



SPLIT TYPE ROOM AIR CONDITIONER

WALL MOUNTED type

SERVICE MANUAL

Models

Indoor unit

Outdoor unit

ASH9LSACW

AOH9LSAC

ASH12LSACW

AOH12LSAC



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SPECIFICATIONS

TYPE	(COOL&HEAT INVERTER)	(COOL&HEAT INVERTER)
INDOOR UNIT	ASH9LSACW	ASH12LSACW
OUTDOOR UNIT	AOH9LSAC	AOH12LSAC
COOLING CAPACITY() : Range (kW)	2.6 (0.5~3.6)	3.5 (0.9~4.2)
HEATING CAPACITY() : Range (kW)	3.6 (0.5~6.0)	4.8 (0.9~6.6)

ELECTRICAL DATA

POWER SOURCE (V)	230		
FREQUENCY (Hz)	50		
RUNNING CURRENT (A)	COOLING	3.0	4.6
	HEATING	3.6	5.8
INPUT WATTS (kW)	COOLING	0.68 (0.25~1.38)	1.03 (0.25~1.61)
	HEATING	0.91 (0.25~1.96)	1.33 (0.25~2.30)
EER (kW/kW)	COOLING	3.82	3.40
	HEATING	3.96	3.61
MOISTURE REMOVAL (ℓ/hr)	1.3	1.8	
AIR CIRCULATION-Hi (m³/hr)	C 630 H665	C 630 H700	

COMPRESSOR

TYPE	Hermetic type, 4 pole, 3 phase, DC brushless motor	
DISCRIMINATION	80206680	80206680
REFRIGERANT R410A (g)	950	1100

Note : Always use a vacuum pump to purge the air.

Refrigerant for purging the air is not charged in the outdoor unit at the factory.

FAN MOTOR

POWER SOURCE (V)	230		
INDOOR UNIT (r.p.m.)	HI-SPEED	C 1,350 H 1,420	C 1,400 H 1,470
	MED-SPEED	C 1,150 H 1,200	C 1,200 H 1,290
	LO-SPEED	C 950 H 1,000	C 1,000 H 1,110
	QUIET	C 740 H 900	C 820 H 980
OUTDOOR UNIT (r.p.m.)	830		

DIMENSIONS

INDOOR UNIT H x W x D (mm)	280 x 790 x 230
OUTDOOR UNIT H x W x D (mm)	535 x 780 x 250

WEIGHTS

INDOOR UNIT GROSS / NET (kg)	12 / 9	
OUTDOOR UNIT GROSS / NET (kg)	35 / 33	37 / 34

NOISE LEVEL

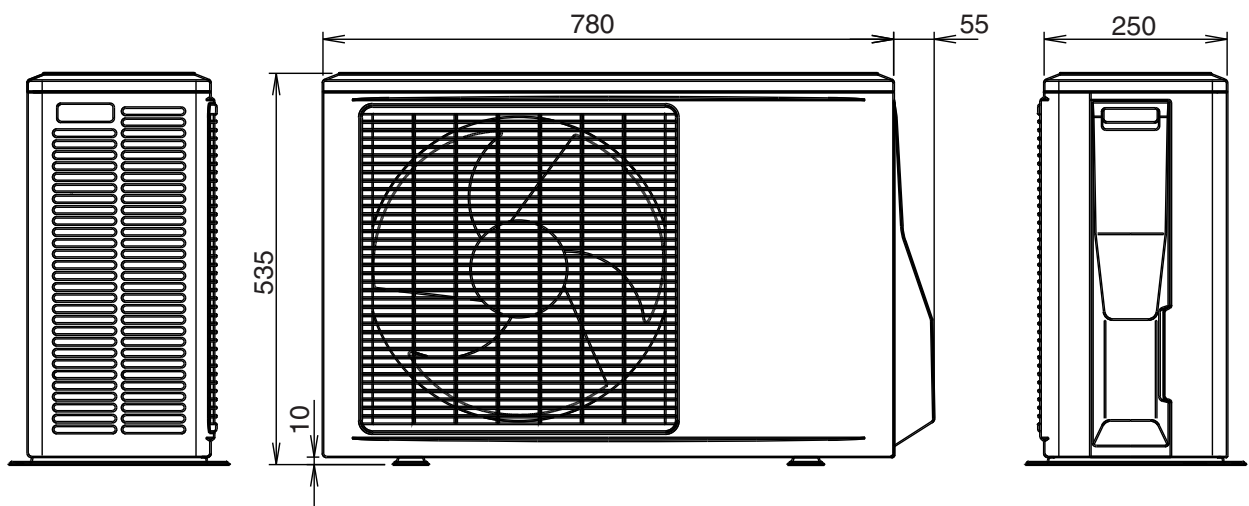
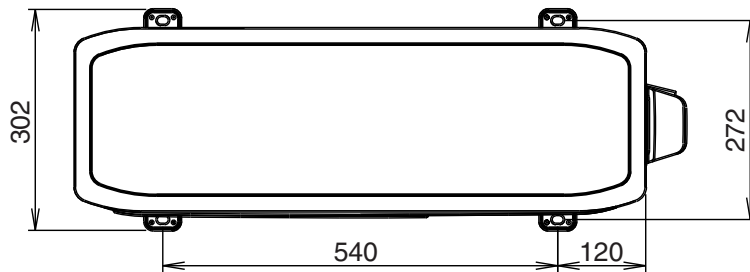
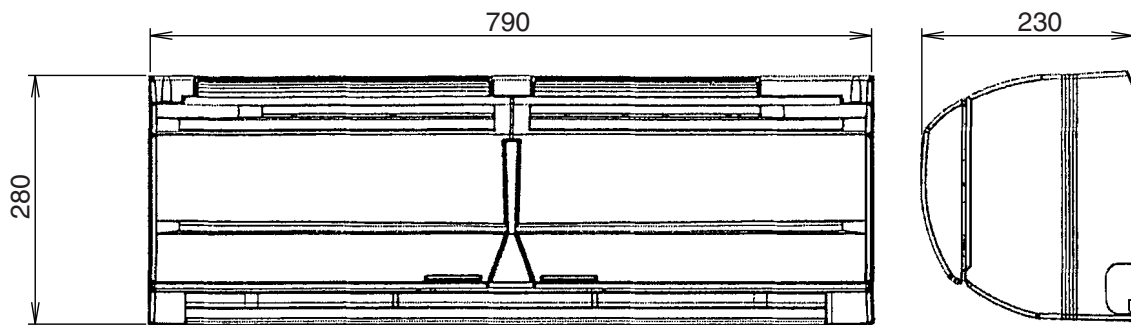
INDOOR UNIT (dB)	HI-SPEED	C 42 H 42	C 43 H 43
	MED-SPEED	C 37 H 36	C 39 H 38
	LO-SPEED	C 31 H 30	C 32 H 33
	QUIET	C 23 H 26	C 26 H 29
OUTDOOR UNIT (dB)	C 47 H 49		

Note : Noise was measured in accordance with JIS standards, Japan.

MAX PIPE LENGTH	15 m
ADDITIONAL REFRIGERANT	None

DIMENSIONS

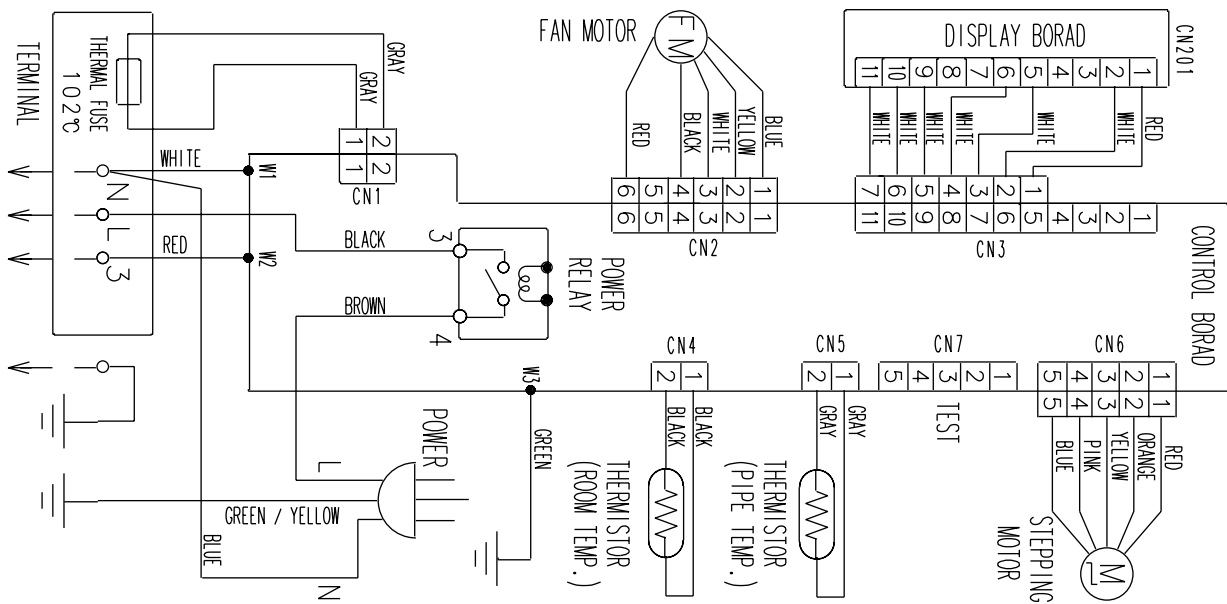
Models : ASH9LSACW / AOH9LSAC
ASH12LSACW / AOH12LSAC



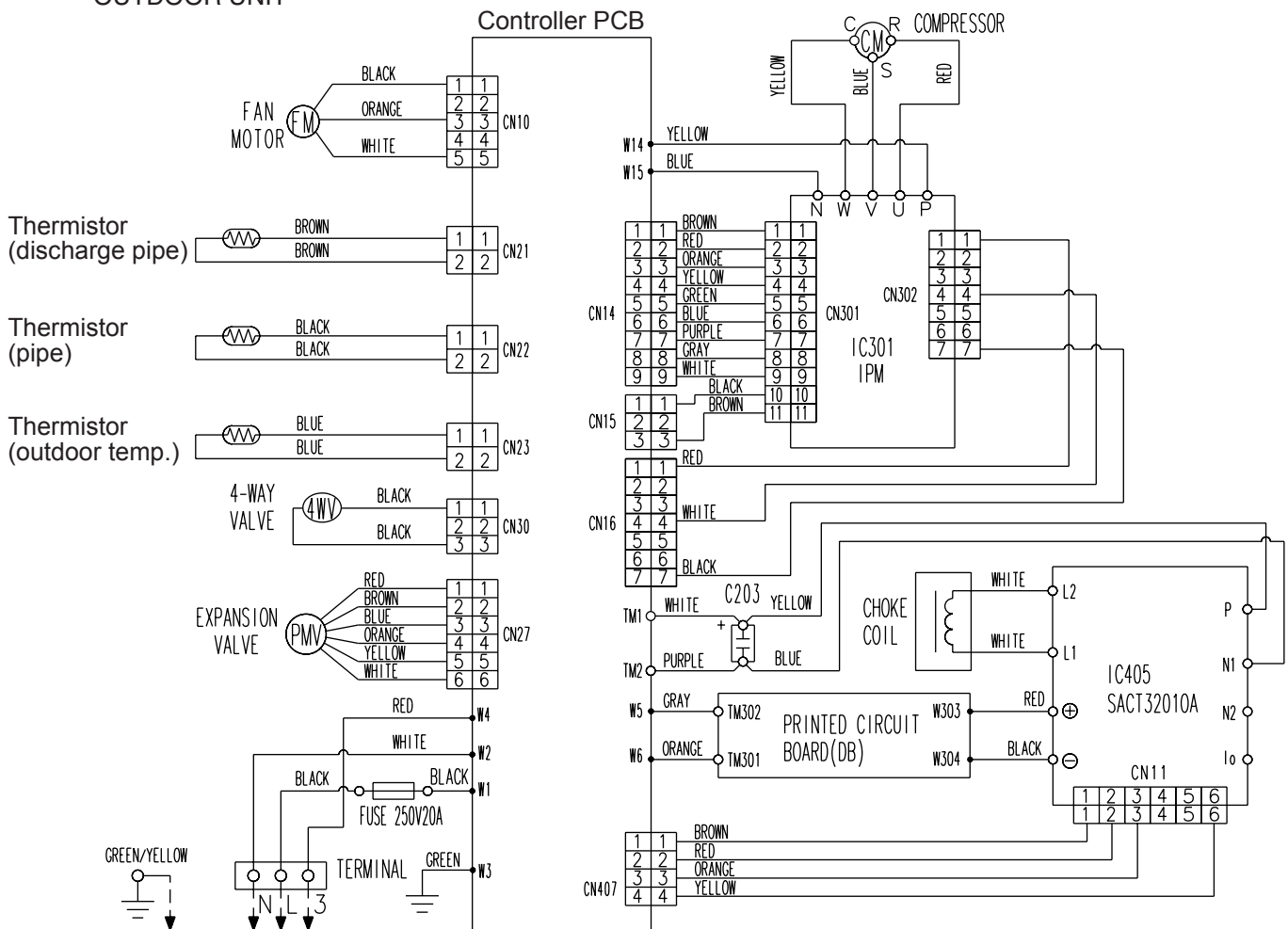
CIRCUIT DIAGRAM

Models : ASH9LSACW / AOH9LSAC
ASH12LSACW / AOH12LSAC

INDOOR UNIT

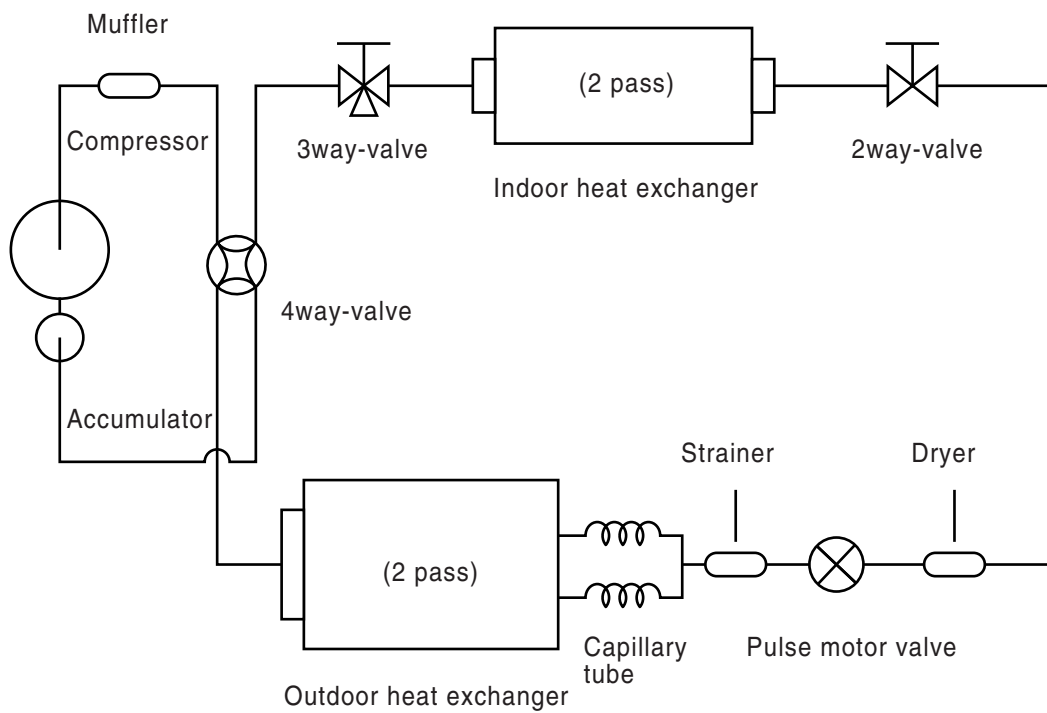


OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM

**Models : ASH9LSACW / AOH9LSACW
ASH12LSACW / AOH12LSACW**



ERROR CONTENTS

Self-diagnosis function table (Flashing LED Display)

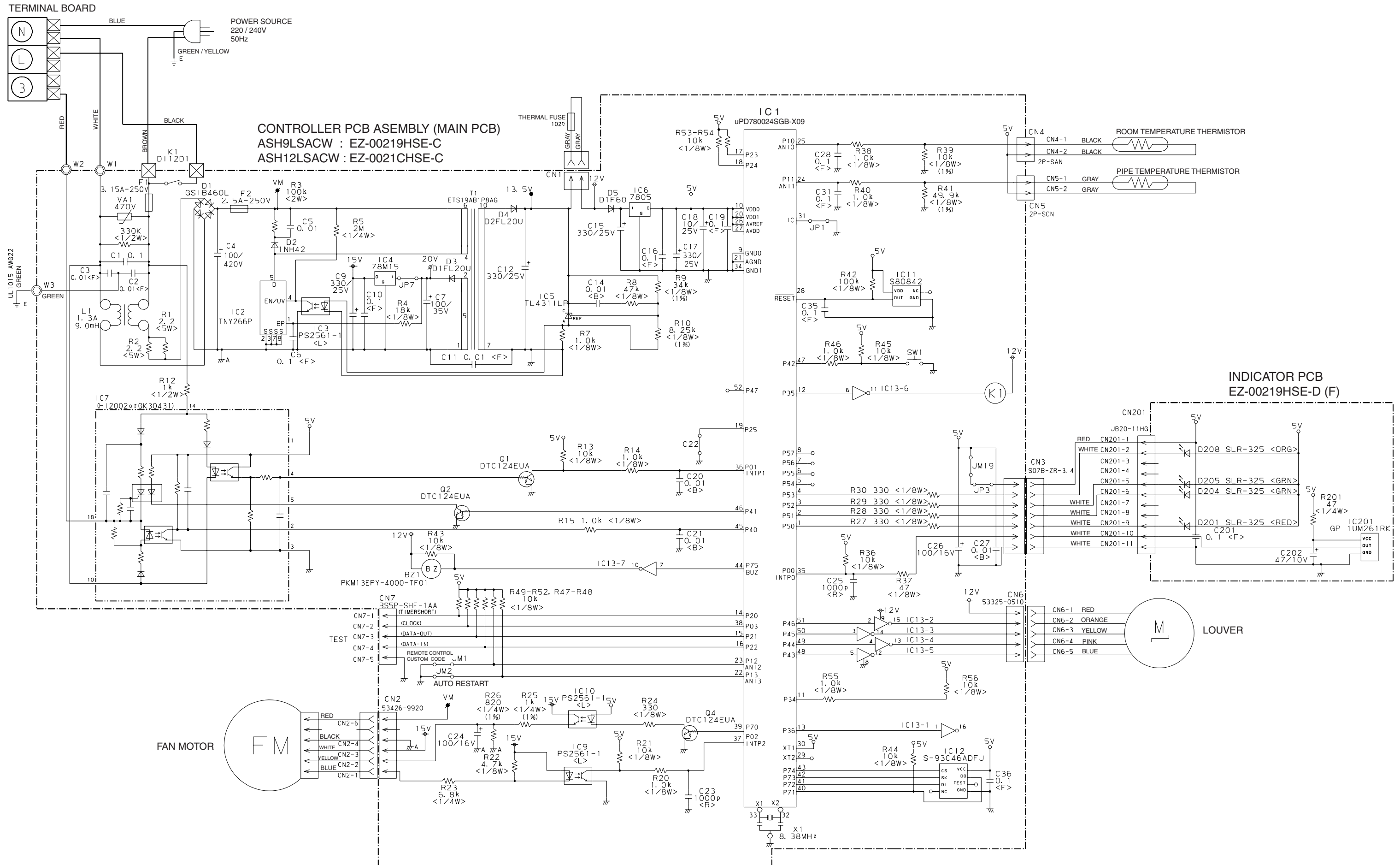
Applicable model : ASH9LSACW, ASH12LSACW

* Detailed Trouble Display (secondary level) can be indicated by pressing Test Operation button.

Trouble Display (primary)			Detailed Trouble Display (by Test Button)			Detailed Error Item
Error	Operation	Timer	Error	Operation	Timer	
Serial signal error	Normal	1 sec blinking	Serial reverse signal error at operation start up	0.1sec blinking	0.5sec 2 times	Normal Serial Reverse Signal can not be received more than 10 secs >>Releases when it becomes normal
			Signal reverse signal error during operation	0.1sec blinking	0.5sec 3 times	Normal Serial Reverse Signal can not be received more than 7 secs (after receiving effective reverse transfer signal) >>Releases when it becomes normal
			Serial forward signal error at operation start up	0.1sec blinking	0.5 sec 4 times	Normal Serial Forward Signal can not be received more than 10 secs >>Releases when it becomes normal
			Serial forward signal error during operation	0.1sec blinking	0.5sec 5 times	Normal Serial Forward Signal can not be received more than 10 secs (after receiving effective forward transfer signal) >>Releases when it becomes normal
Indoor unit thermistor error	0.5sec 2 times	0.1sec blinking	Indoor temperature thermistor open	0.1sec blinking	0.5sec 2 times	Indoor Thermistor detection value is open when AC plug is inserted >>Releases when value becomes normal
			Pipe thermistor open or short	0.1sec blinking	0.5sec 3 times	Indoor Thermistor detection value is open or short when AC plug is inserted >>Releases when value becomes normal
Outdoor unit thermistor error	0.5sec 3 times	0.1sec blinking	Discharge thermistor open or short	0.1sec blinking	0.5sec 2 times	Outdoor Thermistor detection value is open or short >>Outdoor unit stops Releases when it becomes normal
			Heat exchanger thermistor open	0.1sec blinking	0.5sec 3 times	Outdoor Thermistor detection value is open >>Outdoor unit stops Releases when it becomes normal
			Outdoor temperature thermistor open or short	0.1sec blinking	0.5sec 4 times	Outdoor Thermistor detection value is open or short >>Outdoor unit stops Releases when it becomes normal
Indoor unit control error	0.5sec 4 times	0.1sec blinking	Forced automatic SW welded	0.1sec blinking	0.5sec 2 times	Indoor Forced Auto SW is ON for more than 10 secs continuously >>Error is indicated while it is ON Normal Operation other than error indication
			Main relay welded	0.1sec blinking	0.5sec 3 times	Indoor Serial Reverse Signal is received 1 min. after Main relay becomes OFF >>Error is indicated while serial reverse signal is input on normal operation Normal operation except error indication
			Power interruption error	0.1sec blinking	0.5sec 4 times	Indoor 50/60Hz is not detected after 2 secs of power ON. >>Error is indicated and unit is stopped

Trouble Display (primary)			Detailed Trouble Display (by Test Button)				Detailed Error Item
Error	Operation	Timer	Error	Operation	Timer		
Outdoor unit control error	0.5sec 5 times	0.1sec blinking	Current trip	0.1sec blinking	0.5sec 2 times	Outdoor	Current trip error is 2nd time within start up >>Permanent stop
			CT abnormal	0.1sec blinking	0.5sec 3 times	Outdoor	Current detection value is 0A for more than 1 sec when compressor is operated at more than 90rps >>Outdoor unit is stopped until power supply to Outdoor unit is stopped
			Compressor rotation error	0.1sec blinking	0.5sec 5 times	Outdoor	Compressor location detection error (incl. failed start up) for 3 times >>Permanent stop
Indoor fan motor error	0.5sec 6 times	0.1sec blinking	Abnormal lock	0.1sec blinking	0.5sec 2 times	Indoor	Detected rotation is 0 r.p.m. at start up or at 56 secs after Fan mode is selected >>Permanent stop
			Abnormal rotation	0.1sec blinking	0.5sec 3 times	Indoor	Detected rotation is 1/3 of target r.p.m. at start up or at 56 secs after Fan mode is selected >>Permanent stop
Refrigerant cycle error	0.5sec 7 times	0.1sec blinking	Discharge temperature abnormal	0.1sec blinking	0.5sec 2 times	Outdoor	Discharge Temperature protection (Discharge temperature is 110degC) operated 2 times >>Permanent stop
			Cooling high pressure abnormal rise	0.1sec blinking	0.5sec 3 times	Outdoor	High pressure rise protection (Outdoor heat exchanger temperature is 65degC) operated >>Comp. OFF (releases after 3min.ST) Error is indicated while 3 min.ST
Optional function error	0.5sec 8 times	0.1sec blinking	Active filter voltage abnormal (3rd time)	0.1sec blinking	0.5sec 2 times	Outdoor	Active Filter voltage error operated 3 times >>Permanent stop
			Active filter voltage abnormal (1st time)	0.1sec blinking	0.5sec 3 times	Outdoor	Active Filter Module error or open detection protection operated >>Automatic release after 3 min. ST

INDOOR PCB CIRCUIT DIAGRAM

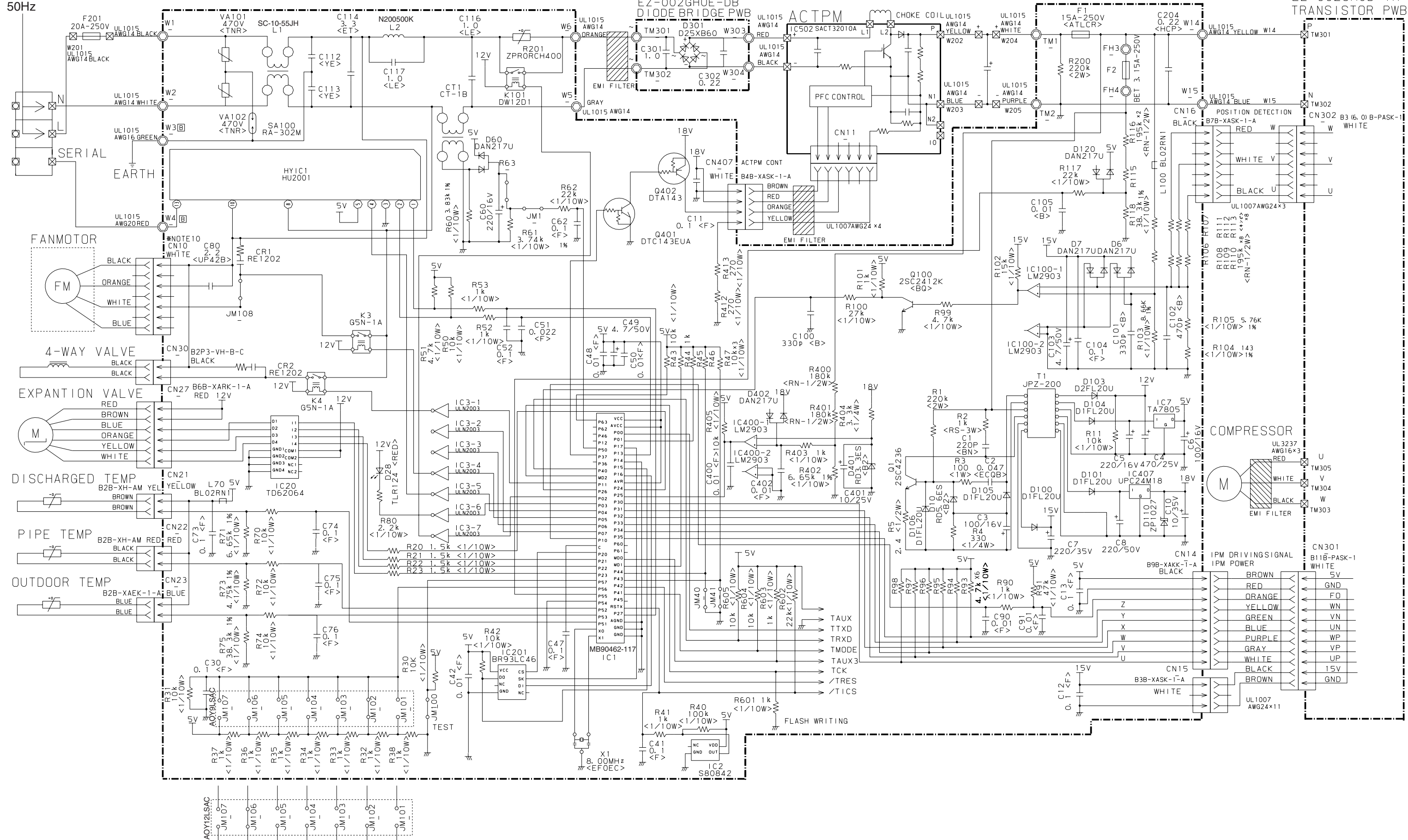


OUTDOOR PCB CIRCUIT DIAGRAM

POWER SOURCE
220 - 240V
50Hz

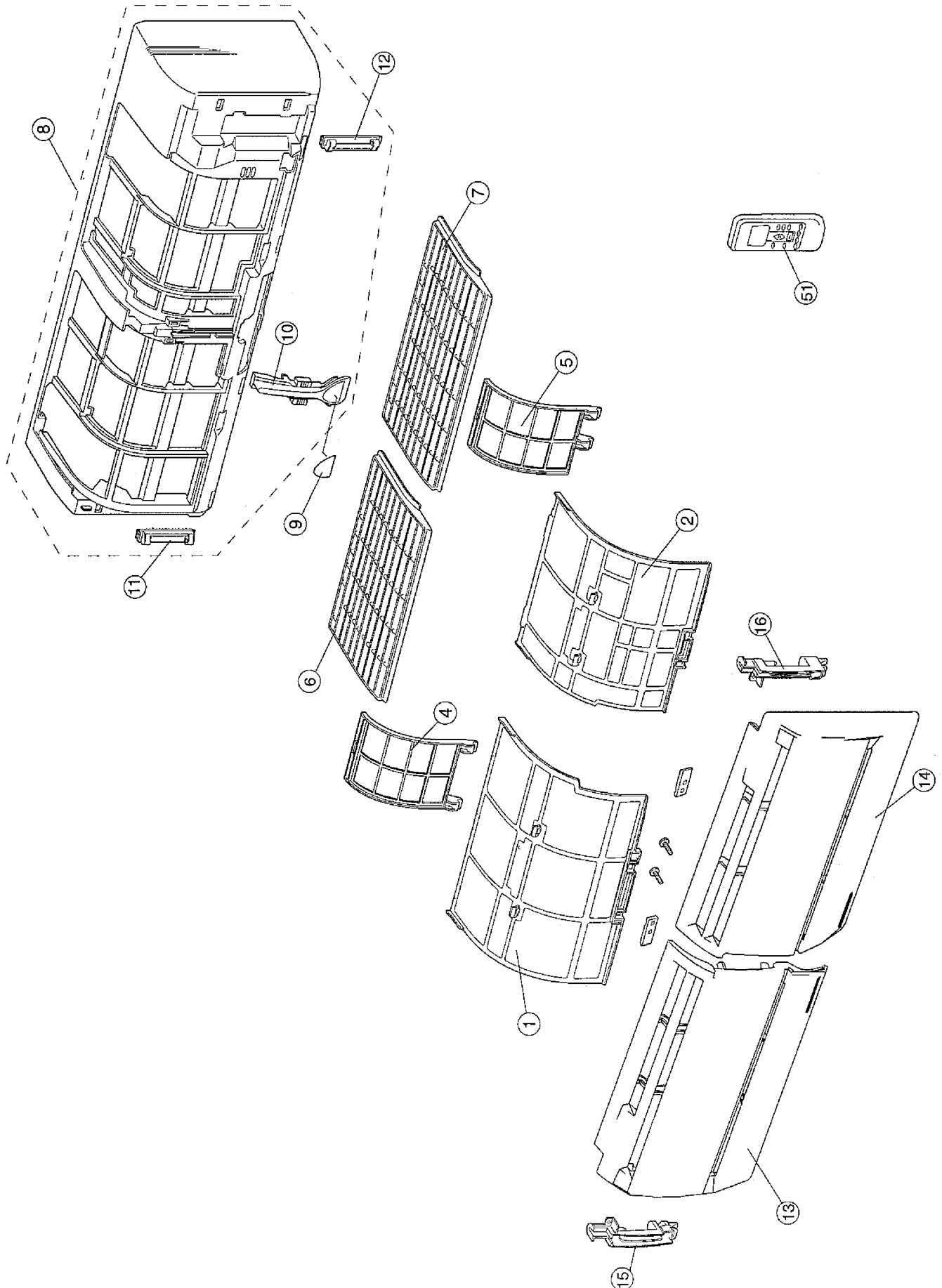
CONTROLLER PCB ASSEMBLY (MAIN PCB)
AOH9LSAC : EZ-002LHUE-C
AOH12LSAC : EZ-002GHUE-C

EZ-0028HUD-TR
TRANSISTOR PWB

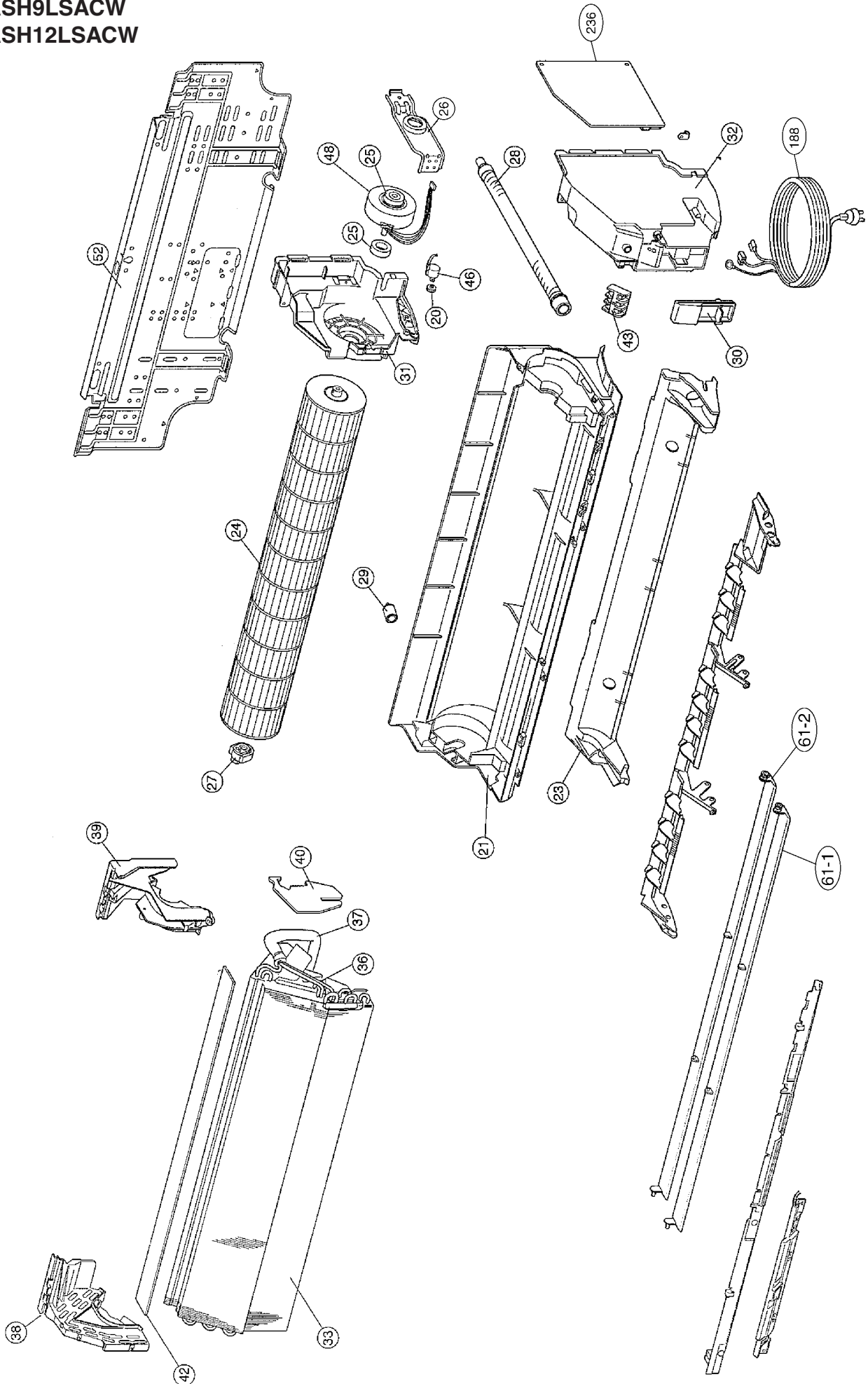


DISASSEMBLY ILLUSTRATION

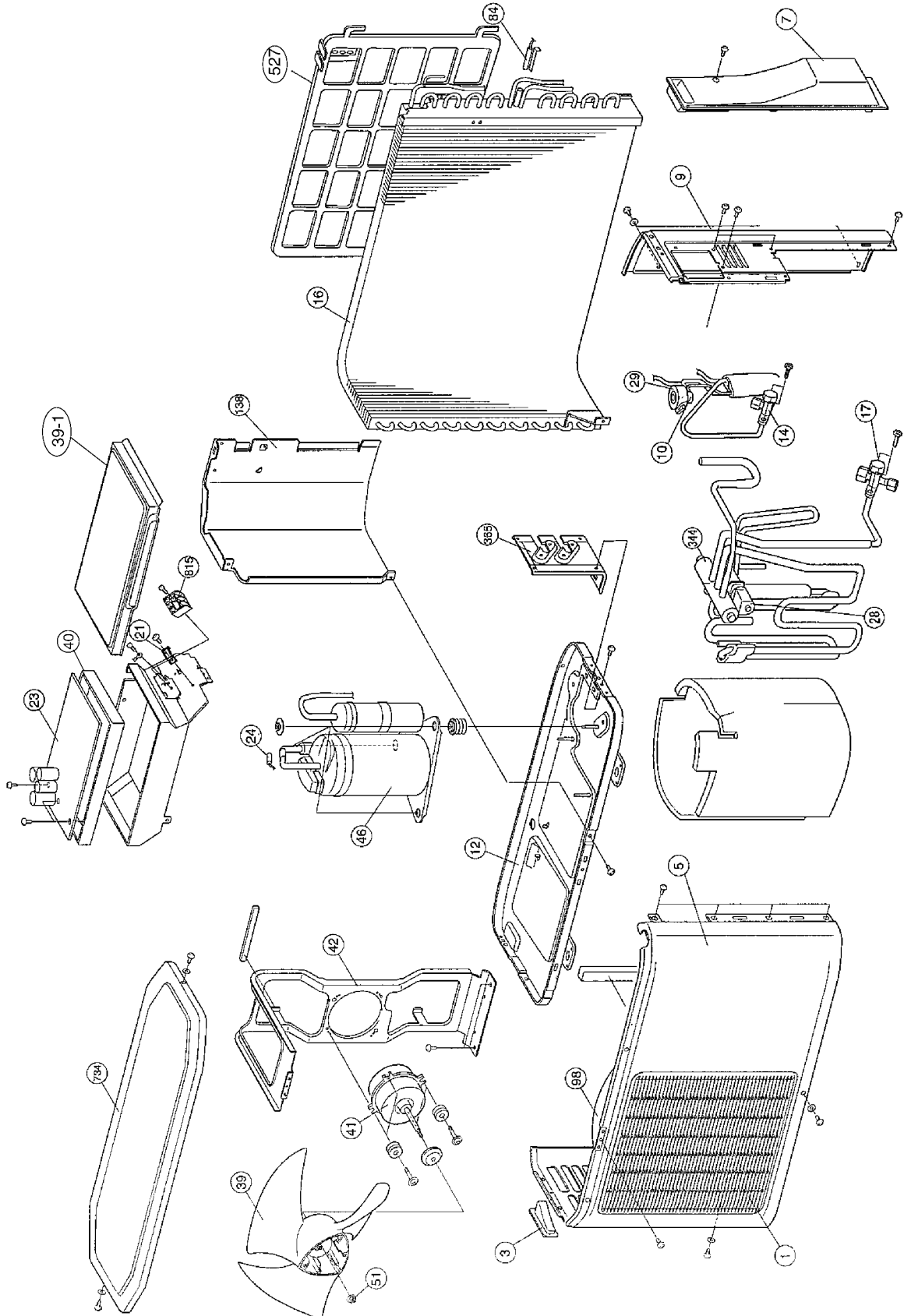
Models :
ASH9LSACW
ASH12LSACW



Models :
ASH9LSACW
ASH12LSACW



Models :
AOH9LSACW
AOH12LSACW



PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord.
		ASH9LSACW	ASH12LSACW	Q'ty
1	Air Filter-L	9311027010	9311027010	
2	Air Filter-R	9311028017	9311028017	
4	Guide (Filter)-L	9311180012	9311180012	
5	Guide (Filter)-R	9311254010	9311254010	
6	Grille (Top)-L	9311025023	9311025023	
7	Grille (Top)-R	9311026020	9311026020	
8	Front Panel Assy	9311903048	9311903048	
9	Emblem-A	9311784043	9311784043	
10	Emblem-B	9311785026	9311785026	
11	Bearing (Panel)-L	9311029014	9311029014	
12	Bearing (Panel)-R	9311030010	9311030010	
13	Grille (Intake)-L	9311782049	9311782049	
14	Grille (Intake)-R	9311783039	9311783039	
15	Shaft (Grille)-L	9305435012	9305435012	
16	Shaft (Grille)-R	9311149019	9311149019	
20	Gear-A	9309994003	9309994003	
21	Casing Assy	9312112036	9312112036	
23	Cover (Casing)-B	9311916017	9311916017	
24	Cross Flow Fan Assy	9307836015	9307836015	
25	Motor Cushion-B	9306274009	9306274009	
26	Clamper (Motor)	9310102008	9310102008	
27	Shaft Holder-C Assy	9306628017	9306628017	
28	Drain Hose Assy	9310357019	9310357019	
29	Drain Cap Assy	9304150008	9304150008	
30	Wire Clamper	9311946014	9311946014	
31	Box (Switch)	9309996014	9309996014	
32	Cover (Switch)	9311863014	9311863014	
33	Evaporator Total Assy	9311495017	9311495017	
36	Joint Pipe Assy-E	9311497011	9311497011	
37	Insulation(Pipe)-E	9304607007	9304607007	
38	Holder (Evaporator)-L	9309982017	9309982017	
39	Holder (Evaporator)-R	9309983014	9309983014	
40	Water Seal	9310721001	9310721001	
42	Air Seal	9310611005	9310611005	
43	Terminal	9701955077	9701955077	
46	Step Motor	9900139025	9900139025	
48	Fan Motor Assy	9601351016	9601351016	
51	Remote Control Unit	9312058013	9312058013	
52	Bracket Panel	9310001004	9310001004	
61-1	Flow Control Panel-U	9330009011	9330009011	
61-2	Flow Control Panel-Z	9309992023	9309992023	
188	Power Cord	9900001025	99000070038	
236	Controller PCB Assy	9705001053	9705001060	
---	Pipe Thermister	9702039011	9702039011	
---	Room Thermister	9700801108	9700801108	
---	Indicator PCB	9704838032	9704838032	

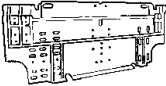
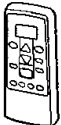
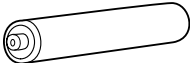
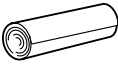
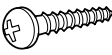
When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

OUTDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		AOH9LSAC	AOH12LSAC	
1	Blow Grill	9309929012	9309929012	
3	Grip	9302061016	9302061016	
5	Cabinet Front Panel, Painted	9309928053	9309928053	
7	Electric Cover	9310979013	9310979013	
9	Cabinet Rear Panel, Painted	9309870024	9309870024	
10	Pulse Motor Valve	9900056018	9900056018	
12	Base Assy, Painted	9310248027	9310248027	
14	2-Way Valve Assy	9310084014	9310084014	
16	Condenser Sub Assy	9312586028	9312586011	
17	3-Way Valve Assy	9311487012	9311487012	
23	Inverter PCB Assy	9705092020	9705092013	
24	Thermistor (Discharge)	9704219060	9704219060	
28	Solenoid Coil	9970033018	9970033018	
29	Coil (Expansion Valve)	9900057015	9900057015	
39	Propeller Fan	9309909014	9309909014	
39-1	Inverter Cover	9311017011	9311017011	
40	Inverter Base	9311015017	9311015017	
41	Fan Motor Assy	9601474012	9601474012	
42	Bracket (Motor)	9306047023	9306047030	
46	Compressor Assy	9312448012	9312448012	
84	Thermistor (Condenser)	9704220011	9704220011	
98	Fan Ring	9309876026	9309876026	
138	Separate Wall	9311013013	9311013013	
344	4-Way Valve	9900047016	9900047016	
527	Protective Net	9310980019	9310980019	
734	Panel Top, Painted	9310338063	9310338063	
---	Emblem	9312635016	9312635016	
---	Inverter capacitor	9704594013	9704594013	
---	Fan capacitor	9900042011	9900042011	
---	Outdoor Thermister	9703516061	9703516061	
---	Controller PCB	9705093218 (EZ-002LHUE-C)	9705093201 (EZ-002GHUE-C)	
---	ACTPM PCB	9703457012	9703457012	
---	TR PCB Assy (K04AK-0400HUE-TRO)	9705553019	9705553019	
---	Diobe Bridge PCB	9705094017 (EZ-002GHUE-DB)	9705094017 (EZ-002GHUE-DB)	
---	Noise Filter beside compressor	0400056119	0400056119	
---	Noise Filter beside diobe bridge PCB	0400056133	0400056133	

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STANDARD ACCESSORIES

Name and Shape	Part No.
	ASH9LSACW ASH12LSACW
Wall hook bracket 	9312752010
Remote control unit 	9312058013
Battery (penlight) 	0600185534
Cloth tape 	9310519004
Tapping screw (φ 4 x 25) 	0700076046



0304G2230