



**INVERTER MULTI  
AIR CONDITIONER**

**WALL MOUNTED** type

# SERVICE MANUAL



## Models

Indoor unit

Outdoor unit

ASH7LMACW  
ASH9LMACW  
ASH12LMACW

AOHA18LAT3

ASH7LMACW  
ASH9LMACW  
ASH12LMACW

AOHA24LAT3

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## SPECIFICATIONS

### INDOOR UNIT

TYPE	COOL & HEAT		
MODEL NAME	ASH7LMACW	ASH9LMACW	ASH12LMACW

### ELECTRICAL DATA

COOLING CAPACITY	2.2 kW	2.7 kW	3.5 kW
HEATING CAPACITY	2.6 kW	3.2 kW	4.0 kW
MOISTURE REMOVAL	1.0 L/hr	1.2 L/hr	1.6 L/hr
AIR CIRCULATION HIGH	430 m <sup>3</sup> /h	480 m <sup>3</sup> /h	530 m <sup>3</sup> /h

### FAN MOTOR

POWER SOURCE	230 - 240 V			
DISCRIMINATION	MFA-40GR			
FAN SPEED	High	1,000 r.p.m.	1,200 r.p.m.	1,310 r.p.m.
	Med	900 r.p.m.	1,100 r.p.m.	1,260 r.p.m.
	Low	850 r.p.m.	1,000 r.p.m.	1,190 r.p.m.
	Quiet	800 r.p.m.	940 r.p.m.	1,100 r.p.m.

DIMENSIONS H x W x D	257 x 808 x 187 mm
WEIGHT Gross / Net	10 / 8 kg

### NOISE LEVEL

HIGH	34 dB	36 dB	38 dB
LOW	29 dB	29 dB	33 dB

## OUTDOOR UNIT

TYPE	Colling & Heating	
MODEL NAME	AOHA18LAT3	AOHA24LAT3
COOLING CAPACITY	5.4 kW	6.8 kW
HEATING CAPACITY	6.8 kW	8.0 kW

## ELECTRICAL SPECIFICATIONS

POWER SUPPLY	(220V) - 230V - (240V)		
FREQUENCY	50 Hz		
RUNNING CURRENT	Cooling	5.9 A	8.5 A
	Heating	7.1 A	8.8 A
INPUT	Cooling	1.35 kW	1.94 kW
	Heating	1.62 kW	2.00 kW
EER	Cooling	4.00 kW/kW	3.50 kW/kW
	Heating	4.20 kW/kW	4.00 kW/kW
AIR CIRCULATION HIGH	3,050 m <sup>3</sup> /hr	3,300 m <sup>3</sup> /hr	

## COMPRESSOR

TYPE	Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary		
DISCRIMINATION	DA150A1F-20NA		
REFRIGERANT	R410A	2,200 g	

## FAN MOTOR

DISCRIMINATION	MFE-60PO	
HIGH SPEED (COOL)	730 r.p.m.	780 r.p.m.
HIGH SPEED (HEAT)	660 r.p.m.	780 r.p.m.

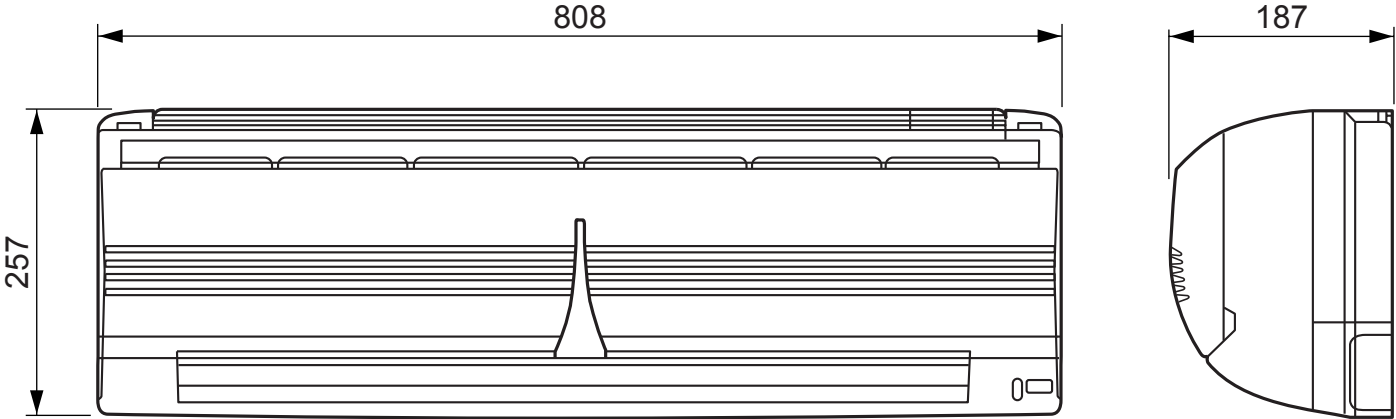
DIMENSIONS	H x W x D	700 x 900 x 330 mm
WEIGHT	Net / Gross	55 kg / 63 kg

## REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	Total Pipe Length	30.0 m	2,200 g
		40.0 m	2,400 g
		50.0 m	2,600 g
ADDITIONAL CHARGE			20 g / m
CHARGELESS			30 m
MAX PIPE LENGTH (each unit)			25 m
MAX PIPE LENGTH (total)			50 m
MAX ELEVATION (between indoor units)			10 m
MAX ELEVATION (between indoor and outdoor)			15 m
MIN. PIPE LENGTH (each unit)			5 m

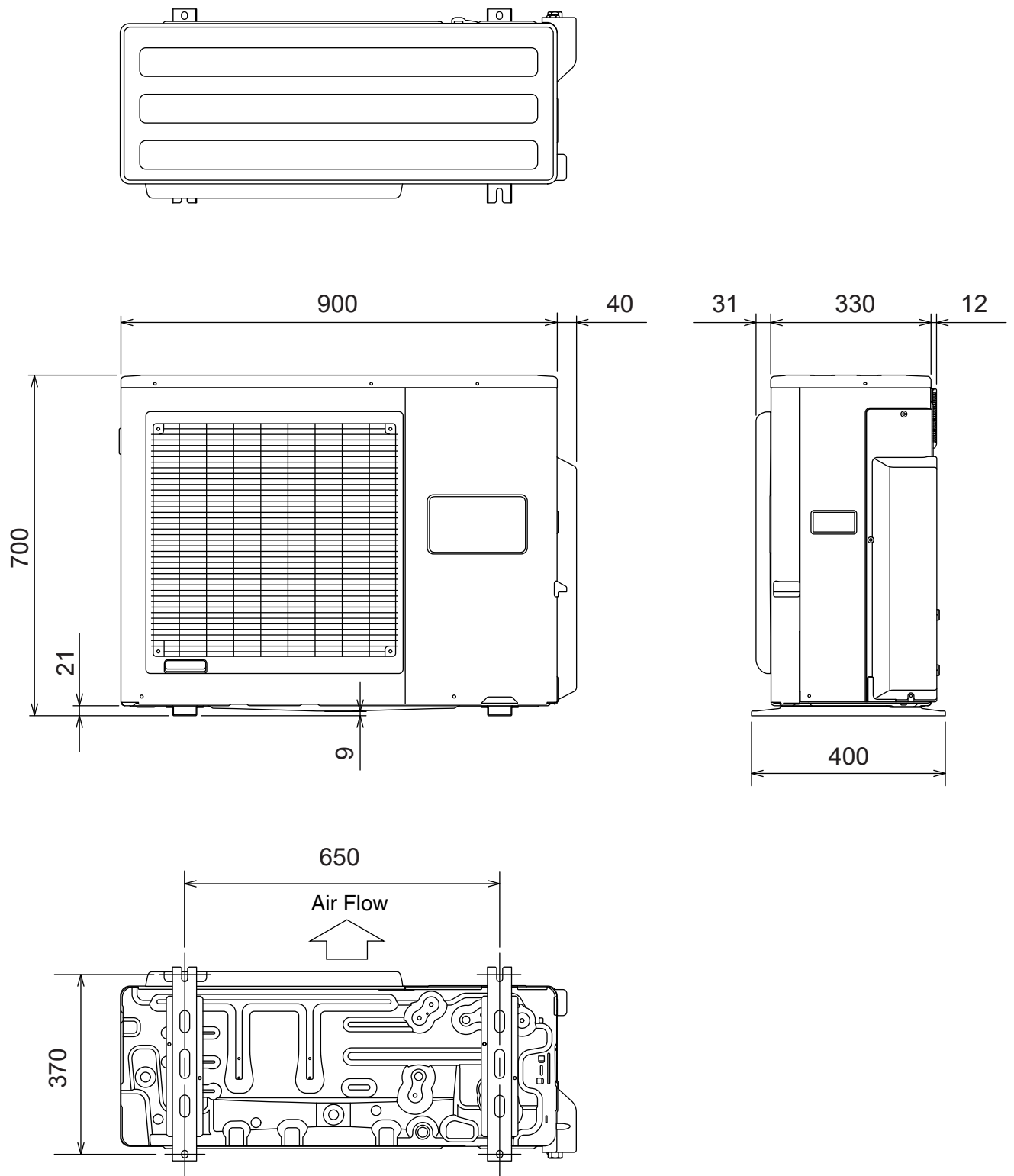
# OUTLINE AND DIMENSIONS

INDOOR UNIT  
Unit : mm



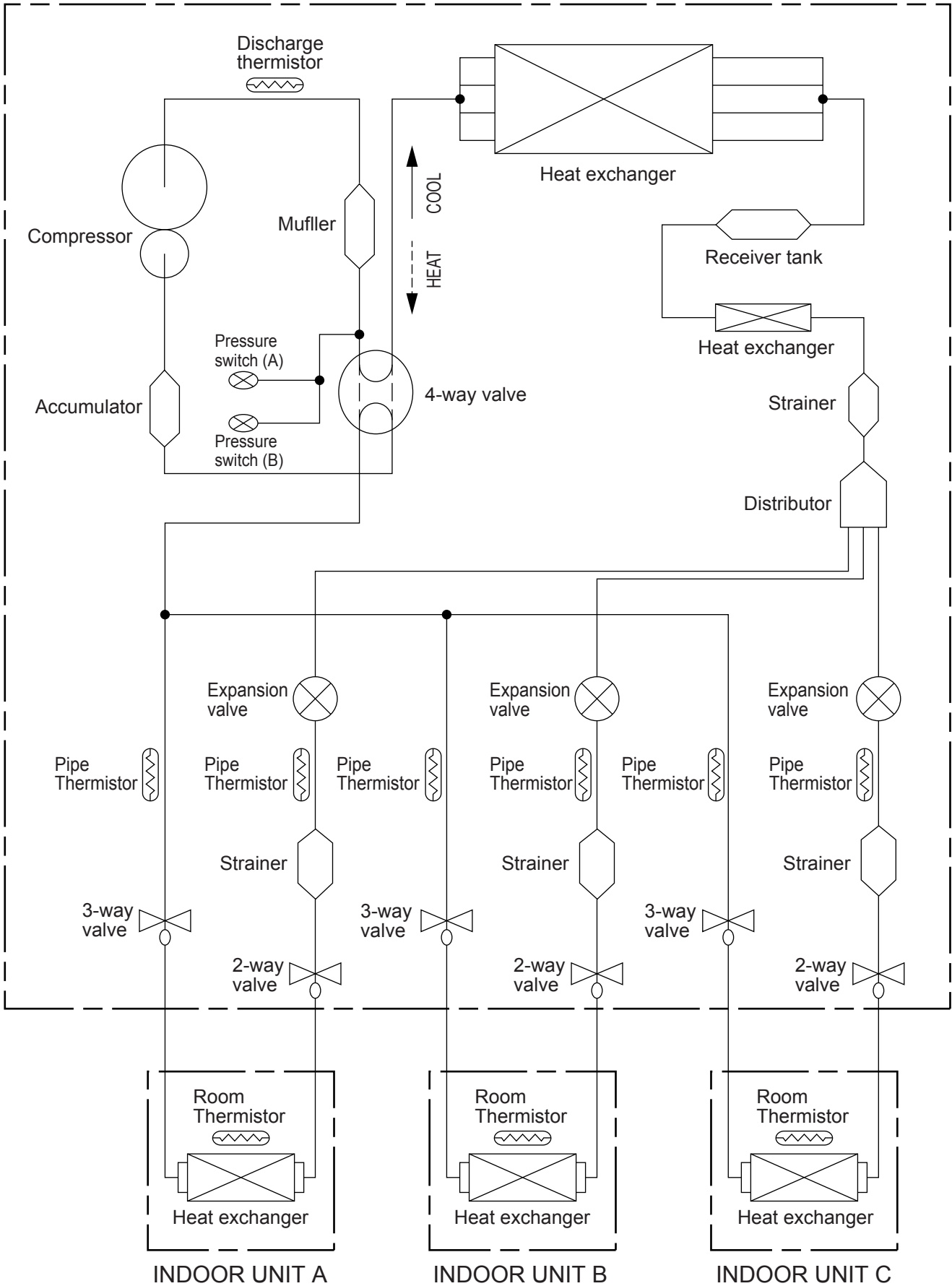
# OUTDOOR UNIT

(Unit : mm)



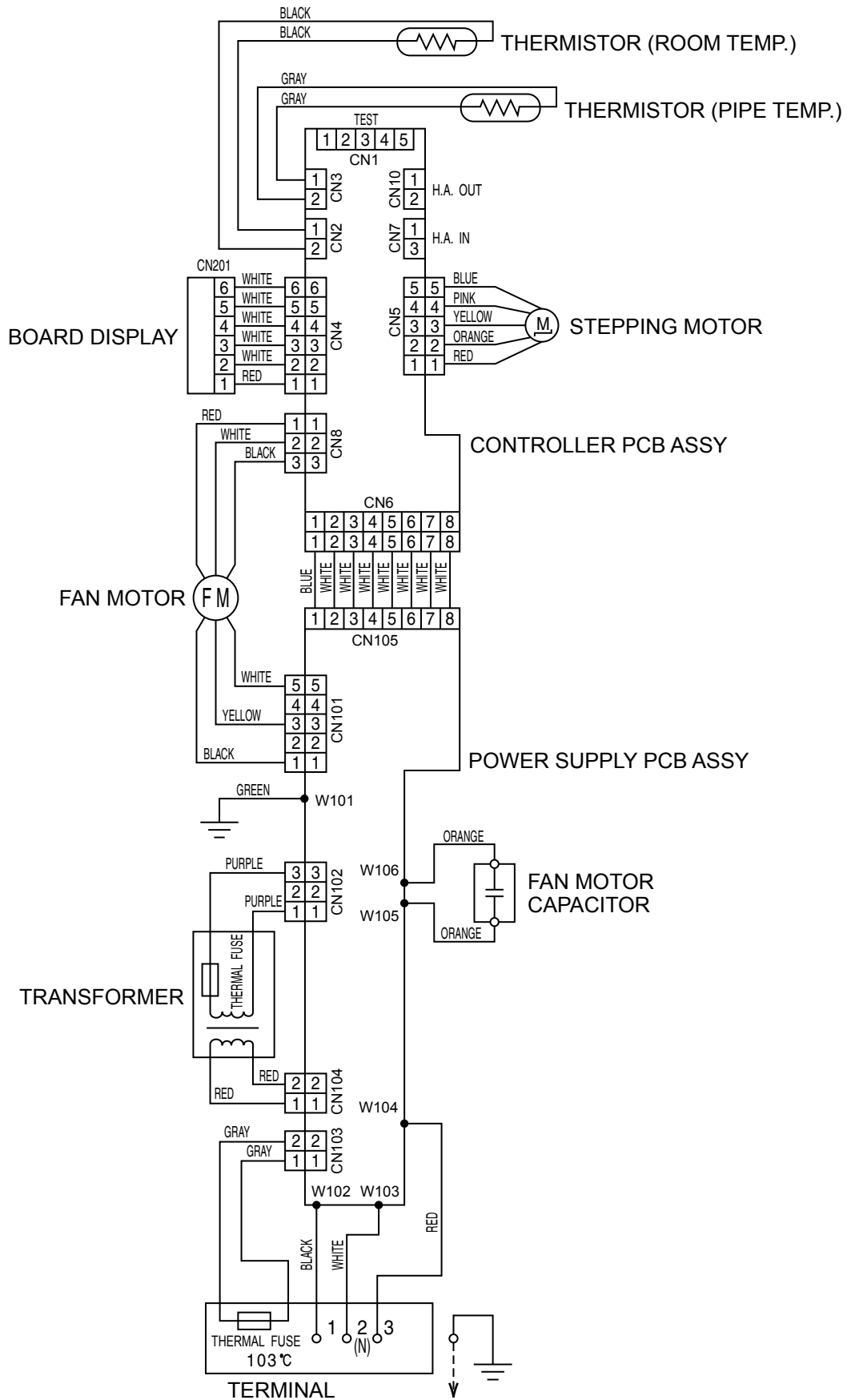
# REFRIGERANT SYSTEM DIAGRAM

## OUTDOOR UNIT

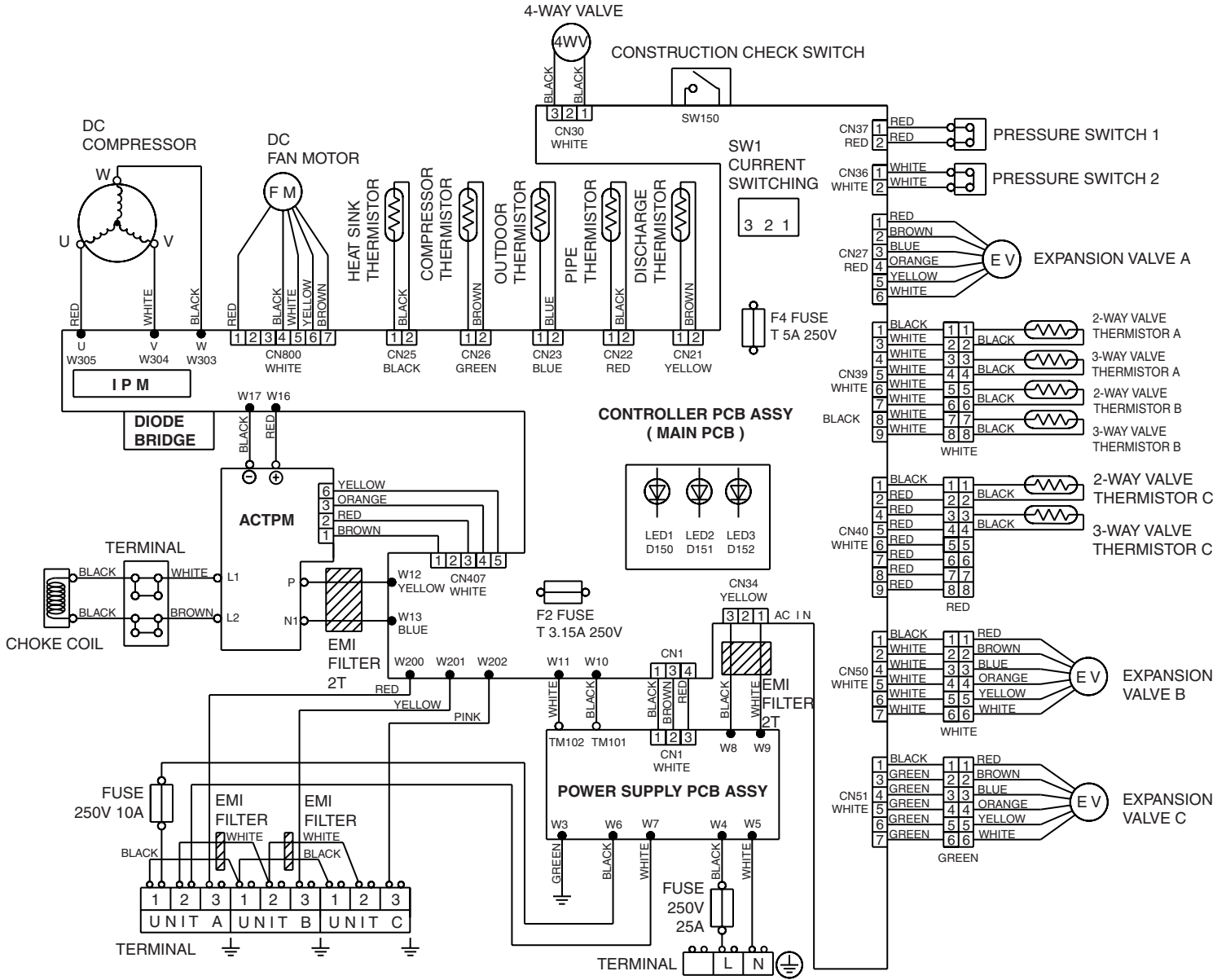


# CIRCUIT DIAGRAM

## INDOOR UNIT

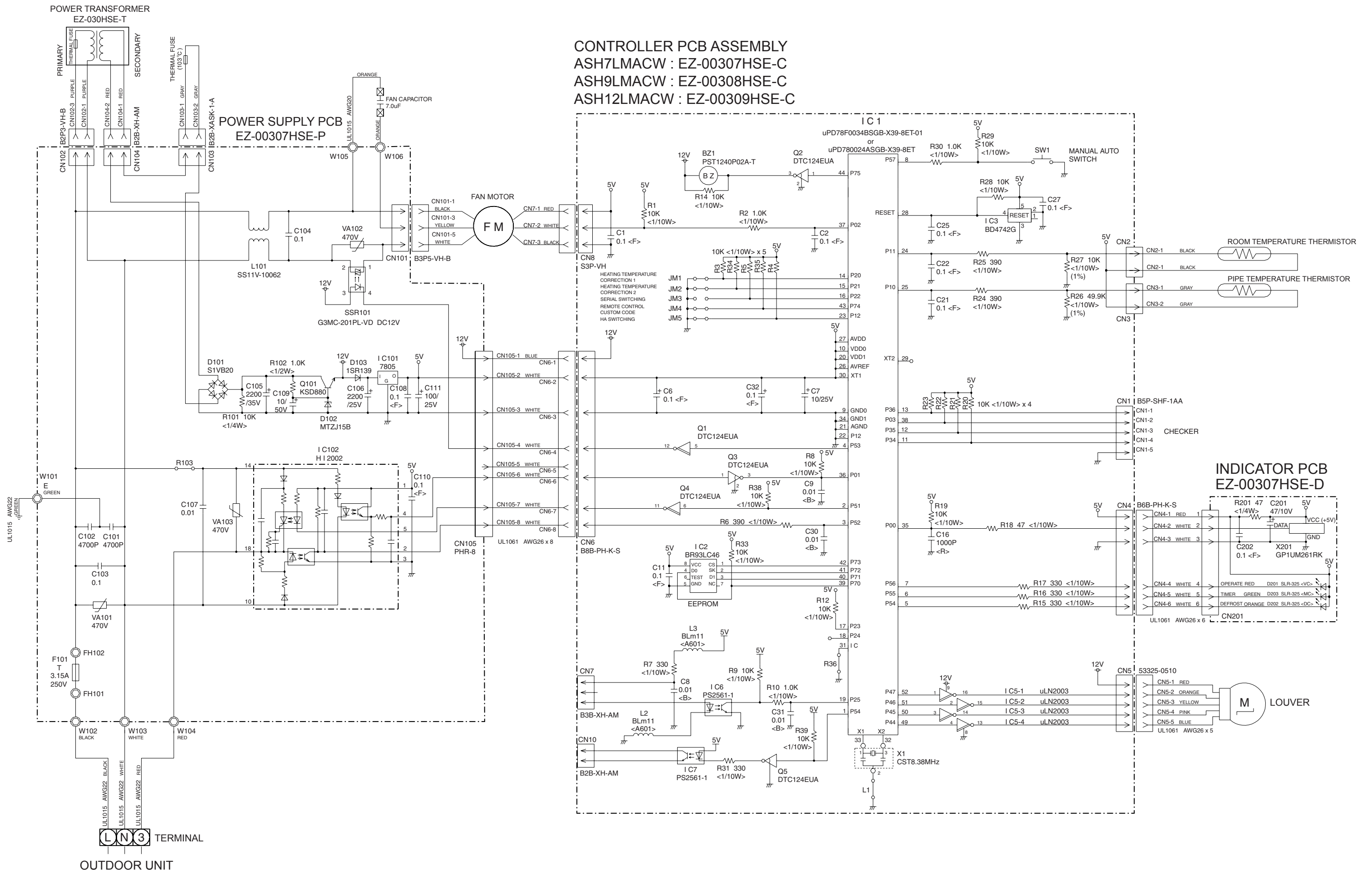


# OUTDOOR UNIT





# INDOOR PCB CIRCUIT DIAGRAM

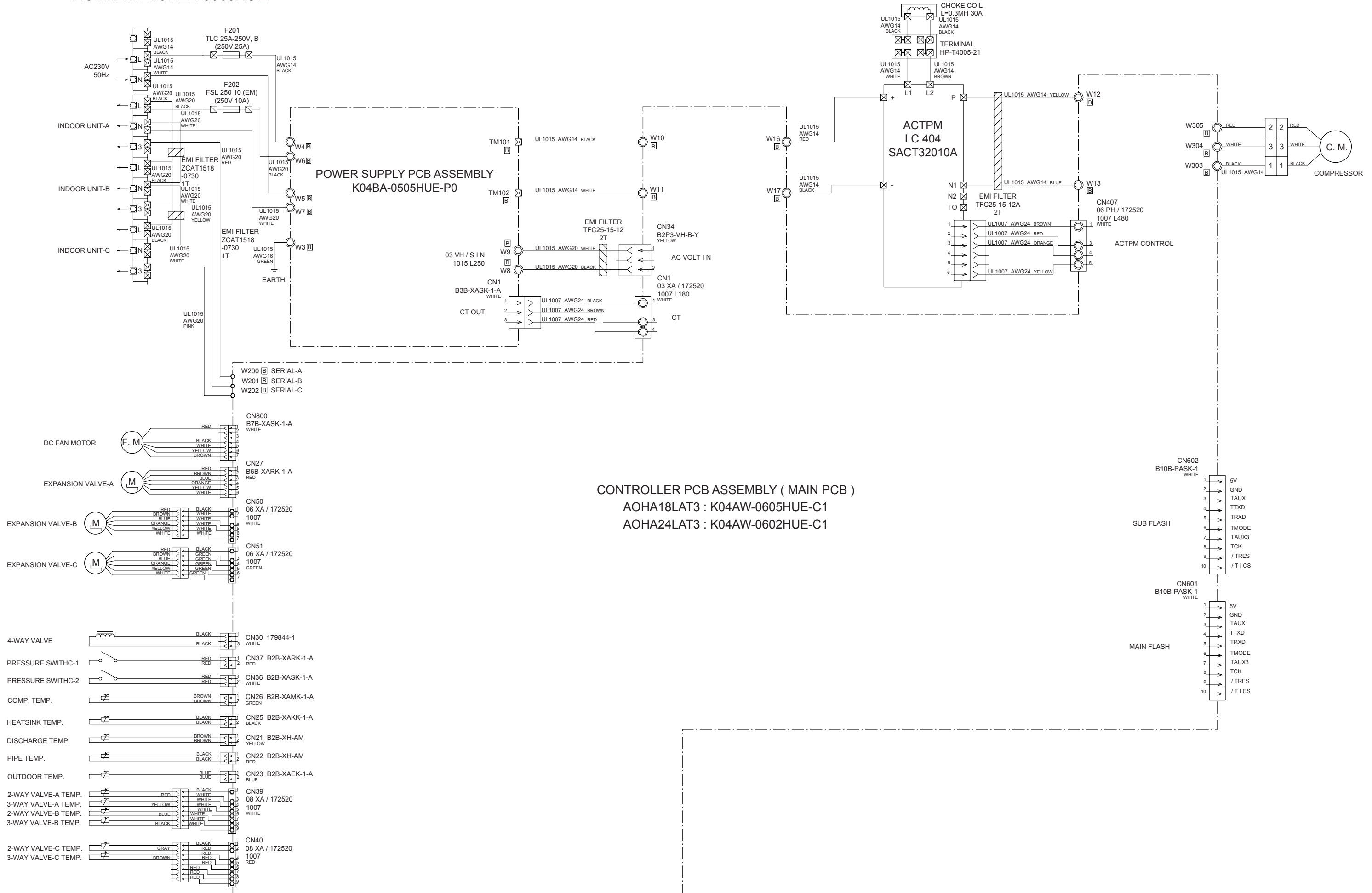


# OUTDOOR PCB CIRCUIT DIAGRAM

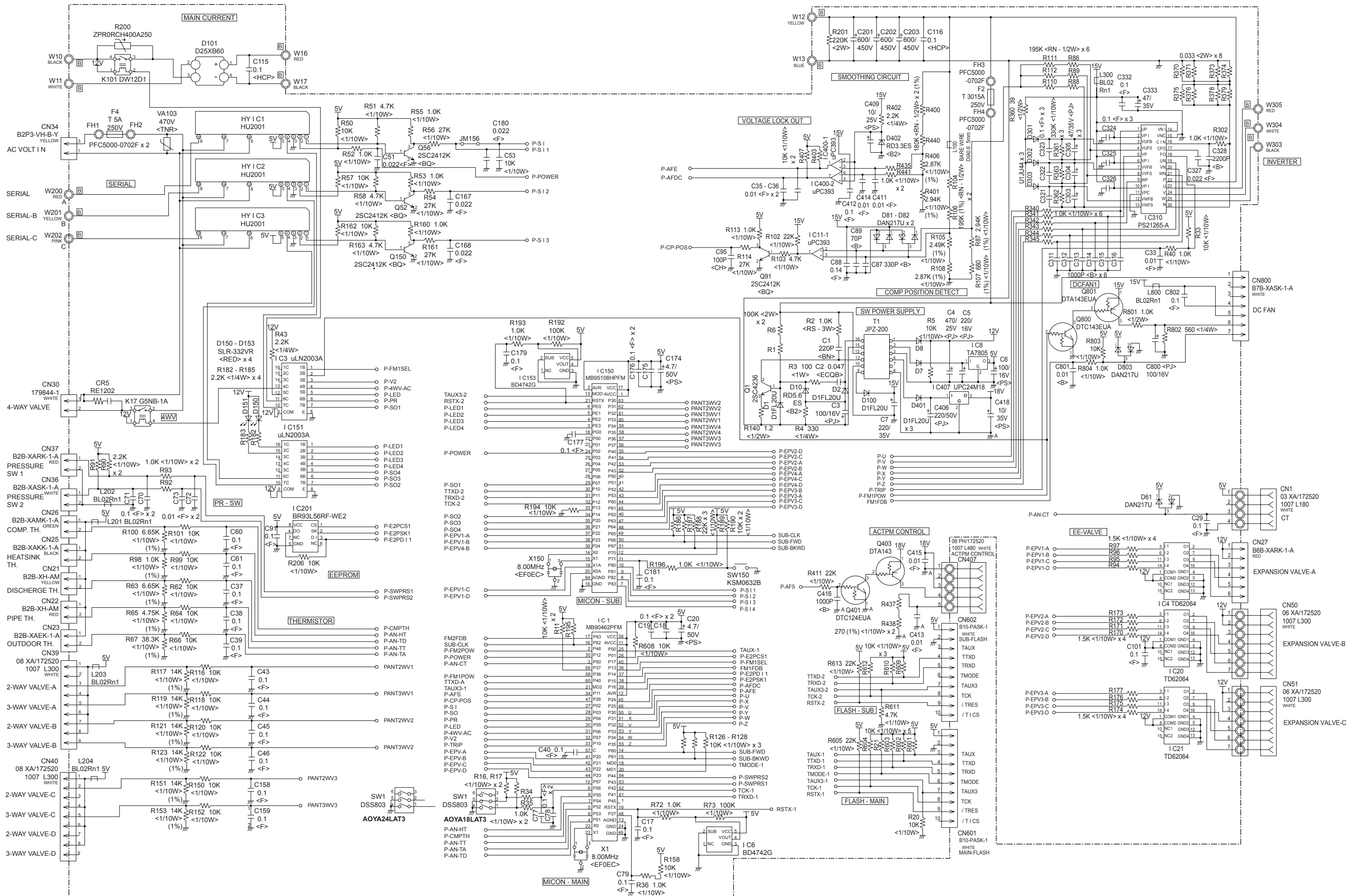
## INVERTER ASSEMBLY

AOHA18LAT3 : EZ-006KHUE

AOHA24LAT3 : EZ-0068HUE

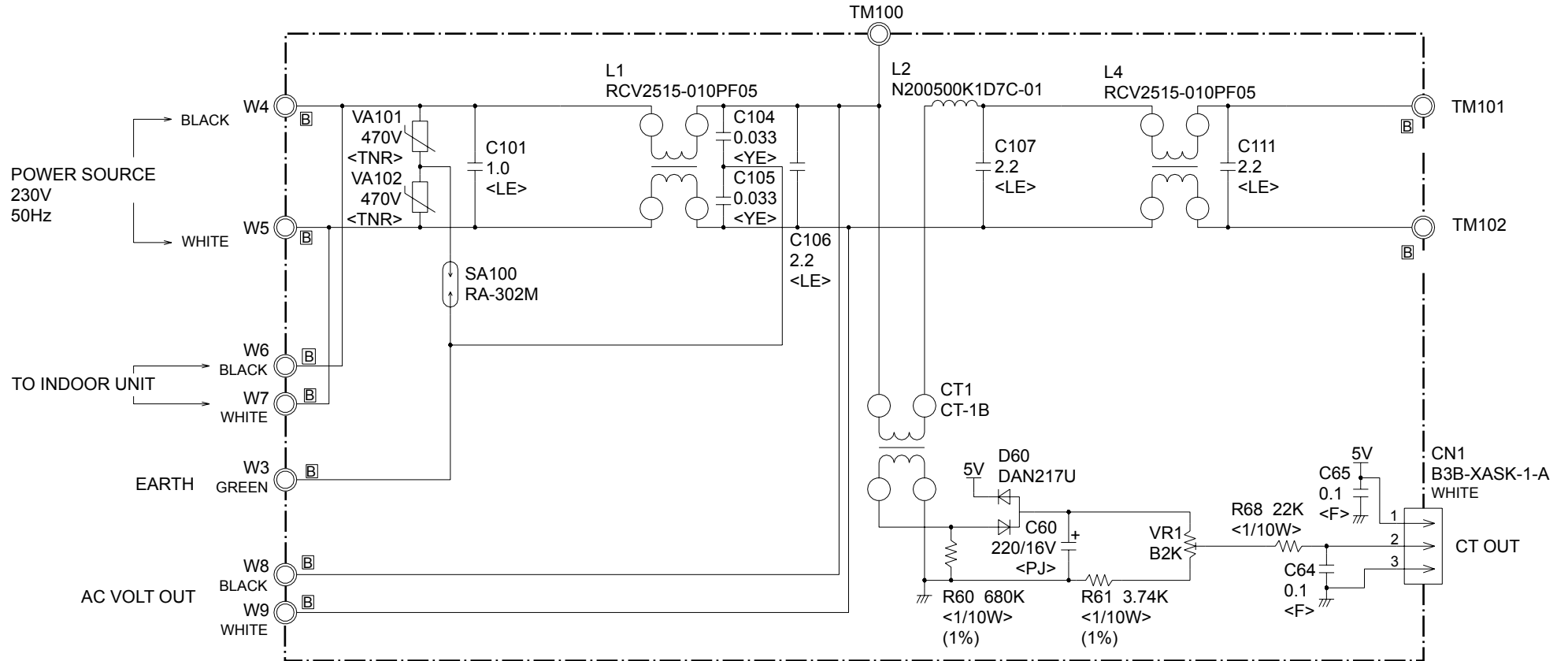


CONTROLLER PCB ASSEMBLY  
 AOHA18LAT3 : K04AW-0605HUE-C1  
 AOHA24LAT3 : K04AW-0602HUE-C1



# OUTDOOR UNIT

## POWER SUPPLY PCB ASSEMBLY K04BA-0505HUE-P0



# ERROR CONTENTS

## INDOOR UNIT

○ : Fast flashing    ● : Slow flashing

Operation lamp : Red lamp  
Timer lamp : Green lamp

Large division indication			Small division indication			
Error contents	LED indication		Error contents	LED indication		
Thermistor error (indoor unit)	Red lamp Green lamp	● (2 times) ○	Thermistor error (room temp.)	Red lamp	○	
			Thermistor error (heat exchanger)	Green lamp	● (2 times)	
Control unit error (indoor unit)	Red lamp Green lamp	● (4 times) ○	MANUAL AUTO button error	Red lamp	○	
			Power source Hz decision error	Green lamp	● (2 times)	
Serial error	Red lamp Green lamp	● (5 times) ○	Serial reverse transmission error	Red lamp	○	
			Serial order transmission error	Green lamp	● (2 times)	
Fan motor error (indoor unit)	Red lamp Green lamp	● (6 times) ○	Lock error	Red lamp	○	
			r.p.m error	Green lamp	● (2 times)	
Thermistor error (outdoor unit)	Red lamp Green lamp	○ ● (2 times)	Discharge thermistor error	Red lamp	○	
			Heat exchanger thermistor error	Green lamp	● (2 times)	
			Outdoor temperature thermistor error	Red lamp	○	
			Compressor thermistor error	Green lamp	● (4 times)	
			2 way valve thermistor error	Red lamp	○	
			3 way valve thermistor error	Green lamp	● (6 times)	
Pressure switch error	Red lamp Green lamp	○ ● (3 times)	Pressure switch error	Red lamp	○	
Control unit error (outdoor unit)	Red lamp Green lamp	○ ● (4 times)	Capacity error of connecting indoor unit	Green lamp	● (2 times)	
				Red lamp	○	
Inverter error	Red lamp Green lamp	○ ● (5 times)	Outdoor unit IPM error	Green lamp	○	
			Compressor loter location error	Red lamp	● (2 times)	
				Green lamp	○	

When an error occurs, "Large division indication" is indicated first.

Secondly, "Small division indication" is indicated by pushing "Test run" button of remote controller.

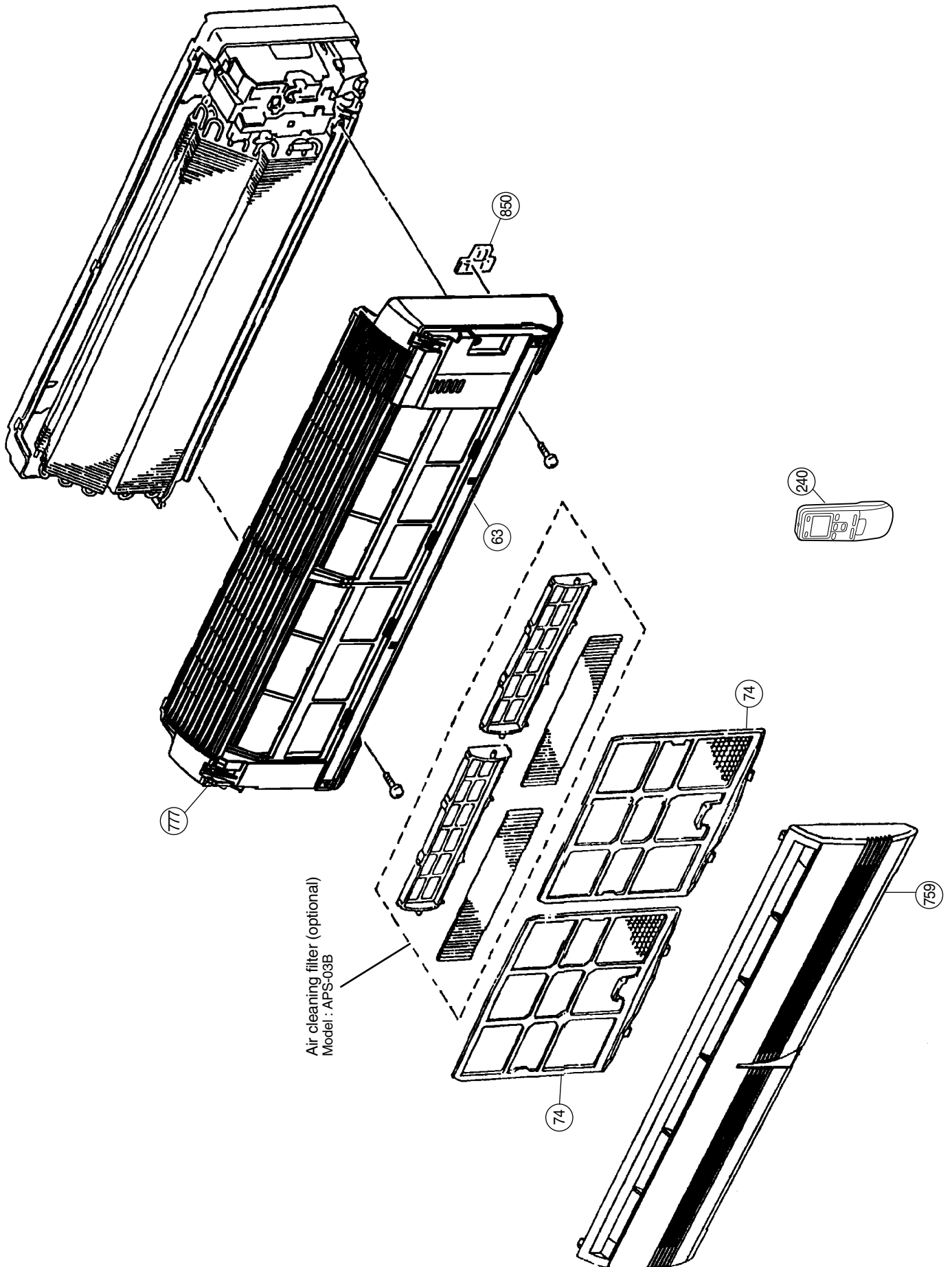
## OUTDOOR UNIT LEDS

	LED A	LED B	LED C
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
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 3way valve(A) temperature sensor	● 6 times	—	—
Outdoor 3way valve(B) temperature sensor	—	● 6 times	—
Outdoor 3way valve(C) 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	—	—
4way valve (Solenoid) abnormal	● 18 times	—	—

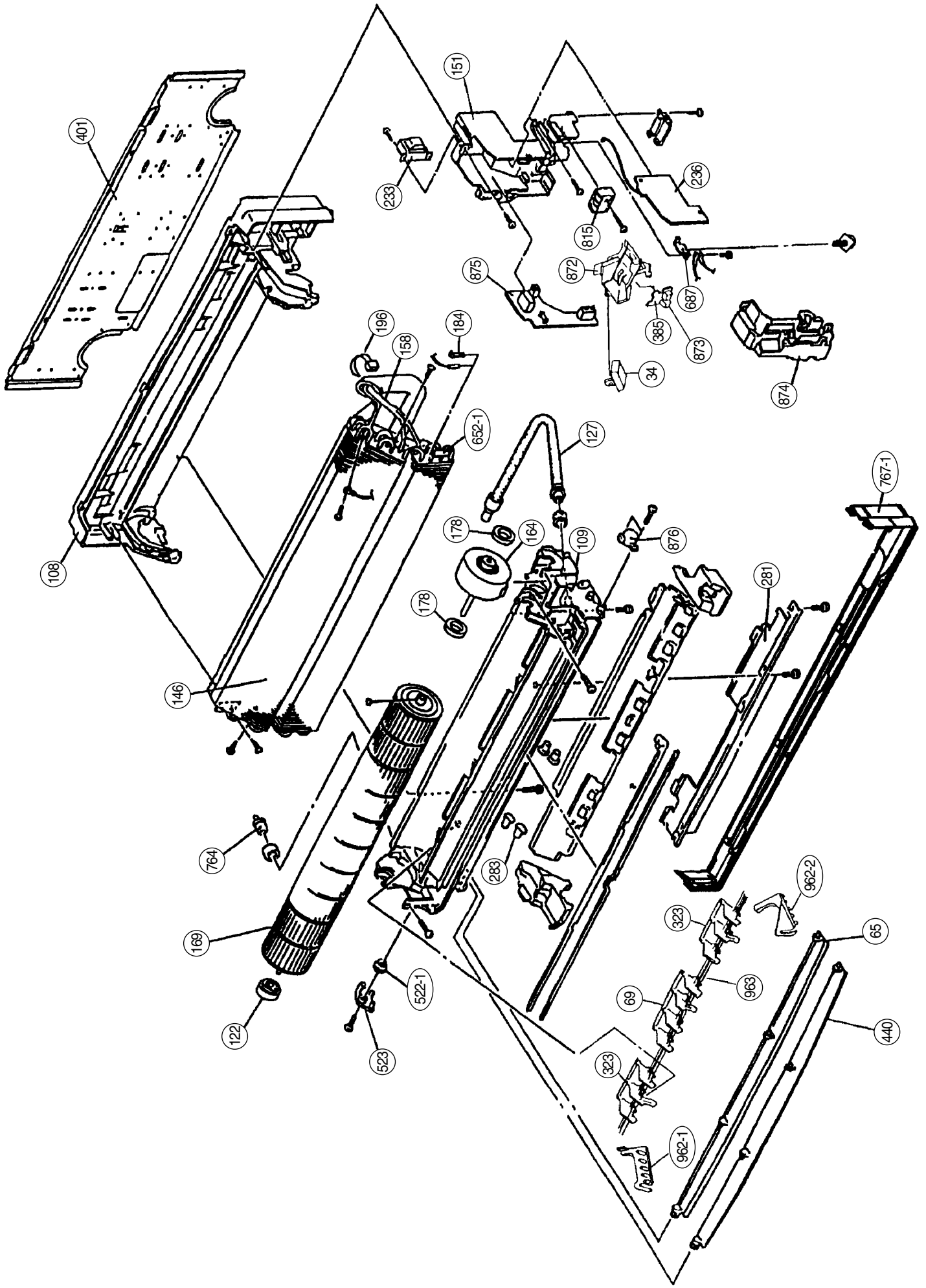
● : Slow flashing - : Off

# DISASSEMBLY ILLUSTRATION

## INDOOR UNIT

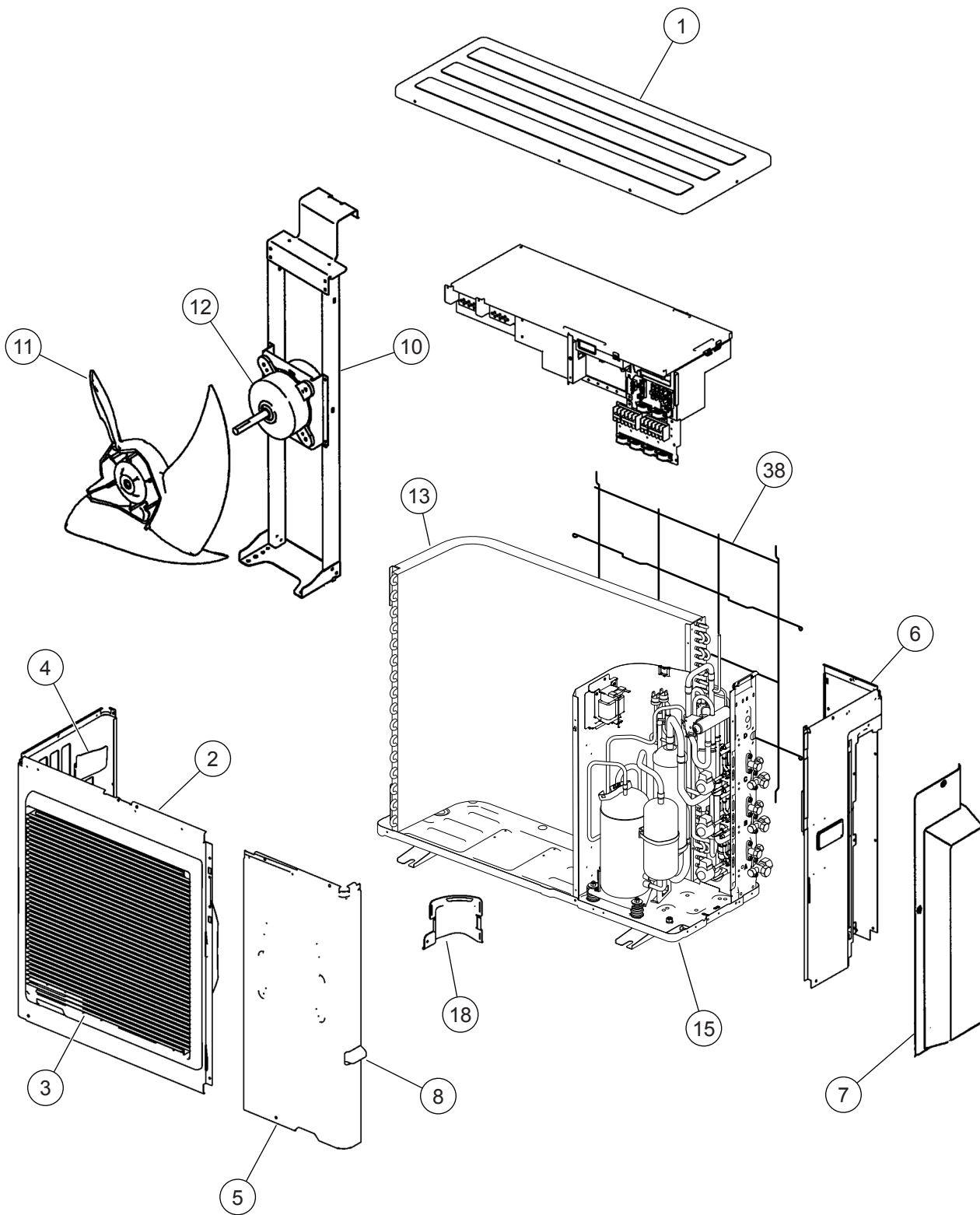


INDOOR UNIT

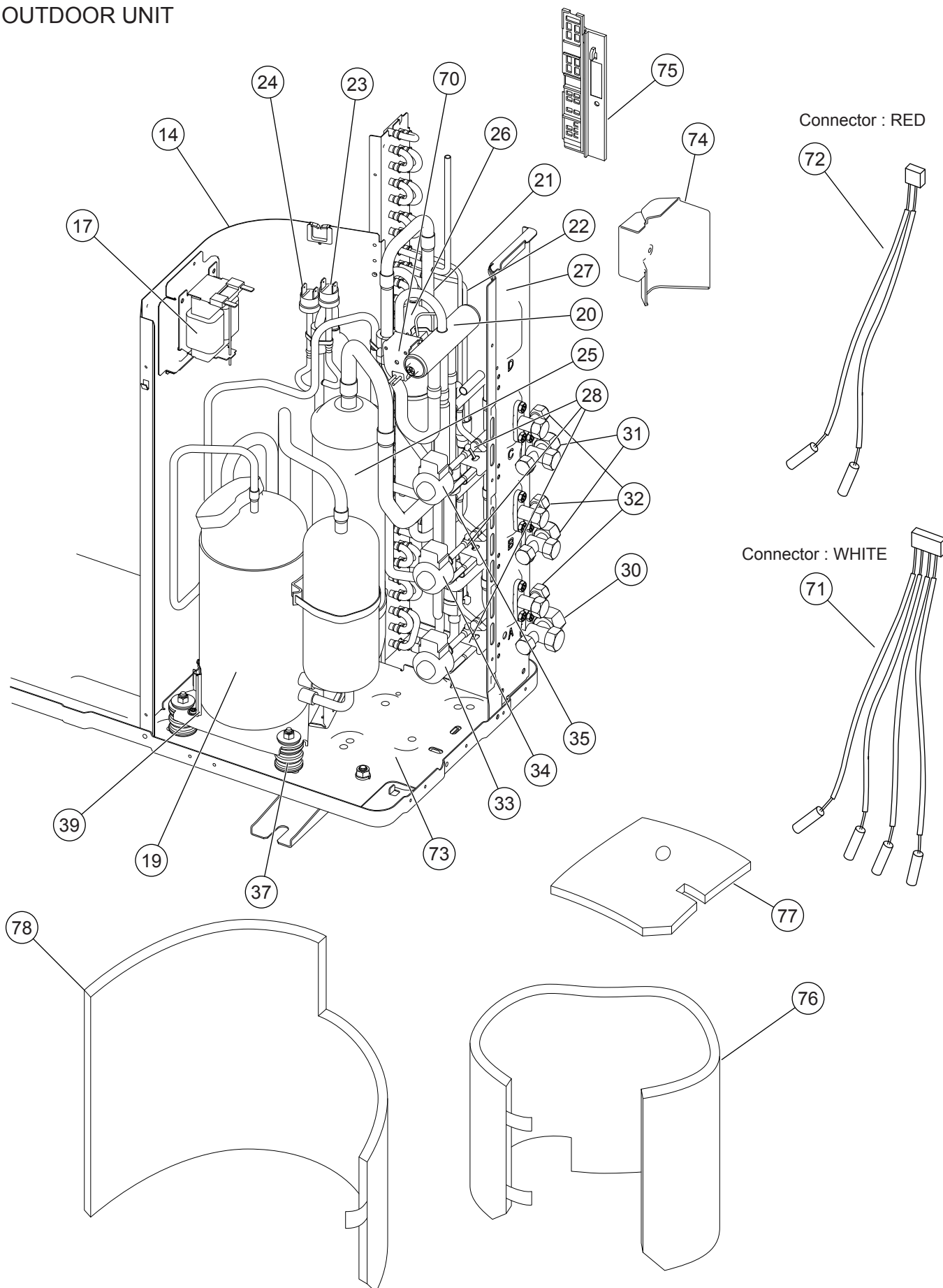




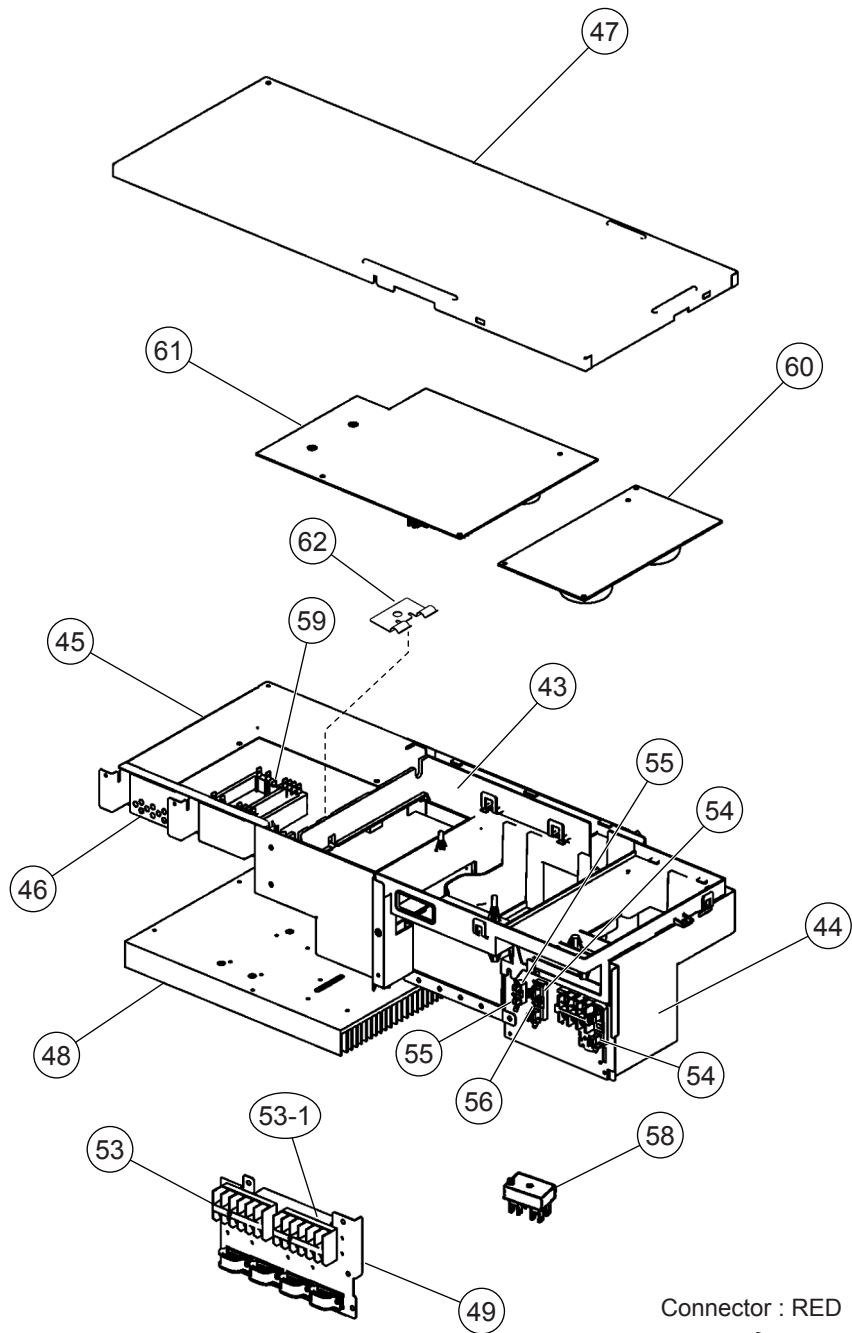
# OUTDOOR UNIT



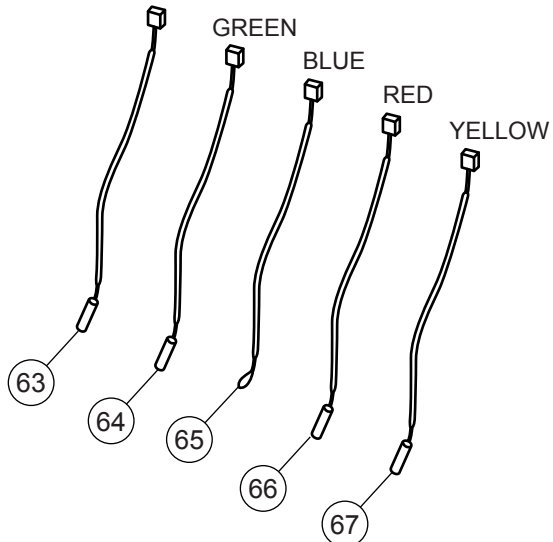
# OUTDOOR UNIT



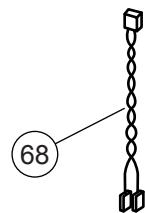
OUTDOOR UNIT  
INVERTER ASSY



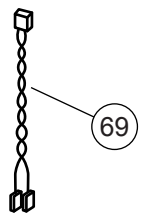
Connector : BLACK



Connector : RED



WHITE



# PARTS LIST

## INDOOR UNIT

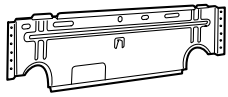
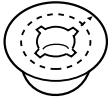
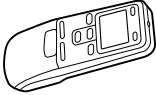

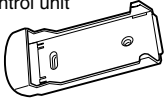
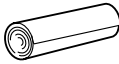
Ref. No.	Description	Part No.			Ord. Q'ty
		ASH7LMACW	ASH9LMACW	ASH12LMACW	
34	Capacitor (Fan motor)	9900089061	9900089061	9900089061	
63	Front Panel Assy	9312172214	9312172214	9312172214	
65	Flow Control Panel-Z	9306058043	9306058043	9306058043	
69	Louver-A	9306055028	9306055028	9306055028	
74	Filter	9305444014	9305444014	9305444014	
108	Base	9309755062	9309755062	9309755062	
109	Casing	9306052027	9306052027	9306052027	
122	Shaft Holder-B	9303066010	9303066010	9303066010	
127	Drain Hose Assy	9305550029	9305550029	9305550029	
146	Evaporator Assy	9308559036	9308559036	9373044017	
151	Control Box	9330007017	9330007017	9330007017	
158	Connecting Pipe Assy	9306416010	9306416010	9306416010	
164	Fan Motor Assy-IN	9601171010	9601171010	9601171010	
169	Cross-Flow Fan Assy	9307836015	9307836015	9307836015	
178	Motor Cushion-M	9601302018	9601302018	9601302018	
184	Thermistor Spring	313728262708	313728262708	313728262708	
196	Clamp SKB-150	313035356905	313035356905	313035356905	
233	Power Transformer	9900028015	9900028015	9900028015	
236	Controller PCB Assy	9705289017	9705289024	9705289031	
		(EZ-00307HSE-C)	(EZ-00308HSE-C)	(EZ-00309HSE-C)	
240	Remote Control Unit	9371190174	9371190174	9371190174	
281	BRACKET(PIPE)	9330011014	9330011014	9330011014	
283	Bushing-A	9303529010	9303529010	9303529010	
323	Louver-B	9306056025	9306056025	9306056025	
385	Indicator PCB Assy	9705296015	9705296015	9705296015	
401	Wall Hook Bracket	9304358008	9304358008	9304358008	
440	Flow Control Panel-U	9306057046	9306057046	9306057046	
522-1	Gear-A	9306062002	9306062002	9306062002	
523	Gear Bracket	9306407001	9306407001	9306407001	
652-1	Thermistor Holder Pipe	313714262805	313714262805	313714262805	
687	Earth Terminal	313681304205	313681304205	313681304205	
759	Intake Grille	9330002050	9330002050	9330002050	
764	Drain Cap Assy	9304150008	9304150008	9304150008	
767-1	Bottom Cover	9330004016	9330004016	9330004016	
777	CLAMPER(GRILL)	9306755010	9306755010	9306755010	
815	Terminal	9900040055	9900040055	9900040055	
850	Window (Receiver)	9330003019	9330003019	9330003019	
872	Indicator Case	9330009011	9330009011	9330009011	
873	Lamp Cover	9330014015	9330014015	9330014015	
874	Control Box Cover	9330008014	9330008014	9330008014	
875	Power Supply PCB Assy	9705294011	9705294011	9705294011	
876	Step Motor	9900139018	9900139018	9900139018	
962-1	Guard Holder-L	9306678012	9306678012	9306678012	
962-2	Guard Holder-R	9306677015	9306677015	9306677015	
963	Fan Guard	9305751013	9305751013	9305751013	

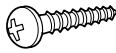

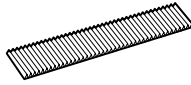
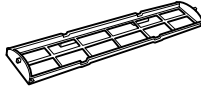
## OUTDOOR UNIT

Ref. No.	Description	Part No.		Ref. No.	Description	Part No.		Ord. Q'ty
		AOHA18LAT3	AOHA24LAT3			AOHA18LAT3	AOHA24LAT3	
1	Top Panel Sub Assy	9374417049		45	Inverter Box C	9375140014		
2	Front Panel Sub Assy	9374414048		46	Inverter Box Duct	9374609017		
5	Service Panel Sub Assy	9374415045		47	Inverter Box Cover	9375139018		
6	Right Panel Sub Assy	9374416103		48	Heat Sink A	9375138011		
7	Valve Cover Sub Assy	9374827015		49	Inverter Box D	9374606023		
10	Motor Bracket Sub Assy	9374418060		52	Terminal (3P)	9900203016		
11	Propeller Fan Assy	9366378020		53	Terminal (6P)	9900016036		
12	Motor. DC Brushless	9601882015		53-1	Terminal (3P)	9306489045		
13	Condenser A Assy	9374433179		54	Fuse Holder (Big)	0501454012		
14	Separate Wall Assy SS	9375226022		55	Fuse Holder (Small)	0501456016		
15	Base Assy	9374166121		56	Fuse (Big)	0600086039		
17	Coil. Choke	9900366018		57	Fuse (Small)	0600376116		
18	Cap Foot	9374345014		58	Terminal (2P)	9701971015		
19	Compressor Assy	9315297037		59	ACTPM	9703457012		
20	4-Way Valve Assy	9374425136		60	Power Supply PCB Assy	9705647091		
21	Inlet Pipe (Cond) A Assy	9373461104		61	Controller PCB Assy (AOYA18L)	9705642225		
22	Outlet Pipe (Cond) A Assy	9374266111		61	Controller PCB Assy (AOYA24L)	9705642195		
23	Pressure Switch A	9900186012		62	Holder (Thermo)	9372797013		
24	Pressure Switch B	9900341015		63	Heat Sink Thermistor	9900311018		
25	Accumulator Assy	9375250027		64	Compressor Temp Thermistor	9900156053		
26	Receiver Tank Assy	9374575039		65	Thermistor (Outdoor Temp)	9900378028		
27	Valve Plate A Assy	9374628148		66	Heat Exchanger Thermistor	9900374020		
28	Pulse Motor Valve	9900056025		67	Discharge Temp Thermistor	9704219039		
30	3-Way Valve Assy (1/2")	9375104016		68	Wire (Pressure Sw) (Red)	9377823014		
31	3-Way Valve Assy (3/8")	9375103019		69	Wire (Pressure Sw) (White)	9377823021		
32	2-Way Valve Assy	9375102012		70	Solenoid	9900165079		
33	Coil (Expansion Valve) (A=Red)	9900057084		71	Thermistor (Pipe)(White)	9900373030		
34	Coil (Expansion Valve) (B=White)	9900057053		72	Thermistor (Pipe)(Red)	9900372019		
35	Coil (Expansion Valve) (C=Green)	9900057060		73	Compressor Plate Assy	9375221058		
37	Rubber Cushion (For Comp)	9312680016		74	Water Seal Plate	9375222017		
38	Net S Protective	9375381028		75	Thermo Holder	9375211011		
39	Thermistor Holder	9377911018		76	Compressor Cover A	9374430093		
43	Inverter Box A	9374603015		77	Compressor Cover B	9374431090		
44	Inverter Box B Assy	9374625024		78	Compressor Cover C	9372067079		
				---	Emblem Rear	9372171011		

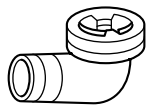
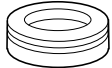
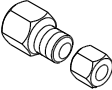

# STANDARD ACCESSORIES

## INDOOR UNIT

Name and Shape	Part No.
Wall hook bracket 	9304358008
Wall cap-B 	313714296205
Remote control unit 	9371190174 (AR-JW17)
Battery (penlight) 	0600185534
Remote control unit holder 	9305642014
Cloth tape 	9308117007

Name and Shape	Part No.
Tapping screw (big) (φ4 x 20) 	301141164200
Tapping screw (small) (φ3 x 12) 	0700019036
Air cleaning filter 	DEODRANT FILTER 9310441015  ELECTRIC FILTER 9310442012
Air cleaning filter frame 	9305445011

## OUTDOOR UNIT

Name and Shape	Q'ty	Use	Part No.
Drain pipe 	1	For outdoor unit drain piping work	9303029015
Drain cap 	2		313166024302
Adapter assy 12.7 mm → 9.52 mm (1/2 in.) (3/8 in.) 	1	For use when connecting models 9-12 to outdoor port A	9370244007
Putty 	1	For sealing	303020200114

0610G3158