

INVERTER MULTI
AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASY18LMA-W	AOY30LMAW4
ASY18LBAJ	
ASY24LBAJ	

CONTENTS

SPECIFICATIONS	1
OUTLINE AND DIMENSIONS	3
REFRIGERANT SYSTEM DIAGRAM	5
CIRCUIT DIAGRAM	6
INDOOR PCB CIRCUIT DIAGRAM	8
OUTDOOR PCB CIRCUIT DIAGRAM	9
ERROR CONTENTS	12
PARTS (Indoor unit)	14
PARTS (Outdoor unit)	22

SPECIFICATIONS

INDOOR UNIT

ELECTRICAL DATA

TYPE	COOL & HEAT	COOL & HEAT
MODEL NAME	ASY18LMA-W ASY18LBAJ	ASY24LBAJ
POWER SOURCE	230 V	230 V
FREQUENCY	50 Hz	50 Hz
MOISTURE REMOVAL	3.0 L/hr	3.0 L/hr
AIR CIRCULATION HIGH	1,020 m3/hr	1,020 m3/hr

FAN MOTOR

POWER SOURCE	230 V	230 V
DISCRIMINATION	MFA-30HTT	MFA-30HTT
HI-SPEED	1,160 r.p.m.	1,290 r.p.m.
MED-SPEED	1,000 r.p.m.	1,100 r.p.m.
LO-SPEED	830 r.p.m.	870 r.p.m.
QUIET	780 r.p.m.	730 r.p.m.

NOISE LEVEL (Cool / Heat)

HI-SPEED	C 43 dB / H 43 dB	C 47 dB / H 47 dB
MED-SPEED	C 39 dB / H 39 dB	C 41 dB / H 41 dB
LO-SPEED	C 35 dB / H 35 dB	C 36 dB / H 36 dB
QUIET-SPEED	C 32 dB / H 32 dB	C 32 dB / H 32 dB

MEASUREMENT

DIMENSIONS	H x W x D	320 x 1,120 x 220 mm
WEIGHT	Gross / Net	22 kg / 16 kg

OUTDOOR UNIT

ELECTRICAL SPECIFICATIONS

TYPE		Cooling & Heating
MODEL NAME		AOY30LMAW4
COOLING CAPACITY		8.0 kW
HEATING CAPACITY		9.6 kW
POWER SUPPLY (V)		(220) - 230 - (240)
FREQUENCY		50 Hz
RUNNING CURRENT (A)	COOLING	9.7
	HEATING	10.5
INPUT (kW)	COOLING	2.22
	HEATING	2.40
EER (kW/kW)	COOLING	3.60
	HEATING	4.00
AIR CIRCULATION HIGH		3,300 m ³ /hr

FAN MOTOR

DISCRIMINATION	MFE-60PO
HI-SPEED (COOL)	820 r.p.m.
HI-SPEED (HEAT)	780 r.p.m.

COMPRESSOR

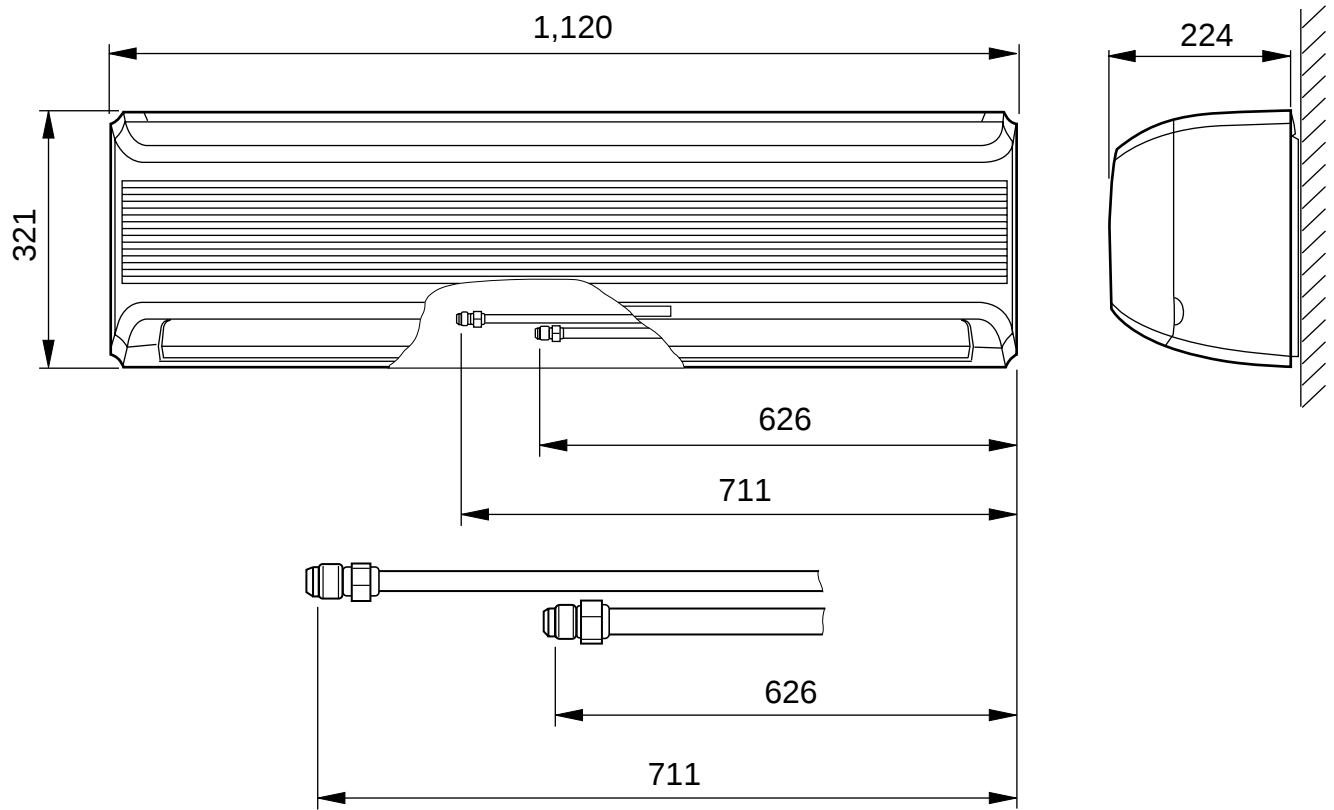
TYPE		Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION		TNB220FPBM9
REFRIGERANT	R410	3,300 g
FULL CHARGE AMOUNT	Total Pipe Length 50 m	3,300 g
	60 m	3,550 g
	70 m	3,800 g
ADDITIONAL CHARGE		25 g/m
CHARGELESS		50 m
MAX PIPE LENGTH (each unit)		25 m
MAX PIPE LENGTH (total)		70 m
MAX ELEVATION (between indoor units)		10 m
MAX ELEVATION (between indoor and outdoor units)		10 m
MIN PIPE LENGTH (each unit)		5 m

MEASUREMENT

DIMENSIONS	H x W x D	830 x 900 x 330 mm
WEIGHT	Net / Gross	68 kg / 78 kg

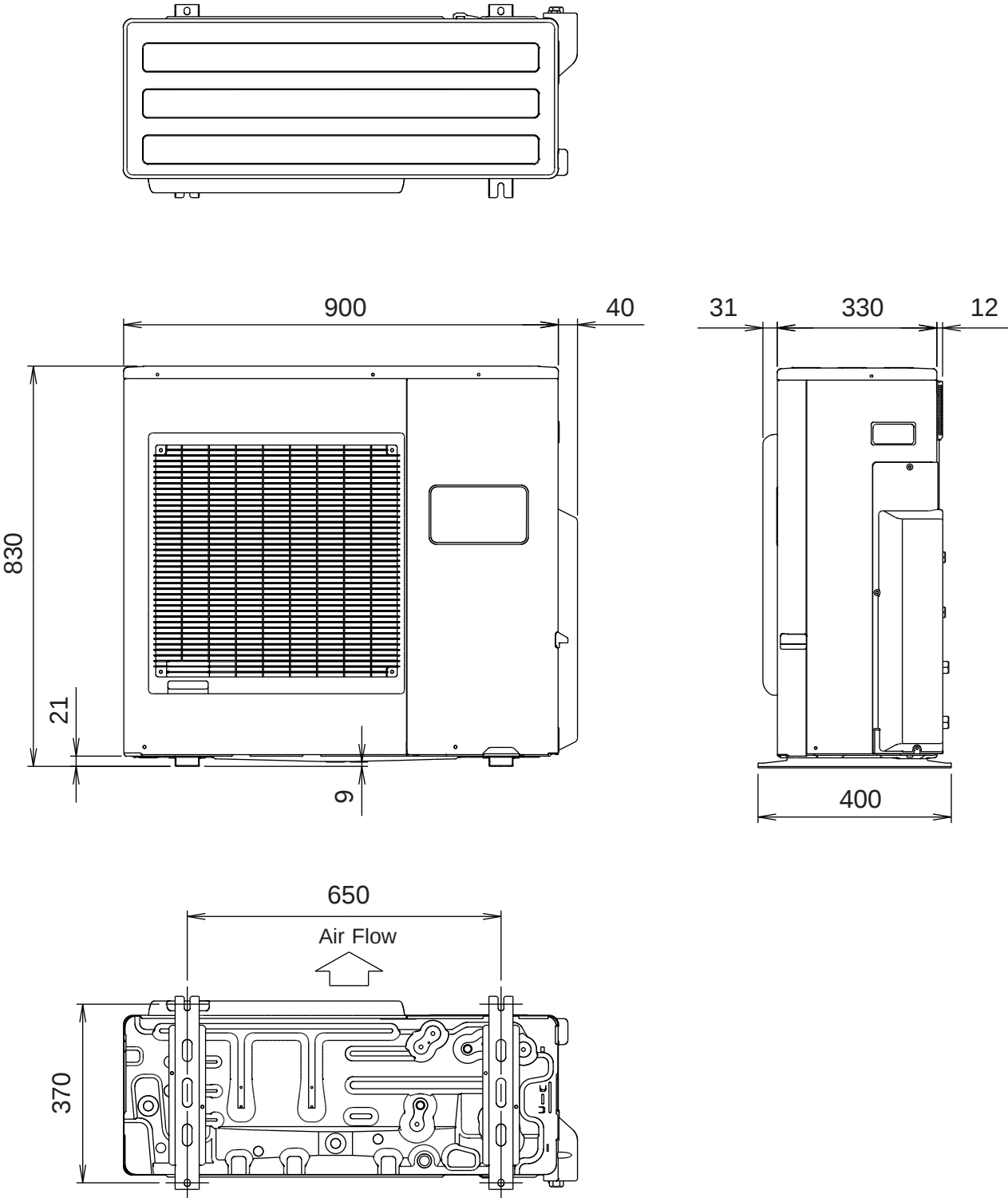
OUTLINE AND DIMENSIONS

INDOOR UNIT
Unit : mm



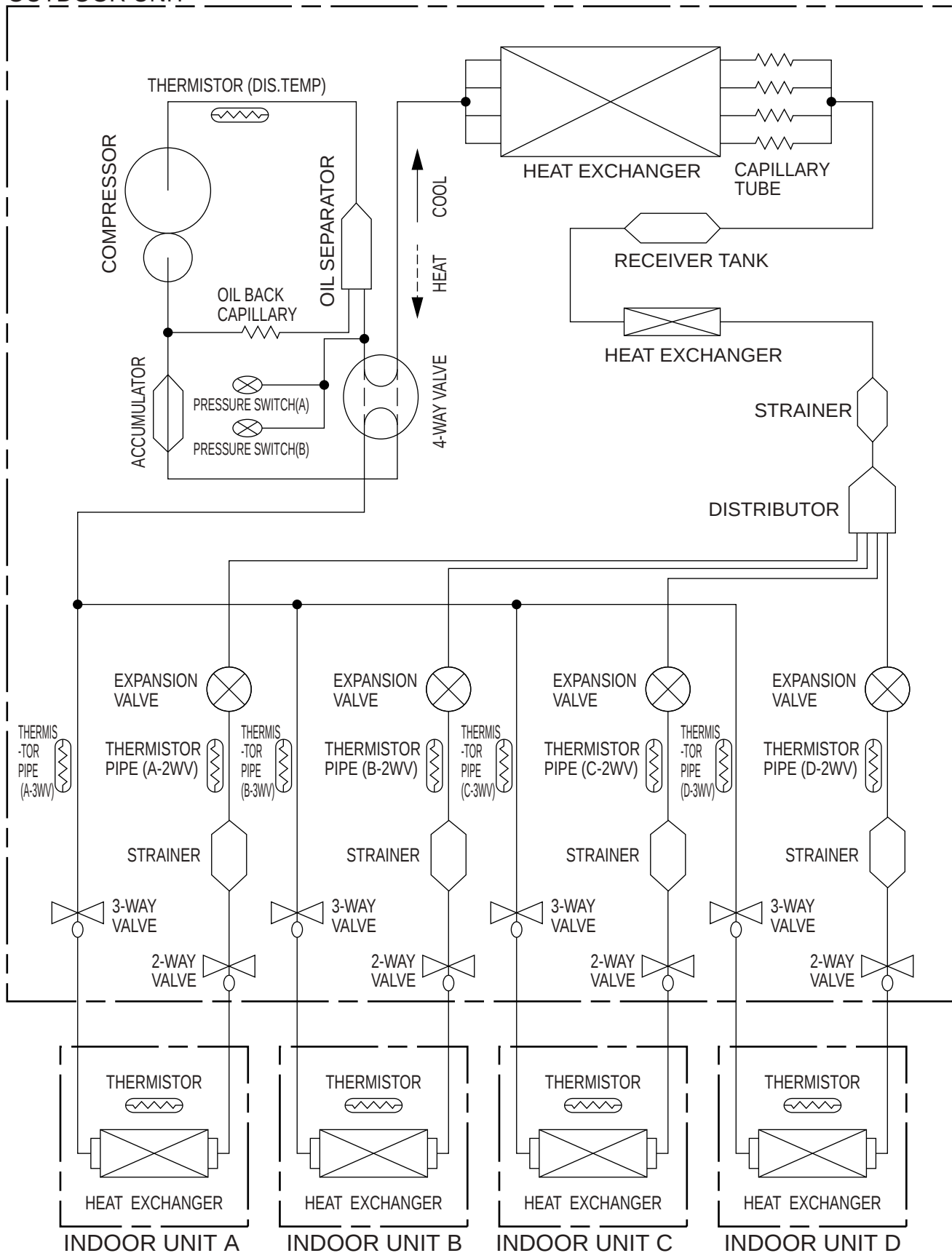
OUTDOOR UNIT

Unit : mm



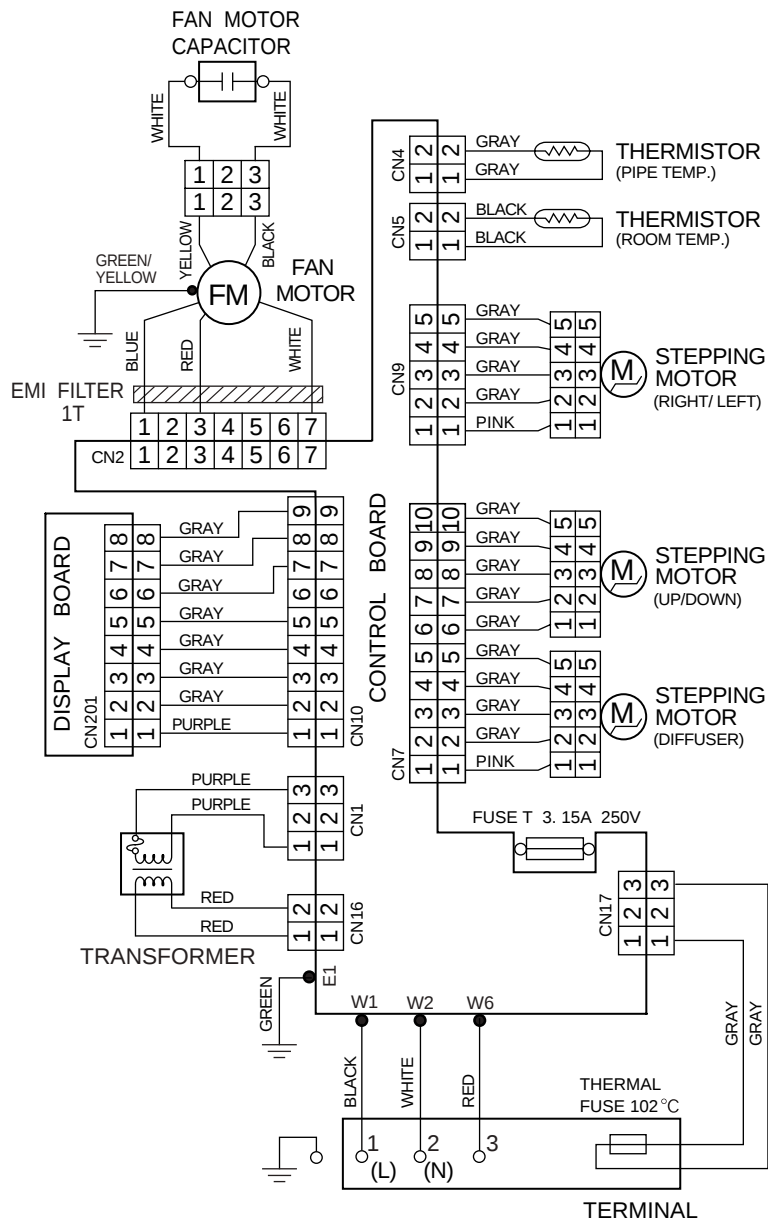
REFRIGERANT SYSTEM DIAGRAM

OUTDOOR UNIT

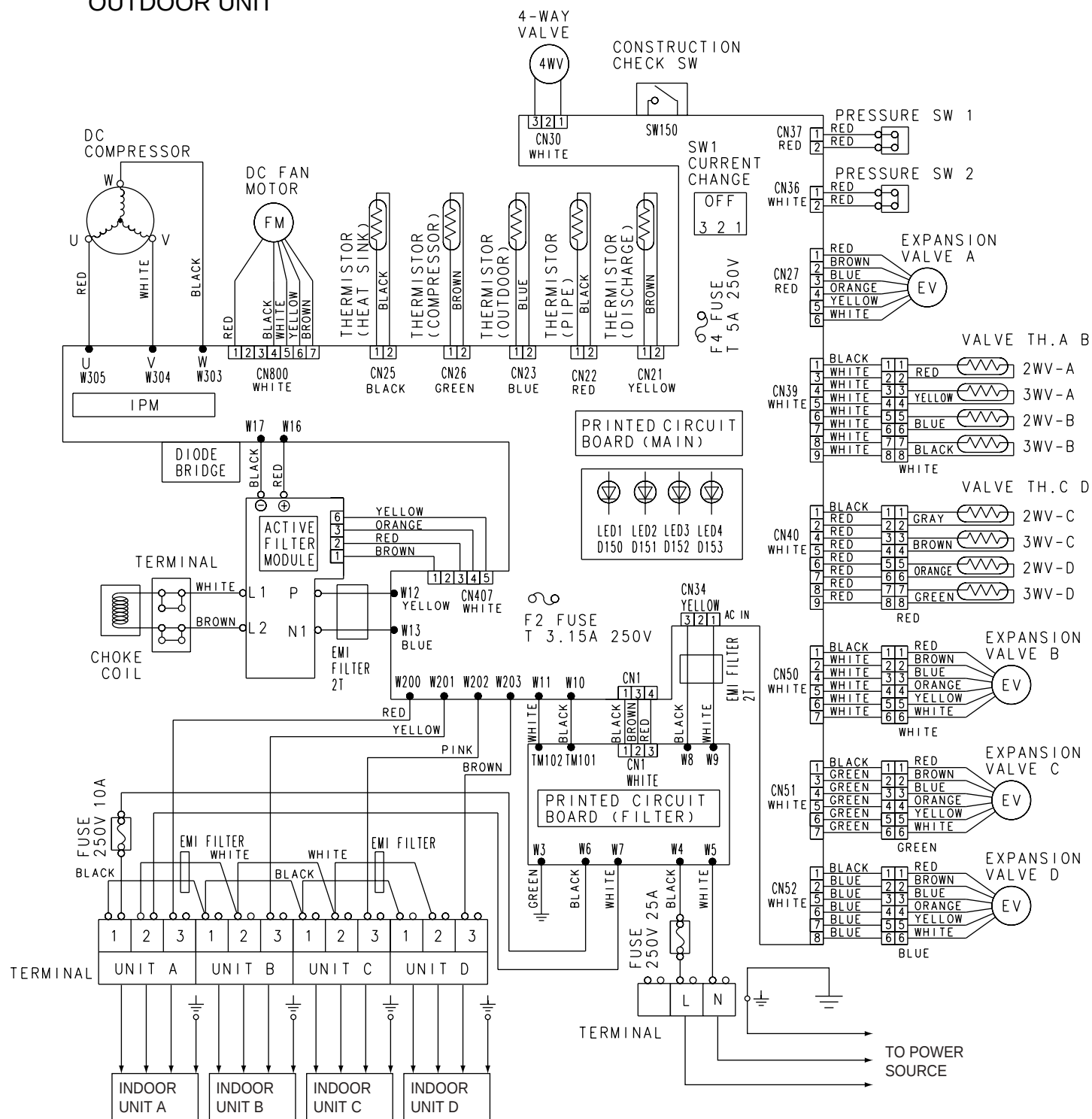


CIRCUIT DIAGRAM

INDOOR UNIT



OUTDOOR UNIT



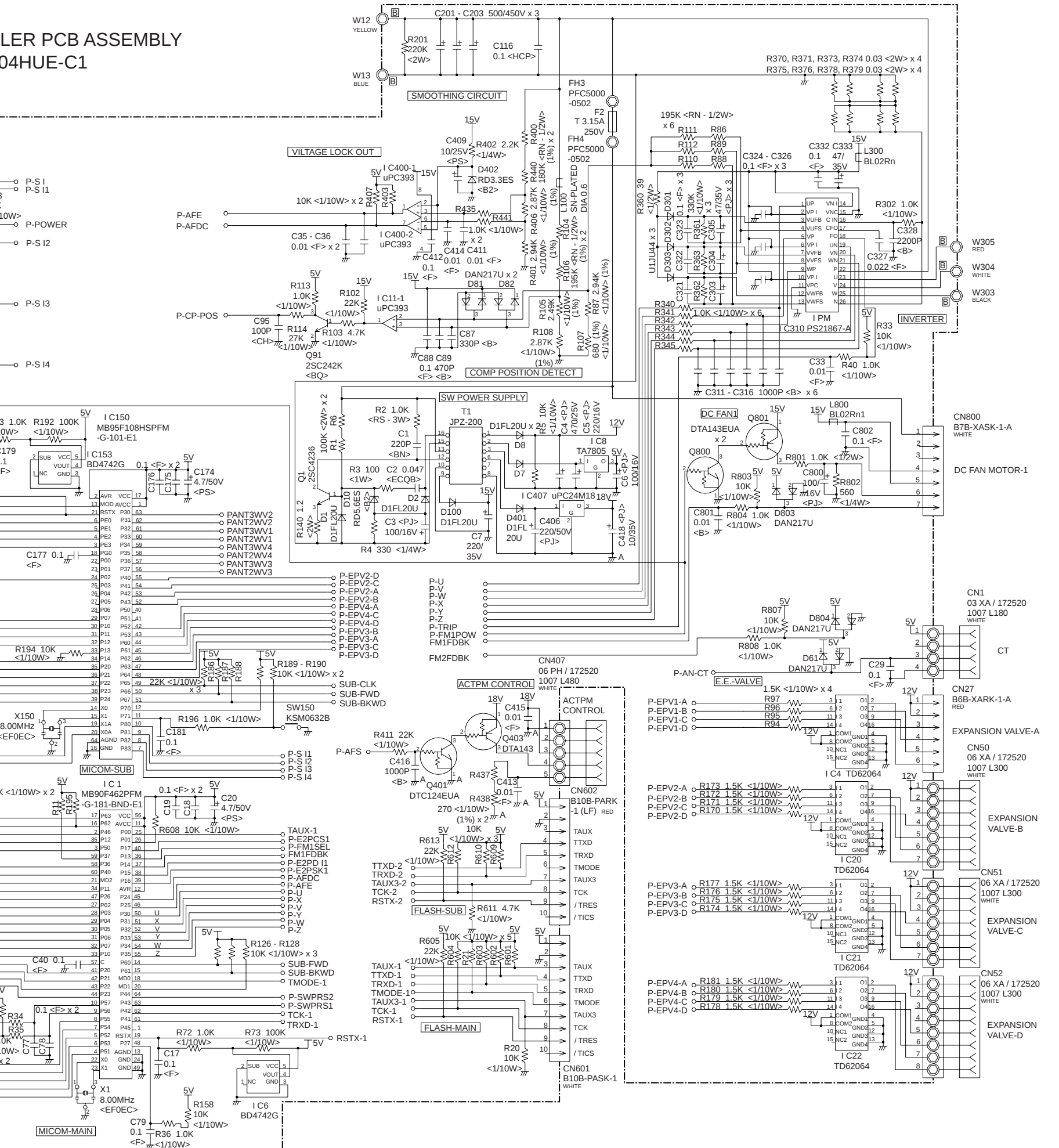
CONTROLLER PCB ASSEMBLY
ASY18LMA-W, ASY18LBAJ : EZ-00319HSE-C
ASY24LBAJ : EZ-0032AHSE-C

[illegible]

INVERTER ASSEMBLY
EZ-004HHUE

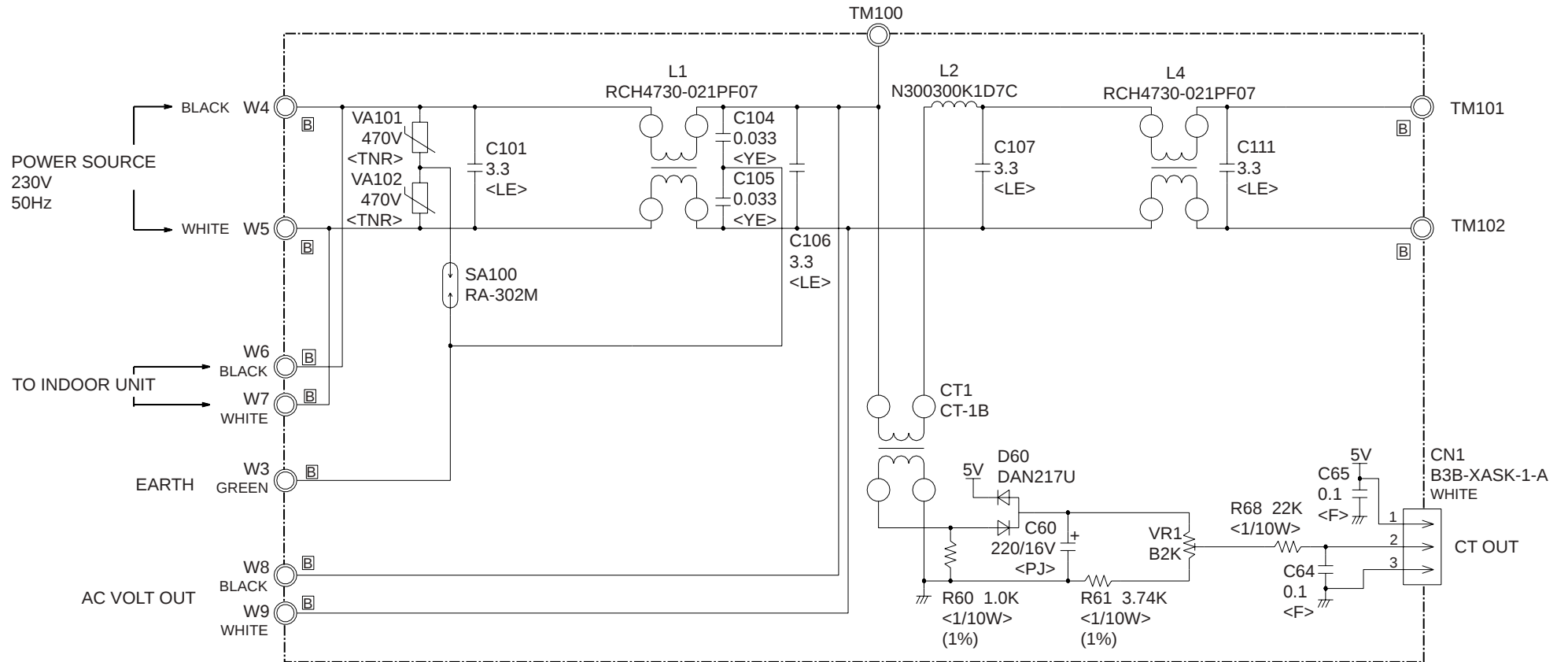
The diagram illustrates the main board wiring, divided into several functional sections:

- MAIN CURRENT:** This section at the top shows the main power input. It includes a fuse F4 (T 5A), a diode bridge K101 (DW12D1), and a capacitor C115 (0.1 <HCP>). The main current is distributed to various components, including the PFC5000 -0502 (FH2 250V) and the VA103 470V <TNR> capacitor.
- SERIAL:** This section on the left shows the serial communication interface, featuring a CR5 RE1202 component and a K17 G5NB-1A component.
- PR-SW:** This section on the right shows the power switch (PR-SW) and its associated components, including a 12V regulator, a 5V regulator, and various capacitors (C60, C61, C37, C38, C39, C43, C44, C45, C46, C158, C159, C160, C161).
- Power Distribution:** The diagram shows a complex network of power lines connecting the main current section to the serial and PR-SW sections. Key components include the PFC5000 -0502 (FH1), the VA103 470V <TNR> capacitor, and the HY1 C 1 HU2001, HY1 C 2 HU2001, HY1 C 3 HU2001, and HY1 C 4 HU2001 capacitors.
- Resistors and Capacitors:** Numerous resistors (R100, R98, R63, R65, R67, R21, R117, R119, R23, R24, R151, R153, R155, R157) and capacitors (C21, C22, C23, C24, C158, C159, C160, C161) are shown, each with its value and tolerance specified.

[illegible]

OUTDOOR UNIT

POWER SUPPLY PCB ASSEMBLY K04BA-0400HUE-P0



ERROR CONTENTS

The OPERATION, TIMER and SWING lamps operate as follows according to the error contents.

Error contents	Error display		
	OPERATION (RED)	TIMER (GREEN)	SWING (ORANGE)
Indoor unit circuit board error	○	○	—
Indoor unit room temperature sensor wire opened	2 times ●	○	—
Indoor unit room temperature sensor wire short circuited	2 times ●	○	○
Indoor unit piping sensor wire opened	3 times ●	○	—
Indoor unit piping sensor short circuited	3 times ●	○	○
Outdoor unit → Indoor unit communication error	5 times ●	○	—
Indoor unit → Outdoor unit communication error	5 times ●	○	○
Indoor unit fan error	6 times ●	○	—
Outdoor unit heat exchanger temperature sensor error	○	3 times ●	—
Outdoor unit outdoor temperature sensor error	○	4 times ●	—
Outdoor unit discharge temperature sensor error	○	5 times ●	—
Outdoor unit compressor temperature sensor error	○	8 times ●	—
Outdoor unit pressure switch error	○	9 times ●	—
Outdoor unit 2 way valve temperature sensor error	○	—	2 times ●
Outdoor unit 3 way valve temperature sensor error	○	—	3 times ●
Indoor unit fan connection capacity error	○	—	4 times ●
IPM error	○	10 times ●	—
Compressor loter location error	○	13 times ●	—
Outdoor fan motor error	○	14 times ●	—

○ : Fast flashing ● : Slow flashing — : Off

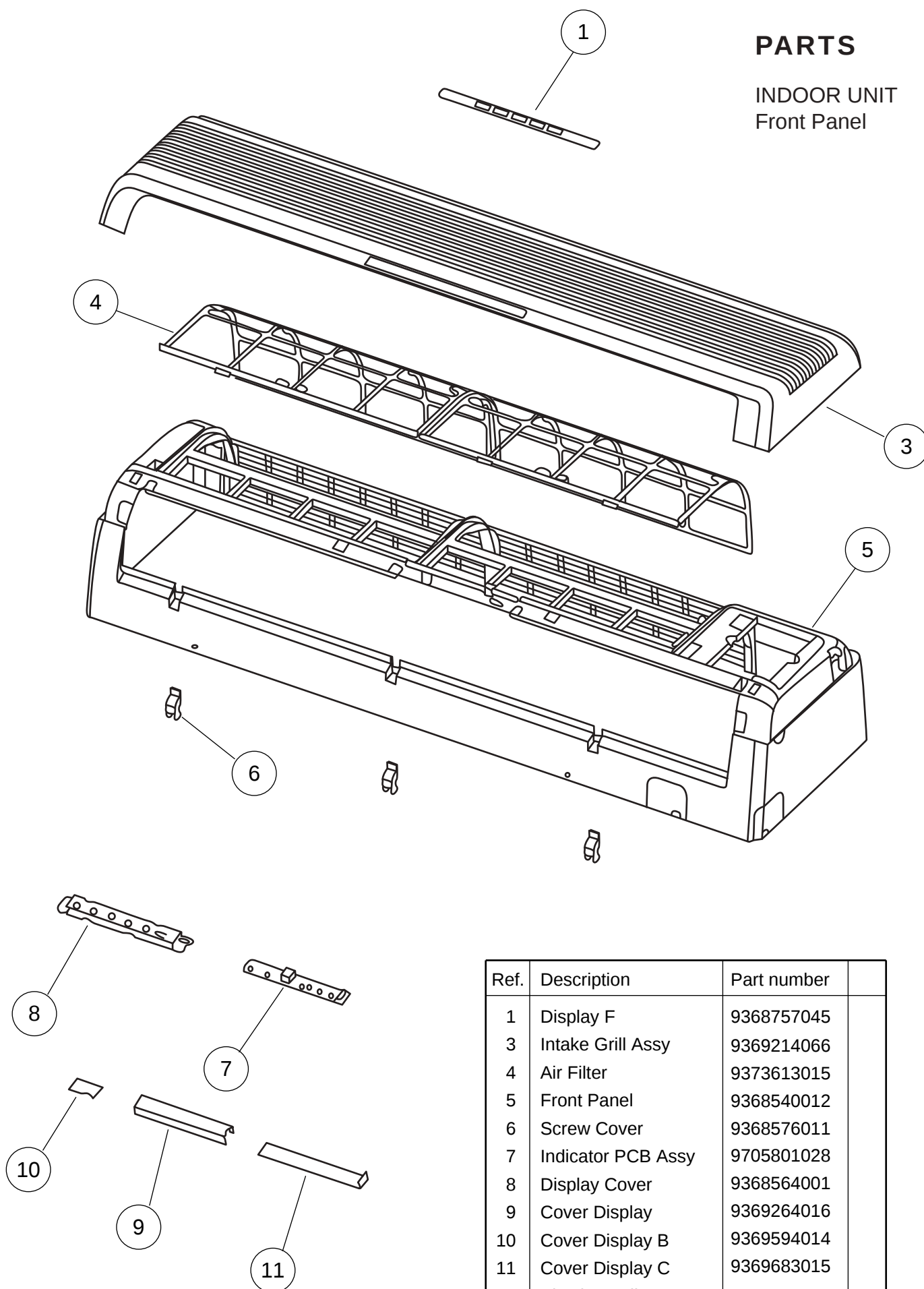
2.OUTDOOR UNIT LEDS

	LED A	LED B	LED C	LED D
Communication error (indoor unit A to outdoor unit)	● 1 time	—	—	—
Communication error (indoor unit B to outdoor unit)	—	● 1 time	—	—
Communication error (indoor unit C to outdoor unit)	—		● 1 time	—
Communication error (indoor unit D to outdoor unit)	—	—	—	● 1 time
Discharge pipe temperature sensor	● 2 times	—	—	—
Outdoor heat exchanger temperature sensor	● 3 times	—	—	—
Outdoor temperature sensor	● 4 times	—	—	—
Outdoor 2way valve(A) temperature sensor	● 5 times	—	—	—
Outdoor 2way valve(B) temperature sensor	—	● 5 times	—	—
Outdoor 2way valve(C) temperature sensor	—	—	● 5 times	
Outdoor 2way valve(D) temperature sensor	—	—	—	● 5 times
Outdoor 3way valve(A) temperature sensor	● 6 times	—	—	—
Outdoor 3way valve(B) temperature sensor	—	● 6 times	—	—
Outdoor 3way valve(C) temperature sensor	—	—	● 6 times	—
Outdoor 3way valve(D) temperature sensor	—	—	—	● 6 times
Compressor temperature sensor	● 7 times	—	—	—
Heatsink temperature sensor	● 8 times	—	—	—
Pressure switch A abnormal	● 9 times	—	—	—
Pressure switch B abnormal	● 10 times	—	—	—
Indoor unit connection capacity error	● 11 times	—	—	—
IPM error	● 12 times	—	—	—
Compressor loter location error	● 13 times	—	—	—
Compressor can not start to operate	● 14 times	—	—	—
Outdoor fan (upper) motor error	● 15 times	—	—	—
Outdoor fan (lower) motor error	● 16 times	—	—	—
Microcomputer error	● 17 times	—	—	—

● : Slow flashing — : Off

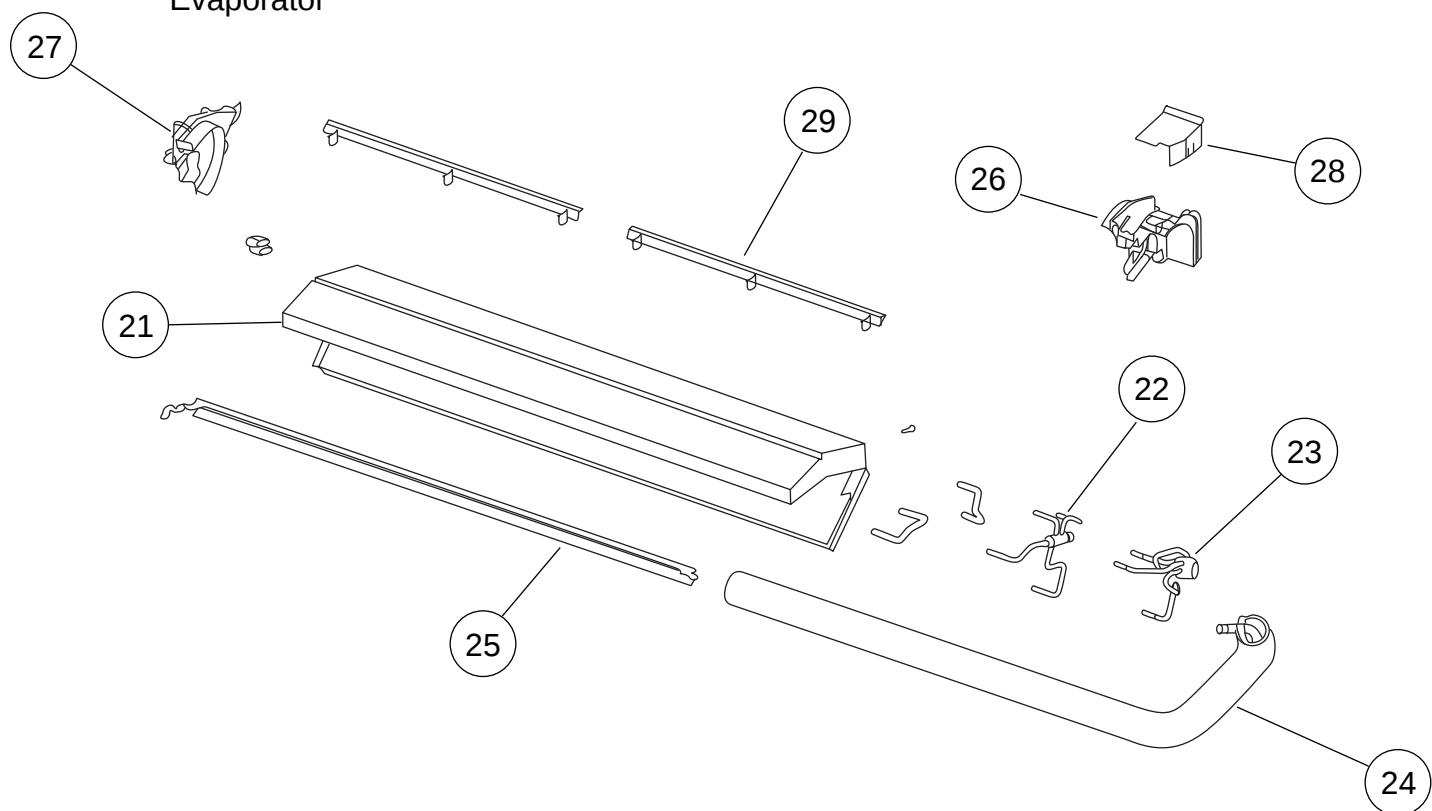
PARTS

INDOOR UNIT
Front Panel

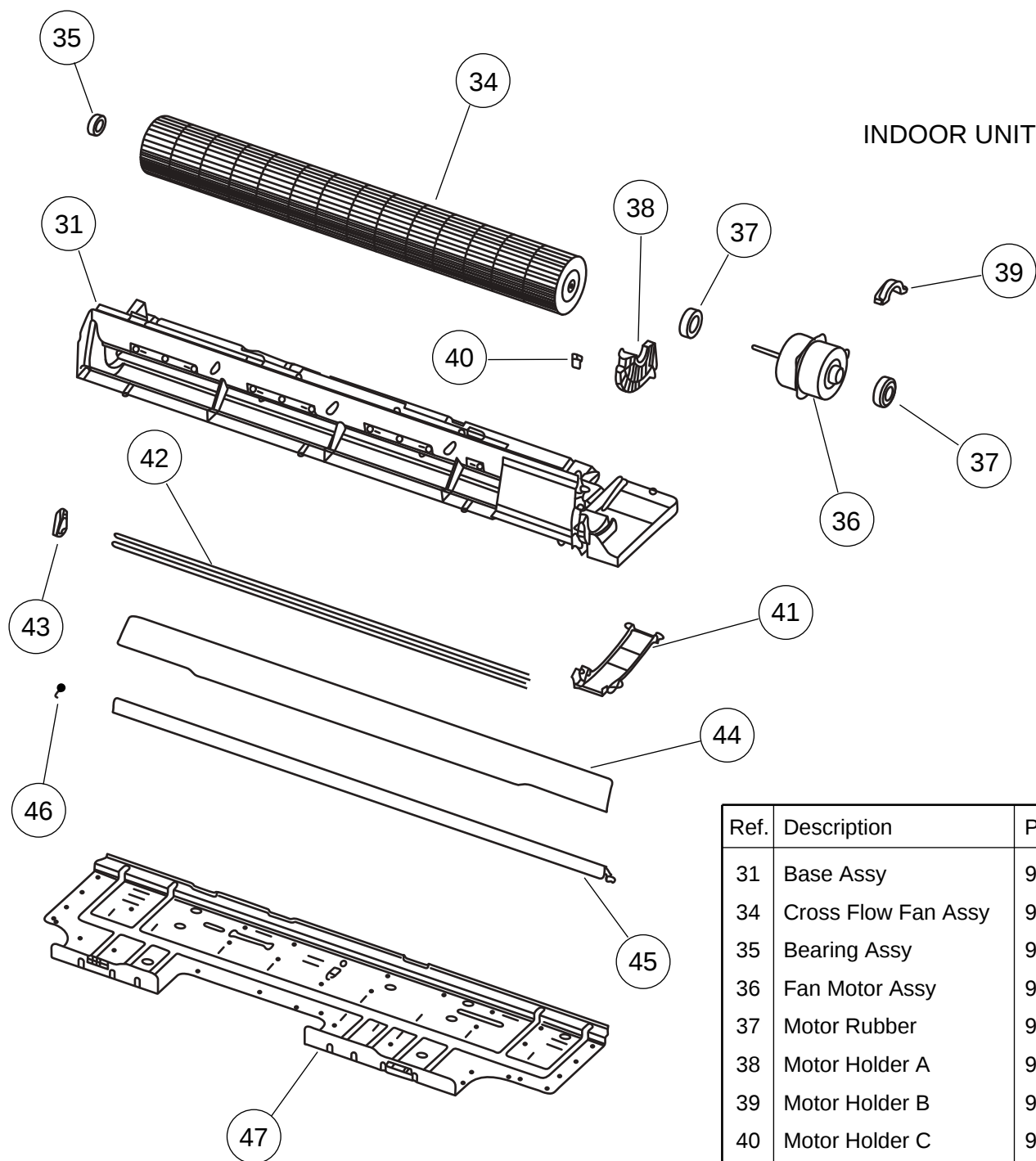


Ref.	Description	Part number	
1	Display F	9368757045	
3	Intake Grill Assy	9369214066	
4	Air Filter	9373613015	
5	Front Panel	9368540012	
6	Screw Cover	9368576011	
7	Indicator PCB Assy	9705801028	
8	Display Cover	9368564001	
9	Cover Display	9369264016	
10	Cover Display B	9369594014	
11	Cover Display C	9369683015	
--	Air Clean Filter Assy	9375372019	

INDOOR UNIT Evaporator

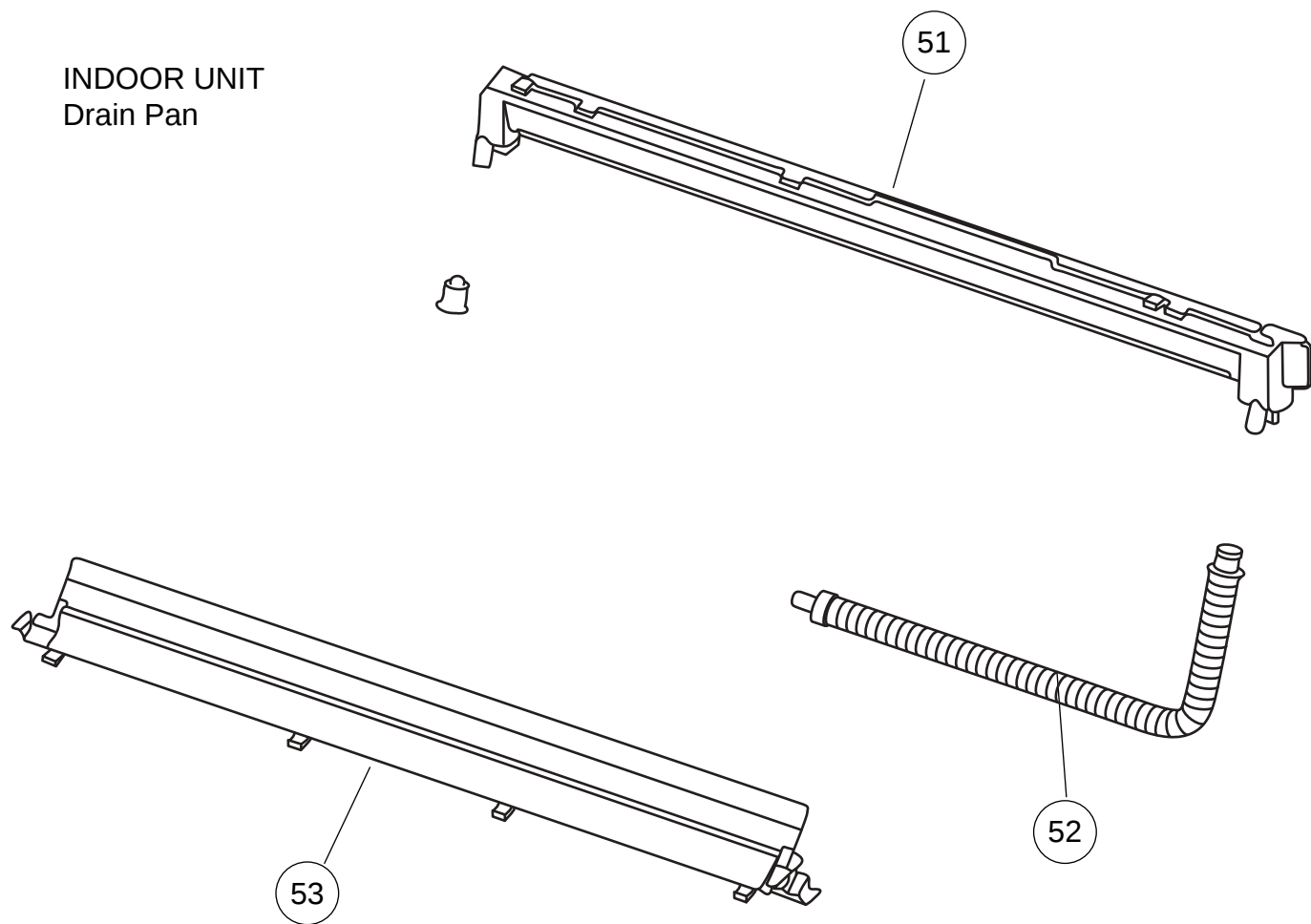


Ref.	Description	Part number	
21	Evaporator Assy (18)	9372102015	
21	Evaporator A Assy (24)	9373721017	
22	Coupling Pipe Assy (18)	9369241000	
22	Coupling Pipe Assy (24)	9373250012	
23	Distributor Assy (18)	9371178004	
23	Distributor Assy (24)	9373249016	
24	Joint Pipe Assy (18)	9372461013	
24	Joint Pipe Assy (24)	9373723011	
25	Kit (Evaporator Bracket)	9371166018	
26	Kit (Evaporator Support R)	9371167015	
27	Kit (Evaporator Support L)	9371165011	
28	Water Seal Plate	9369684005	
29	Water Plate (24)	9368569006	
--	Evaporator B Assy (24)	9369373008	



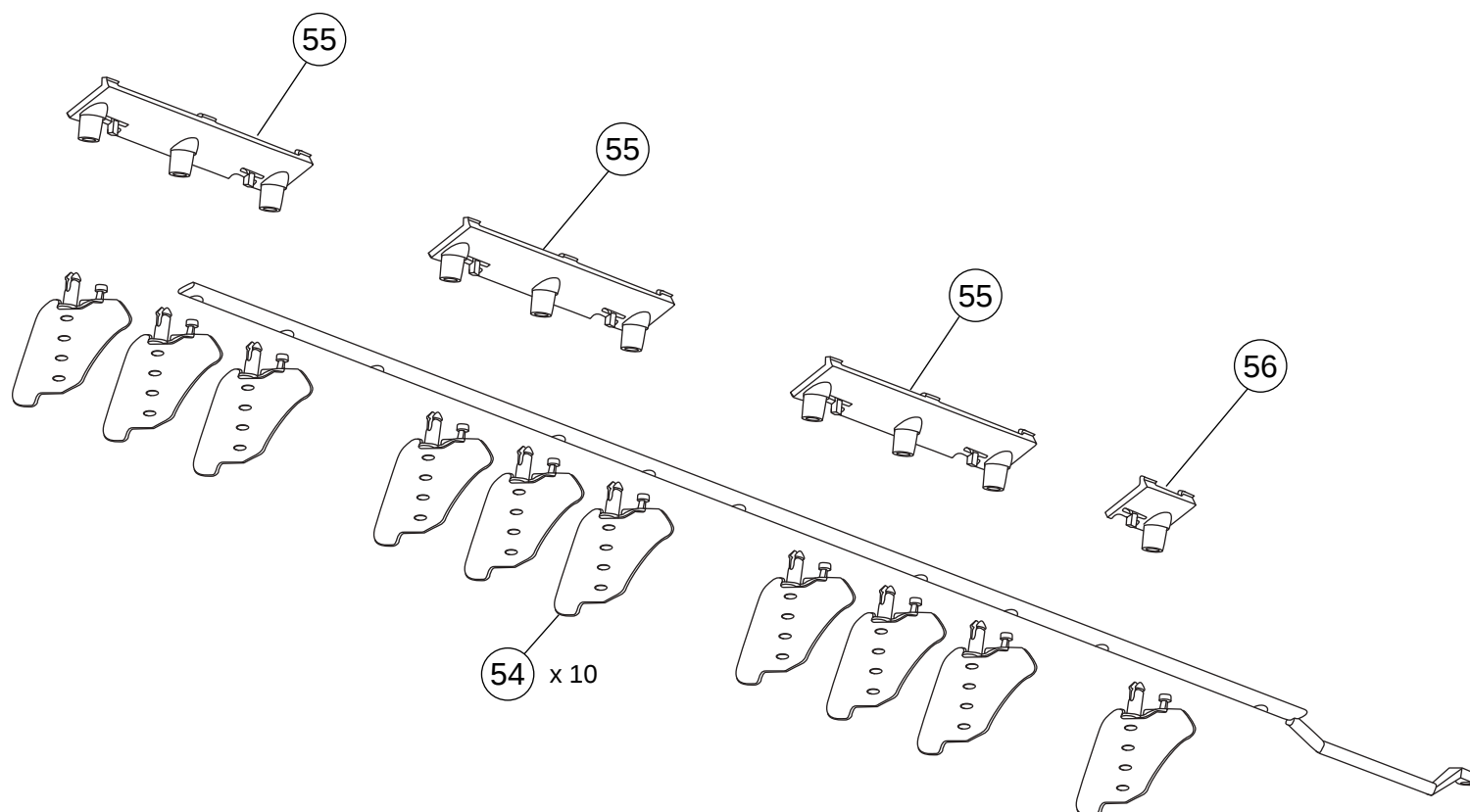
Ref.	Description	Part number	
31	Base Assy	9369209017	
34	Cross Flow Fan Assy	9368586003	
35	Bearing Assy	9368574000	
36	Fan Motor Assy	9601388012	
37	Motor Rubber	9368575007	
38	Motor Holder A	9368550004	
39	Motor Holder B	9368551001	
40	Motor Holder C	9368769000	
41	Kit (Pipe Holder)	9371168012	
42	Fan Guard (ASY18L)	9368588007	
43	Kit (Fan Guard Holder)	9371164014	
44	Kit (Flap)	9371169019	
45	Diffuser Assy	9369346019	
46	Diffuser Spring	9368587000	
47	Wall Hook Bracket	9368579005	

INDOOR UNIT
Drain Pan



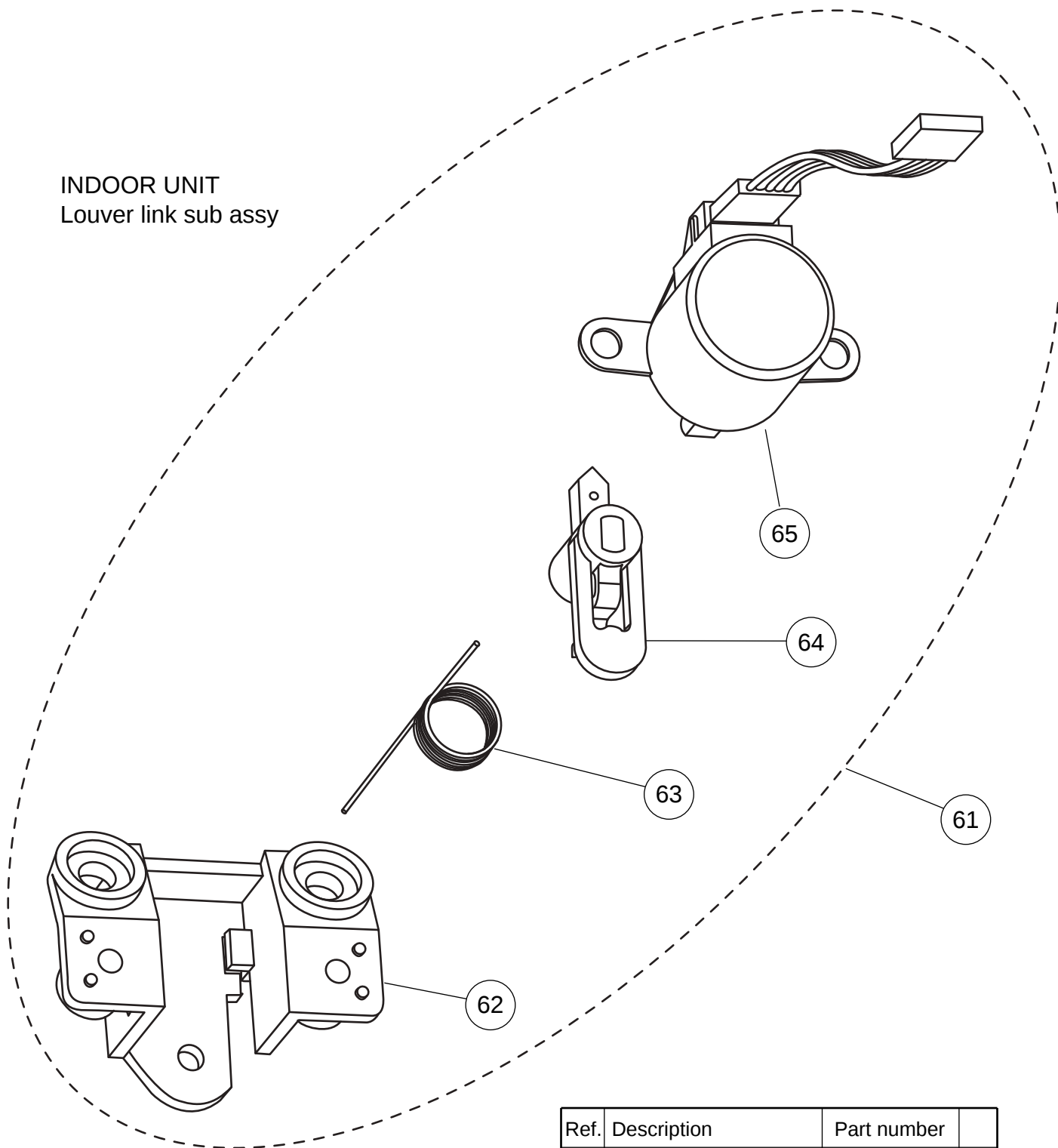
Ref.	Description	Part number	
51	Kit (Front Drain Pan)	9370932010	
52	Drain Hose	9367695003	
53	Rear Drain Pan Sub Assy	9369201028	

INDOOR UNIT
Louver

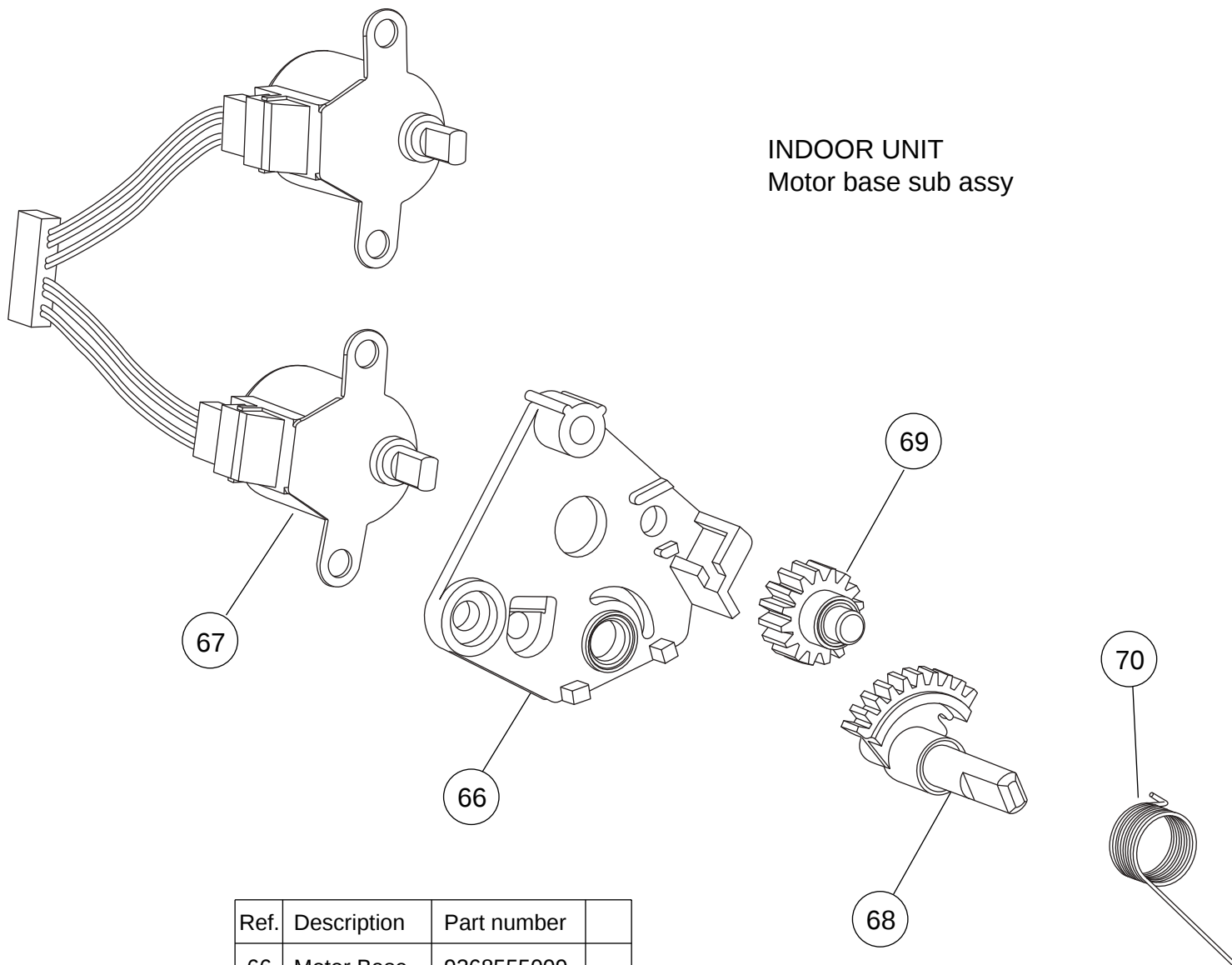


Ref.	Description	Part number	
54	Louver	9368560010	
55	Louver Base A	9368558017	
56	Louver Base B	9368559014	

INDOOR UNIT
Louver link sub assy



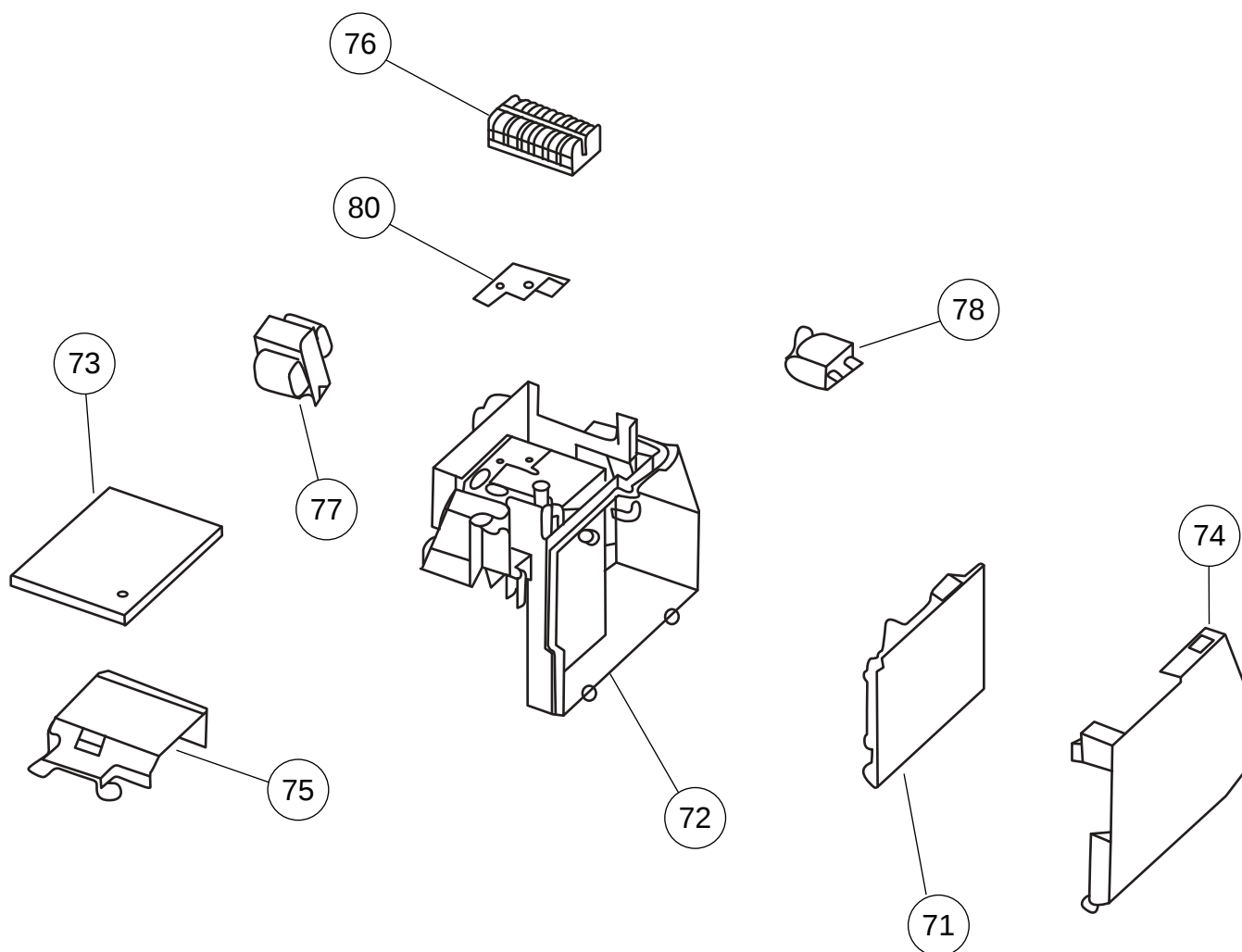
Ref.	Description	Part number	
61	Louver Link Sub Assy	9369347023	
62	Link Holder	9368563004	
63	Louver Spring	9368613006	
64	Louver Link	9368562007	
65	Step Motor	9900139032	



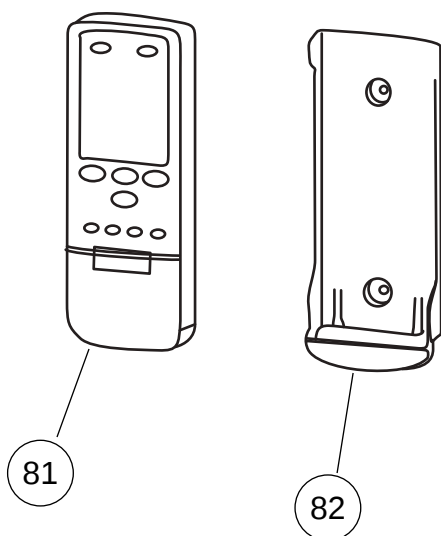
INDOOR UNIT
Motor base sub assy

Ref.	Description	Part number	
66	Motor Base	9368555009	
67	Step Motor	9900139049	
68	Sector Gear	9368556006	
69	Pinion Gear	9368557003	
70	Flap Spring	9368612009	

INDOOR UNIT Control Unit



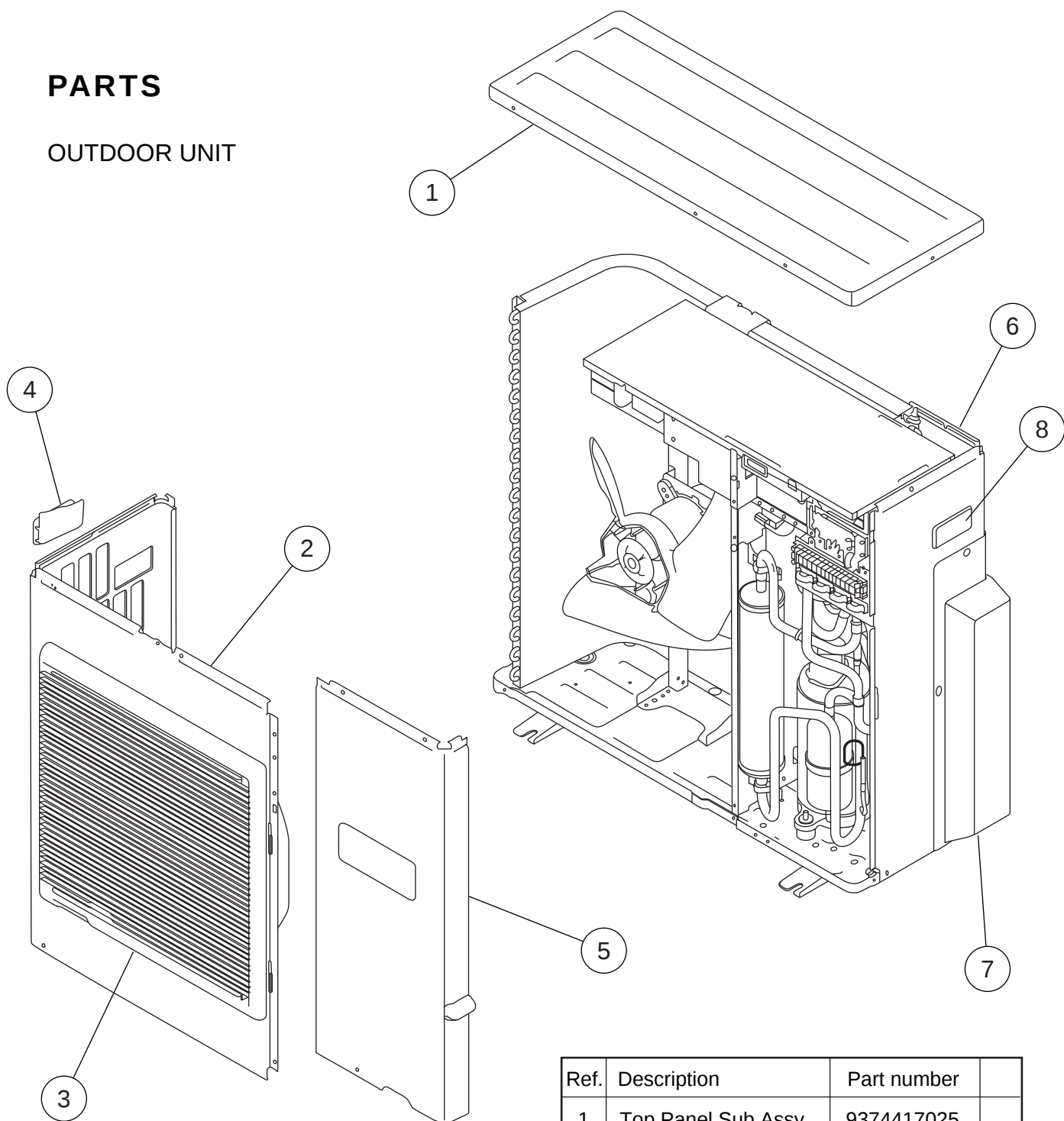
Remote Control



Ref.	Description	Part number	
71	Controller PCB Assy (18)	9704714091	
71	Controller PCB Assy (24)	9704714107	
72	Control Box	9368543006	
73	Control Box Cover	9368611002	
74	Control Box Cover-R	9369631009	
75	Cord Holder	9368566005	
76	Terminal	9306489106	
77	Power Transformer	9900069018	
78	Capacitor (Fan Motor)	9704305060	
80	Earth Plate	9368580001	
81	Remote Control	9371190112	
82	Remote Control Holder	9305642014	
--	Room Thermistor	9900368012	
--	Pipe Thermistor	9900367015	

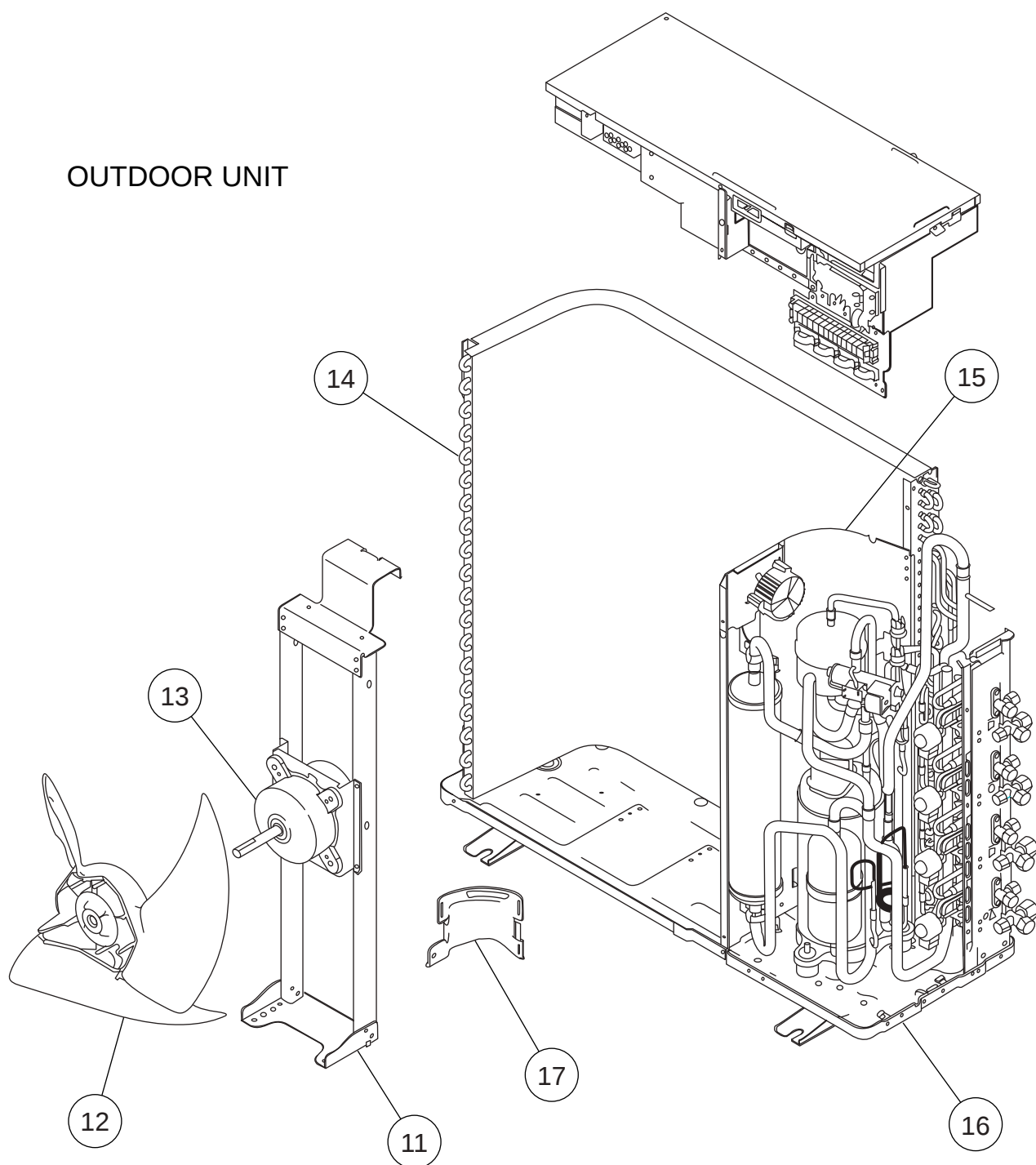
PARTS

OUTDOOR UNIT



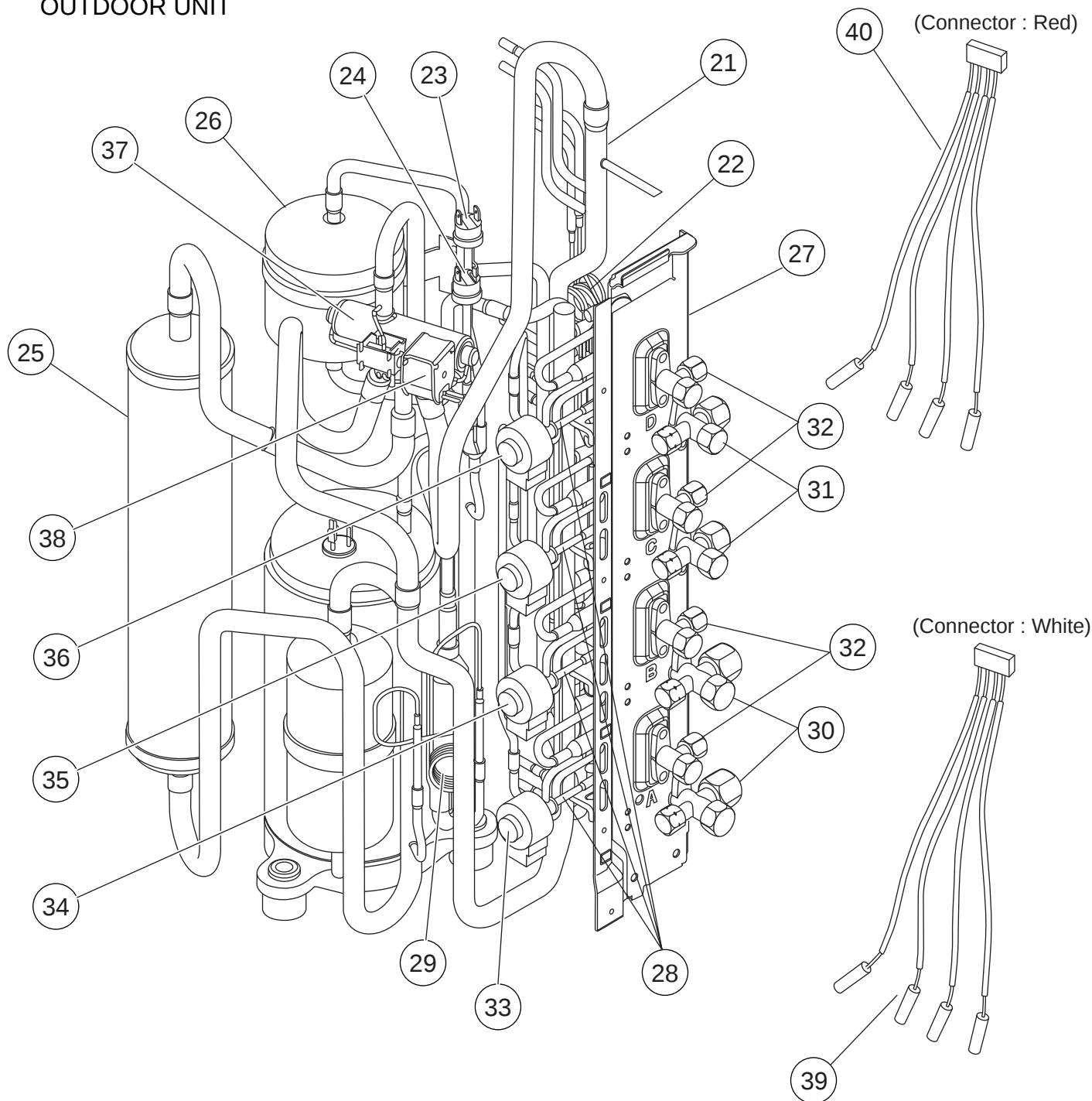
Ref.	Description	Part number	
1	Top Panel Sub Assy	9374417025	
2	Front Panel	9374094066	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Assy	9374415038	
6	Right Panel M	9374599028	
7	Valve Cover Sub Assy	9374827015	
8	Grip	9374172016	
--	Emblem Rear	9351355005	
--	Protective Net	9375381011	

OUTDOOR UNIT



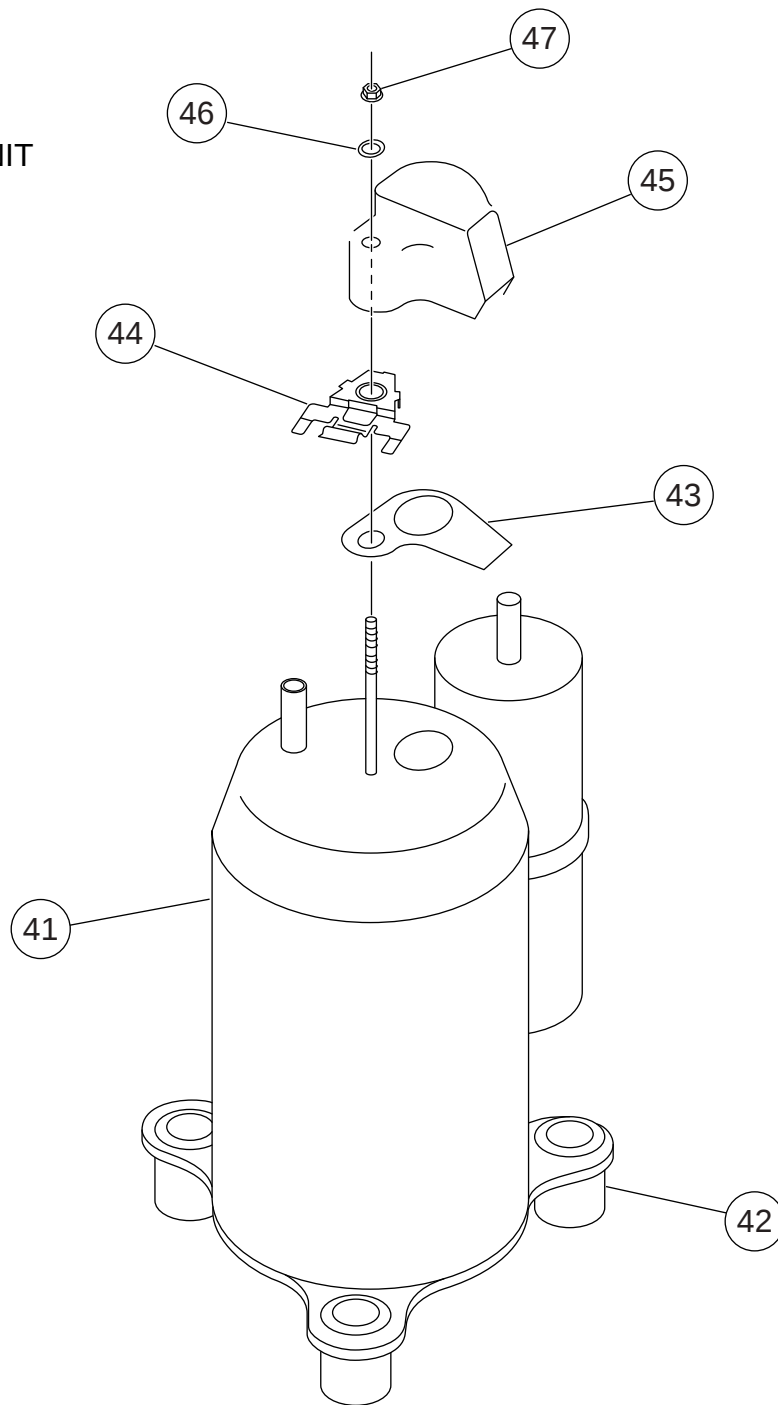
Ref.	Description	Part number	
11	Motor Bracket Sub Assy	9374418053	
12	Propeller Fan Assy	9366378020	
13	Fan Motor	9601882015	
14	Condenser A Assy	9374433056	
15	Separate Wall Assy	9374629022	
16	Base Assy	9374166084	
17	Cap Foot	9374345014	
--	Drain Assy	9303029015	
--	Drain Cap	313166024302	

OUTDOOR UNIT



Ref.	Description	Part number	Ref.	Description	Part number
21	Inlet Pipe (Cond) A Assy	9373461067	32	2-Way Valve Assy	9372204054
22	Outlet Pipe (Cond) A Assy	9374266067	33	Expansion Valve Coil (A, Red)	9900057084
23	Pressure Switch A Assy	9367726028	34	Expansion Valve Coil (B, White)	9900057053
24	Pressure Switch B Assy	9367727025	35	Expansion Valve Coil (C, Green)	9900057060
25	Accumulator Sub Assy	9374426072	36	Expansion Valve Coil (D, Blue)	9900057077
26	Receiver Tank Sub Assy	9373426028	37	4-Way Valve Assy	9374425044
27	Valve Plate A Assy	9374628025	38	Solenoid	9900165055
28	Expansion Valve Assy	9370947106	39	Pipe Thermistor (White)	9900322014
29	Capillary Assy	9372197370	40	Pipe Thermistor (Red)	9900289010
30	3-Way Valve Assy (1/2")	9372205051	--	Strainer	9372524015
31	3-Way Valve Assy (3/8")	9372205044	--	Strainer	9366602019

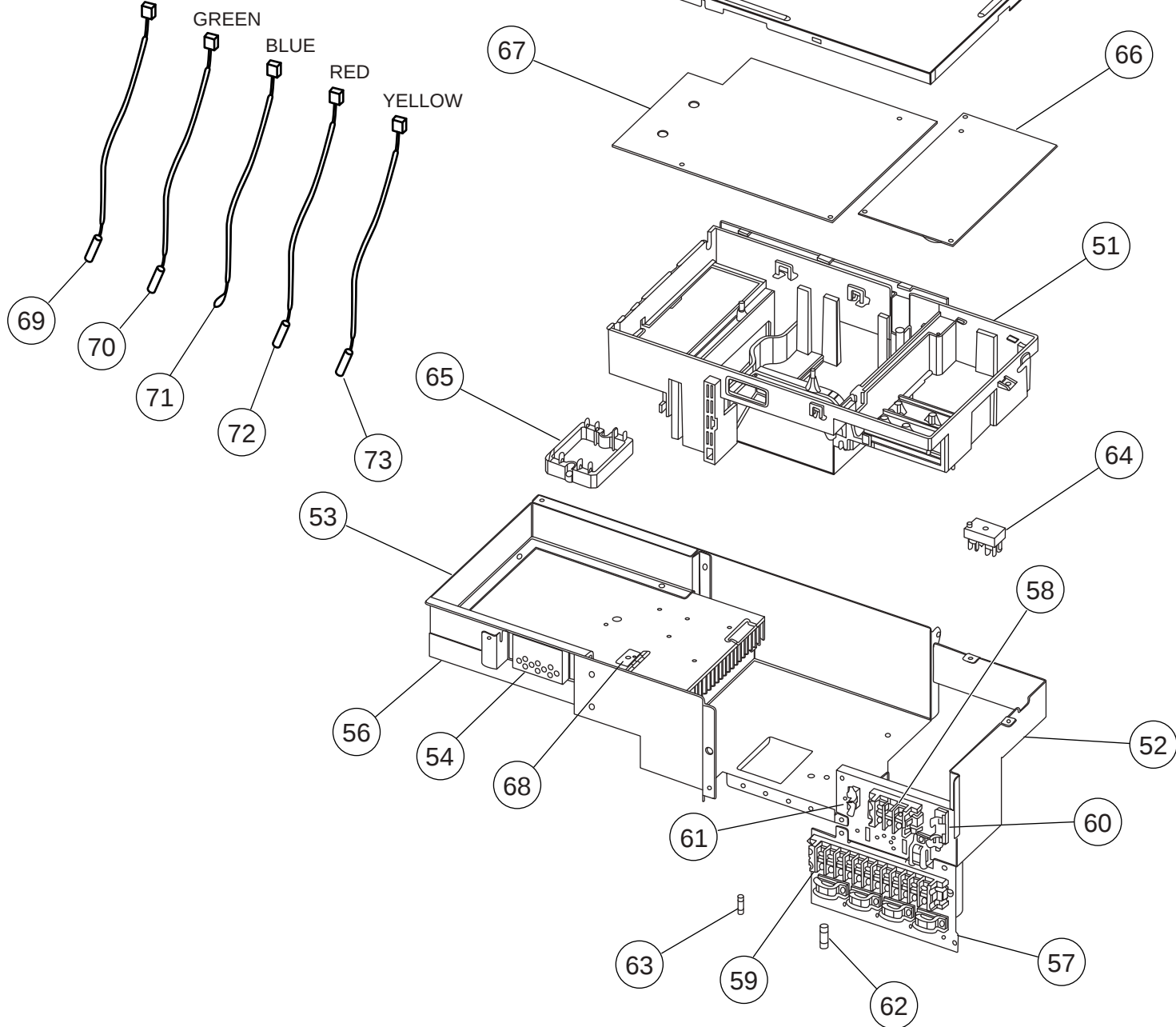
OUTDOOR UNIT
Compressor



Ref.	Description	Part number	
41	Compressor Assy	9377946010	
42	Rubber Seat	9377951014	
43	Terminal Packing	9377948014	
44	Holder	9377952011	
45	Terminal Cover	9377947017	
46	Washer (Rubber)	9377949011	
47	Frang Nut	9377950017	
--	Compressor Cover A	9374430055	
--	Compressor Cover B	9374431052	
--	Compressor Cover C	9372067048	

OUTDOOR UNIT Inverter assy

Connector : BLACK

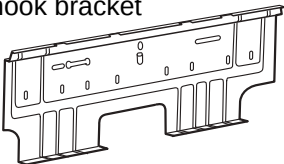
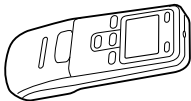
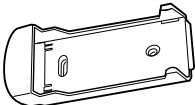
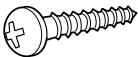
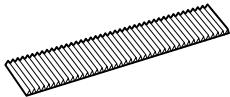
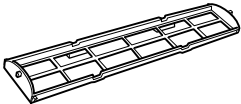


Ref.	Description	Part number
51	Inverter Box A	9374603015
52	Inverter Box B Assy	9374625017
53	Inverter Box C	9374605019
54	Inverter Box Duct	9374609017
55	Inverter Box Cover	9374608010
56	Heat Sink A	9374607013
57	Inverter Box D	9374606016
58	Terminal (3P)	9900203016
59	Terminal (12P)	9358660164
60	Fuse Holder (Big)	0501454012
61	Fuse Holder (Small)	0501456016
62	Fuse (Big)	0600086039

Ref.	Description	Part number
63	Fuse (Small)	0600376116
64	Terminal	9701971015
65	ACTPM	9703457012
66	Power Supply PCB Assy	9705647039
67	Controller PCB Assy	9705642058
68	Holder (Thermo)	9372797013
69	Heat Sink Thermistor	9900311018
70	Compressor Thermistor	9900156022
71	Thermistor (Outdoor)	9703516078
72	Heat Exchanger Thermistor	9704220059
73	Discharge Pipe Thermistor	9704219114

ACCESSORIES

INDOOR UNIT

Name and Shape	Part number
Wall hook bracket 	9368579005
Remote control 	9371190112
Battery (penlight) 	0600185534
Remote control holder 	9305642014
Tapping screw (big) ($\varnothing 4 \times 20$) 	301141164200
Tapping screw (big) ($\varnothing 4 \times 12$) 	301171164129
Tapping screw (small) ($\varnothing 3 \times 12$) 	301141533125
Air cleaning filter 	DEODORANT FILTER 9370525007 ELECTRIC FILTER 9370528015
Air cleaning filter frame 	9368568009