

INVERTER SPLIT TYPE AIR CONDITIONER (50Hz)

DUCT type

SERVICE MANUAL



Models

Indoor unit

Outdoor unit

ARY18LUAL

AOY18LMAKL

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SPECIFICATIONS

ELECTRICAL DATA

TYPE		Cooling & heating
INDOOR UNIT		ARY18LUAL
OUTDOOR UNIT		AOY18LMAKL
COOLING CAPACITY		5.20 kW
HEATING CAPACITY		6.20 kW
POWER SOURCE		230 V
FREQUENCY		50 Hz
RUNNING CURRENT	Cooling	7.4 A
	Heating	8.3 A
INPUT WATTS	Cooling	1.70 kW
	Heating	1.90 kW
E.E.R.	Cooling	3.06 kW/kW
	Heating	3.26 kW/kW
STARTING CURRENT		10 A
MOISTURE REMOVAL		1.7 L/hr
MAXIMUM CURRENT	Cooling	8.8 A
	Heating	10.5 A

Note : The above list shows values at the external static pressure of 0Pa , setting the fan speed high notch.

FAN SPEED

INDOOR	Discrimination	MFA-18NTT
	High	1,040 r.p.m.
	Middle	890 r.p.m.
	Low	750 r.p.m.
OUTDOOR	Discrimination	MFB-24JTAT
	High	780 r.p.m.
	Low	400 r.p.m.

Note : The above list shows values at the external static pressure of 0Pa (10mm Ag), setting the fan speed high notch.

AIR FLOW

INDOOR UNIT	High	800 m ³ /h
	Middle	640 m ³ /h
	Low	500 m ³ /h
OUTDOOR UNIT		2,800 m ³ /h

Note : The above list shows values at the external static pressure of 0Pa (10mm Ag), setting the fan speed high notch.

NOISE LEVEL

INDOOR	High speed	38 dB
	Middle speed	34 dB
	Low speed	30 dB
OUTDOOR	Cool	50 dB
	Heat	52 dB

Note : Static pressure : 0Pa
Duct length : Inlet 1m, Outlet 2m

MEASUREMENT

DIMENSIONS H x W x D	Indoor	217 x 953 x 595 mm
	Outdoor	650 x 830 x 320 mm
WEIGHT Gross / Net	Indoor	29 kg / 25 kg
	Outdoor	58 kg / 54 kg

COMPRESSOR AND REFRIGERANT

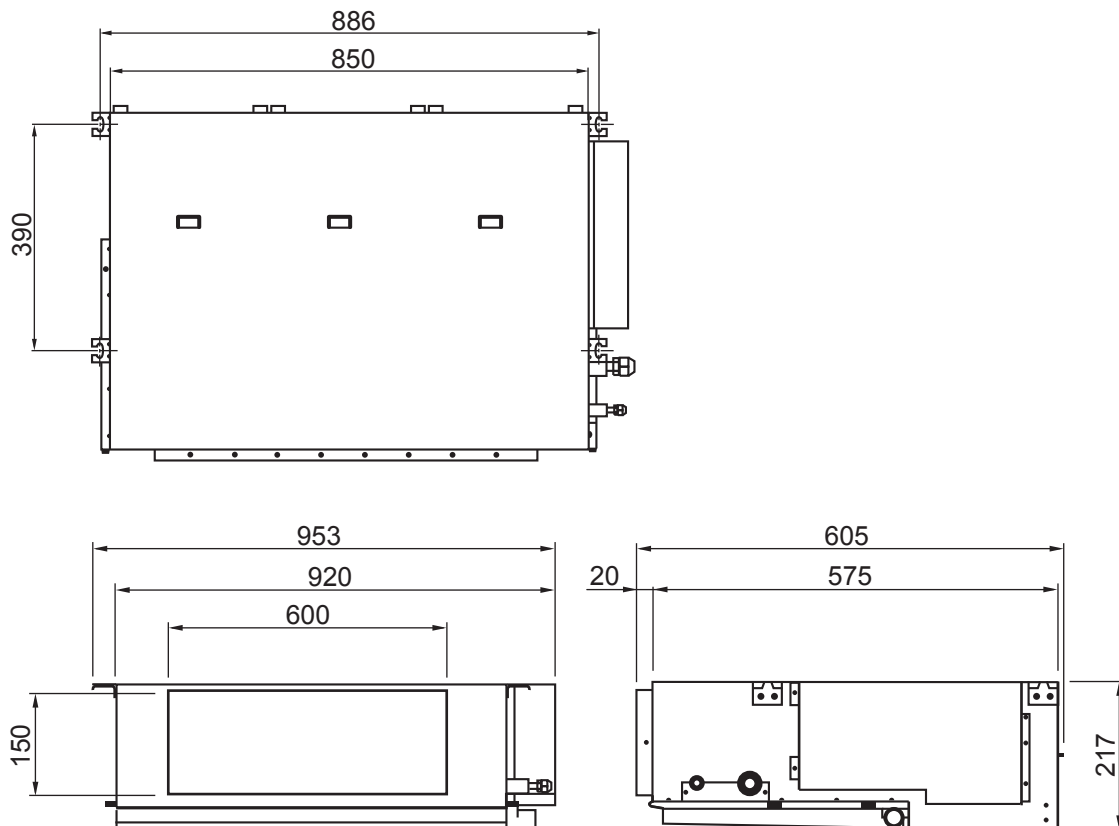
TYPE	Hermetic type, 4 poles, DC motor, Twin Rotary		
DISCRIMINATION	TNB220FPCMT		
WEIGHT (with oil)	14.1 kg		
STANDARD REFRIGERANT	1,500 g		
REFRIGERANT TYPE	R410A		
FULL CHARGE	Pipe length	10 m	1,500 g
		15 m	1,600 g
		20 m	1,700 g
		25 m	1,800 g
ADDITIONAL CHARGE	20 g/m		
MAX PIPE LENGTH	25 m		
MAX PIPE HEIGHT	15 m		

When you dismantle indoor units which are installed, take care not to make parts fall down, especially motors.

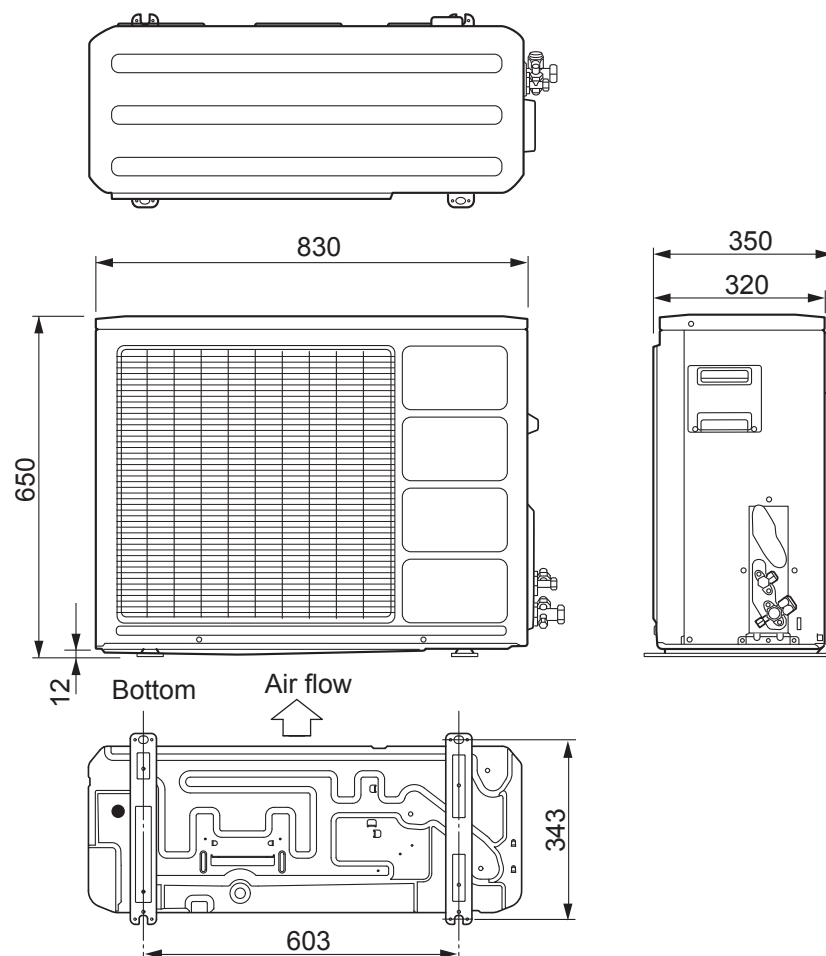
DIMENSIONS

(Unit : mm)

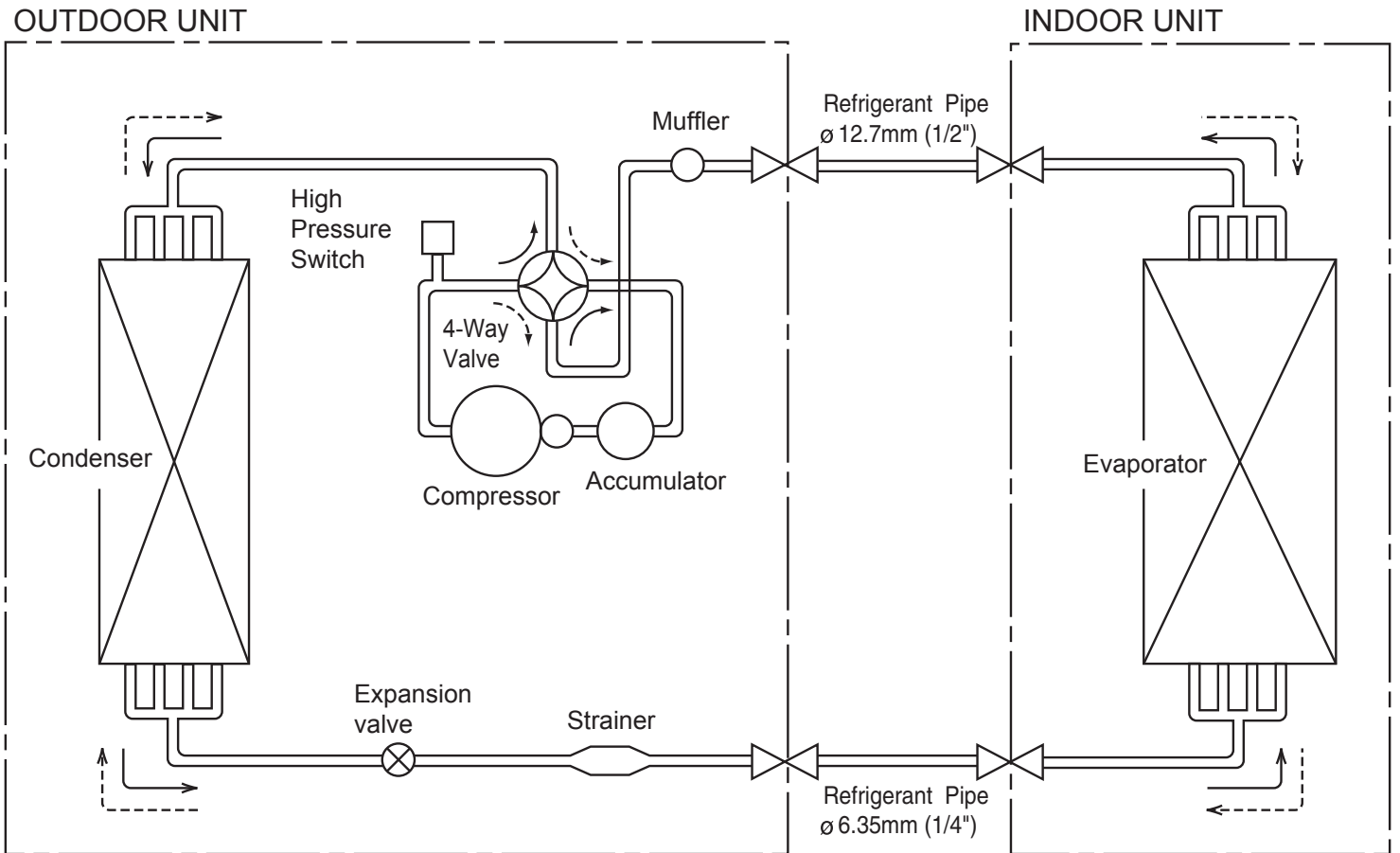
INDOOR UNIT



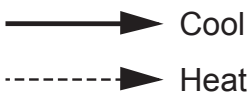
OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM

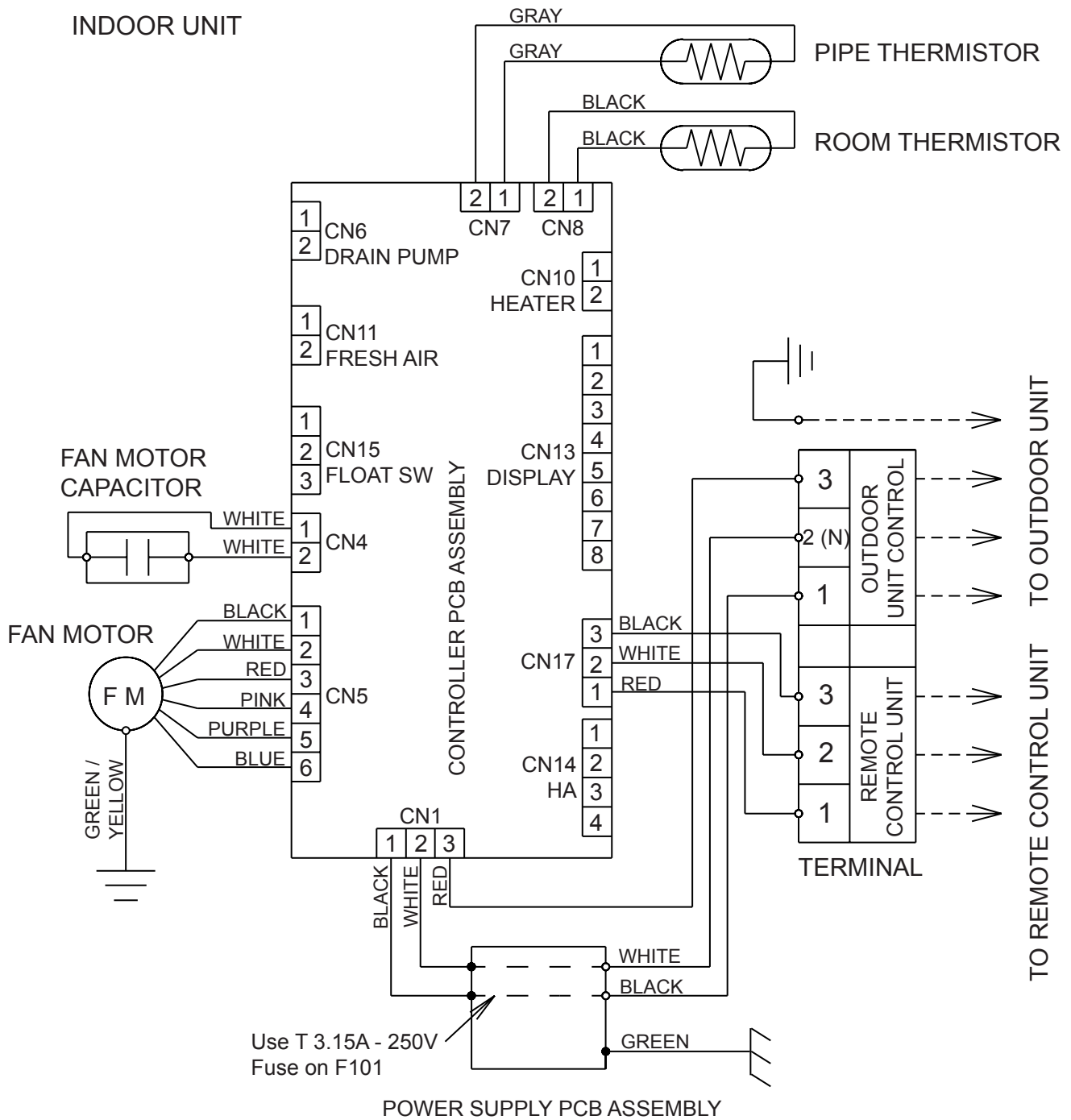


Refrigerant direction

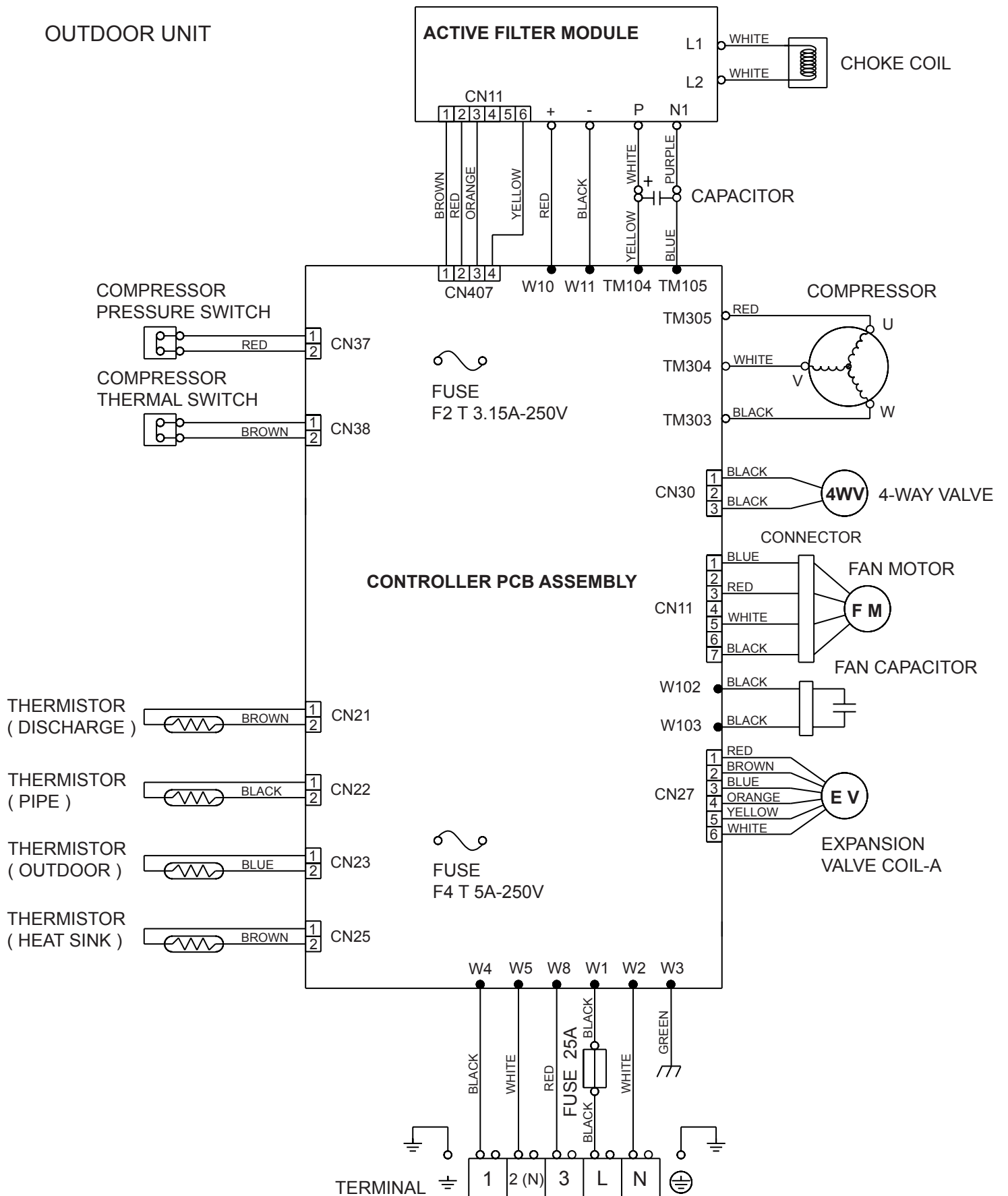


CIRCUIT DIAGRAM

INDOOR UNIT

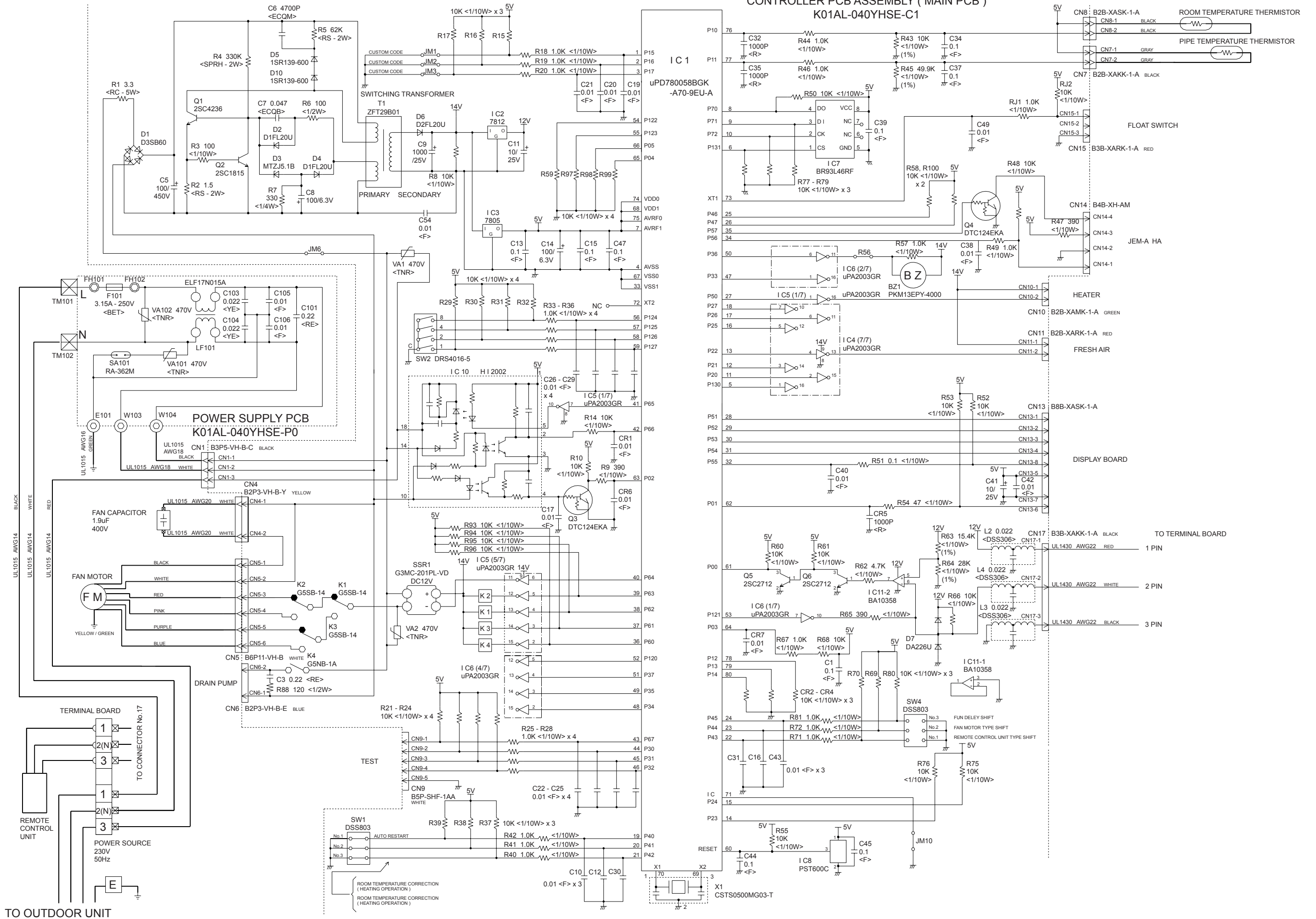


OUTDOOR UNIT



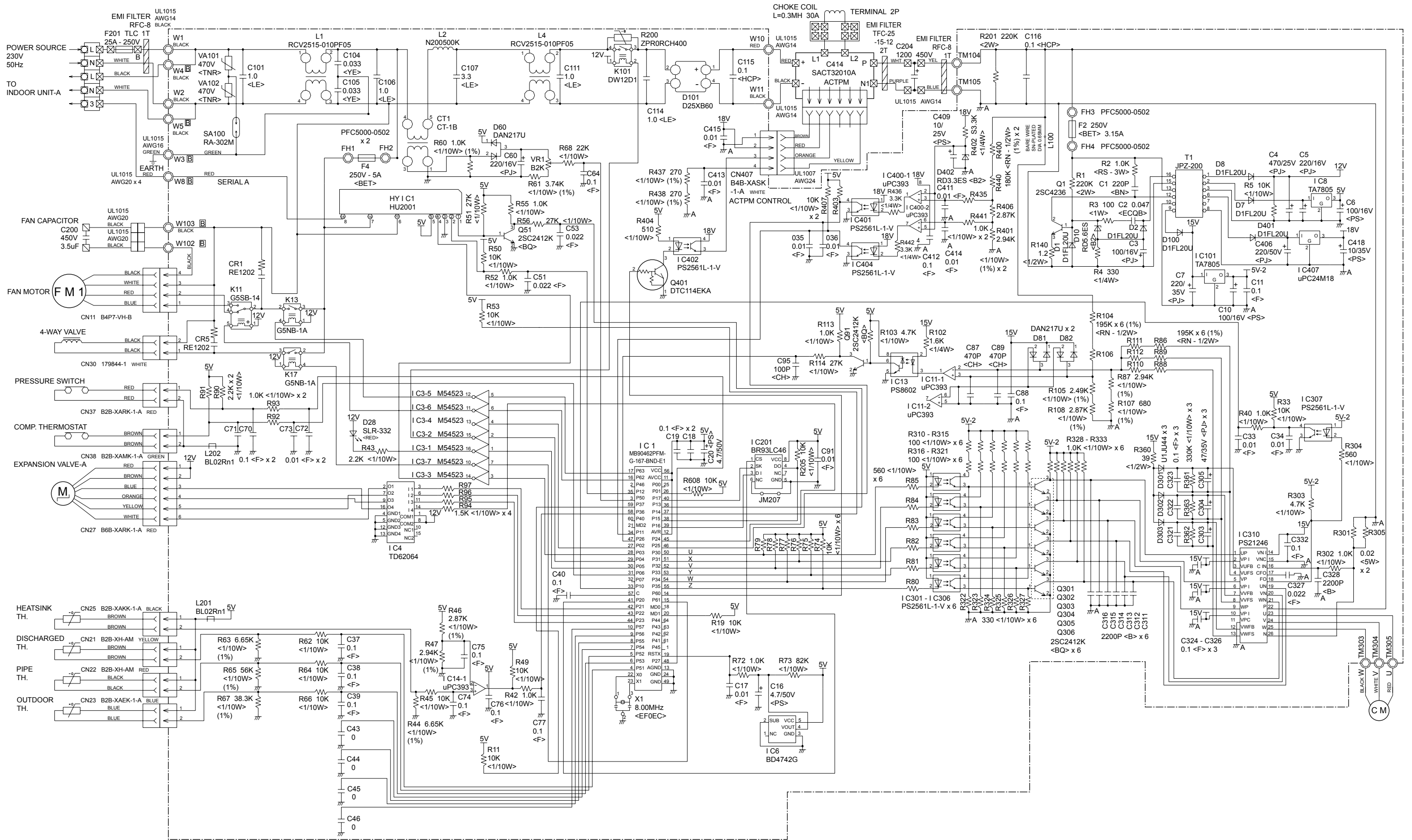
INDOOR PCB CIRCUIT DIAGRAM

CONTROLLER PCB ASSEMBLY (MAIN PCB) K01AL-040YHSE-C1



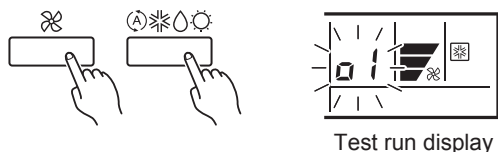
OUTDOOR PCB CIRCUIT DIAGRAM

CONTROLLER PCB ASSEMBLY K06DY-0603HUE-C1



ERROR CONTENTS

- Stop the air conditioner operation.
- Press the master control button and the fan control button simultaneously for 2 seconds to start the test running.



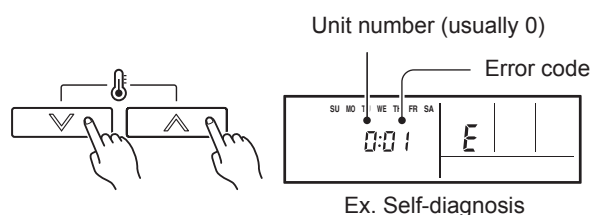
- Press the start/stop button to stop the test running.

SELF-DIAGNOSIS

When the error indication E:EE is displayed, follow the following items to perform the self-diagnosis. E:EE indicates an error has occurred.

REMOTE CONTROLLER DISPLAY

- Stop the air conditioner operation.
- Press the set temperature buttons \wedge / \vee simultaneously for 5 seconds to start the self-diagnosis. Refer to the following tables for the description of each error code.



- Press the set temperature buttons \wedge / \vee simultaneously for 5 seconds to stop the self-diagnosis.

Error code	Error contents
00	Communication error (indoor unit ↔ remote controller)
01	Communication error (indoor unit ↔ outdoor unit)
02	Room temperature sensor open
03	Room temperature sensor short-circuited
04	Indoor heat exchanger temperature sensor open
05	Indoor heat exchanger temperature sensor short-circuited
06	Outdoor heat exchanger temperature sensor
08	Power source connection error
09	Float switch operated
0A	Outdoor temperature sensor
0c	Discharge pipe temperature sensor
11	Model abnormal
12	Indoor fan abnormal
13	Outdoor signal abnormal
14	Outdoor EEPROM abnormal
15	Compressor temperature error
16	Pressure switch error
17	IPM error
1A	Compressor cannot operate
1b	Outdoor fan abnormal

ERROR CONTENTS

OUTDOOR UNIT

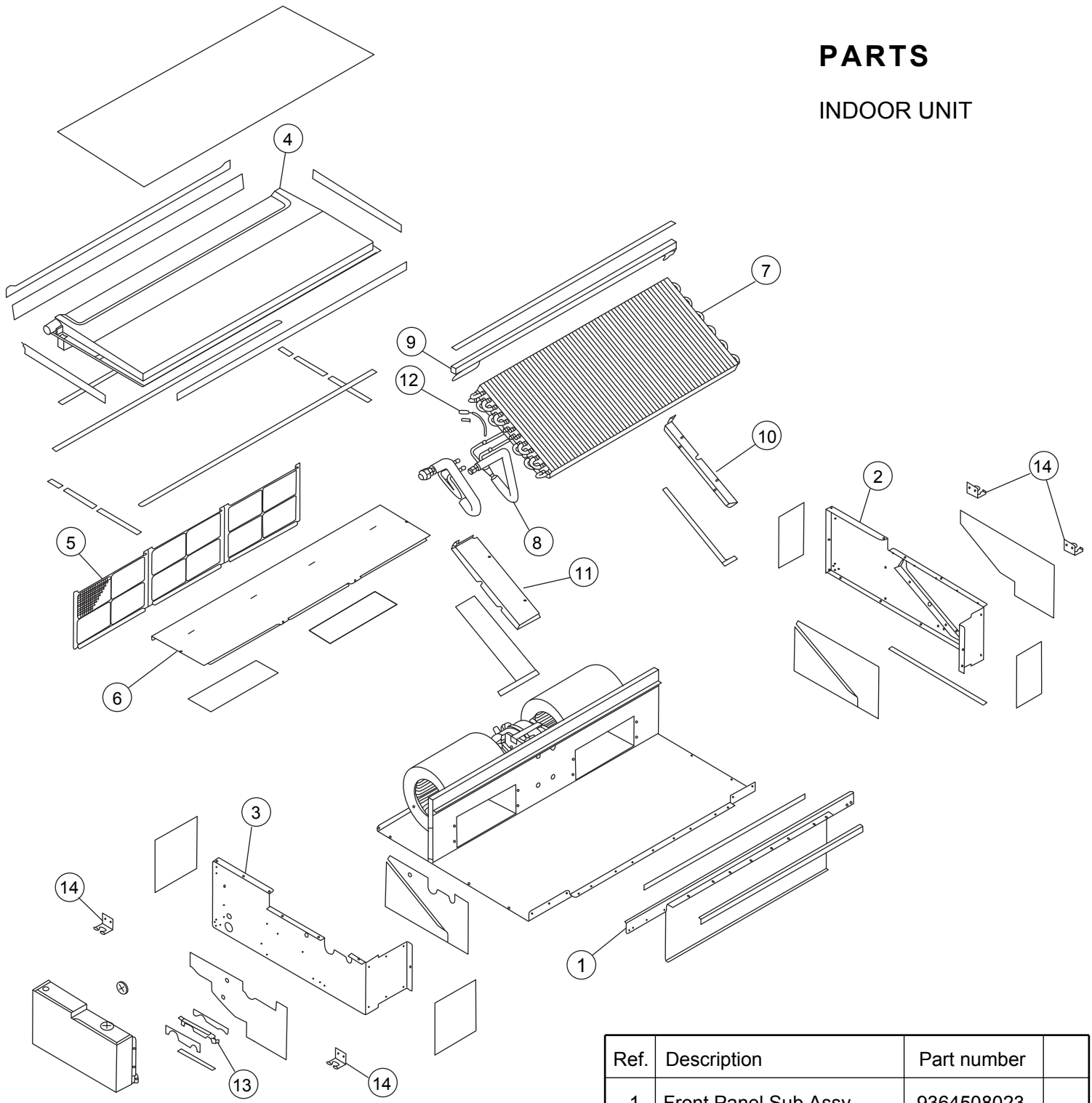
- (1) Is there any abnormal noise and vibration during operation?
- (2) Will noise, wind or drain water from the unit disturb the neighbors?
- (3) Is there any gas leakage?

- Do not operate the air conditioner in the test running state for a long time.

Error contents	LED (red)
Serial signal error	1 time blink
Discharge pipe thermistor error	2 times blink
Heat exchanger thermistor error	3 times blink
Outdoor temperature thermistor error	4 times blink
2 - way valve thermistor A, B error	5 times blink
3 - way valve thermistor A, B error	6 times blink
Compressor thermistor error	7 times blink
Pressure switch error	8 times blink
Indoor unit connection error	9 times blink
Current trip error	10 times blink
CT error	11 times blink
Compressor position detection error	12 times blink
Compressor starting error	13 times blink
Timer error	14 times blink

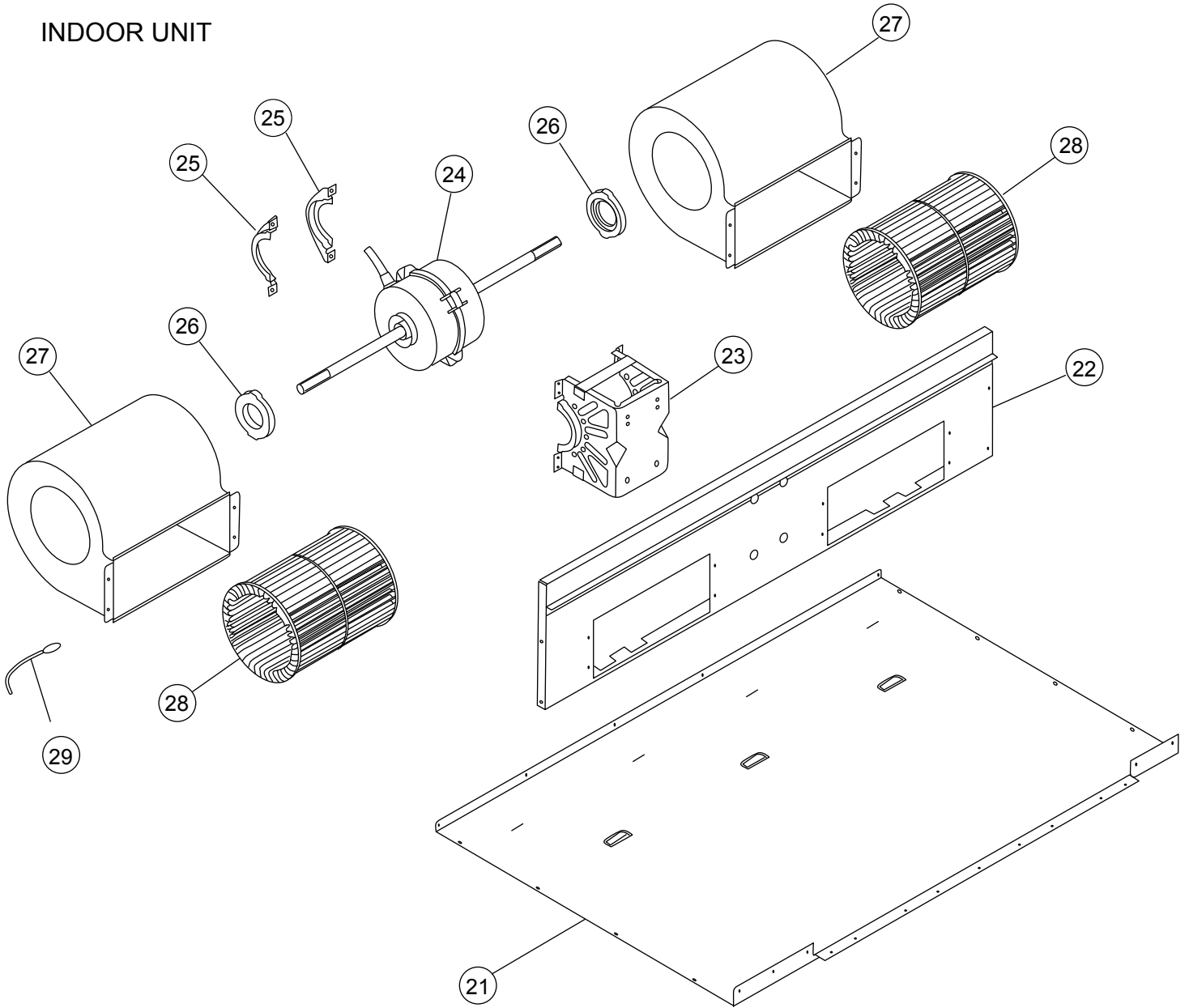
PARTS

INDOOR UNIT



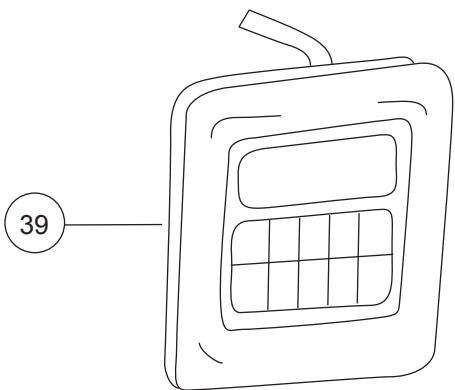
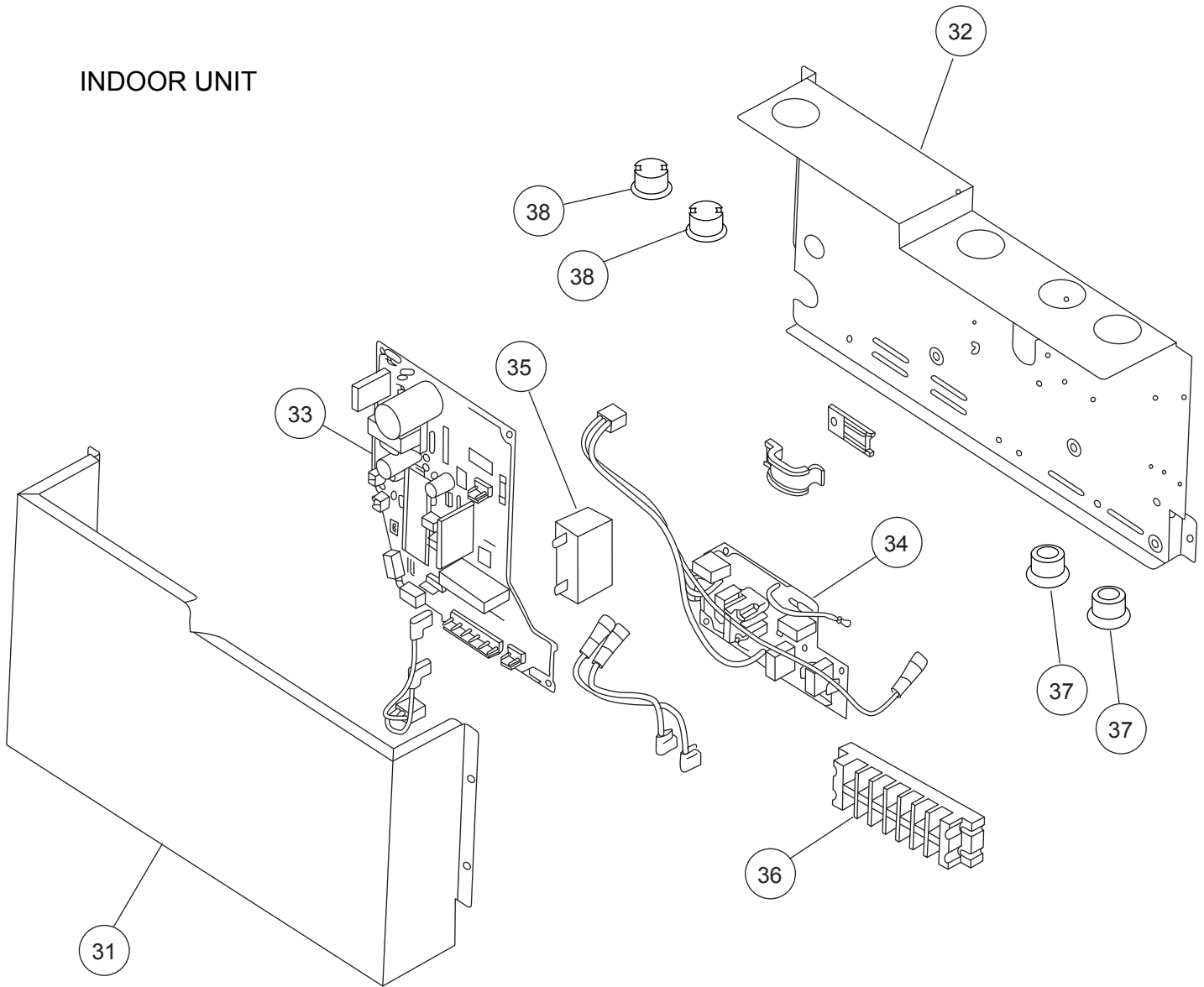
Ref.	Description	Part number
1	Front Panel Sub Assy	9364508023
2	Side Panel R Sub Assy	9364505022
3	Side Panel L Sub Assy	9364506029
4	Drain Pan Sub Assy	9364502069
5	Air Filter	9366833017
6	Cover (Cabinet)	9363400007
7	Evaporator Assy	9372972014
8	Distributor Assy	9373034216
9	Support Plate (Evaporator)	9363404005
10	Bracket Evaporator R	9363199000
11	Bracket Evaporator L	9363198003
12	Pipe Thermistor	9703297090
13	Pipe Cover	9363327007
14	Hook Metal	9363195002
--	Outlet (Eva) Assy	9372978047
--	Drain cap Assy	9377878014

INDOOR UNIT



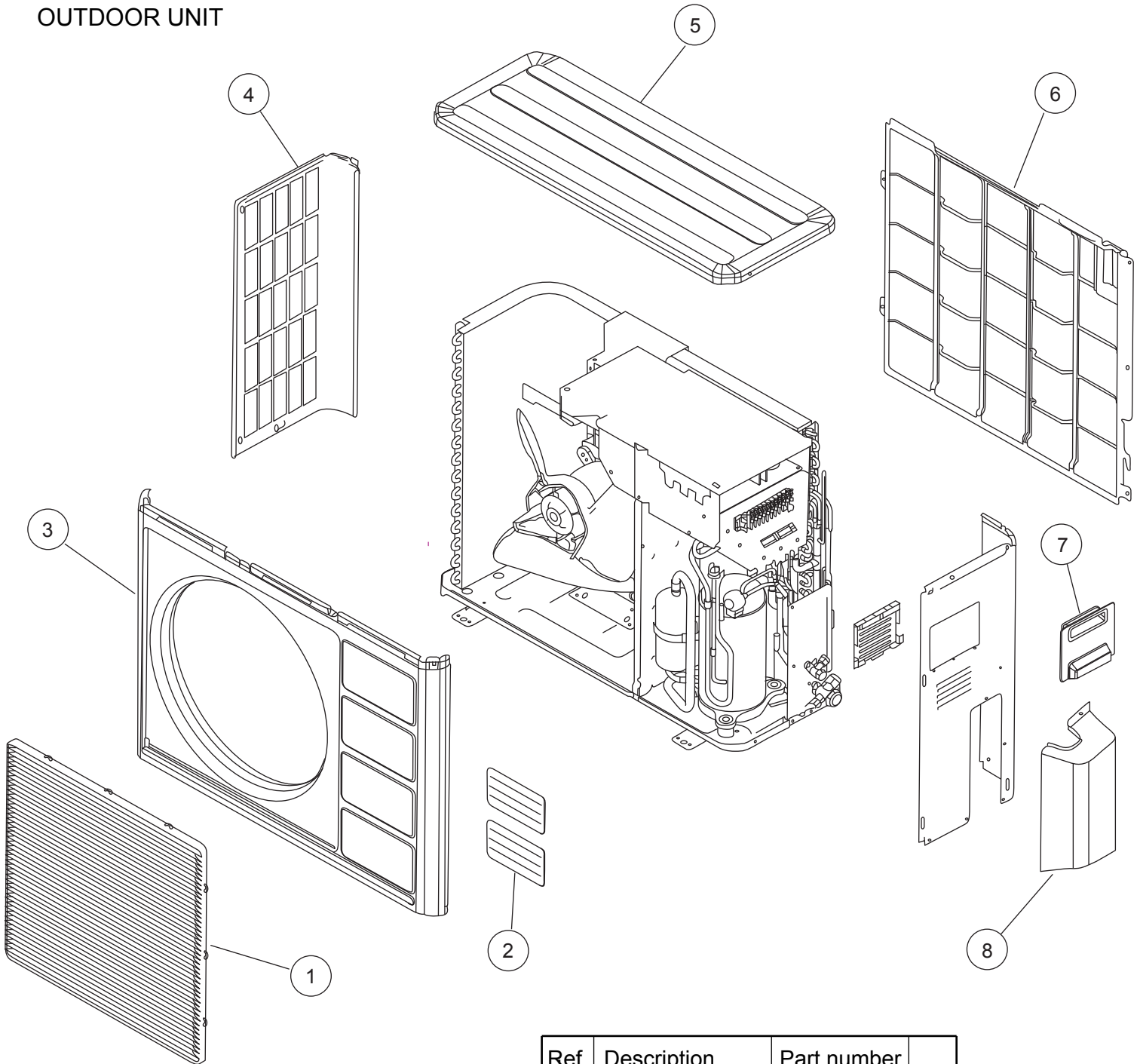
Ref.	Description	Part number	
21	Top Panel Sub Assy	9364507026	
22	Panel Assy (Motor)	9363401004	
23	Motor Fixing Table Assy	9358591000	
24	Fan Motor Assy	9600778210	
25	Motor Fixture	9358594001	
26	Rubber (Vibration-proof)	313659068604	
27	Casing Assy	9363322002	
28	Sirocco Fan Assy	9358621004	
29	Room Thermistor	9703299018	

INDOOR UNIT



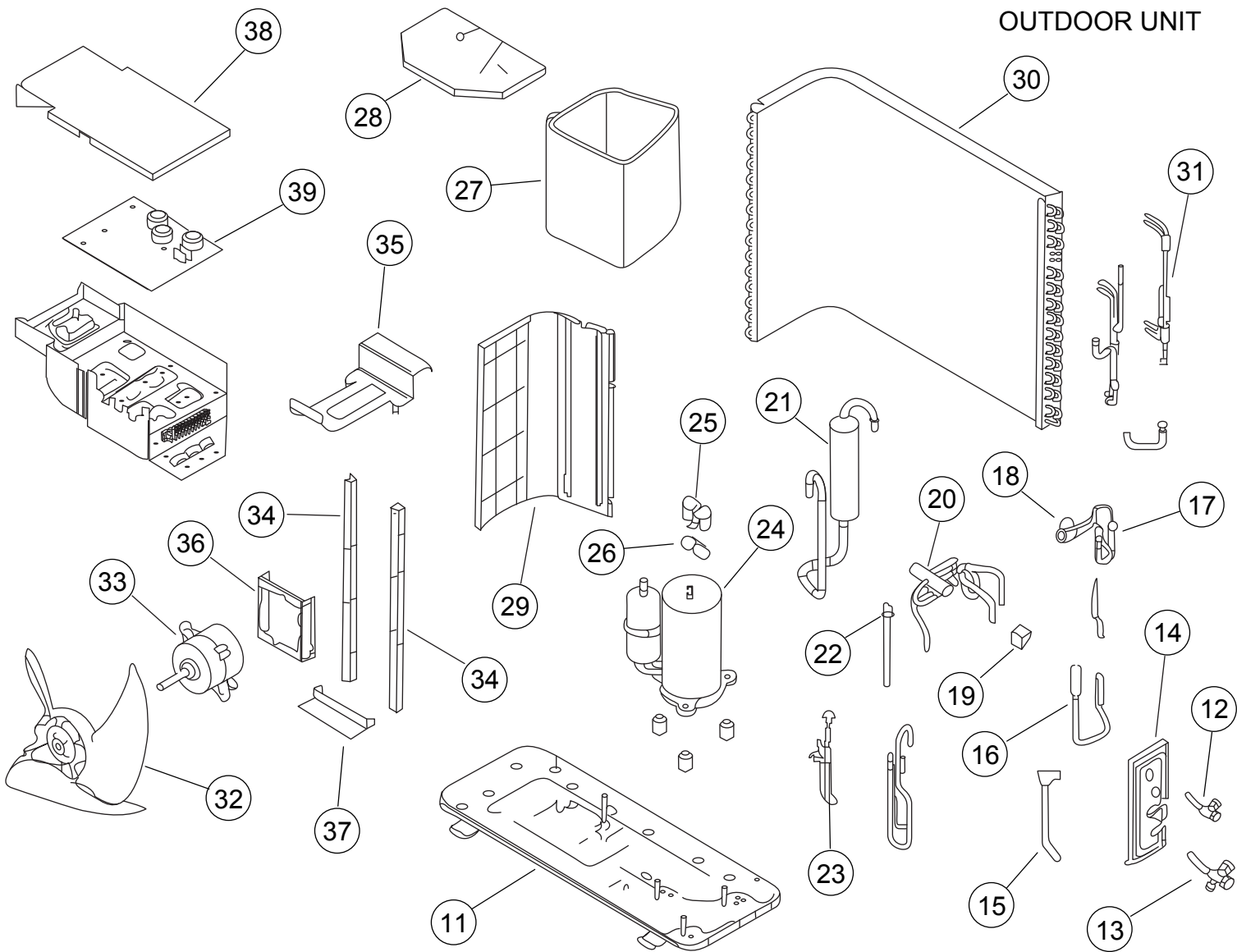
Ref.	Description	Part number
31	Control Box Cover	9363201000
32	Control Box	9375240035
33	Controller PCB Assy	9704557957
34	Power Supply PCB Assy	9704561251
35	Capacitor (Plastic)	9900089160
36	Terminal 7P	9703403019
37	One Touch Bush	9364788005
38	Hole Cover	9378176010
39	Remote Control Unit	9372266014

OUTDOOR UNIT



Ref.	Description	Part number
1	Fan Guard	9371187013
2	Emblem Rear	9351355005
3	Front Panel	9371924014
4	Side Panel L	9371926018
5	Top Plate	9371925011
6	Protective Net	9371934013
7	Connector Cover	9366398004
8	Valve Cover	9372796016

OUTDOOR UNIT

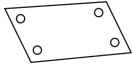








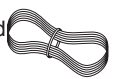


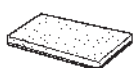



Ref.	Description	Part number
11	Base Assy	9371920078
12	2-Way Valve	9372204054
13	3-Way Valve	9372205051
14	Valve Plate	9371928012
15	Muffler	9372369029
16	Strainer Assy	9372524015
17	Expansion Valve Assy	9373729518
18	Coil (Expansion Valve)	9900057022
19	Solenoid	9900165079
20	4-Way Valve	9900163013
21	Accumulator	9377990020
22	Pressure Switch	9900186012
23	Accumulator Support Assy	9372252017
24	Compressor Assy	9377945013
25	Terminal Cover (Comp.)	9377953018
26	Gasket	9377955012
27	Compressor Cover A	9373730019
28	Compressor Cover B	9373730026
29	Separate Wall	9372795019
30	Condenser Assy	9372181096
31	Capillary Assy	9373729433

Ref.	Description	Part number
32	Propeller Fan Assy	9366378013
33	Motor, Induction	9601671046
34	Motor Bracket	9371929019
35	Motor Bracket Top	9371931012
36	Motor Bracket Center	9371930015
37	Motor Bracket Bottom	9371932019
38	Control Cover	9372792018
39	Controller PCB Assy	9707560046
--	Capacitor (Fan)	9900270049
--	Holder	9377954015
--	Thermal Switch	9377956019
--	Discharge Thermistor	9704219039
--	Heat Exchanger Thermistor	9900374020
--	Outdoor Thermistor	9703516047
--	Heat Sink Thermistor	9900195014
--	ACTPM	9703457012
--	Capacitor	9705387010
--	Fuse	0600086039
--	Fuse Holder	0501454012
--	Terminal 5P	9900203023
--	Terminal	9900433017

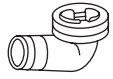

STANDARD ACCESSORIES

INDOOR UNIT

Name and Shape	Q'ty	Application	Part No
Installation template 	1	For positioning the indoor unit	9364225005
Hanger 	4	For suspending the indoor unit from ceiling	9363195002
Tapping screw (φ 4 x 10) 	8	For installing the hanger	301171164104
Special nut (large flange) 	4	For suspending the indoor unit from ceiling	313005446653
Special nut (small flange) 	4		313005446759
Coupler heat insulation (large) 	1	For indoor side pipe joint (large pipe)	9350716029
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)	9352766015
Binder 	(Small) 1	For remote controller and remote controller cord binding	313361275805
	(Large) 4	For fixing the coupler heat insulation	312300787605
Remote controller 	1	Heat & Cooling model	9372266014
Remote controller cord 	1	For connecting the remote controller	9372714010
Tapping screw (φ 4 x 16) 	2	For installing the remote controller	0700181108
Filter 	3	1200 - 22000 BTU/h models	9366833017
Drain hose insulation 	1	Insulates the drain hose and vinyl hose connection	313806217708
Edge cover 	1	For making a wiring hole for connecting optional units	9378176010

Remote sensor : UTD-RS100 (P/N 9072619004)

OUTDOOR UNIT

Name and Shape	Q'ty	Application	Part No
Drain pipe 	1	For outdoor unit drain piping work	9303029015
Cap (drain) 	1		313166024302

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