# ERROR DETECTION

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.)



● : 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	R.C. address or Refrigerant circuit address setting error [Simultaneous Multi]
● (2)	● (2)	◇	22	Indoor unit capacity error
● (2)	● (3)	◇	23	Combination error
● (2)	● (4)	◇	24	• Connection R.C. address error (indoor secondary unit) [Simultaneous Multi] • Connection R.C. address error (indoor unit or branch unit) [Flexible Multi]
● (2)	● (7)	◇	27	Primary unit, secondary 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	Room 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

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 1 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]

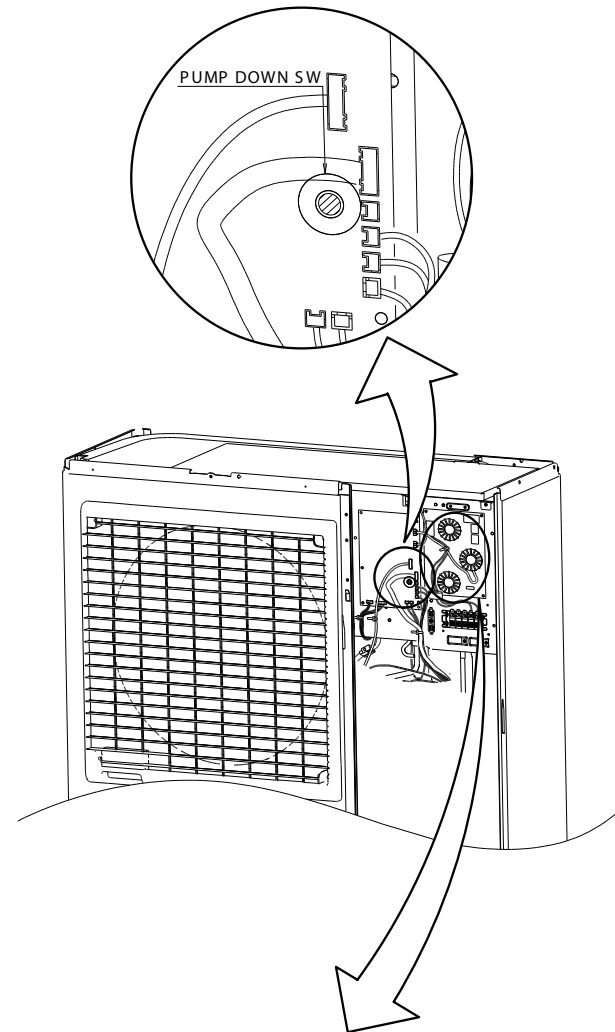
## OUTDOOR UNIT

### 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.

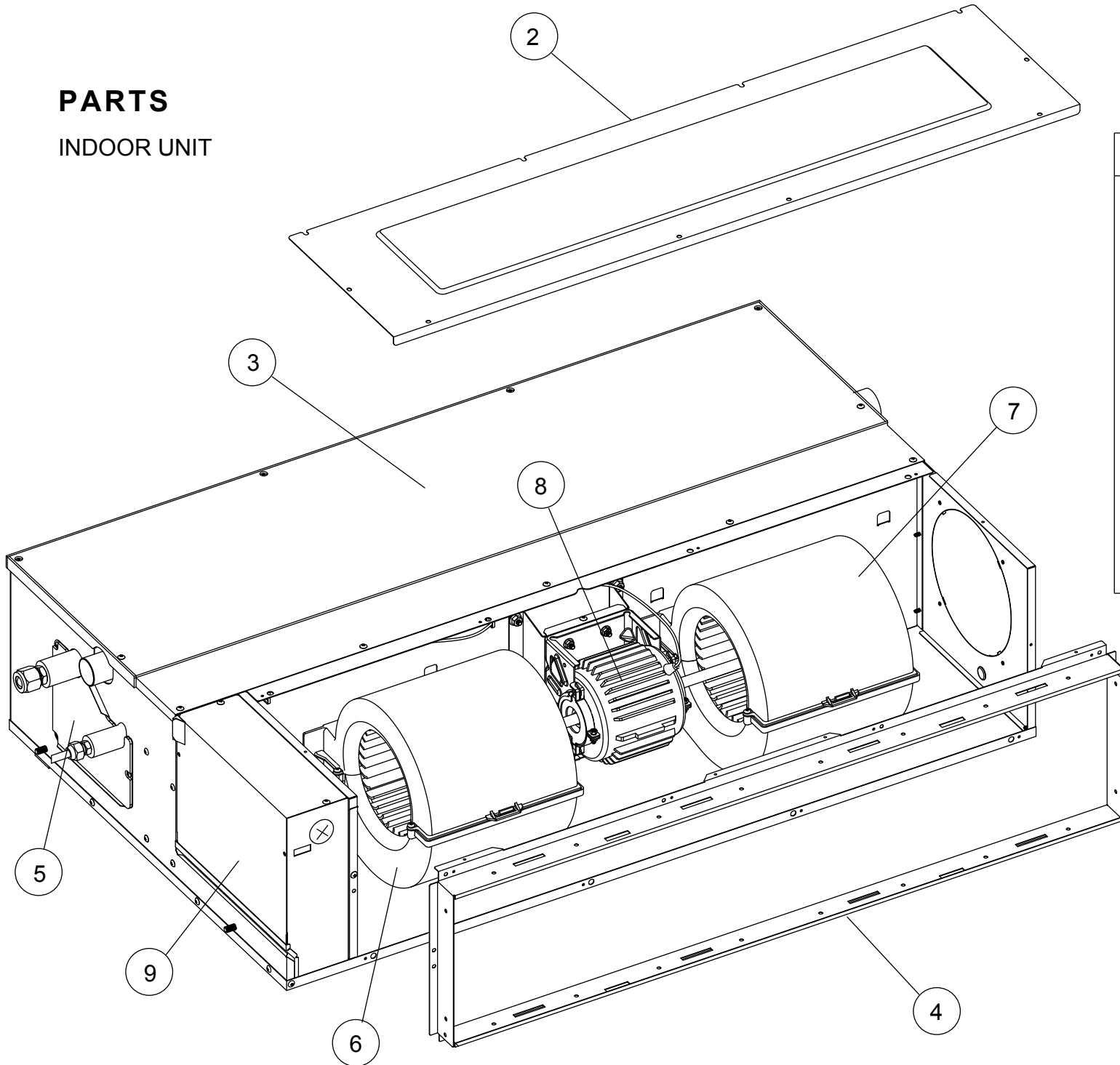


 DANGER

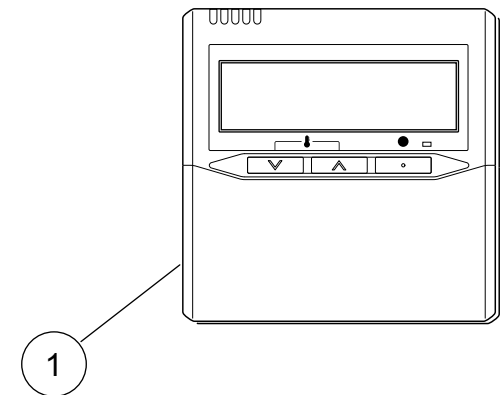
This part (Choke coil) generates high voltages.  
Never touch this part.

# PARTS

## INDOOR UNIT

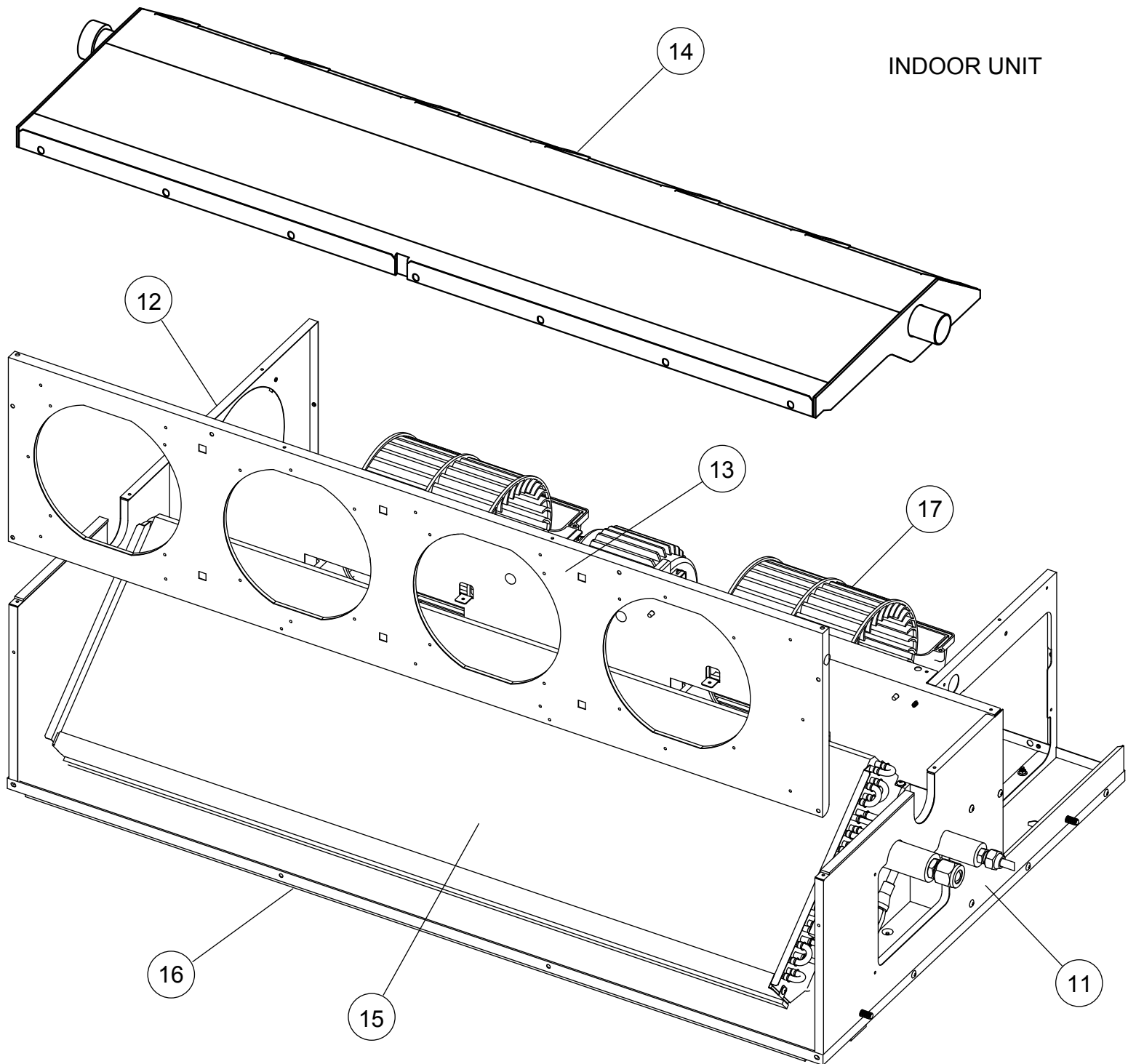


Ref.	Description	Part number
1	Remote Control	9318593013
2	Intake Cover Sub Assy	9374512010
3	Main Panel Sub Assy	9374511013
4	Intake Frame Assy	9374216017
5	Bracket Pipe Sub Assy	9374514014
6	Casing A	9374233021
7	Casing B	9374234028
8	Fan Motor	9603213015
9	Control Cover A Sub Assy	9374516025

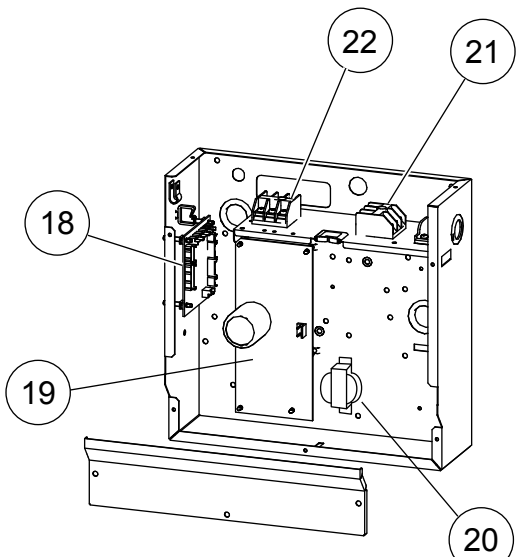




INDOOR UNIT

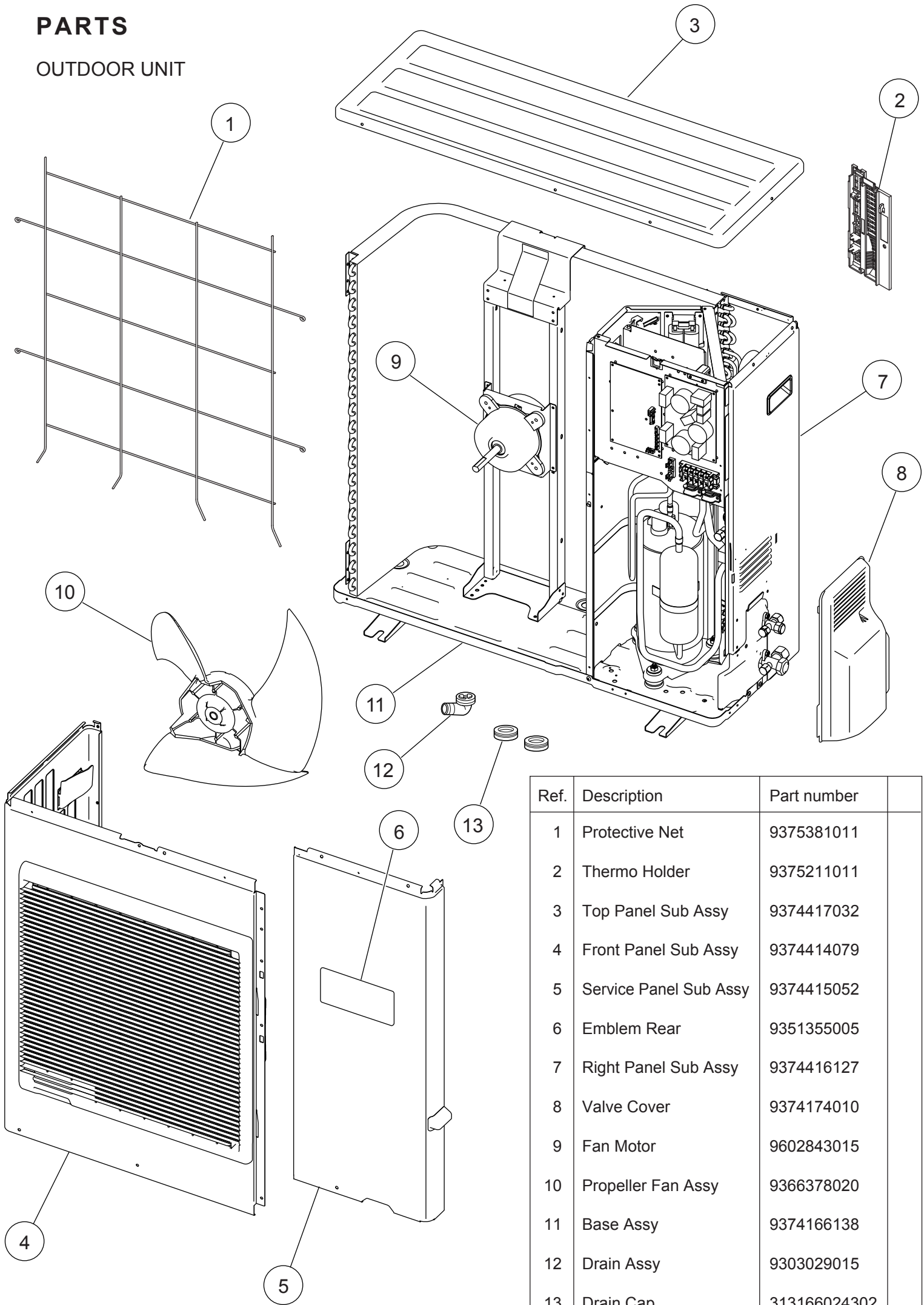


Ref.	Description	Part number
11	Cabinet R Sub Assy	9374508020
12	Cabinet L Sub Assy	9374509010
13	Outlet Panel Sub Assy	9374510016
14	Drain Pan Sub Assy	9374513017
15	Evaporator Sub Assy	9374517312
16	Base Sub Assy	9374504015
17	Sirocco Fan Assy	9356531046
18	Main PCB (30)	9709245217
18	Main PCB (36)	9709245224
19	Power Supply PCB	9707398359
20	Reactor Assy	9707457018
21	Terminal 3P	9703345012
22	Terminal 3P	9306489045
--	Room Thermistor	9703299025
--	Pipe Thermistor	9703297021



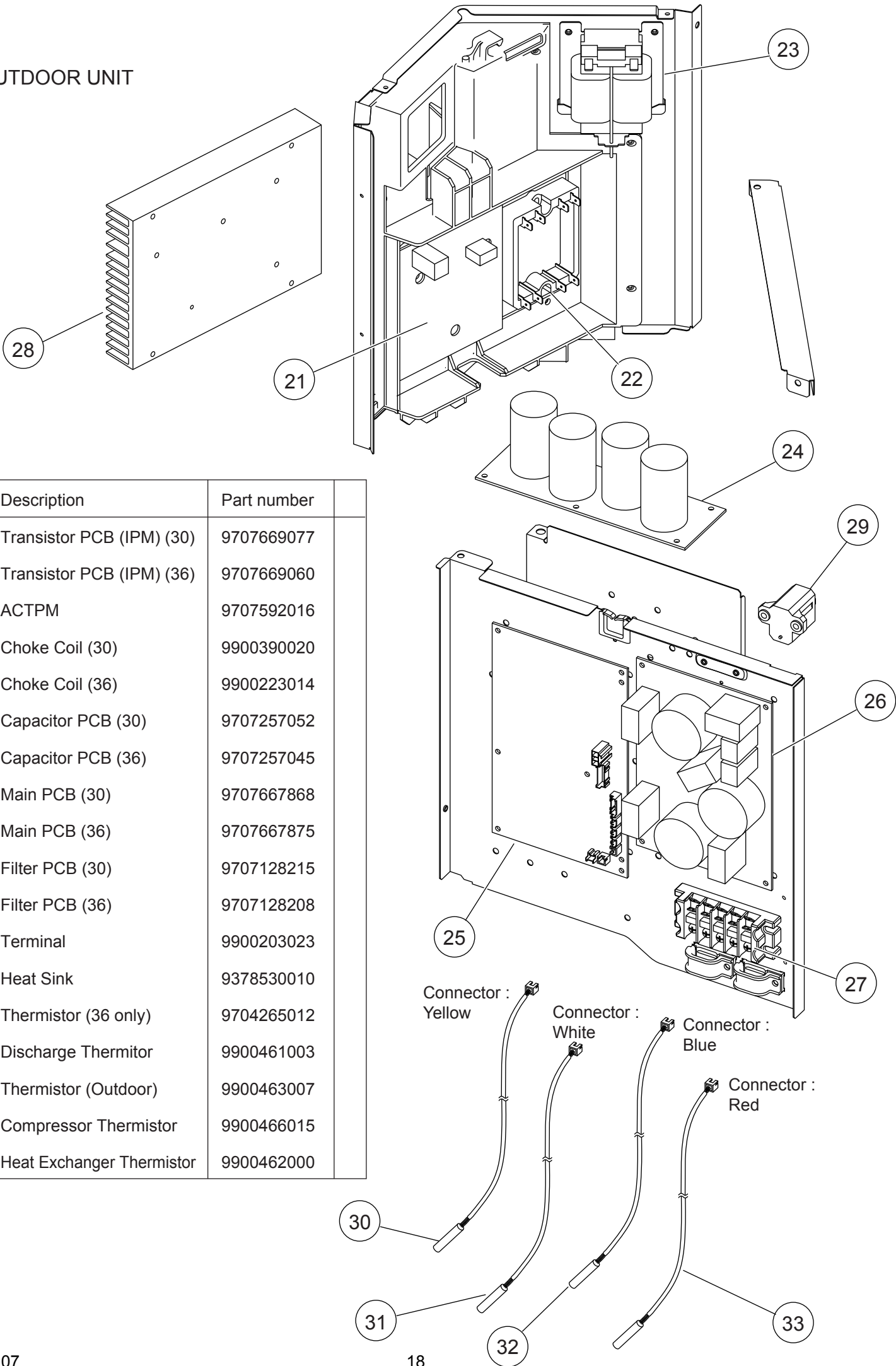
# PARTS

## OUTDOOR UNIT

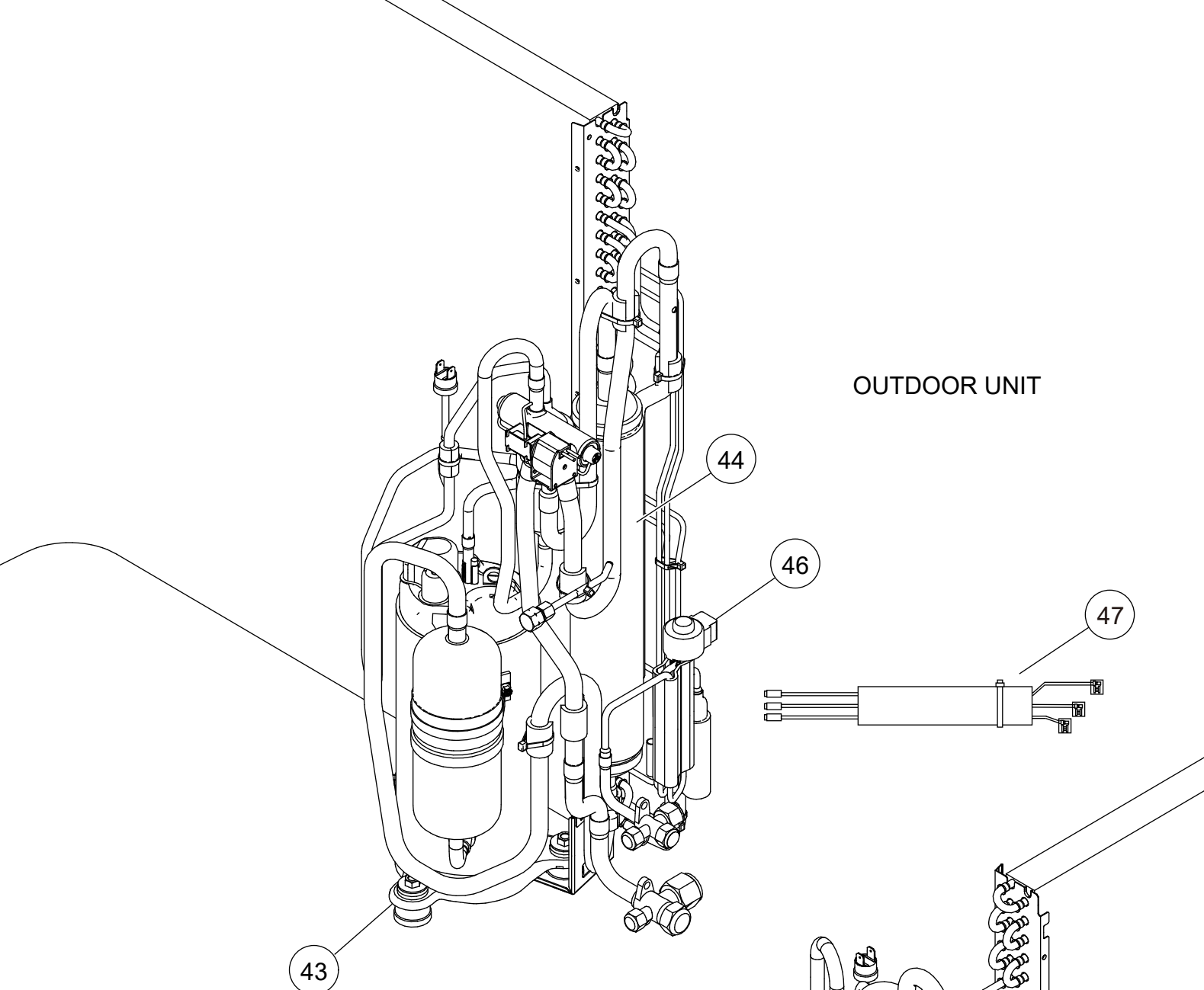


Ref.	Description	Part number
1	Protective Net	9375381011
2	Thermo Holder	9375211011
3	Top Panel Sub Assy	9374417032
4	Front Panel Sub Assy	9374414079
5	Service Panel Sub Assy	9374415052
6	Emblem Rear	9351355005
7	Right Panel Sub Assy	9374416127
8	Valve Cover	9374174010
9	Fan Motor	9602843015
10	Propeller Fan Assy	9366378020
11	Base Assy	9374166138
12	Drain Assy	9303029015
13	Drain Cap	313166024302

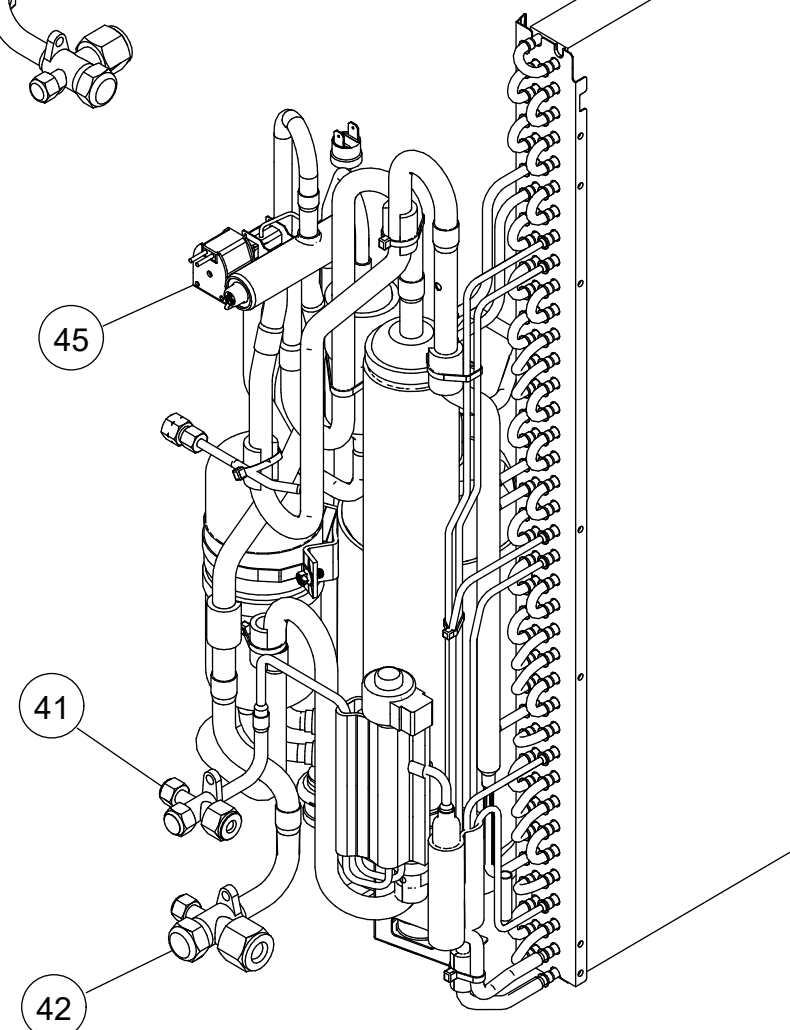
# OUTDOOR UNIT

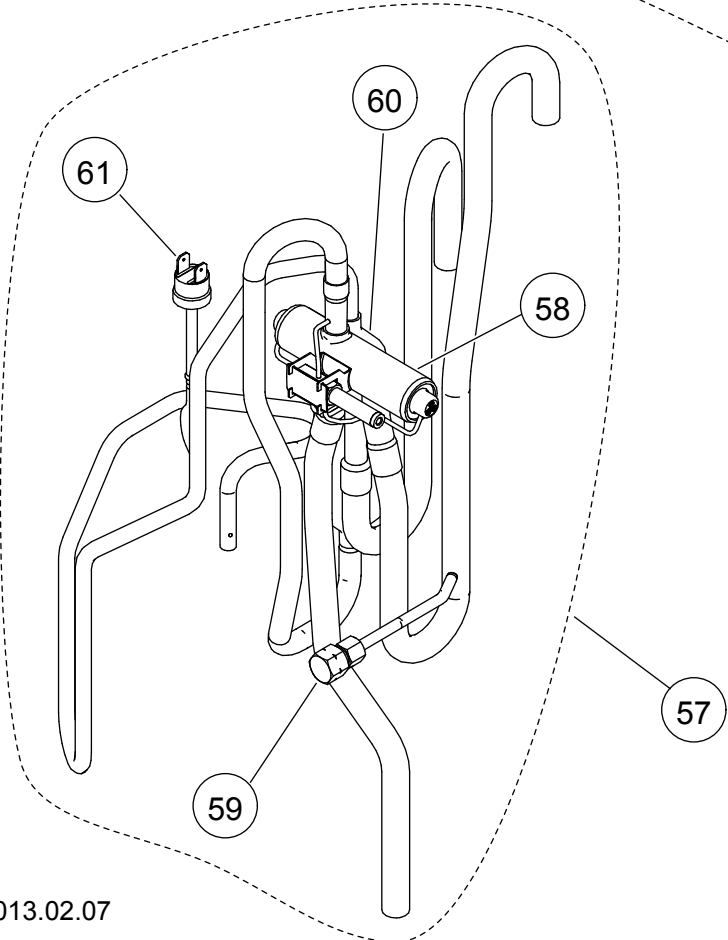
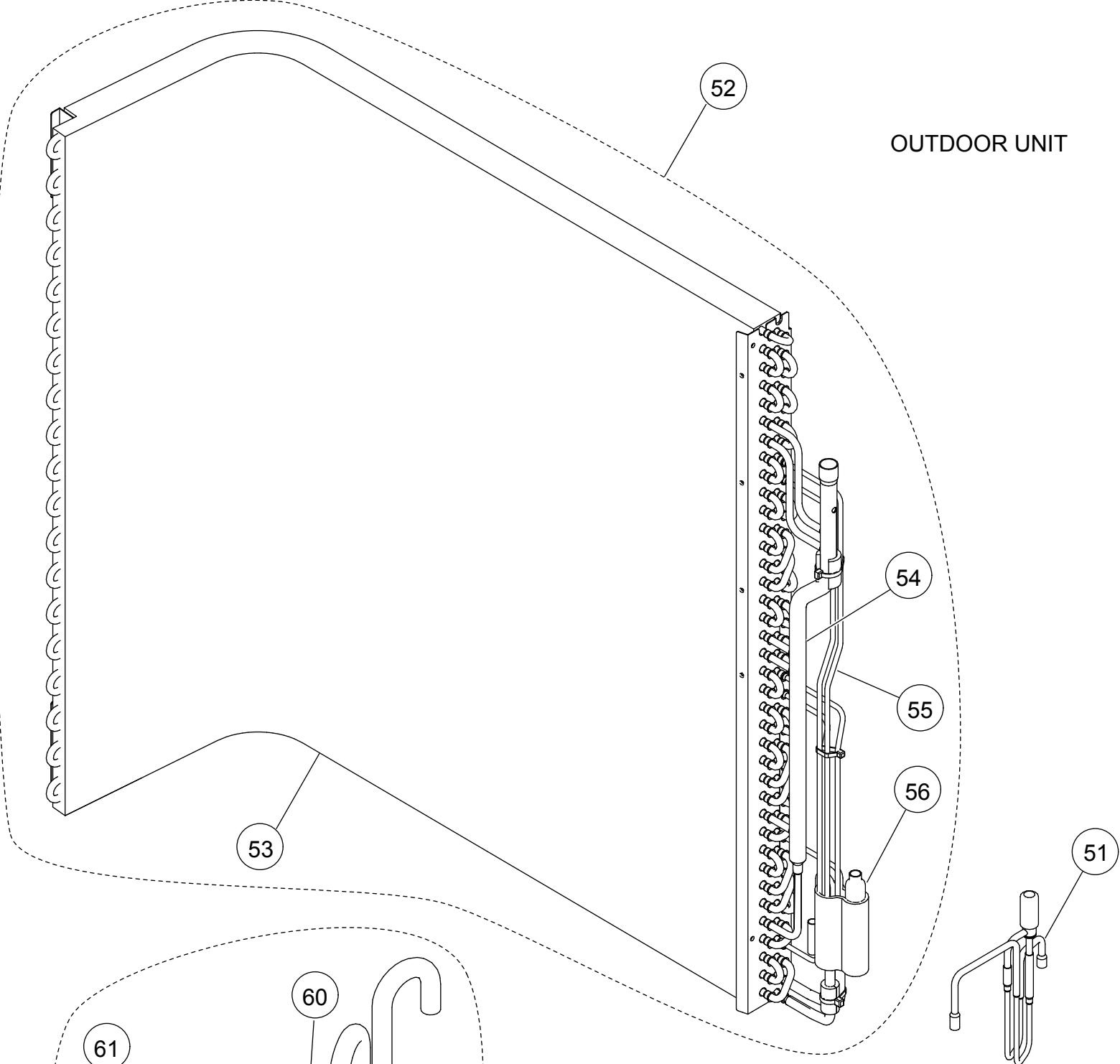


Ref.	Description	Part number
21	Transistor PCB (IPM) (30)	9707669077
21	Transistor PCB (IPM) (36)	9707669060
22	ACTPM	9707592016
23	Choke Coil (30)	9900390020
23	Choke Coil (36)	9900223014
24	Capacitor PCB (30)	9707257052
24	Capacitor PCB (36)	9707257045
25	Main PCB (30)	9707667868
25	Main PCB (36)	9707667875
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



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
47	Wire w/Terminal for comp.	9707837032

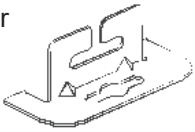




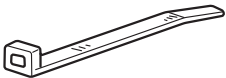
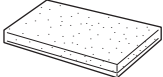
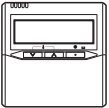
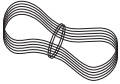





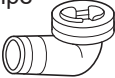

Ref.	Description	Part number
51	Expansion Valve Assy	9370947144
52	Condenser A Sub Assy	9374420308
53	Condenser A Assy	9374433056
54	Inlet Pipe (Cond) A Assy	9373461067
55	Outlet Pipe (Cond) A Assy	9374266104
56	Strainer Assy	9372524015
57	4-way Valve Assy	9374425198
58	4-way Valve	9900164010
59	Check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

# ACCESSORIES

## INDOOR UNIT

Name and Shape	Q'ty	Application
Hanger 	4	For suspending the indoor unit from ceiling
Special nut A (large flange) 	4	For suspending the indoor unit from ceiling
Special nut B (small flange) 	4	
Coupler heat insulation (large) 	1	For indoor side pipe joint (large pipe)
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)
Binder 	1 (large)	For fixing the drain hose
	1 (small)	For fixing the remote controller cord
Drain hose insulation 	1	Insulates the drain hose and vinyl hose
Remote control 	1	For air conditioner operation
Remote control cord (*1) 	1	For connecting the remote control
Tapping screw (ø4 ×16) 	2	For installing the remote control

## OUTDOOR UNIT

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

1301G4157