



# MULTI AIR CONDITIONER WALL MOUNTED type

# SERVICE MANUAL



Models

Indoor unit

Outdoor unit

ASH9UMBD

AOH19USCV2

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# SPECIFICATIONS

## ELECTRICAL DATA

TYPE		COOL & HEAT	
INDOOR UNIT		ASH9UMBD	ASH9UMBD x 2
OUTDOOR UNIT		AOH19USCV2	
COOLING CAPACITY		2.80 kW	5.60 kW
HEATING CAPACITY		3.25 kW	6.50 kW
POWER SOURCE		230 V	
FREQUENCY		50 Hz	
RUNNING CURRENT	COOLING	4.6 A	8.6 A
	HEATING	4.6 A	8.6 A
INPUT WATTS	COOLING	0.99 kW	1.86 kW
	HEATING	1.03 kW	1.90 kW
E.E.R.	COOLING	2.83 kW/kW	3.01 kW/kW
	HEATING	3.16 kW/kW	3.42 kW/kW
MOISTURE REMOVAL		1.0 L/hr	2.0 L/hr
AIR CIRCULATION-High		470 m <sup>3</sup> /hr	470 m <sup>3</sup> /hr x 2

## INDOOR UNIT

FAN MOTOR ( cool / heat )	HIGH-SPEED	1,200 r.p.m. / 1,200 r.p.m.
	MED-SPEED	1,100 r.p.m. / 1,100 r.p.m.
	LOW-SPEED	1,000 r.p.m. / 1,000 r.p.m.
	QUIET	940 r.p.m. / 940 r.p.m.
DIMENSIONS	H x W x D	257 x 808 x 187 mm
WEIGHT	GROSS / NET	10 kg / 8 kg
NOISE LEVEL ( cool / heat )	HIGH-SPEED	36 dB / 35 dB
	MED-SPEED	34 dB / 33 dB
	LOW-SPEED	31 dB / 30 dB
	QUIET	29 dB / 28 dB

## OUTDOOR UNIT

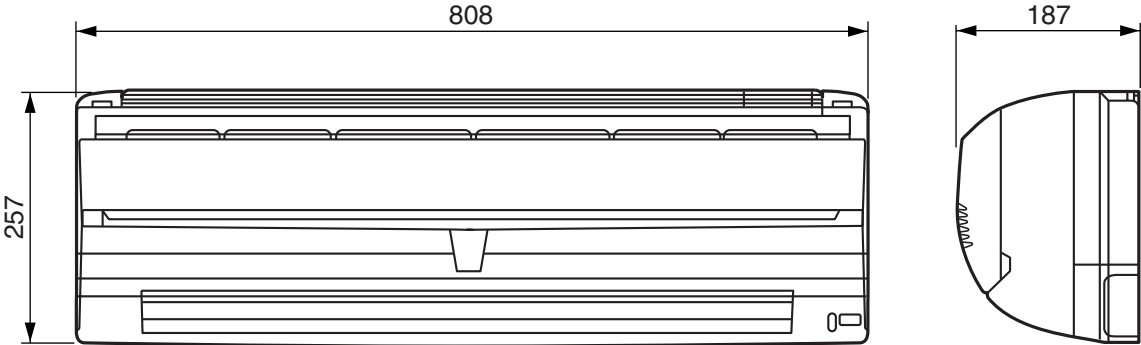
COMPRESSOR TYPE	Hermetic type, Permanent split condenser, 2 pole, Single phase, Induction motor, Rotary
COMPRESSOR DISCRIMINATION	802 141 65B
POWER SOURCE	230V - 50Hz
REFRIGERANT	R410A 800 g x 2
ADDITIONAL CHARGE	10 g/m
CHARGELESS PIPE LENGTH	7.5 m
MAXIMUM PIPE LENGTH (each pipe)	15 m
FAN MOTOR	780 r.p.m.
DIMENSIONS	H x W x D 700 x 900 x 330 mm
WEIGHT	GROSS / NET 70 kg / 63 kg
NOISE LEVEL ( cool / heat )	51 dB / 52 dB

# OUTLINE AND DIMENSIONS

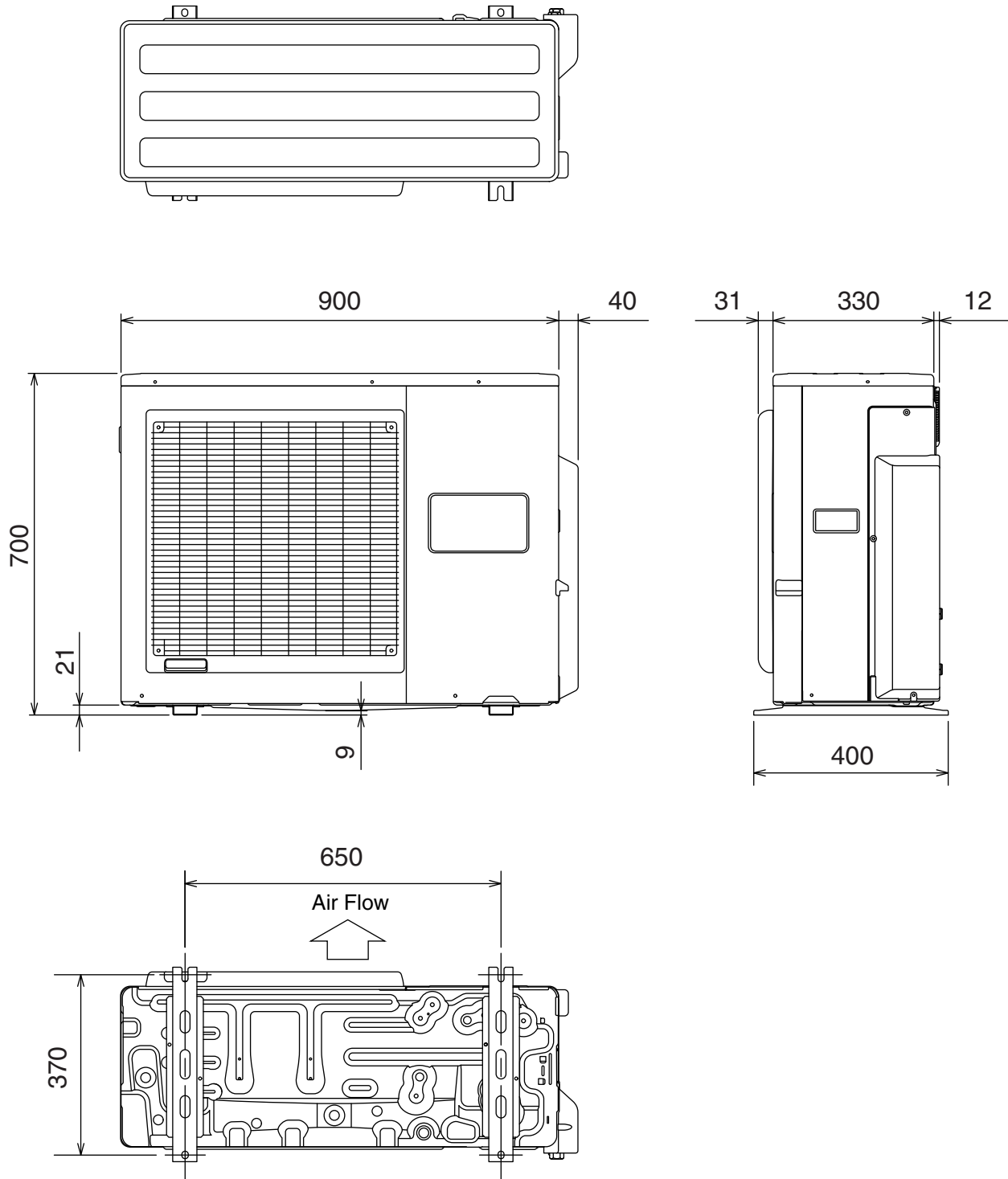
INDOOR UNIT (Wall mounted type)

Model : ASH9UMBD

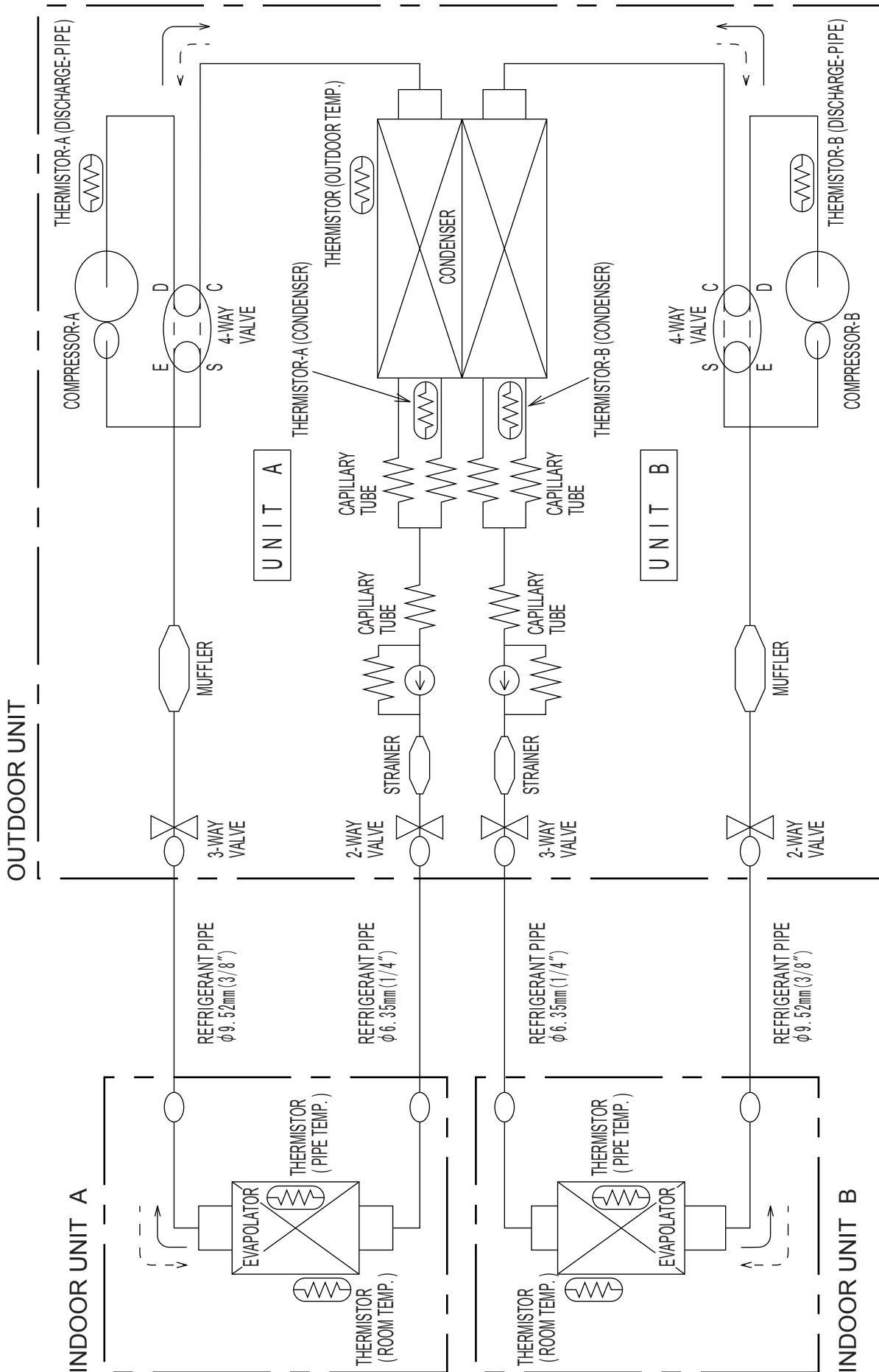
(Unit : mm)



OUTDOOR UNIT  
Model : AOH19USCV2  
(Unit : mm)



# REFRIGERANT SYSTEM DIAGRAM



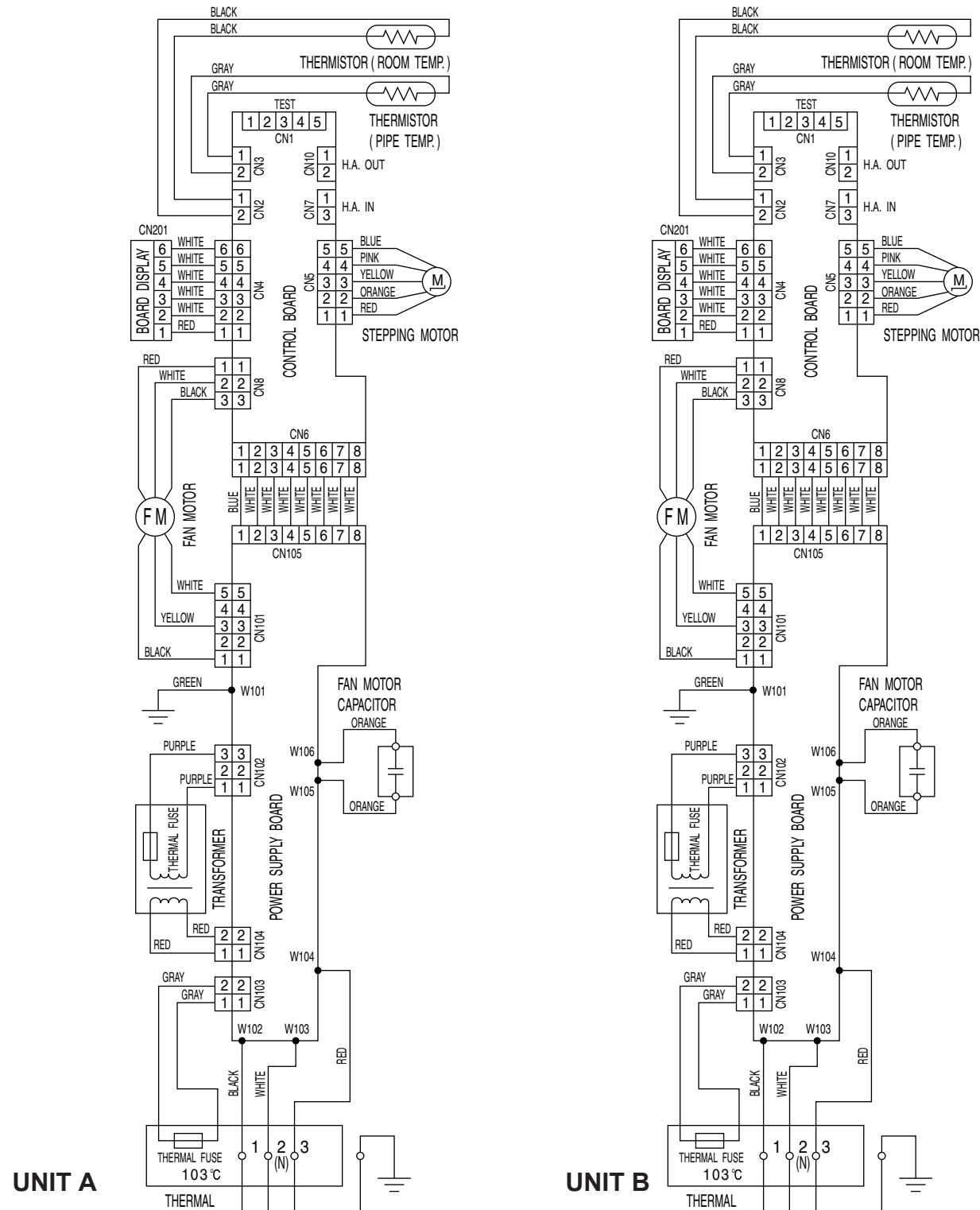
# CIRCUIT DIAGRAM

Models : ASH9UMBD / AOH19USCV2

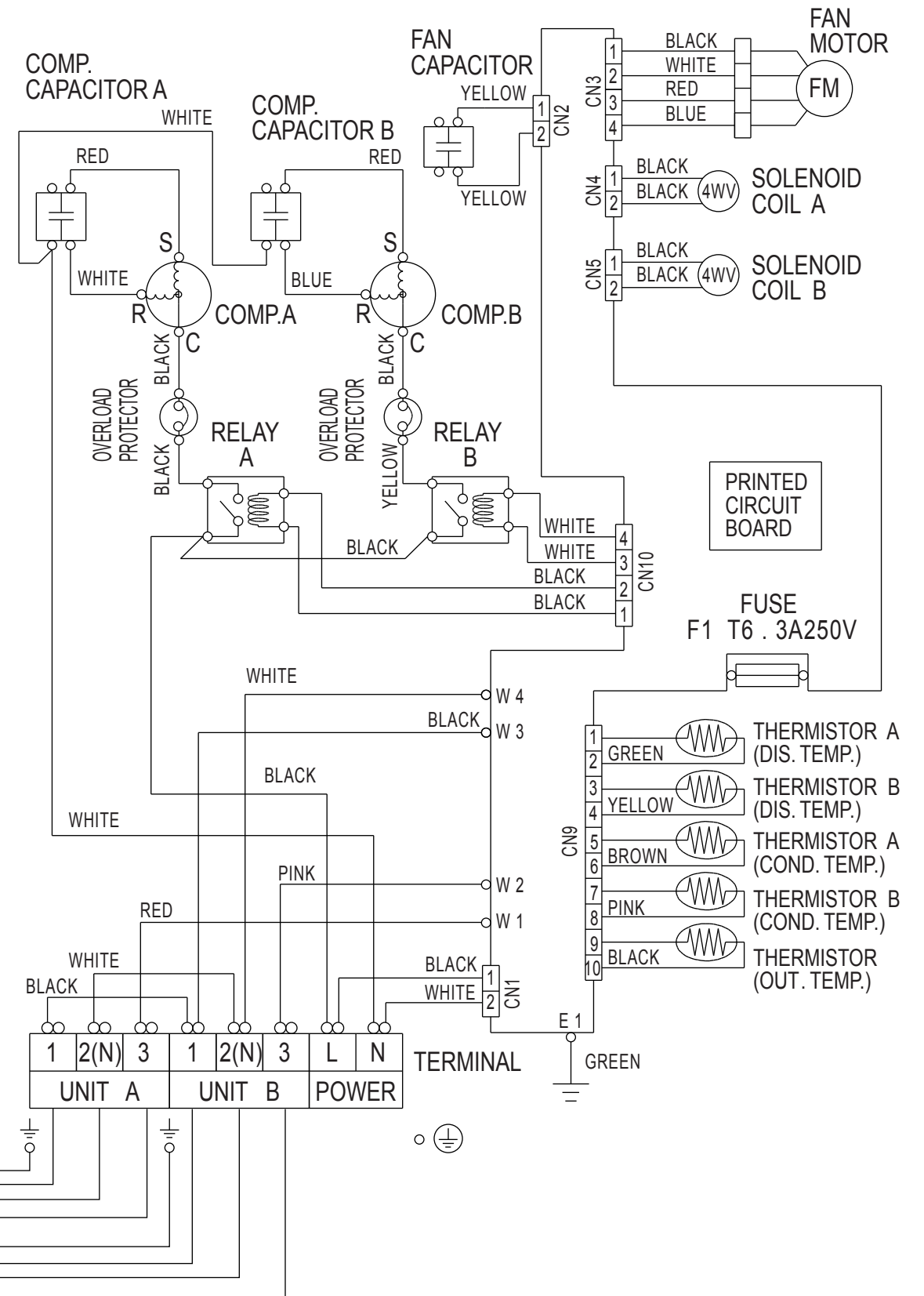
## INDOOR UNIT

Wall Mounted type

Wall Mounted type

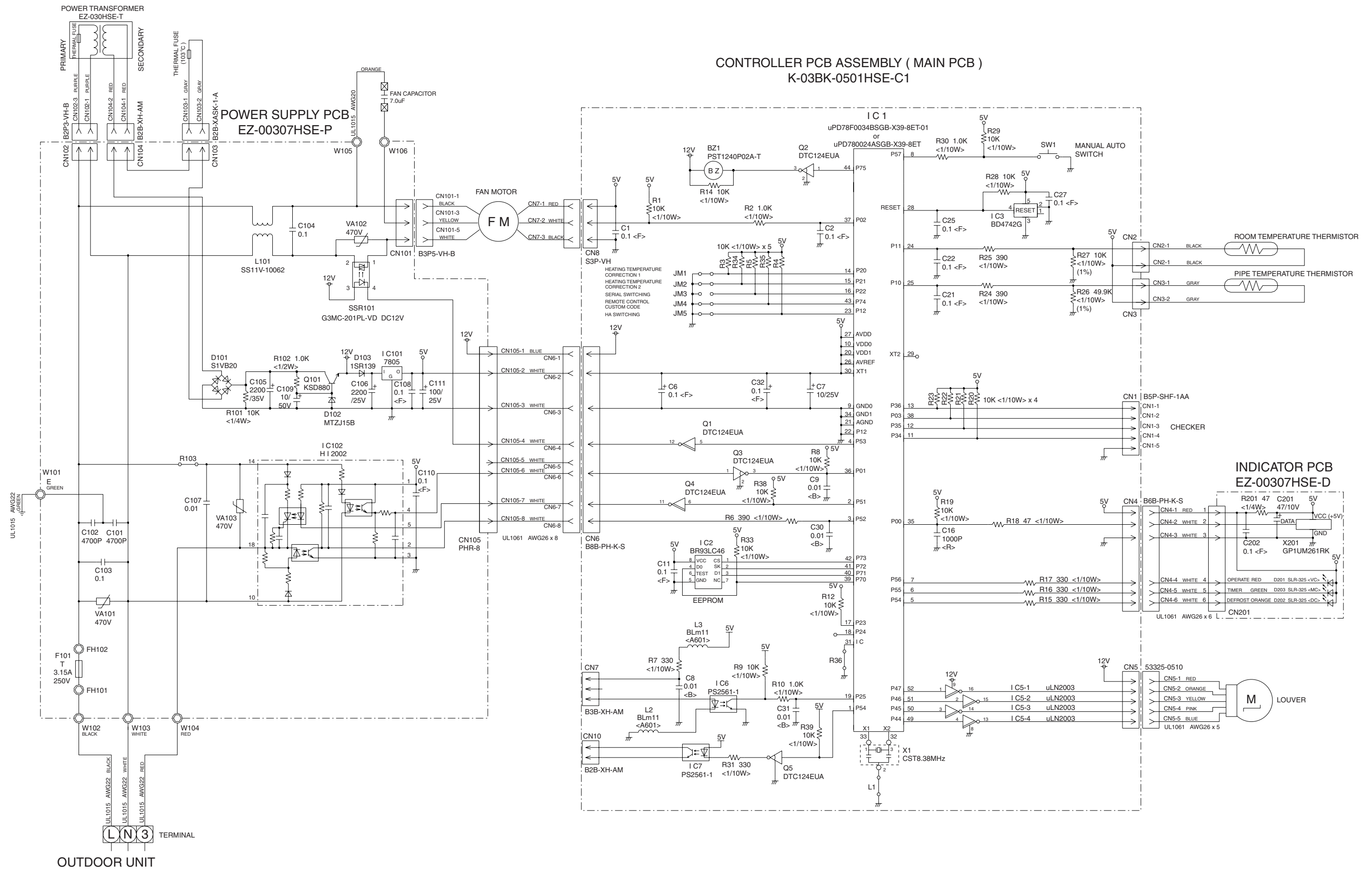


## OUTDOOR UNIT



# INDOOR PCB CIRCUIT DIAGRAM

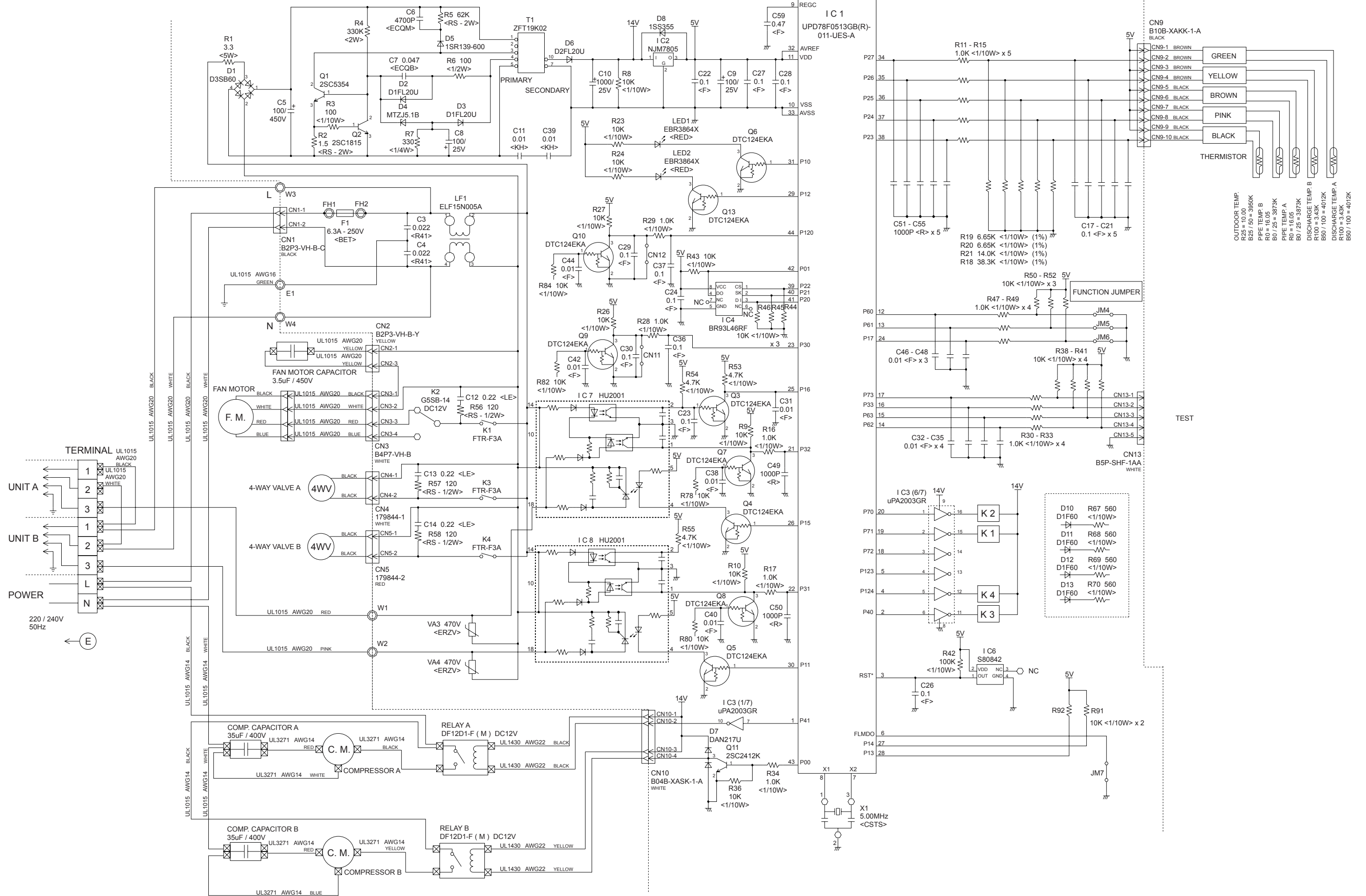
Model : ASH9UMBD



# OUTDOOR PCB CIRCUIT DIAGRAM

## CONTROLLER PCB ASSEMBLY ( MAIN PCB ) K05DT-0500HUE-C1

Model : AOH19USCV2



OUTDOOR TEMP.  
 0.10 = 3950K  
 B25 / 50 = 3950K  
 PIPE TEMP. B  
 B0 = 36.05  
 B0 / 25 = 3879K  
 PIPE TEMP. A  
 B0 = 36.05  
 B0 / 25 = 3879K  
 DISCHARGE TEMP. B  
 R100 = 3.43K  
 B50 / 100 = 4012K  
 DISCHARGE TEMP. A  
 R100 = 3.43K  
 B50 / 100 = 4012K

D10 R67 560  
 D1F60 <1/10W>  
 D11 R68 560  
 D1F60 <1/10W>  
 D12 R69 560  
 D1F60 <1/10W>  
 D13 R70 560  
 D1F60 <1/10W>



# ERROR CONTENTS

INDOOR UNIT (Wall Mounted type)

○ : Fast flashing      ● : Slow flashing

Operation lamp : Red lamp

Timer lamp : Green lamp

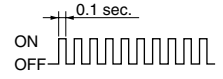
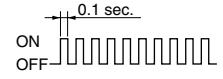
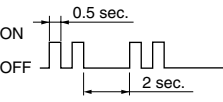
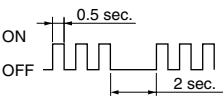
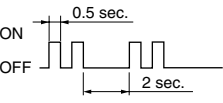
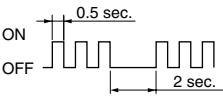
Large division indication			Small division indication		
Error contents	LED indication		Error contents	LED indication	
circuit board error (indoor unit )	Red lamp Green lamp	○ ○	-----	-----	-----
thermistor error (indoor unit )	Red lamp Green lamp	● (2 times) ○	thermistor error (room temp.)	Red lamp Green lamp	○ ● (2 times)
			thermistor error (heat exchanger)	Red lamp Green lamp	○ ● (3 times)
control unit error (indoor unit )	Red lamp Green lamp	● (4 times) ○	MANUAL AUTO button error	Red lamp Green lamp	○ ● (2 times)
			power source Hz decision error	Red lamp Green lamp	○ ● (4 times)
serial error	Red lamp Green lamp	● (5 times) ○	serial reverse transmission error	Red lamp Green lamp	○ ● (2 times)
			serial order transmission error	Red lamp Green lamp	○ ● (3 times)
fan motor error (indoor unit)	Red lamp Green lamp	● (6 times) ○	lock error	Red lamp Green lamp	○ ● (2 times)
			r.p.m error	Red lamp Green lamp	○ ● (3 times)
thermistor error (outdoor unit)	Red lamp Green lamp	○ ● (2 times)	-----	-----	-----

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

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

## OUTDOOR UNIT

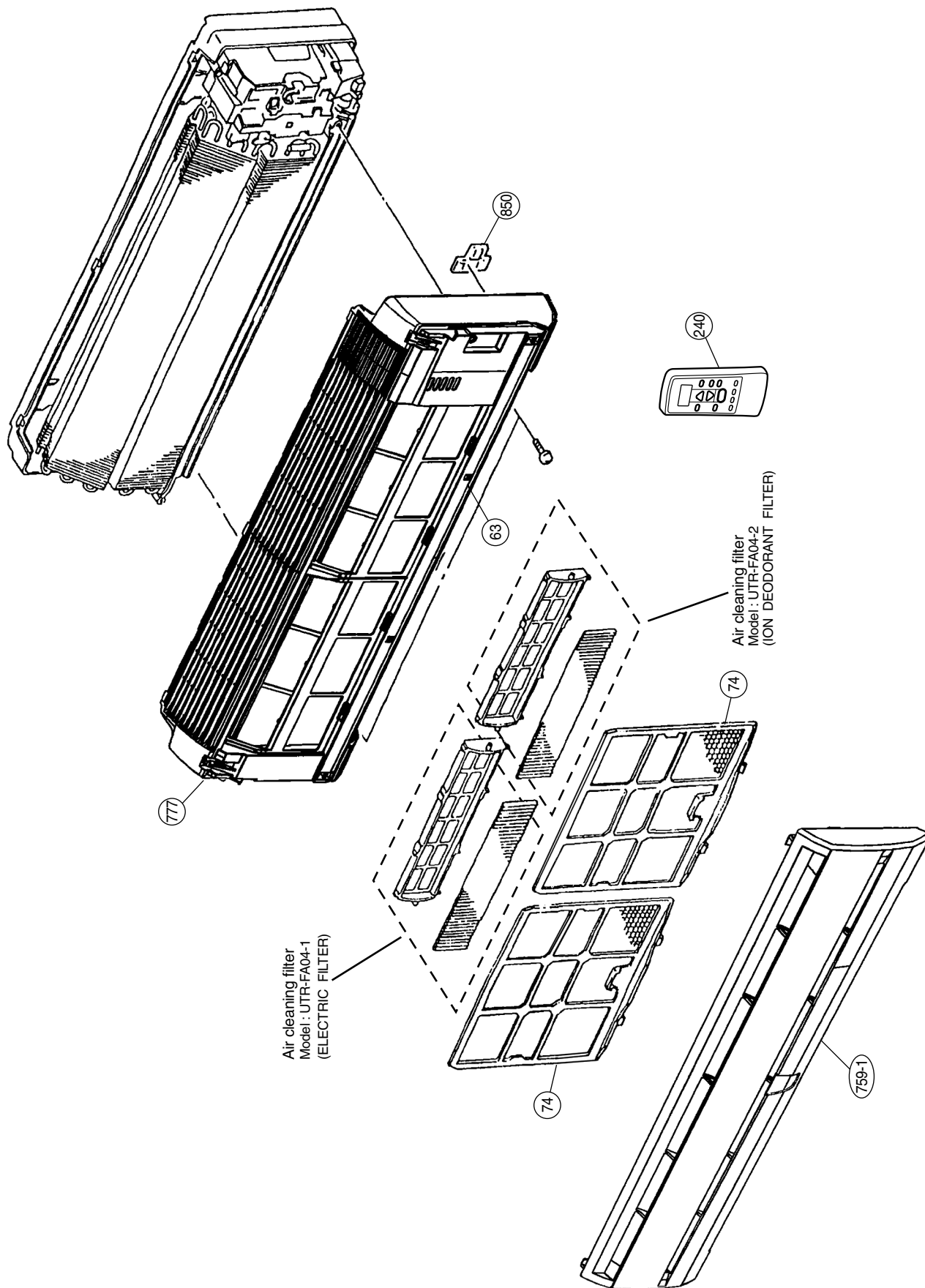
When a malfunction occurs in the outdoor unit, the LEDs on the circuit board light to indicate the error. Refer to the following table for the description of each error according to the LEDs.

Error display		Error contents
LED 1	LED 2	
 <p>Quick flash continued</p>	 <p>Quick flash continued</p>	Model abnormal or EEPROM abnormal
 <p>2 quick flash repeated</p>	Dislighting continued	UNIT A Discharge temperature sensor error
 <p>3 quick flash repeated</p>	Dislighting continued	UNIT A Outdoor heat exchanger temperature sensor error
4 quick flash repeated	Dislighting continued	Outdoor temperature sensor error
5 quick flash repeated	Dislighting continued	UNIT A Communication signal error
6 quick flash repeated	Dislighting continued	UNIT A Indoor unit error
7 quick flash repeated	Dislighting continued	UNIT A Discharge temperature abnormal
Dislighting continued	 <p>2 quick flash repeated</p>	UNIT B Discharge temperature sensor error
Dislighting continued	 <p>3 quick flash repeated</p>	UNIT B Outdoor heat exchanger temperature sensor error
Dislighting continued	5 quick flash repeated	UNIT B Communication signal error
Dislighting continued	6 quick flash repeated	UNIT B Indoor unit error
Dislighting continued	7 quick flash repeated	UNIT B Discharge temperature abnormal

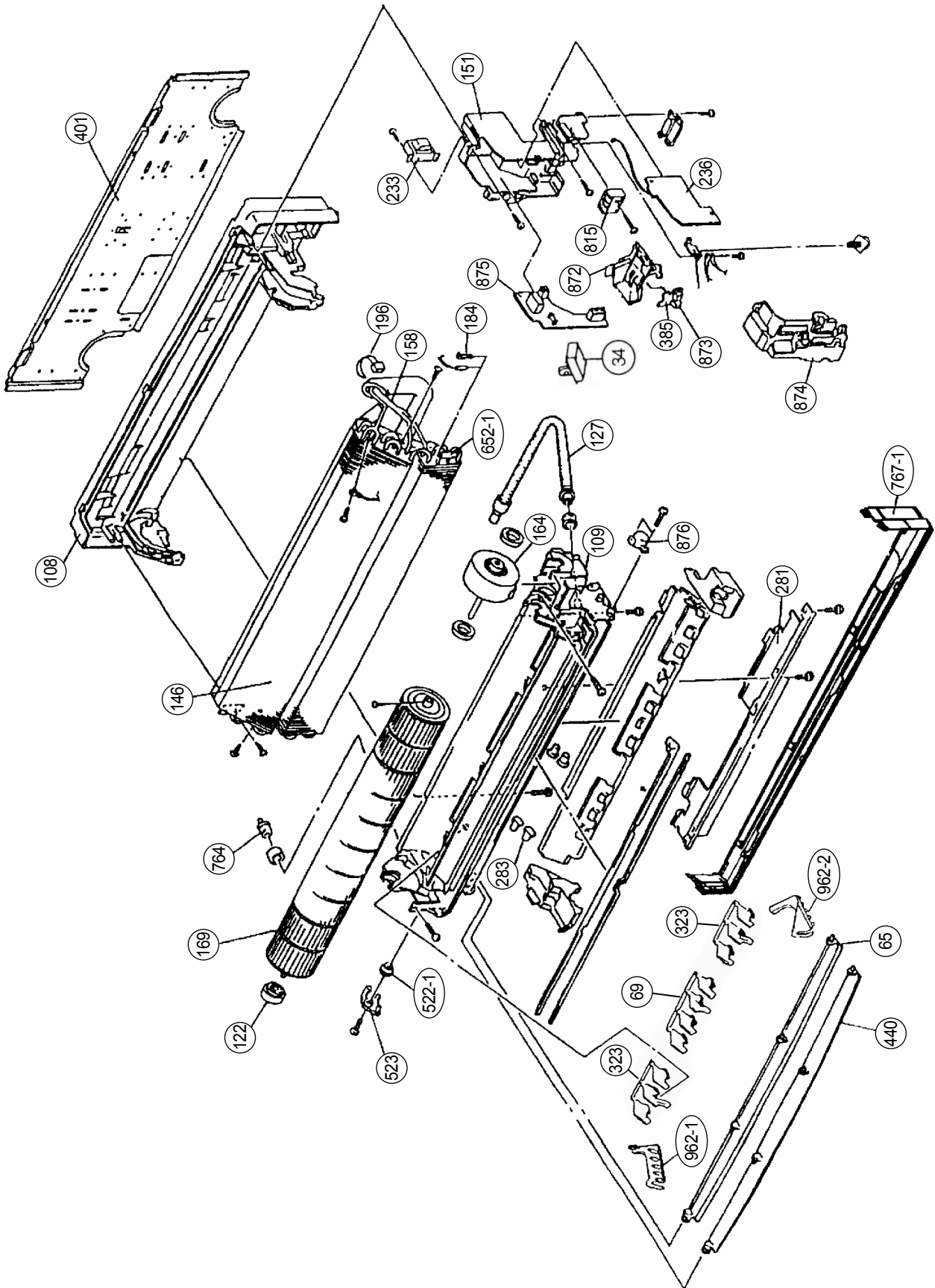
When the fault is cleared, the LED lamp goes off.

# DISASSEMBLY ILLUSTRATION

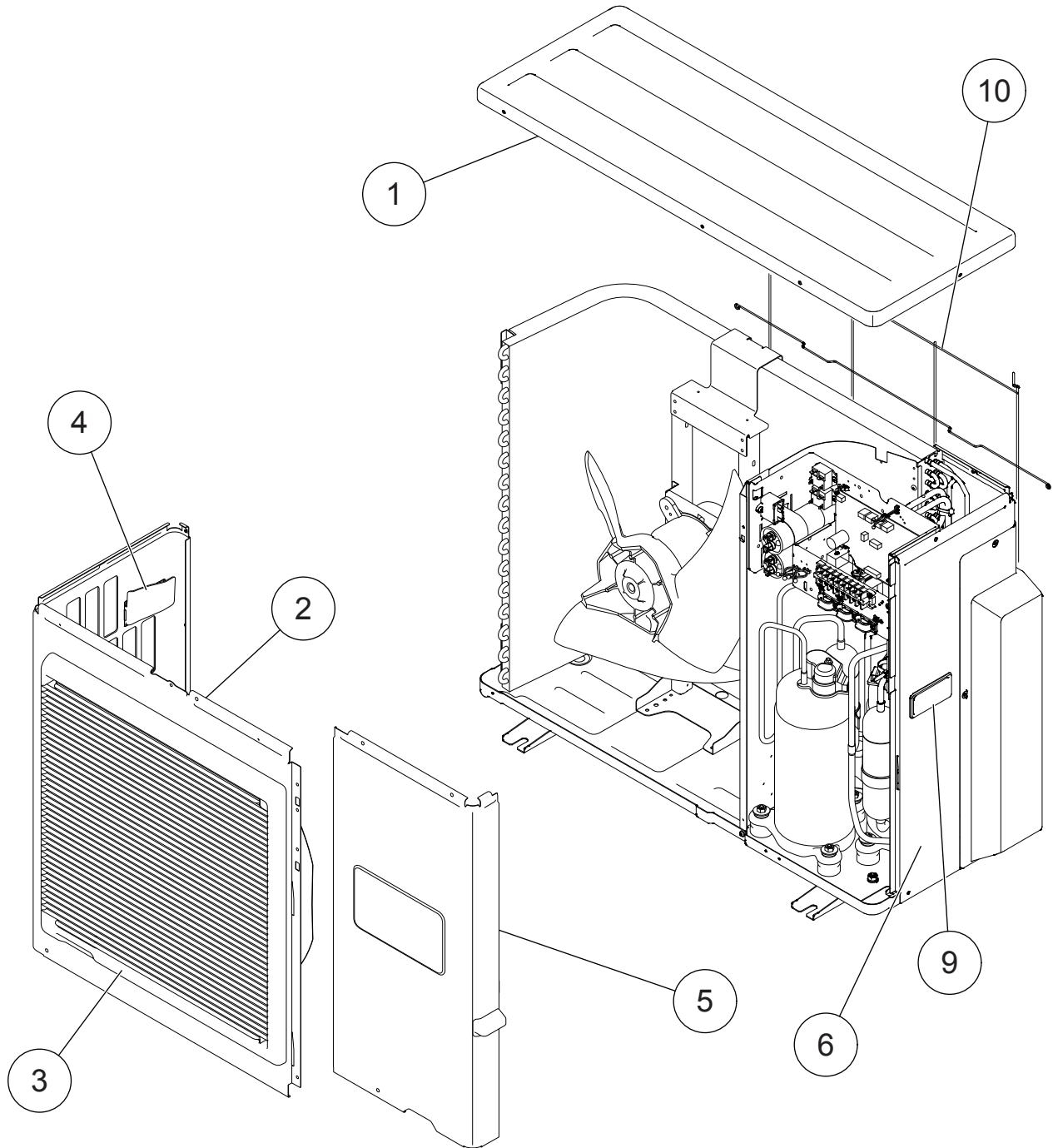
Model : ASH9UMBD



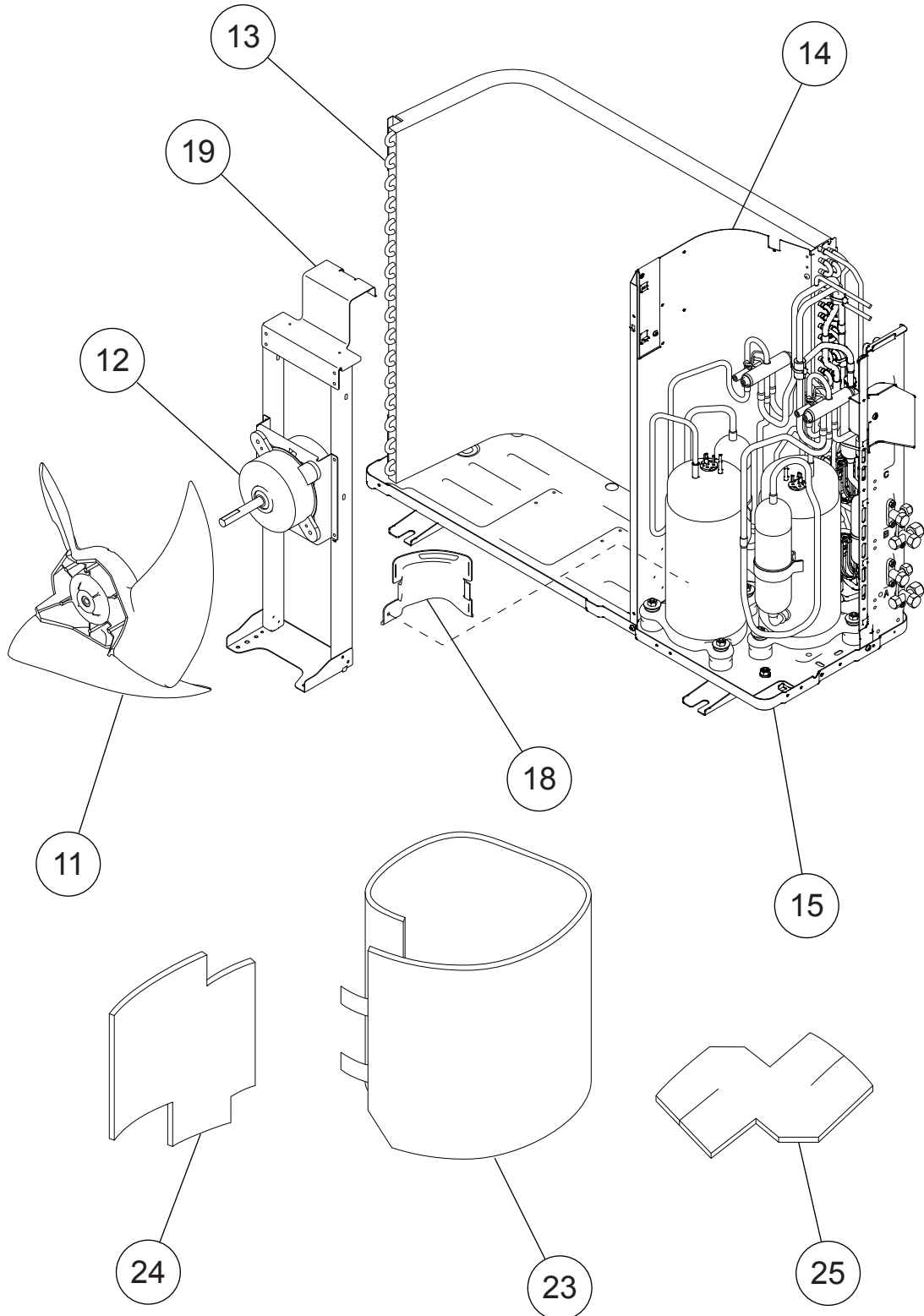
Model : ASH9UMBD



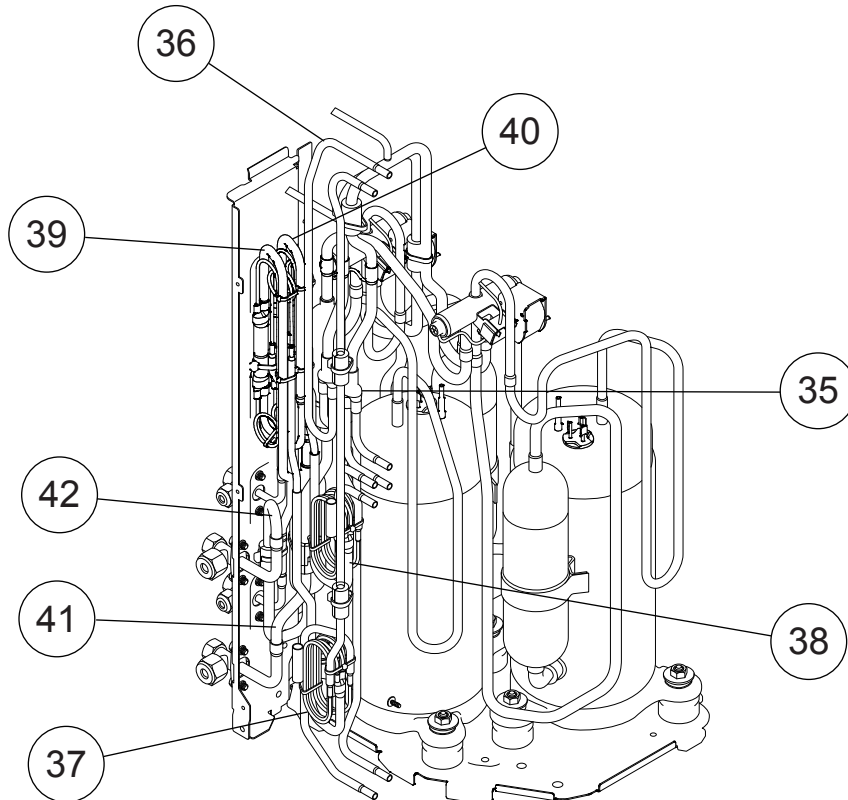
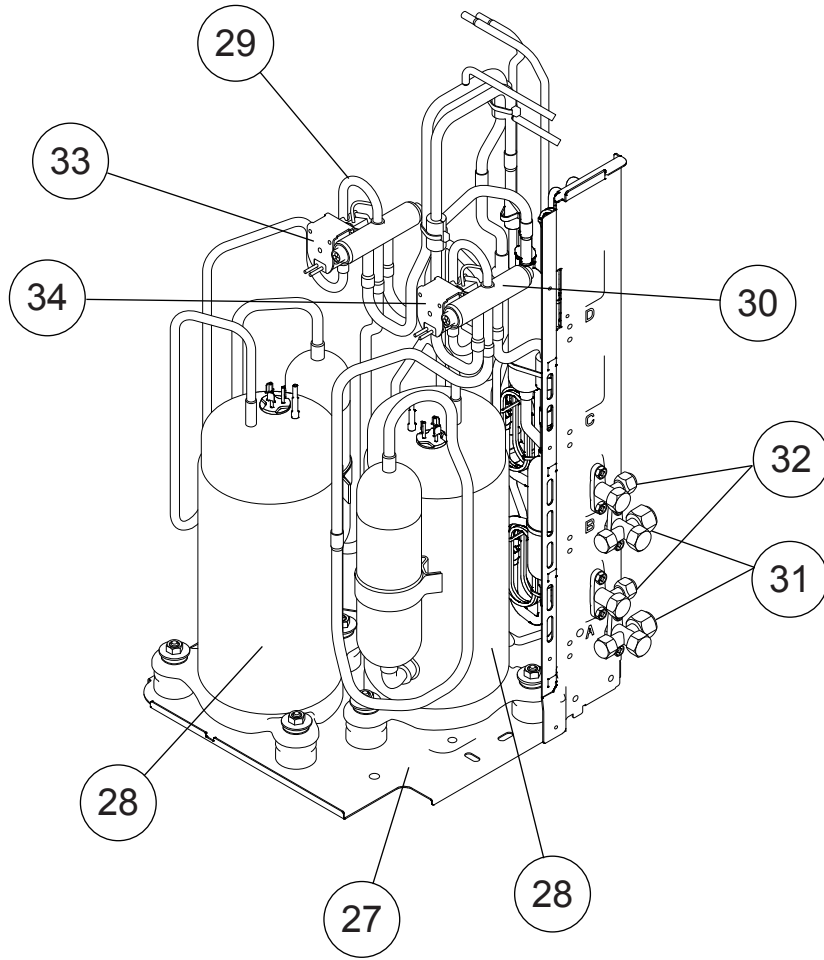
Model : AOH19USCV2



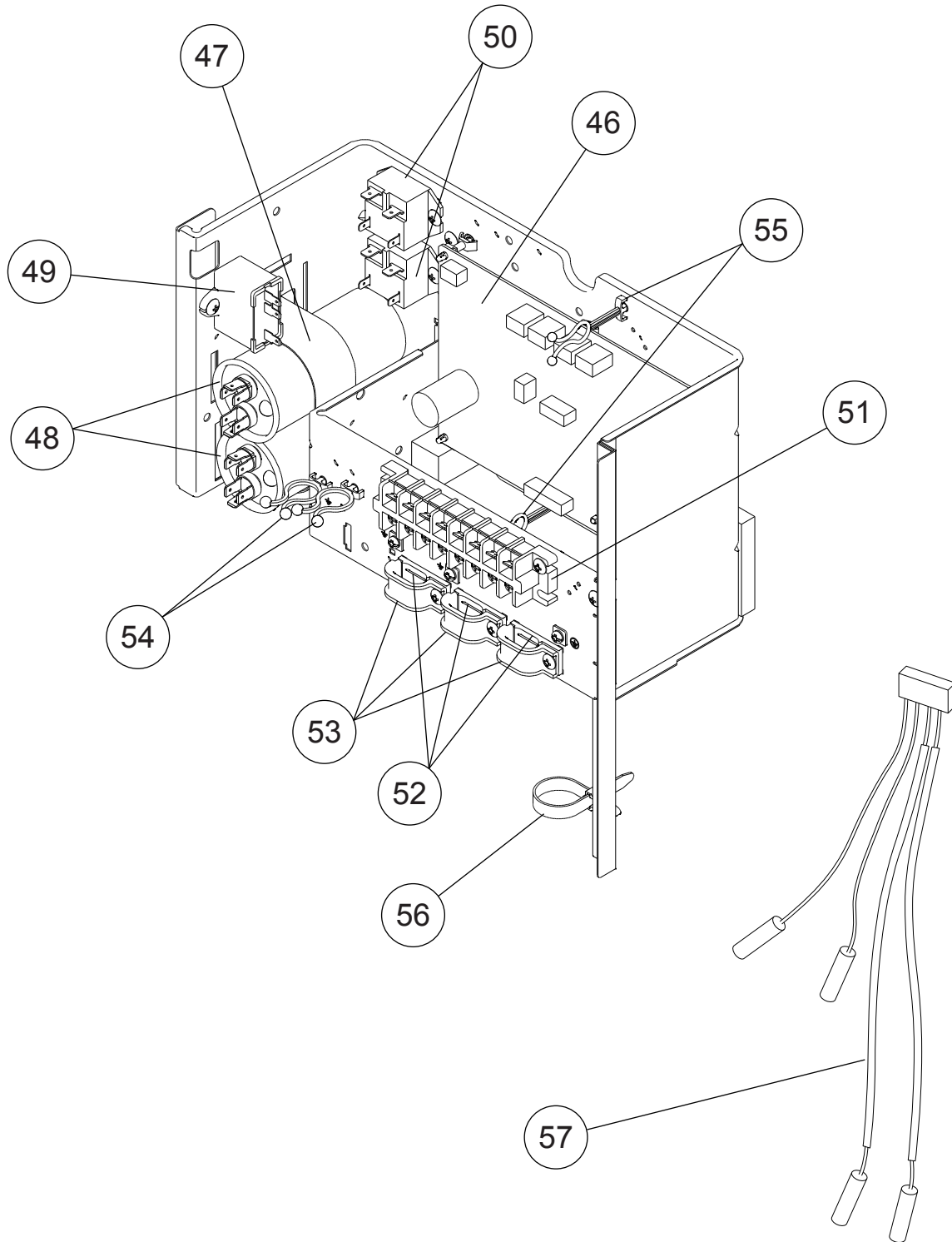
Model : AOH19USCV2



Model : AOH19USCV2

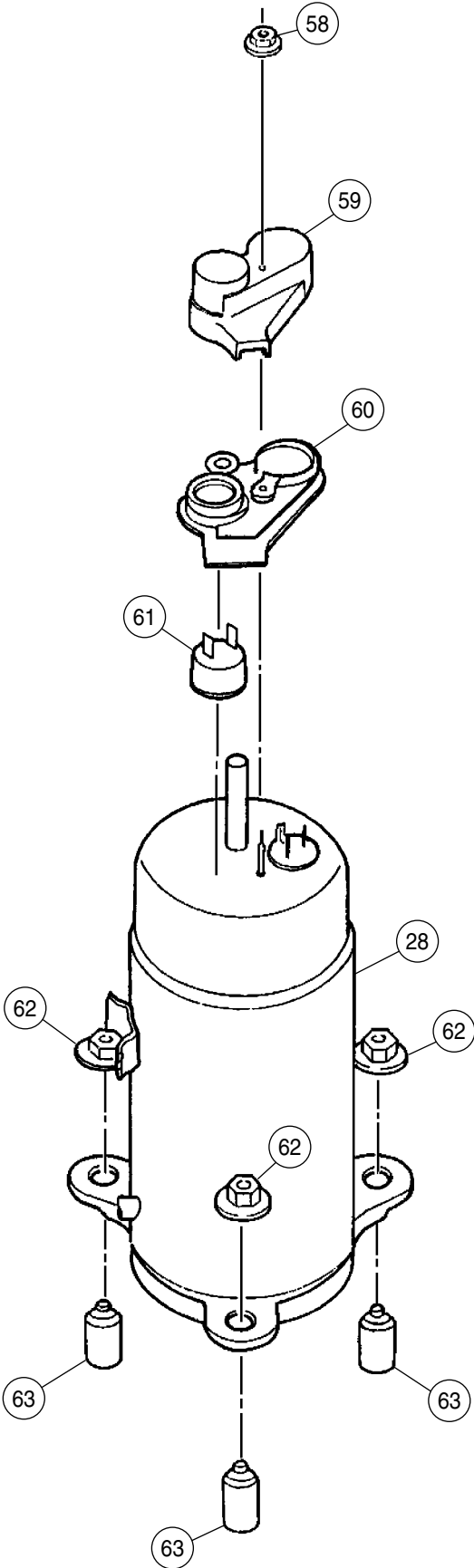


Model : AOH19USCV2





Model : AOH19USCV2



# PARTS LIST

## INDOOR UNIT

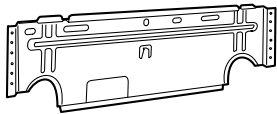
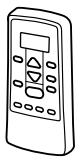

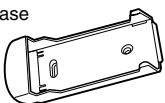
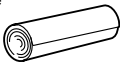


Ref. No.	Description	Part No.	Ord. Q'ty
		ASH9UMBD	
34	Capacitor (Fan Motor)	9900089061	
63	Front Panel Assy	9312172085	
65	Flow Control Panel-Z	9306058043	
69	Louver-A	9306055028	
74	Filter	9305444014	
108	Base	9309755062	
109	Casing Assy	9312173037	
122	Shaft Holder-B	9303066010	
127	Drain Hose Assy	9305550029	
146	Evaporator Assy	9373044017	
151	Control Box	9330007017	
158	Connecting Pipe Assy	9306416010	
164	Fan Motor Assy-IN	9601844013	
169	Cross-Flow Fan Assy	9307836015	
184	Thermistor Spring	313728262708	
196	Clamp SKB-150	313035356905	
233	Power Transformer	9900028015	
236	Controller PCB Assy	9705536043 (K03BK-0501HSE-C1)	
240	Remote Control Unit	9314684029	
281	Clamp Metal (Pipe)	9306063009	
283	Bushing-A	9303529010	
323	Louver-B	9306056025	
385	Indicator PCB Assy	9705296015	
401	Wall Hook Bracket	9304358008	
440	Flow Control Panel-U	9306057046	
522-1	Gear-A	9306062002	
523	Gear Bracket	9306407001	
652-1	Thermistor Holder Pipe	313714262805	
759-1	Intake Grille-B	9330002012	
764	Drain Cap Assy	9304150008	
767-1	Bottom Cover	9330004016	
777	Clamper (Grille)	9306755010	
815	Terminal	9900040055	
850	Window (Receiver)	9330003019	
872	Indicator Case	9330009011	
873	Lamp Cover	9330014015	
874	Control Box Cover	9330008014	
875	Power Supply PCB Assy	9705294011	
876	Step Motor	9900139018	
962-1	Guard Holder-L	9306678012	
962-2	Guard Holder-R	9306677015	

## OUTDOOR UNIT


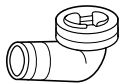
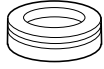
Ref. No.	Description	Part No.	Ord. Q'ty
		AOH19USCV2	
1	Top Panel Sub Assy	9374417018	
2	Front Panel S	9374094080	
3	Fan Guard	9374330010	
4	Grip Side	9374173013	
5	Service Panel Sub Assy	9374415045	
6	Right Panel	9374599042	
9	Grip	9374172016	
10	Print Net S	9374255047	
11	Propeller Fan Assy	9366378013	
12	Motor, Induction	9601671060	
13	Condenser A Assy	9374433094	
14	Separate Wall S	9374135042	
15	Base Assy	9374166121	
18	Cap Foot	9374345014	
19	Motor Bracket Sub Assy	9374418084	
23	Compressor Cover A	9375323011	
24	Compressor Cover B	9374431076	
25	Compressor Cover C	9372067055	
27	Compressor Plate Assy	9375221010	
28	Compressor Assy	9373010029	
29	4-Way Valve A Assy	9375293024	
30	4-Way Valve B Assy	9375294021	
31	3-Way Valve Assy	9375103019	
32	2-Way Valve Assy	9375102012	
33	Solenoid (A=White)	9900165079	
34	Solenoid (B=Red)	9900165062	
35	Inlet Pipe (Cond) A1 Assy	9373461081	
36	Inlet Pipe (Cond) B1 Assy	9373463061	
37	Outlet Pipe (Cond) A Assy	9374266098	
38	Outlet Pipe (Cond) B Assy	9375292010	
39	Capillary A Assy	9375297039	
40	Capillary B Assy	9375298036	
41	Joint Pipe (Valve) A Assy	9375295011	
42	Joint Pipe (Valve) B Assy	9375296018	
46	PCB Assy	9707096019	
47	Band (Capacitor)	9352123009	
48	Capacitor, Plastic (Comp.)	9900269043	
49	Capacitor, Plastic (Fan)	9900270049	
50	Relay	9900264017	
51	Terminal	9900203047	
52	Clamp (Cord) C	9359677000	
53	Clamp (Cord)	9356857009	
54	Clamp No.1219	313361271706	
55	Wire Clamper	0600231019	
56	Clip (Cable) No 1259	313739340109	
57	Thermistor Assy	9900356019	
58	Special Nut M5	313199233602	
59	Terminal Cover (Comp)	9302419008	
60	Terminal Gasket (Comp)	9351505011	
61	OCR Assy	9311143000	
62	Special Nut	9355091008	
63	Rubber Seat (for Comp) A	9351507015	
---	Emblem Rear	9372171011	

## STANDARD ACCESSORIES

### INDOOR UNIT

Name and Shape	Q'ty	Part No.
Wall hook bracket 	1	9304358008
Remote control unit 	1	9314684029 (AR-JE5)
Battery (penlight) 	1 set	0600185534
Remote control unit holder case 	1	9312653010
Cloth tape 	1	9310519004
Tapping screw (big) ( $\phi 4 \times 25$ ) 	8	0700076046
Tapping screw (small) ( $\phi 3 \times 12$ ) 	2	0700019036

### OUTDOOR UNIT

Name and Shape	Q'ty	Part No.
Putty 	1	303020200114
Drain pipe 	1	9303029015
Drain cap 	2	313166024302

0602G3026