

SPLIT TYPE ROOM AIR
CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL



Indoor unit	Outdoor unit
ASY9LSACW	AOY9LSAC
ASY12LSACW	AOY12LSAC

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SPECIFICATIONS

TYPE	(COOL&HEAT INVERTER)	(COOL&HEAT INVERTER)
INDOOR UNIT	ASY9LSACW	ASY12LSACW
OUTDOOR UNIT	AOY9LSAC	AOY12LSAC
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 brushles 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	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
(r.p.m.)			
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

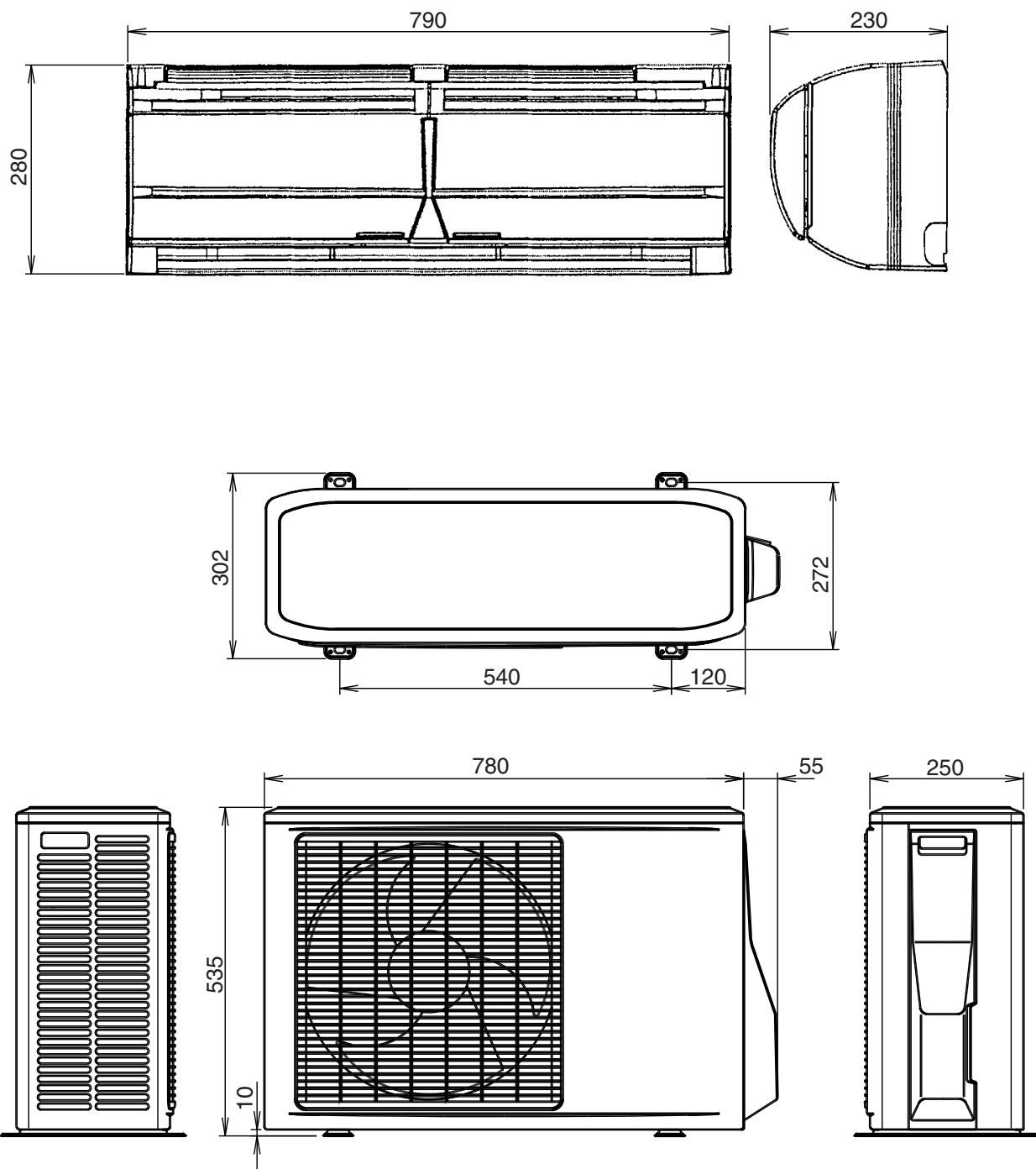
NOISE LEVEL

INDOOR UNIT	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
(dB)			
OUTDOOR UNIT	(dB)	C 47 H 49	

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

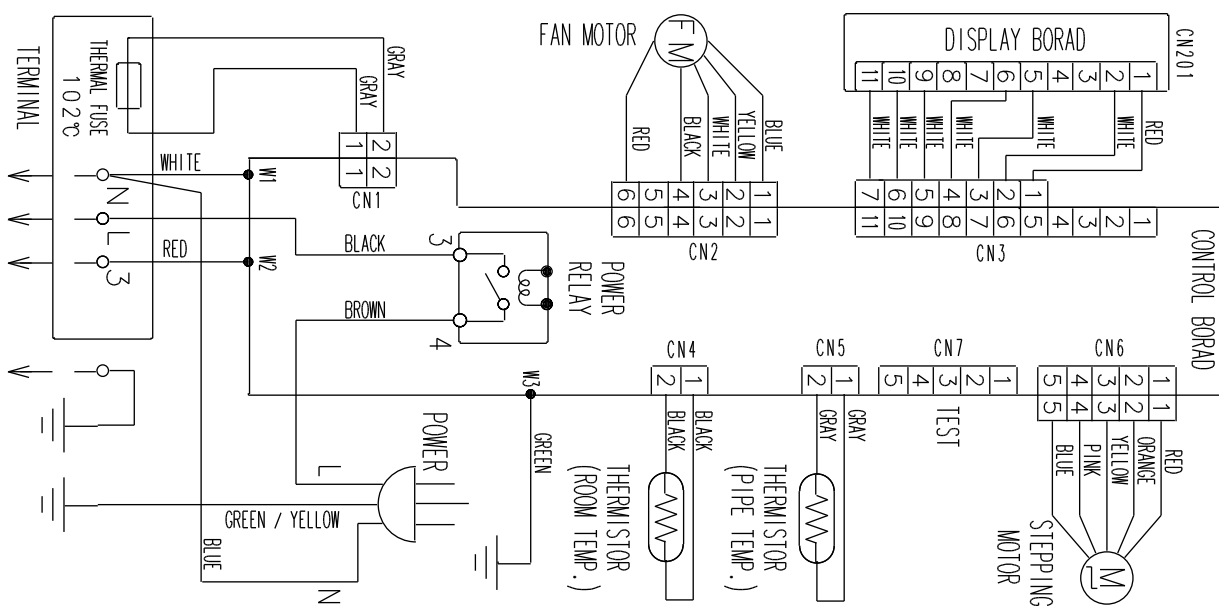
MAX PIPE LENGTH	15 m
ADDITIONAL REFRIGERANT	None

DIMENSIONS

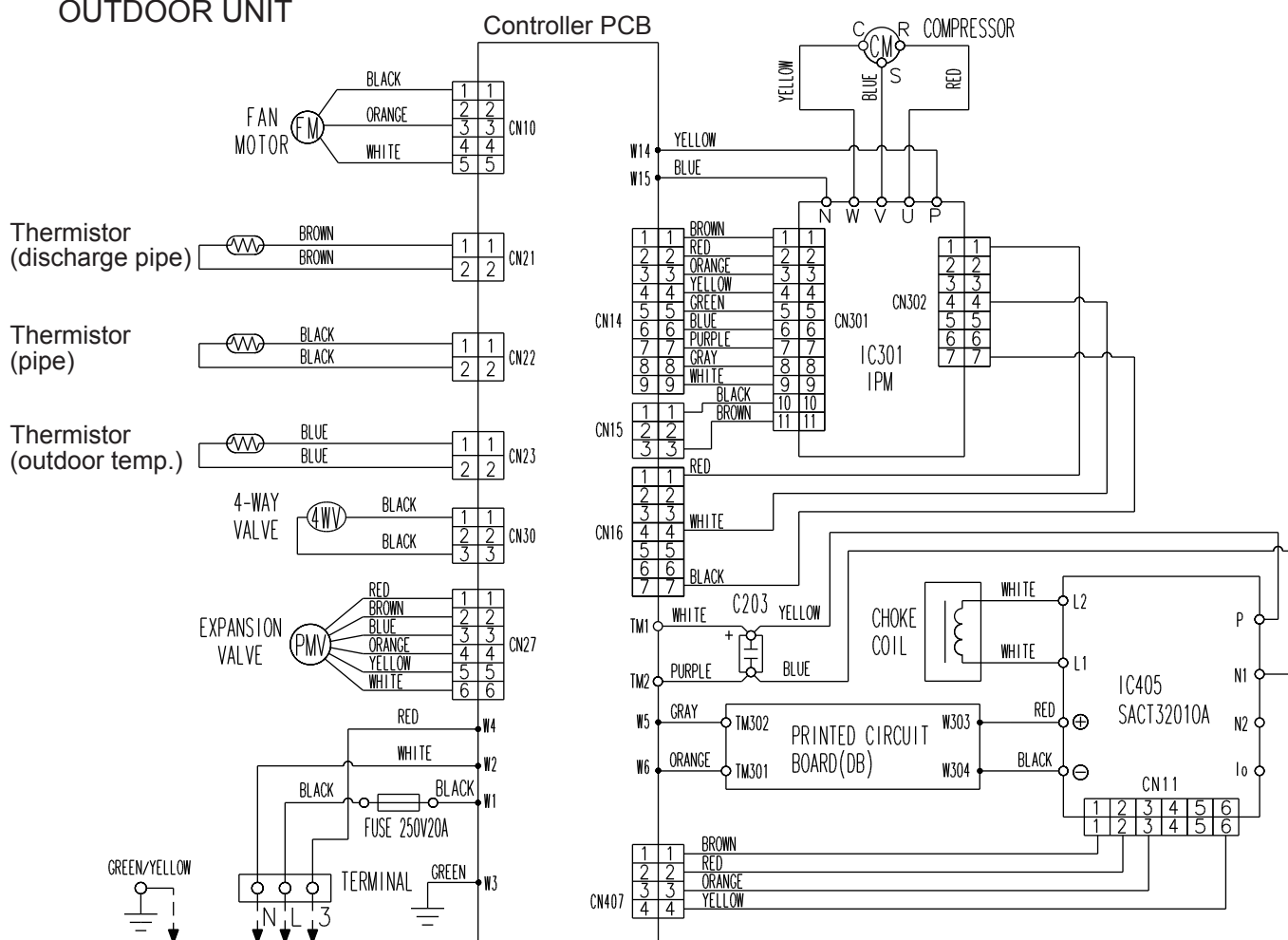


CIRCUIT DIAGRAM

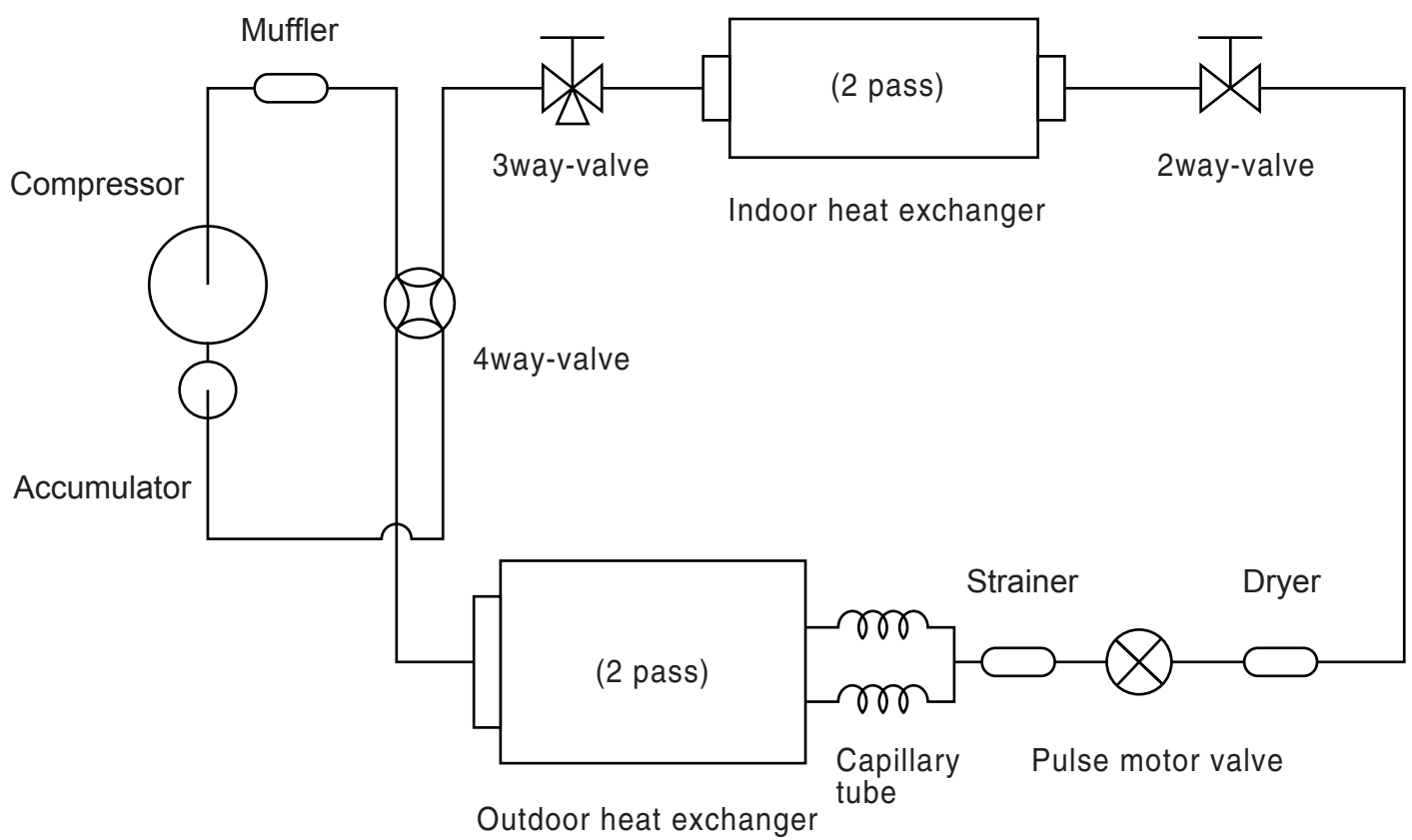
INDOOR UNIT



OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM



Refrigerant pipe diameter
 Liquid : 1/4" (6.35 mm)
 Gas : 3/8" (9.52 mm)

ERROR CONTENTS

Self-diagnosis function table (Flashing LED Display)

Applicable model : ASY9LSACW, ASY12LSACW

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

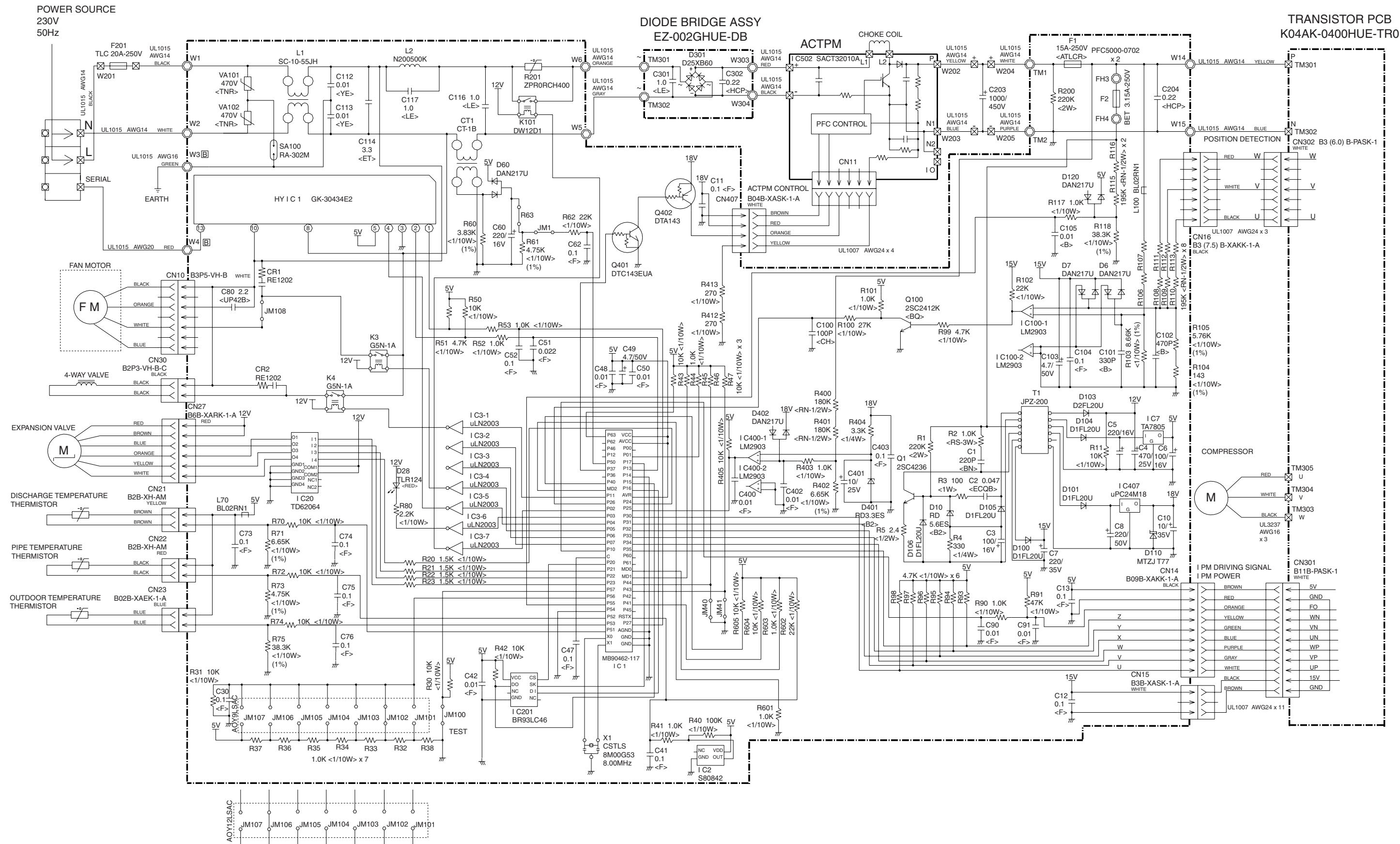
Trouble Display (primary)			Detailed Trouble Display (by Test Button)			Detailed Error Item
Error	Operation	Timer	Error	Operation	Timer	
Serial signal error	Normal	1 sec blinking	Serial reverse signal error at operation start up	0.1sec blinking	0.5sec 2 times	Normal Serial Reverse Signal can not be received 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

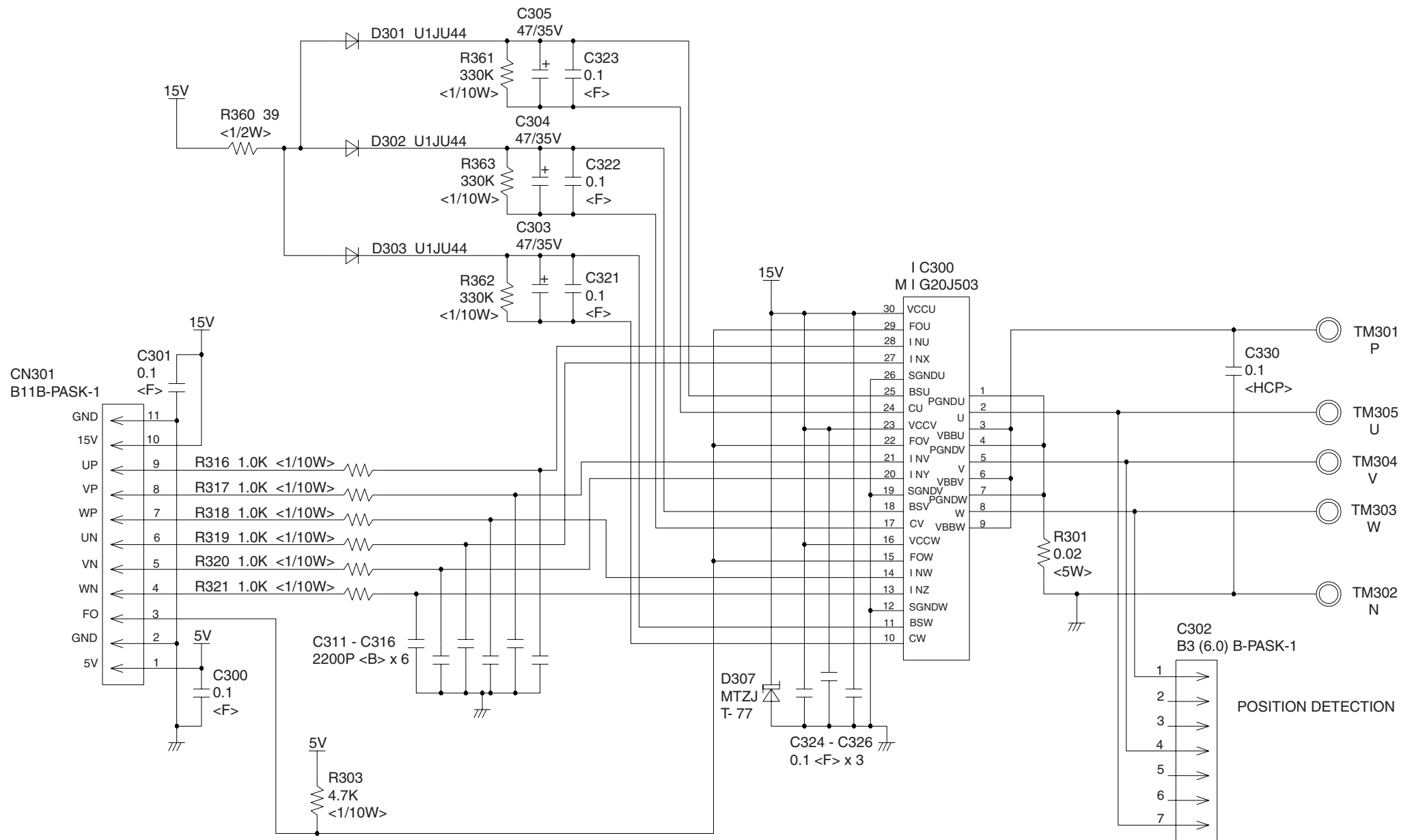
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OUTDOOR PCB
CIRCUIT DIAGRAM

CONTROLLER PCB ASSEMBLY (MAIN PCB)
AOY9LSAC : EZ-002LHUE-C
AOY12LSAC : EZ-002GHUE-C

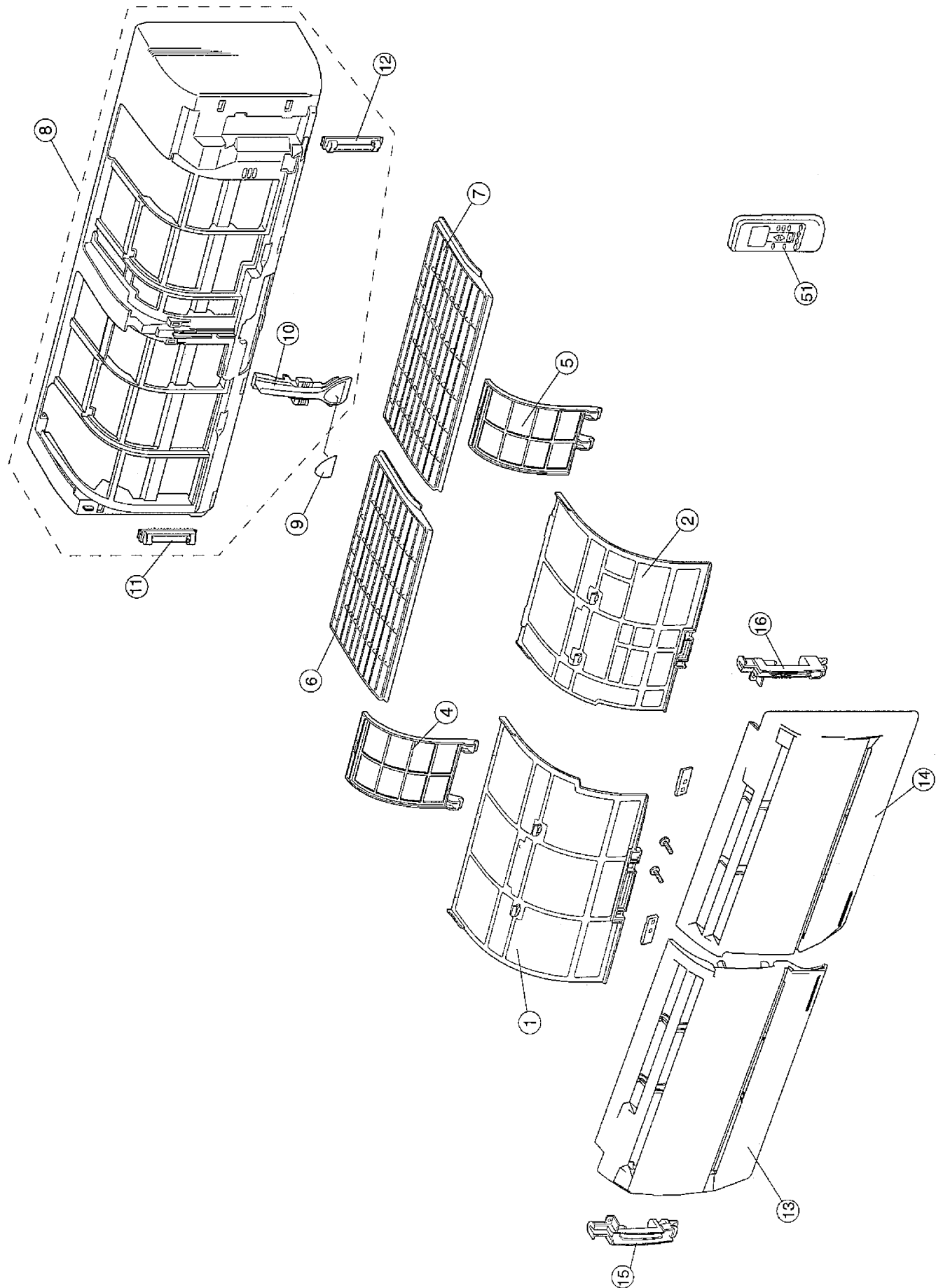


OUTDOOR UNIT
TRANSISTOR PCB
K04AK-0400HUE-TR0

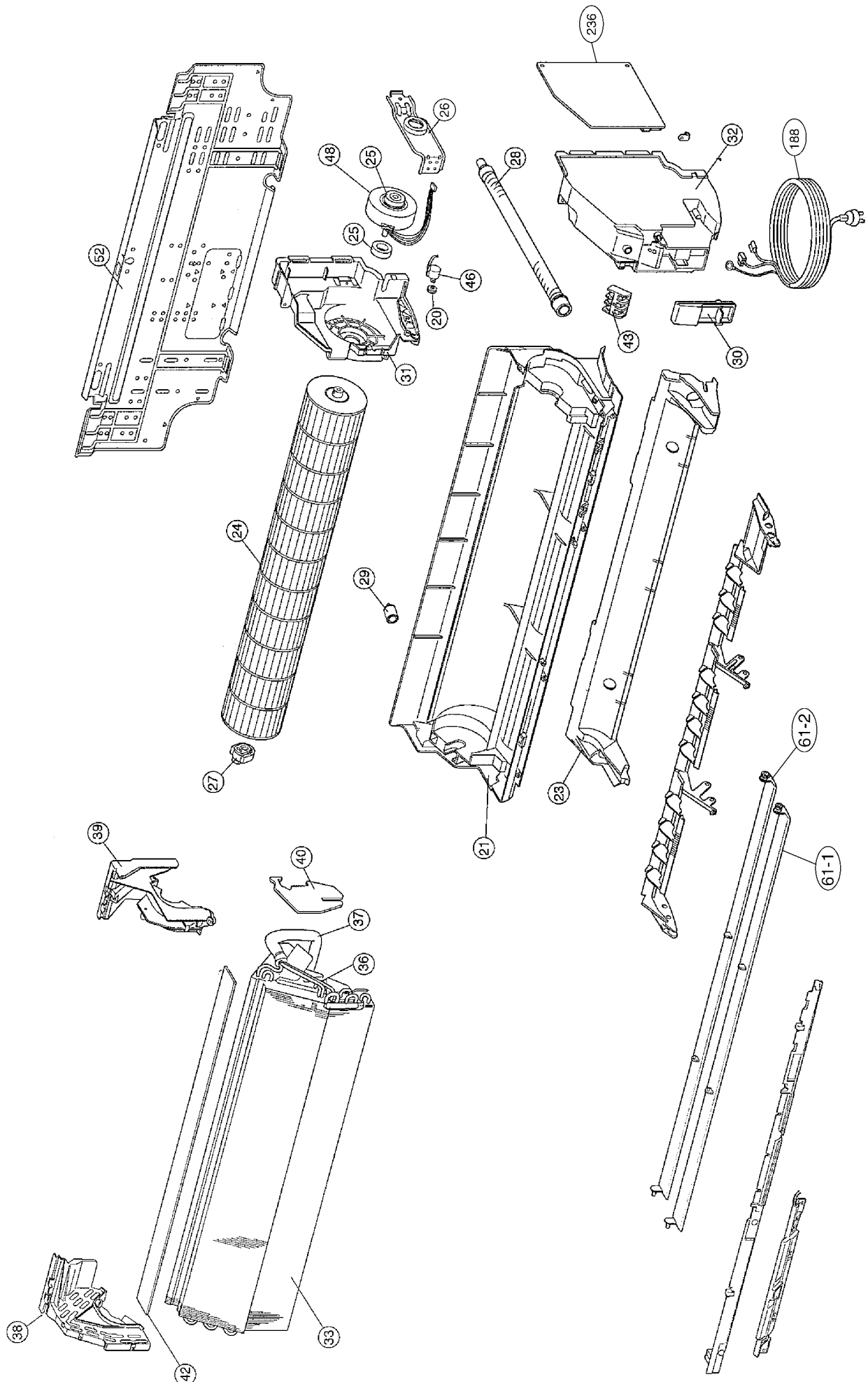


DISASSEMBLY ILLUSTRATION

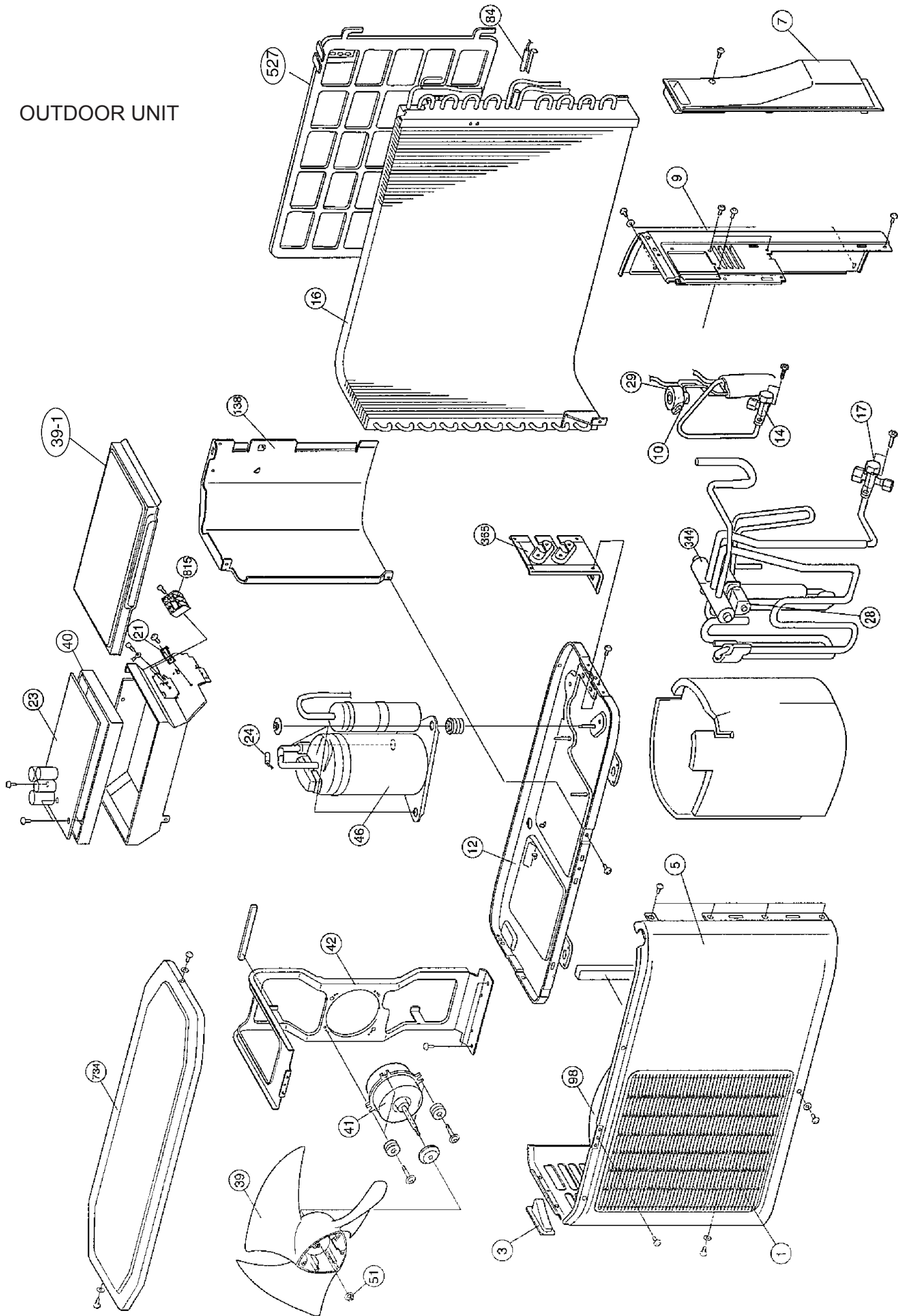
INDOOR UNIT



INDOOR UNIT



OUTDOOR UNIT



PARTS LIST

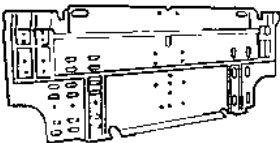
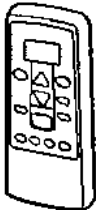
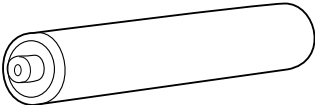
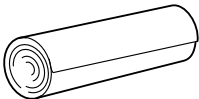
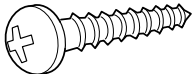
INDOOR UNIT

Ref.	Description	Part No.	
		ASY9LSACW	ASY12LSACW
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	9311784036	9311784036
10	Emblem-B	9311785026	9311785026
11	Bearing (Panel)-L	9311029014	9311029014
12	Bearing (Panel)-R	9311030010	9311030010
13	Intake Grille L Assy	9312116027	9312116027
14	Intake Grille R Assy	9312117024	9312117024
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	9312058013	9312058013
52	Bracket Panel	9310001004	9310001004
61-1	Flow Control Panel-U	9309991026	9309991026
61-2	Flow Control Panel-Z	9309992023	9309992023
188	Power Cord	9900001025	9900070038
236	Controller PCB Assy	9705036017	9705036024
---	Pipe Thermister	9702039011	9702039011
---	Room Thermister	9700801108	9700801108
---	Indicator PCB	9704838032	9704838032

OUTDOOR UNIT

Ref.	Description	Part No.	
		AOY9LSAC	AOY12LSAC
1	Blow Grill	9309929012	9309929012
3	Grip	9302061016	9302061016
5	Cabinet Front Panel	9309928053	9309928053
7	Electric Cover	9310979013	9310979013
9	Cabinet Rear Panel	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	Controller PCB Assy	9705093218	9705093201
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
51	Nut (Propeller Fan)	9304902003	9304902003
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	9312633012	9312633012
---	Inverter capacitor	9704594013	9704594013
---	Fan capacitor	9900042011	9900042011
---	Outdoor Thermister	9703516061	9703516061
---	ACTPM	9703457012	9703457012
---	TR PCB Assy (K04AK-0400HUE-TRO)	9705553019	9705553019
---	Diode Bridge PCB	9705094017	9705094017
		(EZ-002GHUE-DB)	(EZ-002GHUE-DB)
---	Noise Filter beside compressor	0400056119	0400056119
---	Noise Filter beside diobe bridge PCB	0400056133	0400056133
---	Strainer	9312597000	9312597000
---	Dryer	9312056002	9312056002

ACCESSORIES

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

