

SPLIT TYPE  
ROOM AIR CONDITIONER  
WALL MOUNTED TYPE

# SERVICE MANUAL



Indoor unit	Outdoor unit
ASU15RLS2	AOU15RLS2

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# SPECIFICATIONS

## ELECTRICAL DATA

TYPE		Cool & heat inverter
INDOOR UNIT		ASU15RLS2
OUTDOOR UNIT		AOU15RLS2
COOLING CAPACITY		14,500 Btu/h
HEATING CAPACITY		18,000 Btu/h
POWER SOURCE		208/230 V
FREQUENCY		60 Hz
RUNNING CURRENT	Cooling	5.5 A
	Heating	6.1 A
INPUT WATTS	Cooling	1.21 kW
	Heating	1.35 kW
E.E.R.	Cooling	12.0 Btu/Wh
COP	Heating	13.3 Btu/Wh
MOISTURE REMOVAL		4.43 Pts/h, 2.1 L/h
AIR CIRCULATION HIGH	Cooling	529 cfm, 900 m <sup>3</sup> /h
	Heating	559 cfm, 950 m <sup>3</sup> /h
MAXIMUM CURRENT	Cooling	9.5 A
	Heating	13.5 A

## FAN MOTOR

POWER SOURCE		208/230 V
INDOOR UNIT Cooling	High	1,510 r.p.m.
	Medium	1,290 r.p.m.
	Low	1,070 r.p.m.
	Quiet	840 r.p.m.
INDOOR UNIT Heating	High	1,550 r.p.m.
	Medium	1,300 r.p.m.
	Low	1,100 r.p.m.
	Quiet	860 r.p.m.
OUTDOOR UNIT Cooling		1,050 r.p.m.
OUTDOOR UNIT Heating		1,000 r.p.m.

## NOISE LEVEL

INDOOR UNIT Cooling	High	45 dB
	Medium	40 dB
	Low	33 dB
	Quiet	25 dB
INDOOR UNIT Heating	High	45 dB
	Medium	40 dB
	Low	34 dB
	Quiet	27 dB
OUTDOOR UNIT Cooling		51 dB
OUTDOOR UNIT Heating		51 dB

## COMPRESSOR AND REFRIGERANT

COMPRESSOR TYPE		Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary
DISCRIMINATION		808-213-80
WEIGHT (with oil)		20-1/2 lb., 9.3 kg
PRECHARGED REFRIGERANT		44-3/32 oz., 1,250 g
FULL CHARGE	Pipe length 15 m	44-3/32 oz., 1,250 g
	20 m	47-5/8 oz., 1,350 g
ADDITIONAL CHARGE		20 g/m
MAXIMUM PIPING HEIGHT		49-7/32 ft., 15 m
REFRIGERANT TYPE		R410A

## DIMENSIONS

INDOOR UNIT	H x W x D	11-3/32 x 34-1/4 x 7-9/32 in. 282 x 870 x 185 mm
OUTDOOR UNIT	H x W x D	24-13/32 x 31-3/32 x 11-13/32 in. 620 x 790 x 290 mm

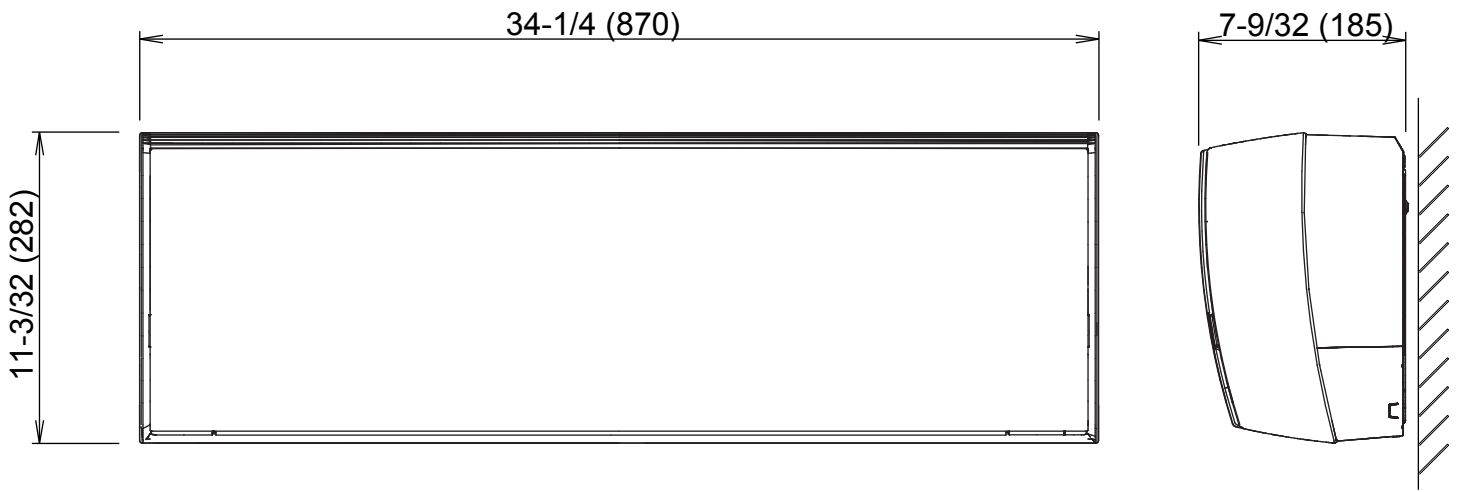
## WEIGHT

INDOOR UNIT	Net / Shipping	20-15/16 lb. / 26-15/32 lb. 9.5 kg / 12.0 kg
OUTDOOR UNIT	Net / Shipping	86 lb. / 94-13/16 lb. 39 kg / 43 kg

# DIMENSIONS

unit : inch (mm)

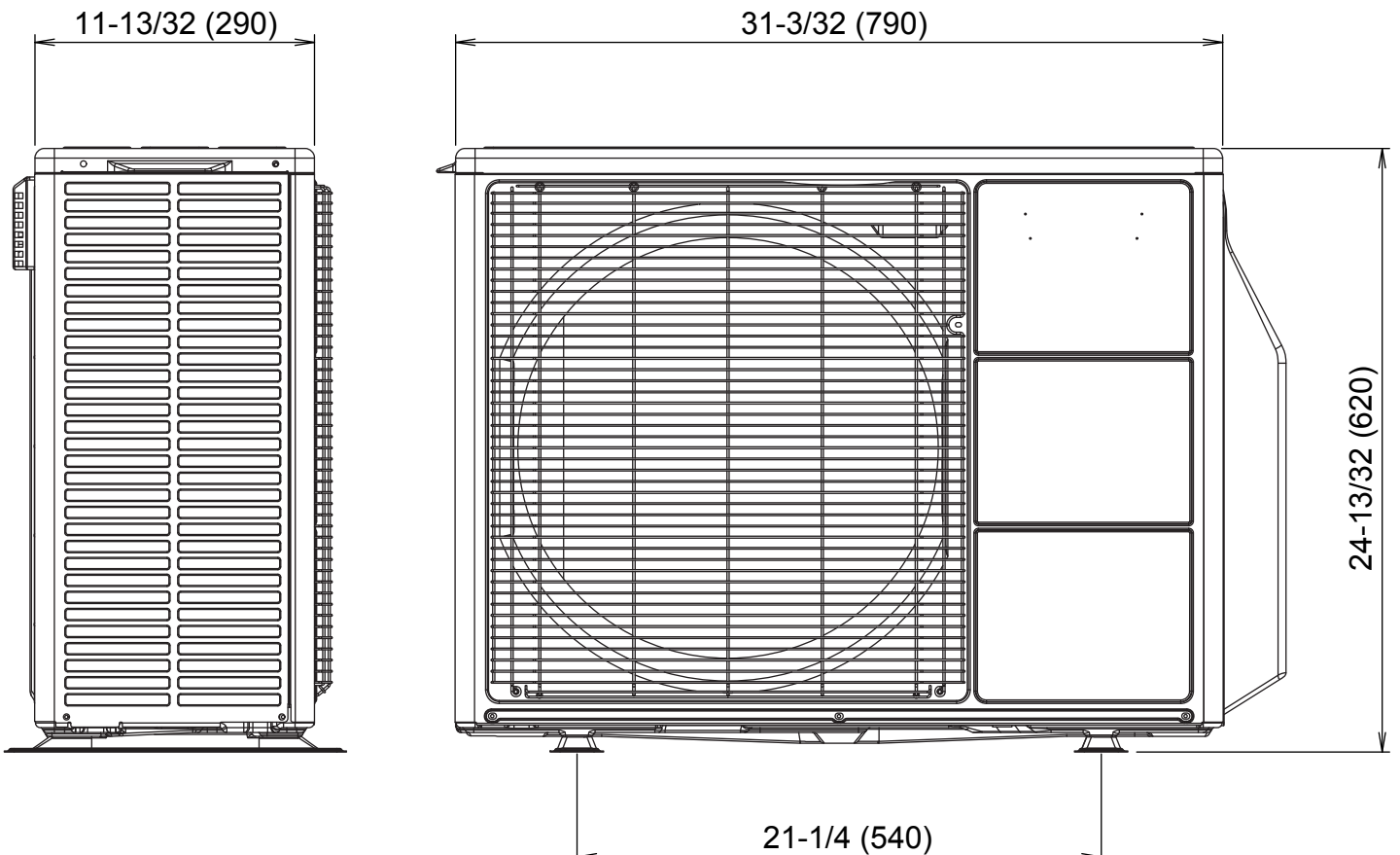
## INDOOR UNIT



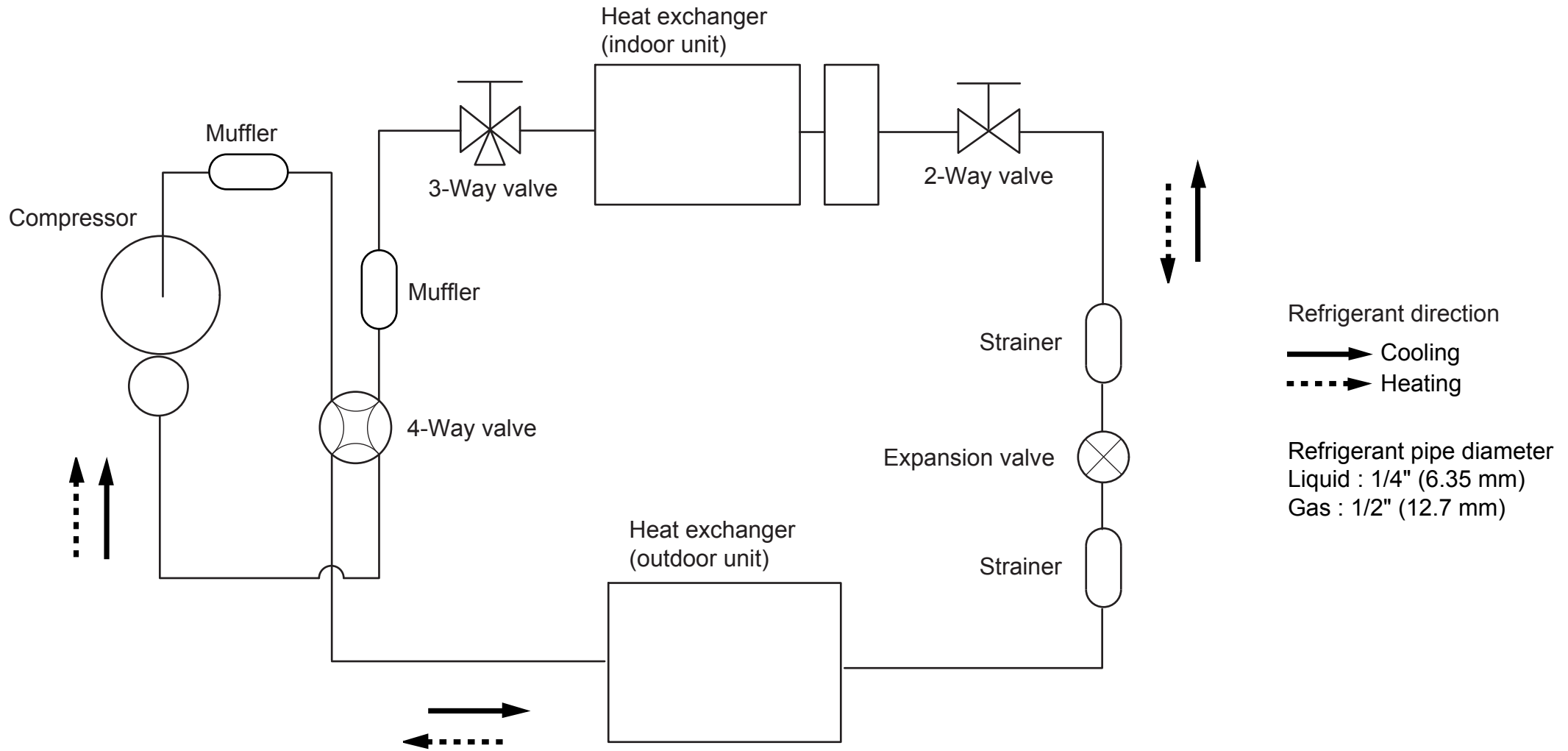
Drain pipe diameter  
16.2 mm

Liquid pipe diameter :  $\frac{1}{4}$  inch (6.35 mm)  
Gas pipe diameter :  $\frac{1}{2}$  inch (9.52 mm)

## OUTDOOR UNIT



# REFRIGERANT SYSTEM DIAGRAM

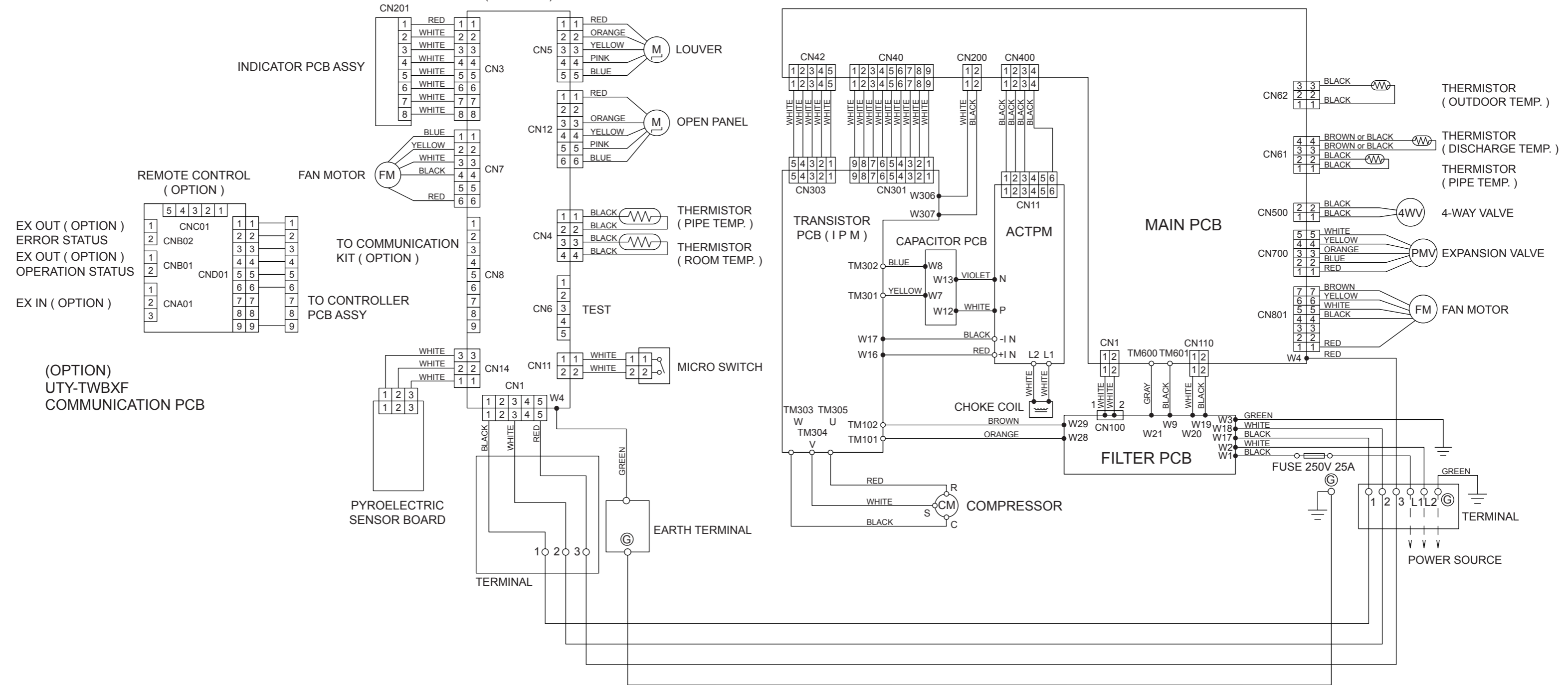


# CIRCUIT DIAGRAM

## INDOOR UNIT

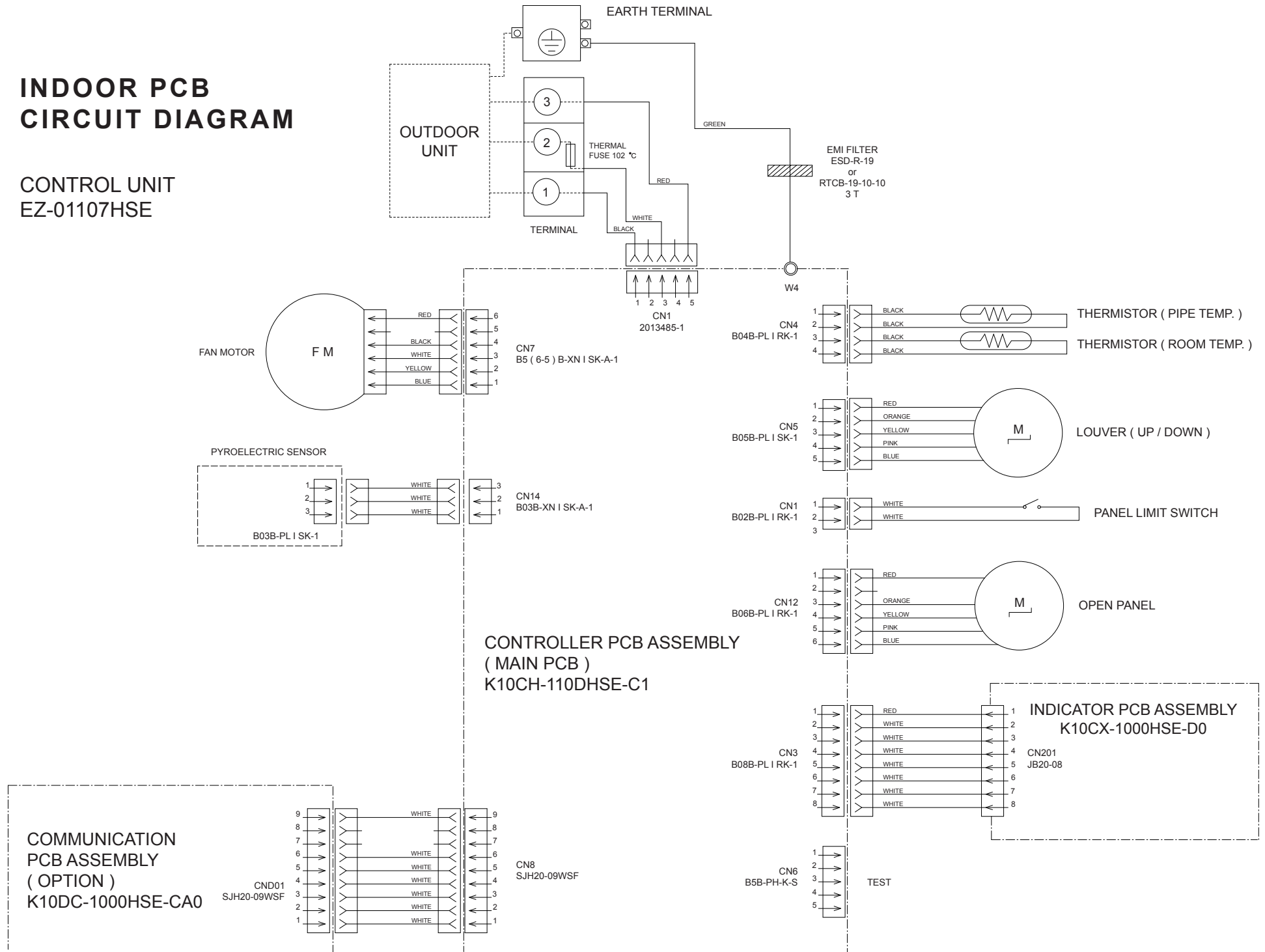
## OUTDOOR UNIT

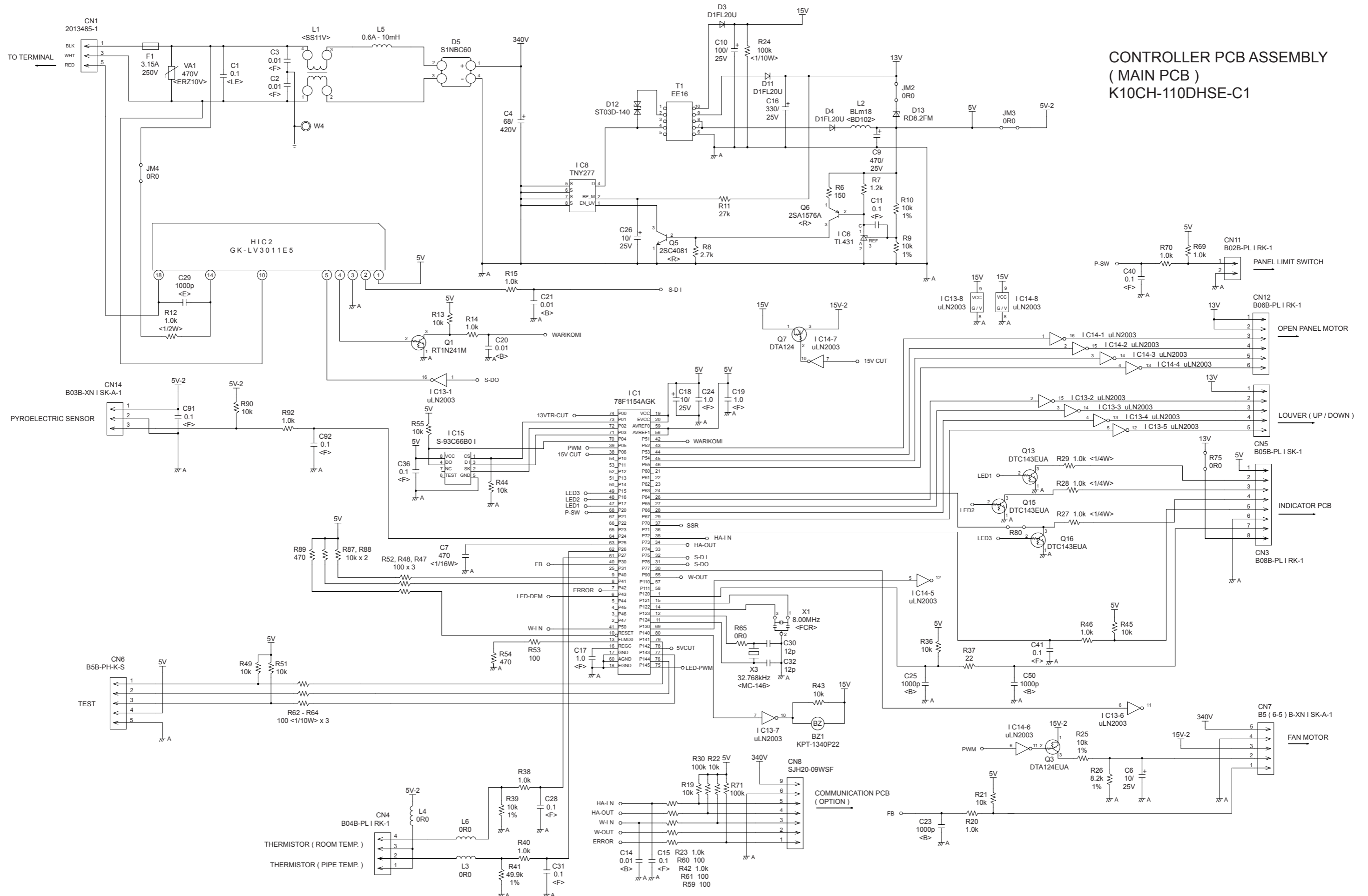
### CONTROLLER PCB ASSY ( MAIN PCB )



# INDOOR PCB CIRCUIT DIAGRAM

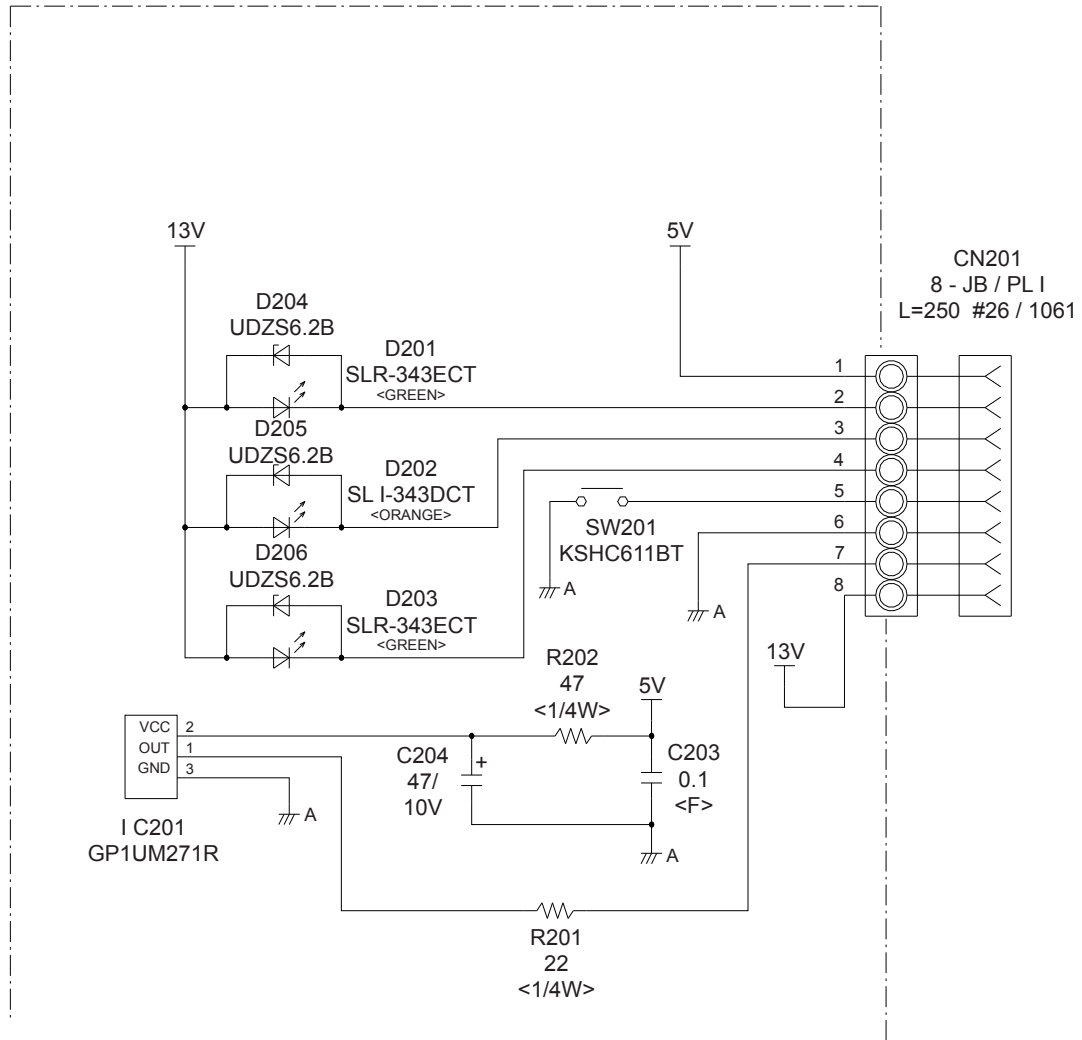
CONTROL UNIT  
EZ-01107HSE





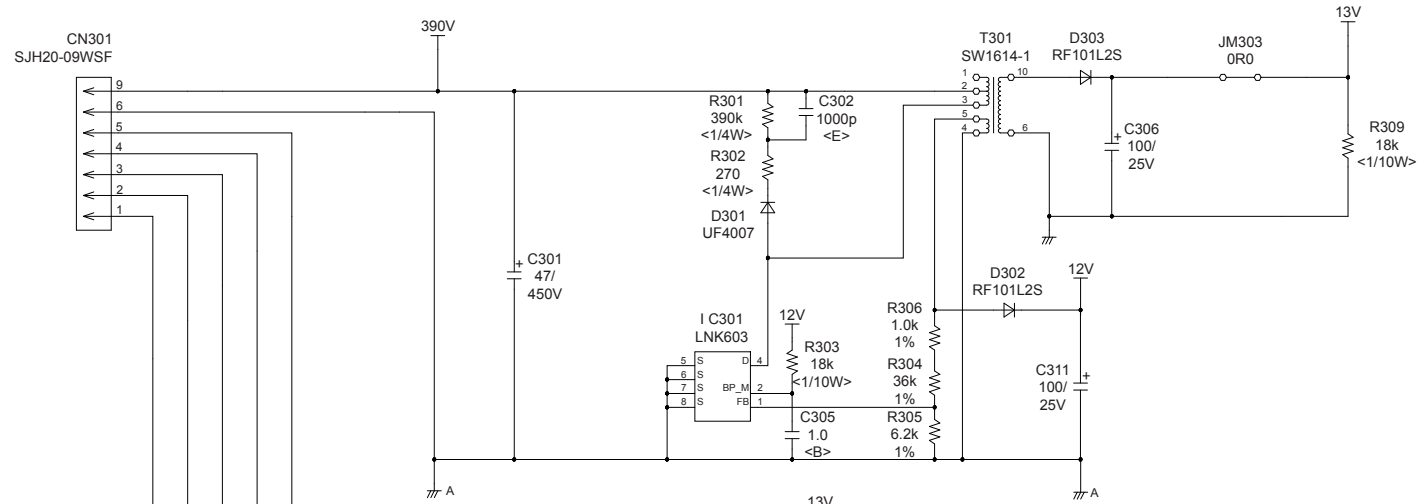
**CONTROLLER PCB ASSEMBLY  
( MAIN PCB )  
K10CH-110DHSE-C1**

INDOOR UNIT  
 INDICATOR PCB ASSEMBLY  
 K10CX-1000HSE-D0

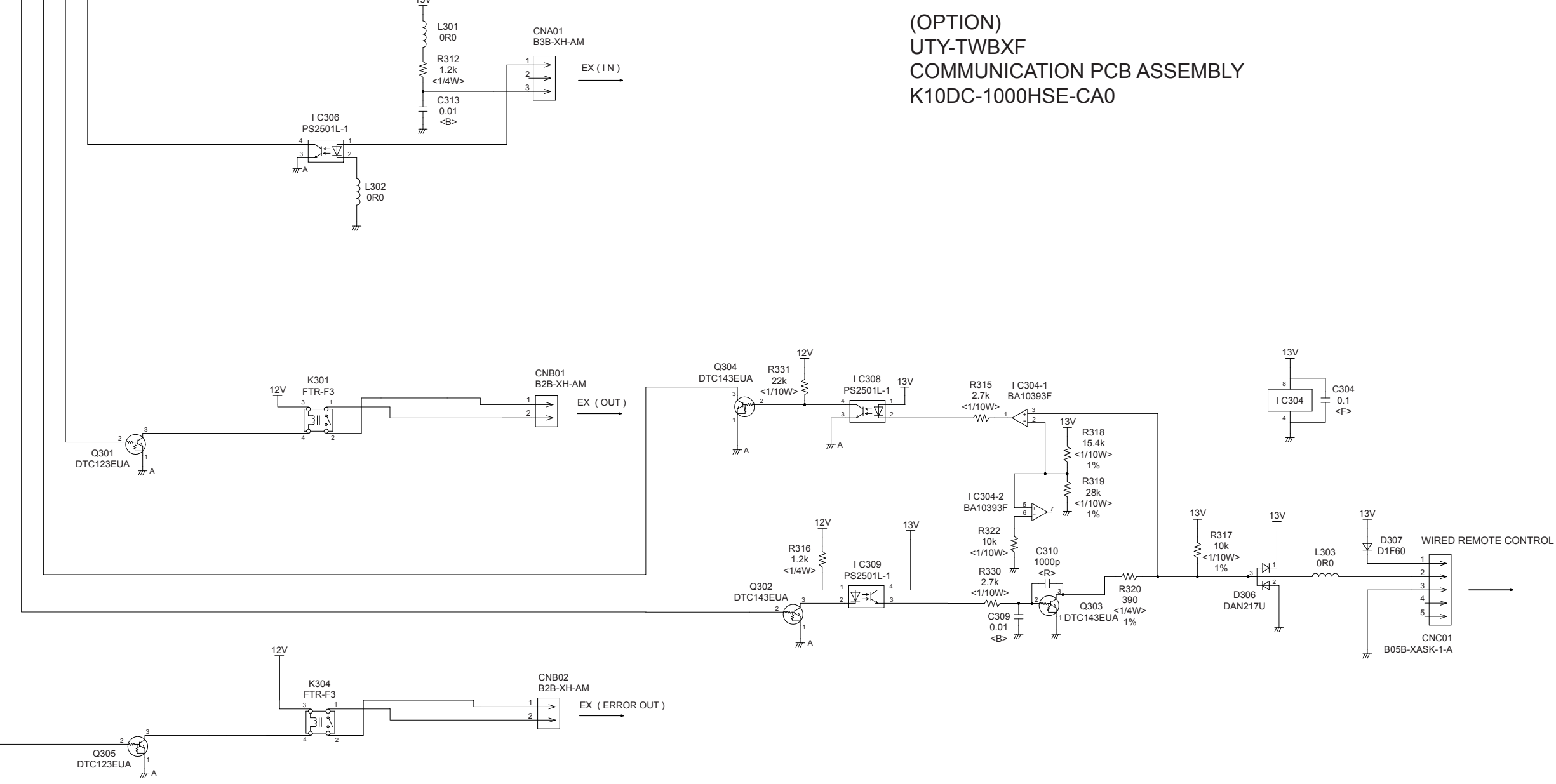




TO CONTROLLER PCB ASSEMBLY

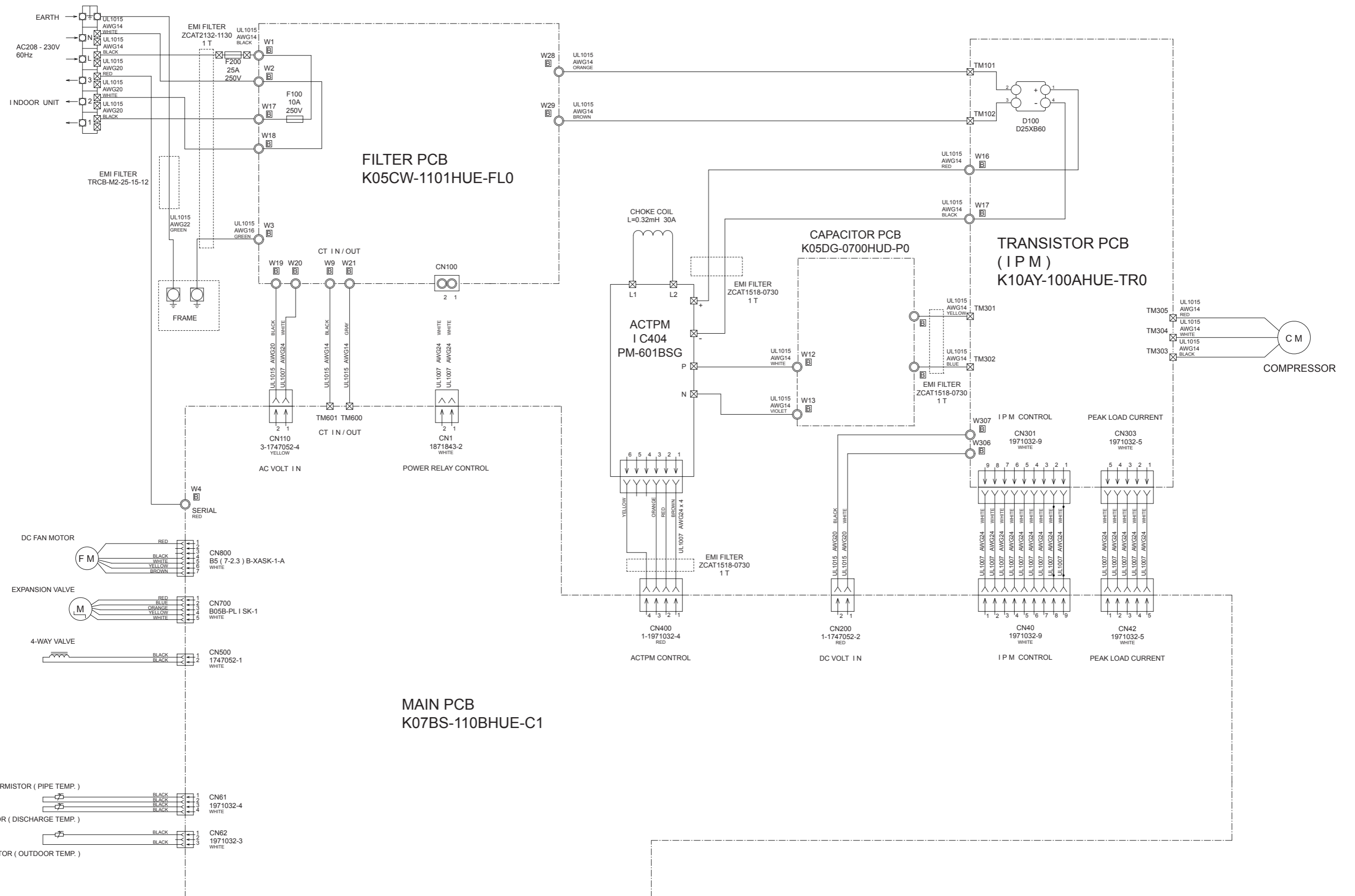


(OPTION)  
 UTY-TWBXF  
 COMMUNICATION PCB ASSEMBLY  
 K10DC-1000HSE-CA0



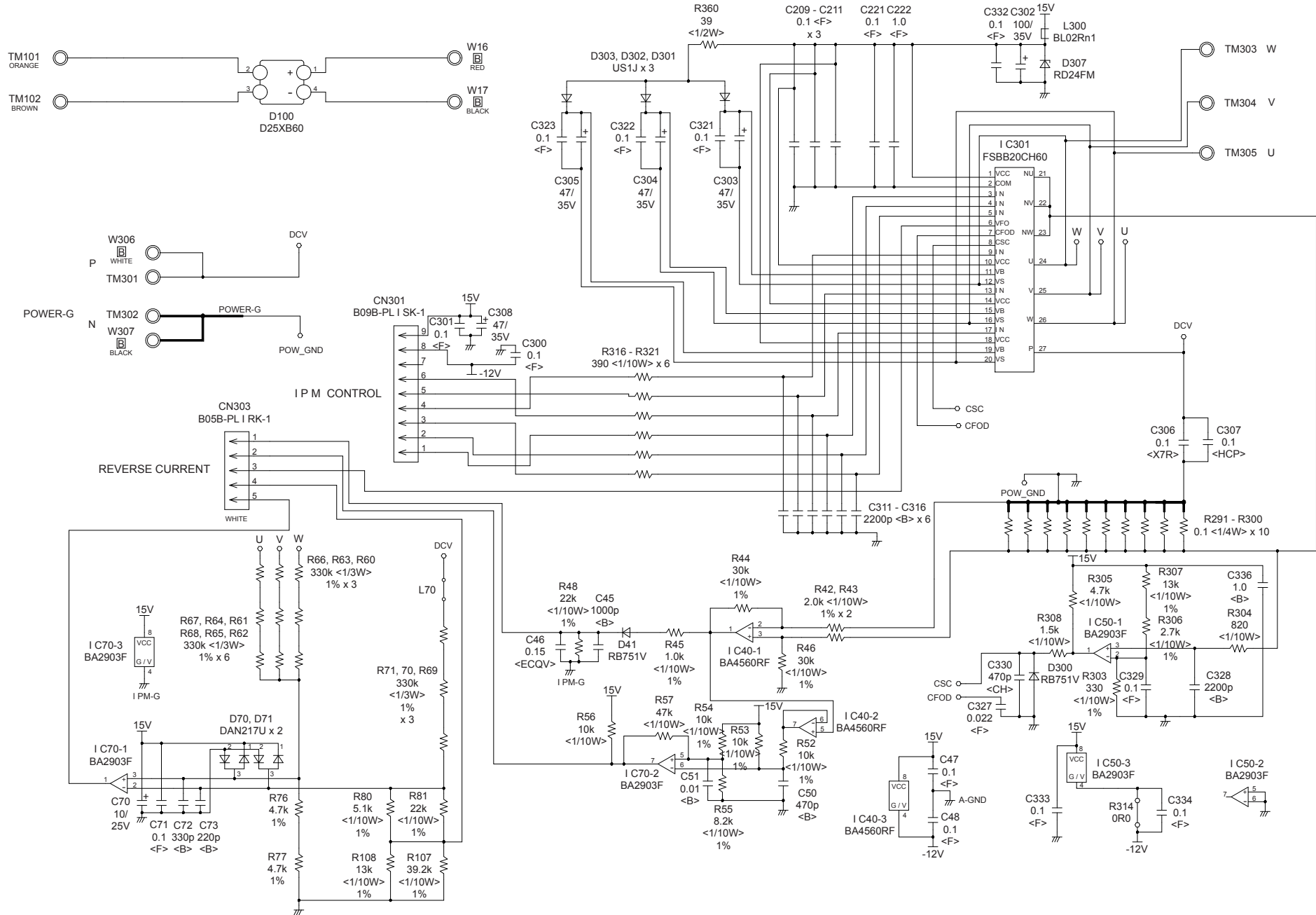
# OUTDOOR PCB CIRCUIT DIAGRAM

INVERTER ASSEMBLY  
EZ-0111BHUE

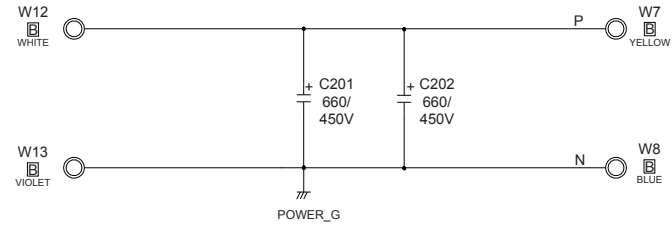




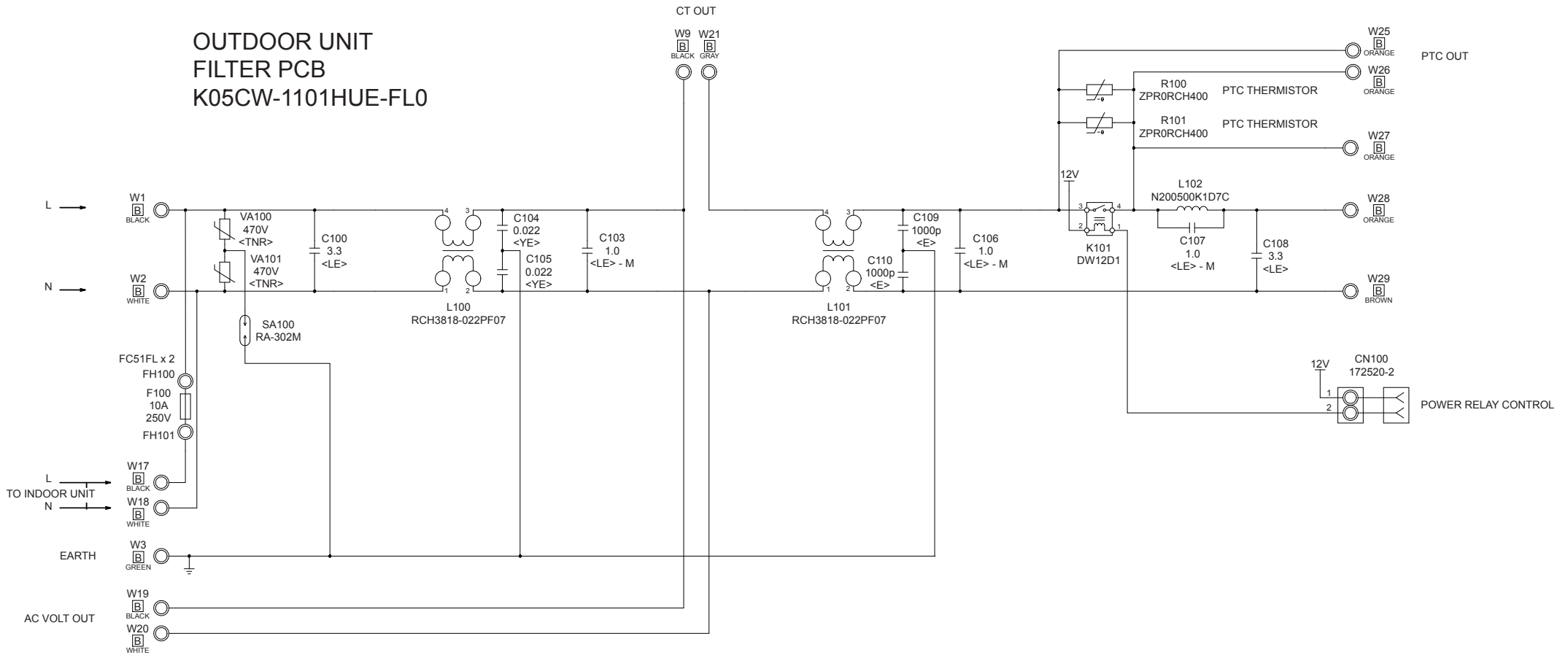
# OUTDOOR UNIT TRANSISTOR PCB ( I P M ) K10AY-100AHUE-TR0



OUTDOOR UNIT  
CAPACITOR PCB  
K05DG-0700HUD-P0



OUTDOOR UNIT  
FILTER PCB  
K05CW-1101HUE-FL0



## Indoor unit display

# ERROR DETECTION

## INDOOR UNIT 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 remote control, error codes will appear on the remote control display.

See the lamp blinking patterns and error codes in the table.

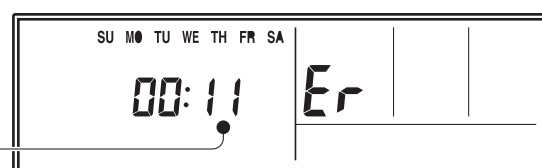
An error display is displayed only during operation.



OPERATION indicator lamp (green) —┐  
 TIMER indicator lamp (orange) —┐  
 ECONOMY indicator lamp (green) —┘

## Wired remote control display (Option)

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



Error code

● : 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)	● (2)	◇	22	Indoor unit capacity error
● (2)	● (3)	◇	23	Combination 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)	● (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

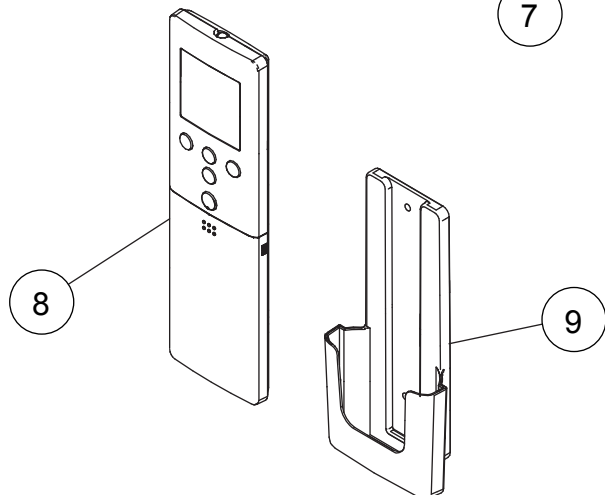
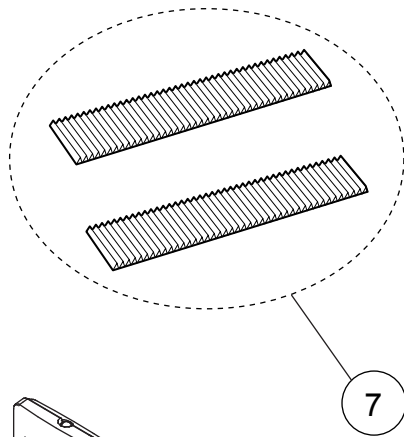
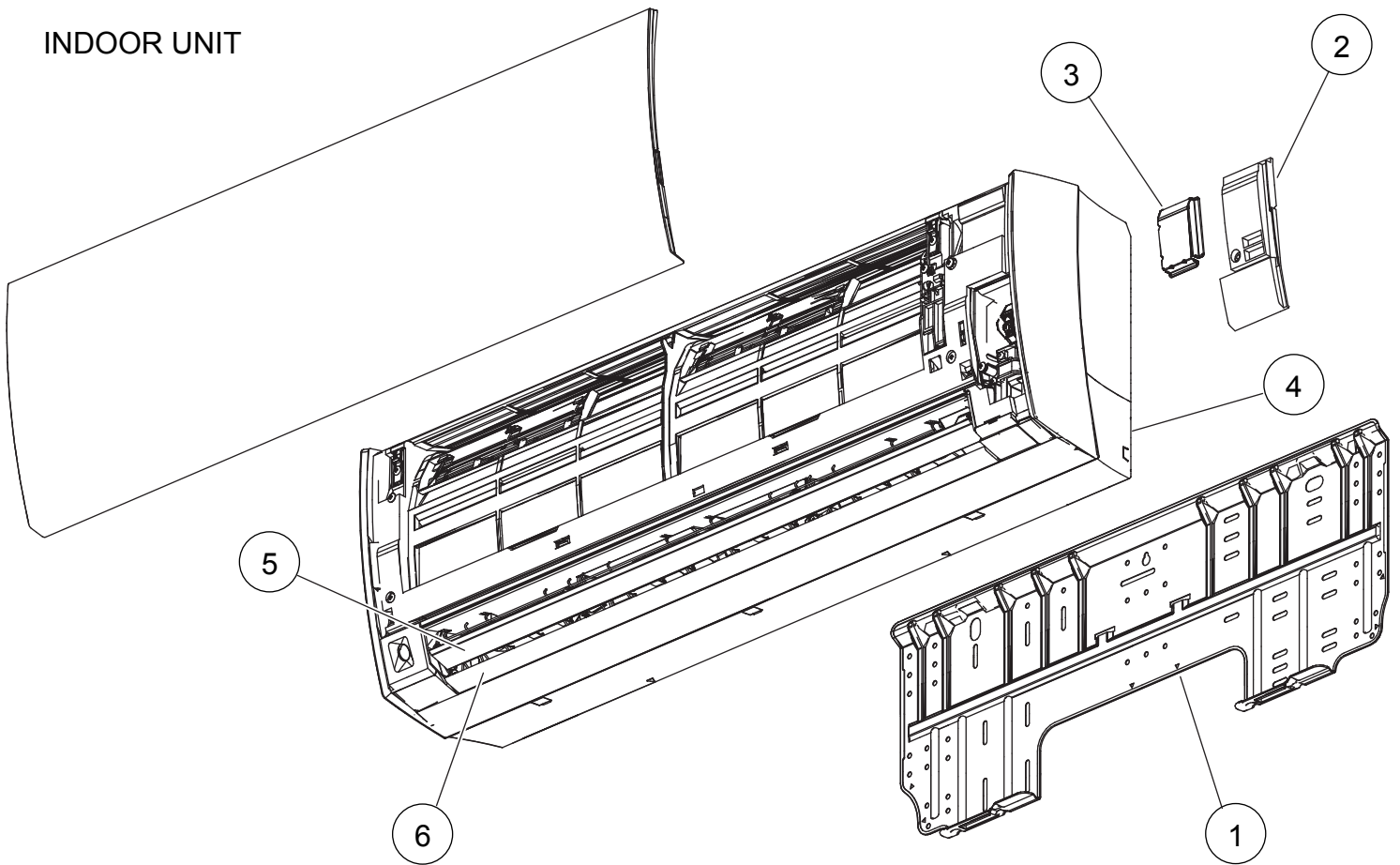
Indoor unit			Wired remote control	Description
OPERATION lamp (green)	TIMER lamp (orange)	ECONOMY lamp (green)		
● (7)	● (3)	◇	73	Outdoor unit Heat Ex. liquid temp. sensor error
● (7)	● (4)	◇	74	Outdoor temp. sensor error
● (7)	● (5)	◇	75	Suction Gas temp. sensor error
● (7)	● (6)	◇	76	• 2-way valve 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

## OUTDOOR UNIT

LED	ERROR
on	Discharge temperature abnormal
0.5 second on / 0.5 second off	IPM overcurrent protection
0.1 second on / 0.1 second off	Thermistor abnormal
2.0 second on / 2.0 second off	CT abnormal
0.1 second on / 2.0 second off	Compressor location abnormal
5.0 second on / 5.0 second off	Fan abnormal

# PARTS

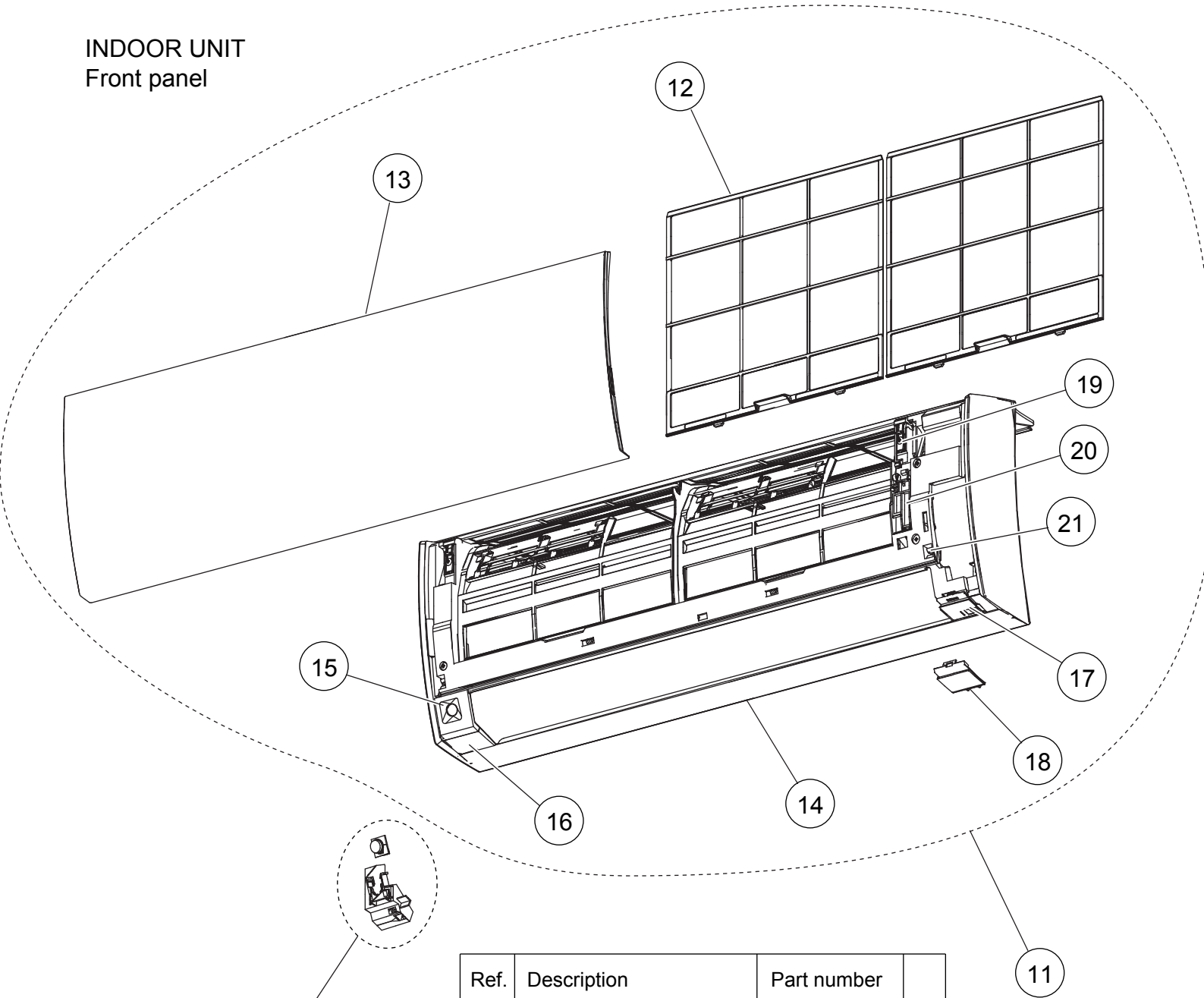
## INDOOR UNIT



Ref.	Description	Part number
1	Bracket Panel	9318913002
2	Wire Cover	9318911008
3	Wire Shield	9318919004
4	Under Cover	9318879001
5	Louver (Upper)	9318880007
6	Louver (Lower)	9318881004
7	Air Clean Filter Assy	9317250009
8	Remote Control	9319634005
9	Remote Control Holder	9318912005

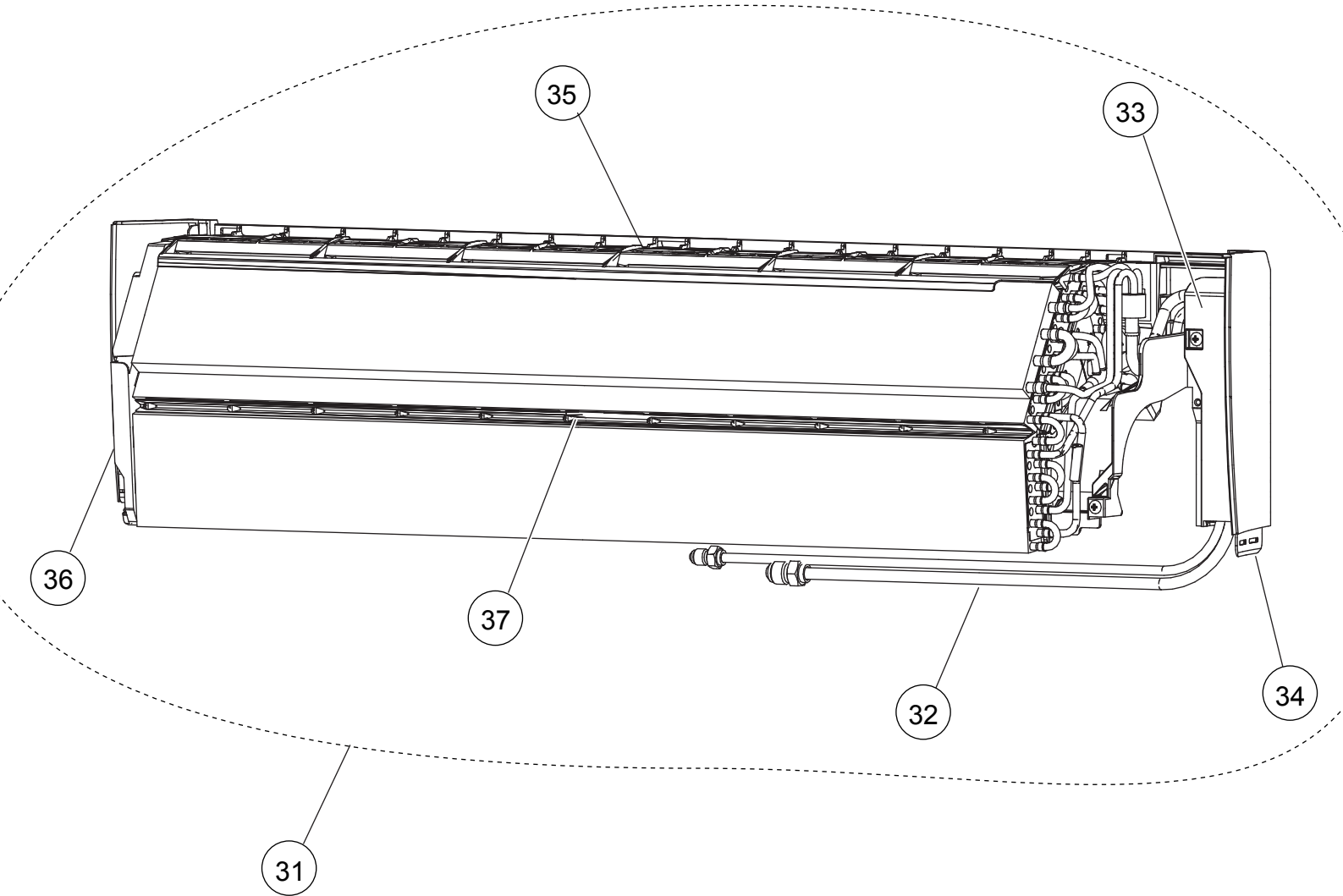


INDOOR UNIT  
Front panel

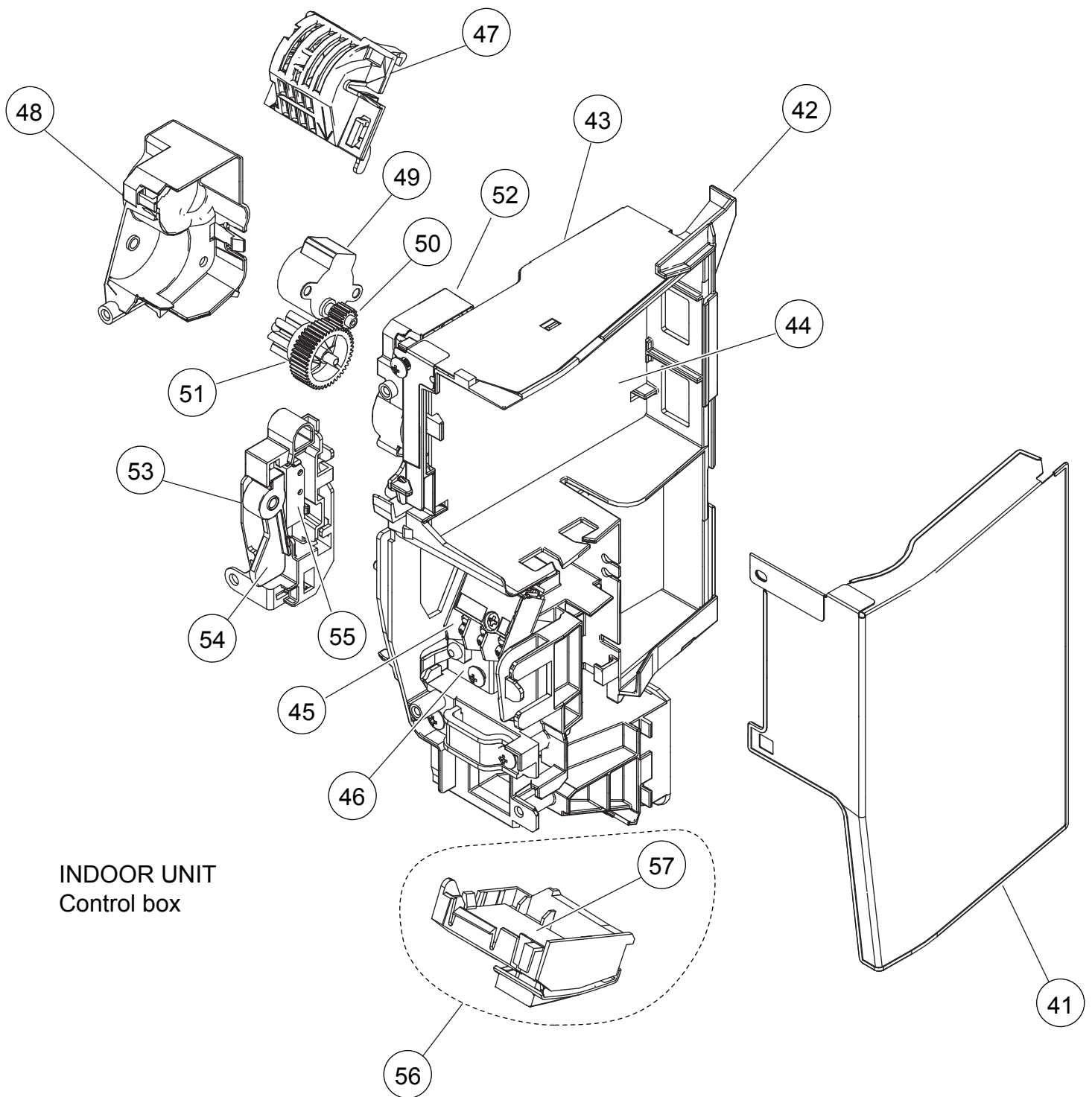


Ref.	Description	Part number	
11	Front Panel Total Assy	9319348209	
12	Air Filter	9318883008	
13	Intake Grille Assy	9319351186	
14	Front Panel	9318876000	
15	Front Panel Cover T	9318909005	
16	Display Plate Holder L	9318894004	
17	Display Plate Holder R	9318895001	
18	Display Plate R	9318893007	
19	Arm Cover	9318900002	
20	Grille Stay	9318899009	
21	Grille Clamper B	9316951006	
22	Pyroelectric Sensor Assy	9319346007	

INDOOR UNIT  
Evaporator



Ref.	Description	Part number	
31	Evaporator Total Assy	9319327013	
32	Joint Pipe Assy	9319322018	
33	Joint Pipe Holder	9318901009	
34	Base	9318874006	
35	Filter Guide	9318887006	
36	Evaporator Holder L	9318875003	
37	Air Seal	9319295008	

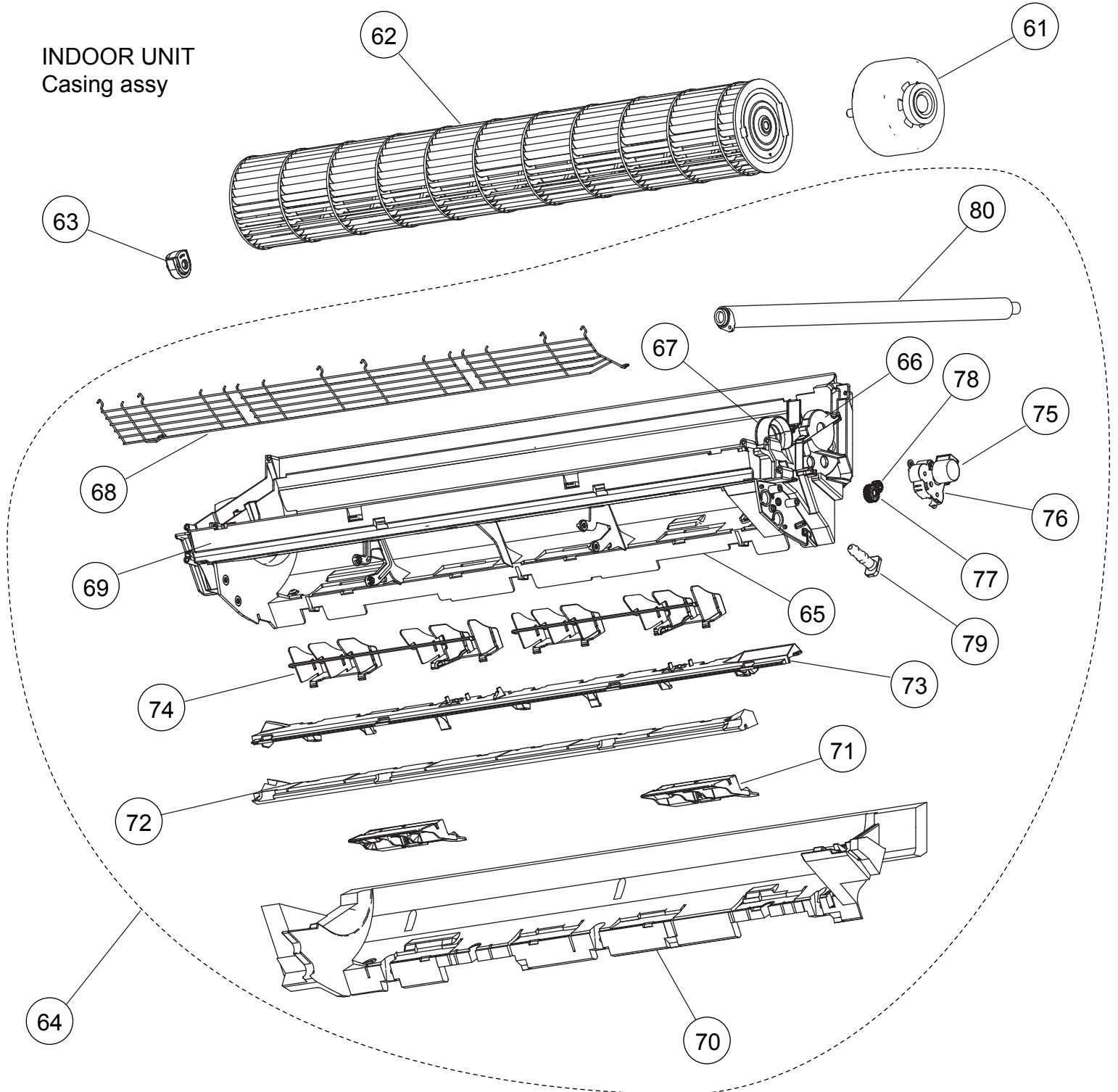


INDOOR UNIT  
Control box

Ref.	Description	Part number
41	Cover Shield A	9318916003
42	Control Box	9318882018
43	Box Shield Assy	9319344003
44	Controller PCB Assy	9708713229
45	Terminal	9900638016
46	Earth Terminal	9318918007
47	Room Thermistor Holder	9319068008
48	Gear Cover	9318902006
49	Step Motor	9900384166

Ref.	Description	Part number
50	Gear B	9319294001
51	Panel Gear	9319293004
52	Gear Case	9318903003
53	Switch Case	9319332000
54	Grille Key Top	9319334004
55	Micro Switch	9900625009
56	Display Assy	9708823010
57	Display PCB Assy	9708824017
--	Thermistor Assy	9900627003

INDOOR UNIT  
Casing assy

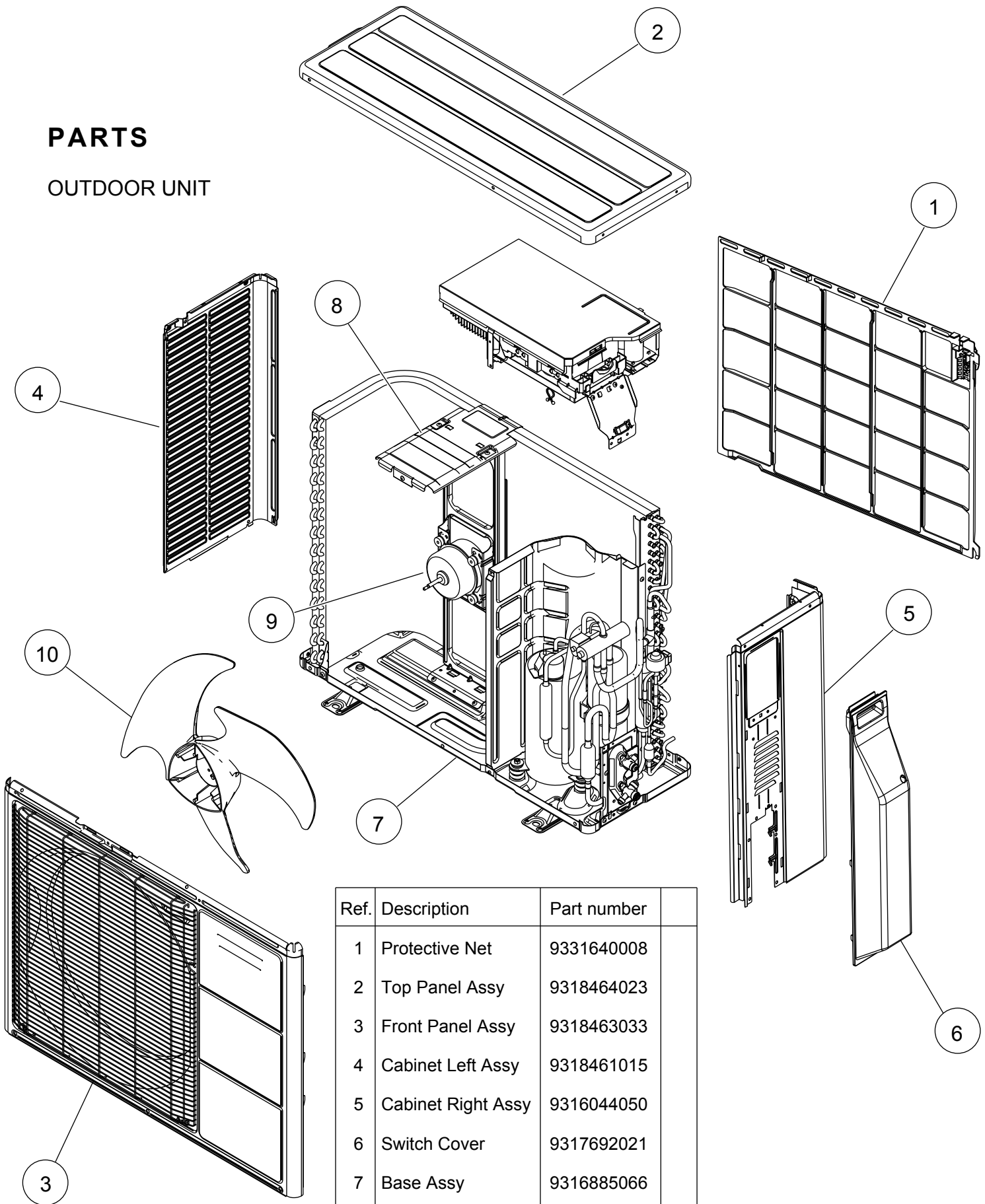


Ref.	Description	Part number
61	Fan Motor	9602947010
62	Crossflow Fan Assy	9319361000
63	Bearing C Assy	9306628017
64	Casing Assy	9319342009
65	Casing	9318873009
66	Motor Cover	9316601000
67	Motor Cover	9318888003
68	Fan Guard	9318924008
69	Casing Cover F	9318923001
70	Casing Cover B	9318920000

Ref.	Description	Part number
71	Pipe Bracket	9318889000
72	Panel Cover	9319296005
73	Louver Holder	9318886009
74	R and L Louver	9318885002
75	Motor Step	9900384128
76	Louver Gear Holder	9318905007
77	Louver Gear	9318904000
78	Gear A	9309994003
79	Drain Cap	9316177017
80	Drain Hose Assy	9316904002

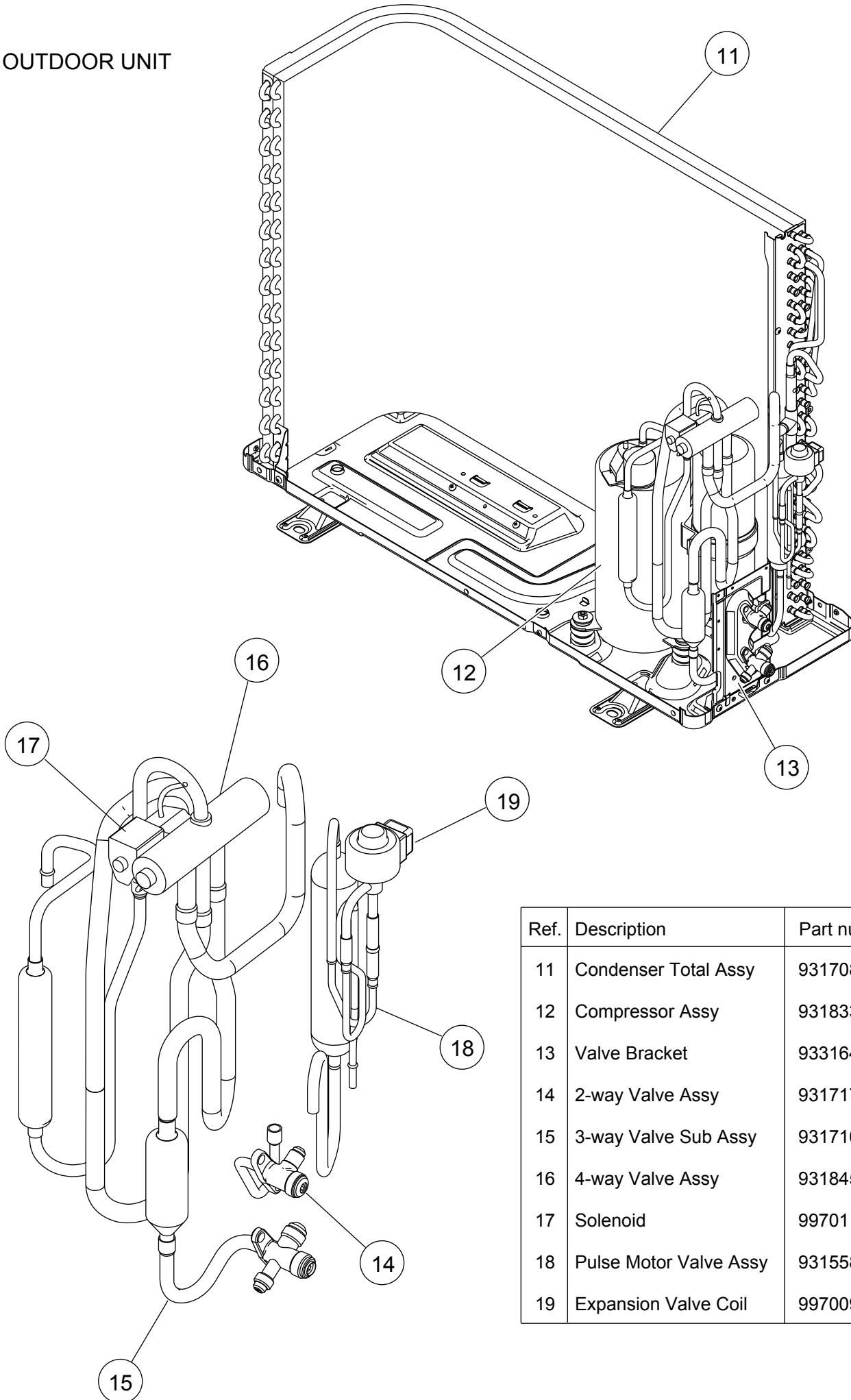
# PARTS

## OUTDOOR UNIT



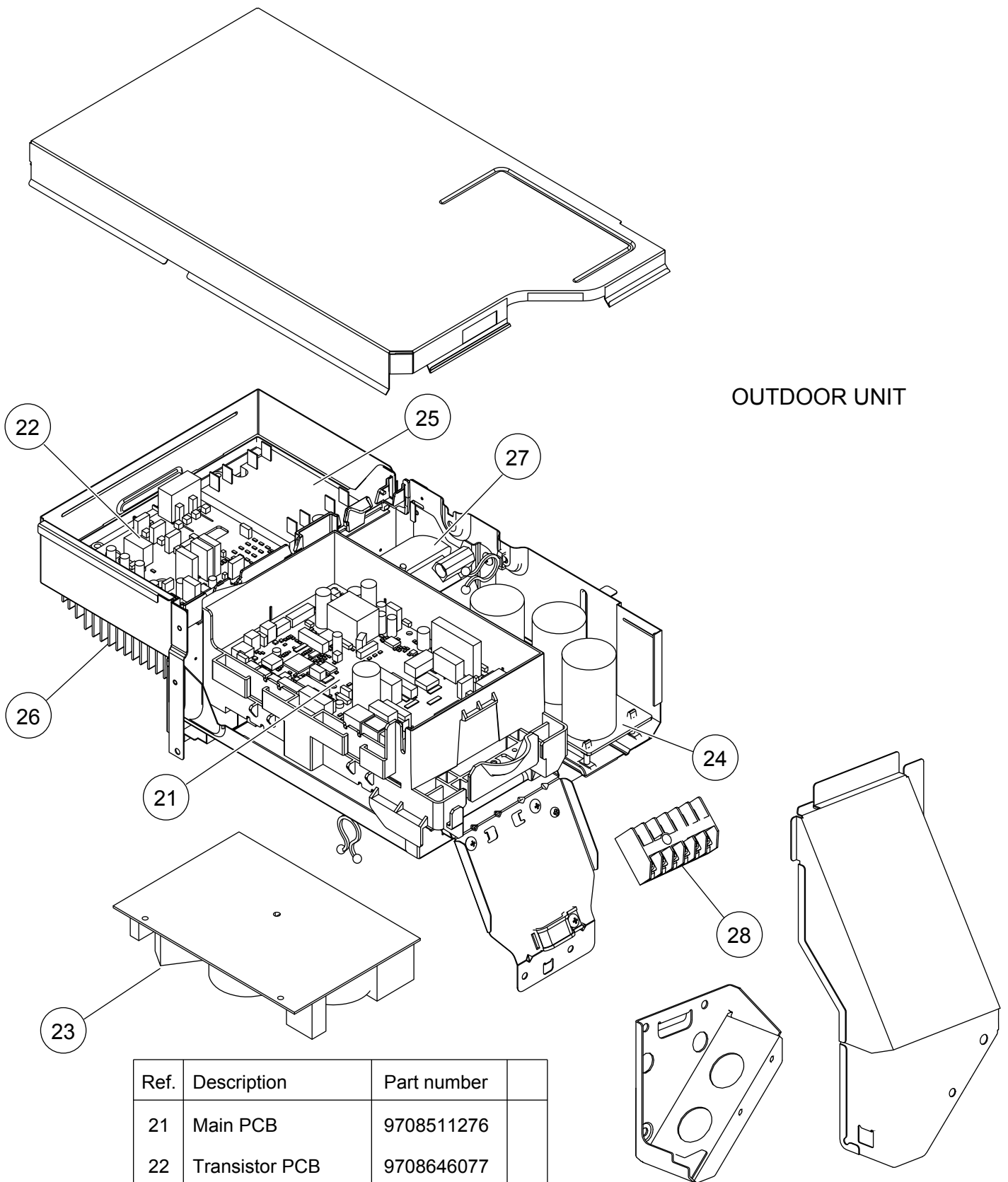
Ref.	Description	Part number
1	Protective Net	9331640008
2	Top Panel Assy	9318464023
3	Front Panel Assy	9318463033
4	Cabinet Left Assy	9318461015
5	Cabinet Right Assy	9316044050
6	Switch Cover	9317692021
7	Base Assy	9316885066
8	Motor Bracket Assy	9316041011
9	Fan Motor	9602724000
10	Propeller Fan	9313808013
--	Emblem	9317903011
--	Drain Assy	9303029022

# OUTDOOR UNIT



Ref.	Description	Part number
11	Condenser Total Assy	9317089128
12	Compressor Assy	9318334005
13	Valve Bracket	9331649001
14	2-way Valve Assy	9317171014
15	3-way Valve Sub Assy	9317109062
16	4-way Valve Assy	9318457018
17	Solenoid	9970110023
18	Pulse Motor Valve Assy	9315587022
19	Expansion Valve Coil	9970095030

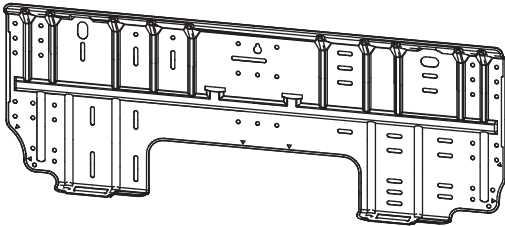
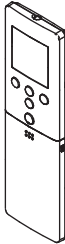


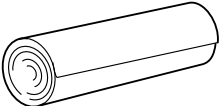
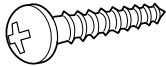
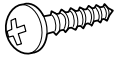
## OUTDOOR UNIT



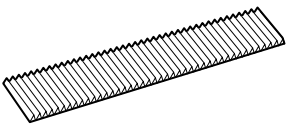
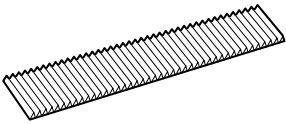
Ref.	Description	Part number
21	Main PCB	9708511276
22	Transistor PCB	9708646077
23	Filter PCB	9709217023
24	Capacitor PCB	9708514017
25	ACTPM	9707592016
26	Heatsink	9318614015
27	Choke Coil	9900223014
28	Terminal 6P	9900016081
--	Outdoor Thermistor	9900544041
--	Thermistor Assy	9900648008

# ACCESSORIES

## INDOOR UNIT

Name and Shape	Part number
Bracket panel 	9318913002
Remote control 	9319634005
Remote control holder 	9318912005
Battery (penlight) 	0600185077
Cloth tape 	9308117007
Tapping screw (big) ( $\phi$ 4 x 25) 	0700076046
Tapping screw (small) ( $\phi$ 3 x 12) 	0700019036

## OPTION

Name and Shape	Part number
Air cleaning filter (ion deodorant) 	9311925088
Air cleaning filter (electric) 	9312153077



1112G4002