

**SPLIT TYPE AIR
CONDITIONER (50Hz)**

DUCT type

SERVICE MANUAL

Models	Indoor unit	Outdoor unit
	ARY36ELA3	AOY36EPA3L
	ARY45ELA3	AOY45EPA3L



C O N T E N T S

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UJITSU GENERAL LIMITED



Большая библиотека технической документации

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каталоги, инструкции, сервисные мануалы, схемы.

S P E C I F I C A T I O N S

MODELS		ARY36ELA3	ARY45ELA3
		AOY36EPA3L	AOY45EPA3L
COOLING CAPACITY	(kW)	10.3 - 10.5	12.4 - 12.7

ELECTRICAL DATA

POWER SOURCE		3N~380-415V 50Hz	
RUNNING CURRENT	(A)	7.0 - 6.9	8.6 - 8.8
INPUT WATTS	(kW)	4.05 - 4.05	4.76 - 4.80
EER	(kW/kW)	2.54 - 2.59	2.61 - 2.65
MOISTURE REMOVAL	(ℓ/hr)	4.0	5.5
AIR CIRCULATION-Hi	(m³/hr)	2,000	2,200

Note : The above list shows values at the external static pressure of 10 mm Aq. (98 Pa.).

COMPRESSOR

TYPE	Hermetic type, 2 pole, 3-phase, Induction motor	
CODE	ZR49KCE-TFD	ZR61KCE-TFD

FAN MOTOR

INDOOR UNIT	TYPE	MFA-45BT	
	HI-SPEED (r.p.m.)	1,280	1,320
	MED-SPEED (r.p.m.)	1,200	1,270
	LO-SPEED (r.p.m.)	1,130	1,200
OUTDOOR UNIT	TYPE	MFB-362F	
	HI-SPEED (r.p.m.)	790	

DIMENSIONS

INDOOR UNIT	H x W x D (mm)	270 x 1,210 x 700	
OUTDOOR UNIT		1,152 x 940 x 370	

WEIGHTS

INDOOR UNIT	GROSS / NET (kg)	60 / 45	
OUTDOOR UNIT		108 / 94	116 / 102

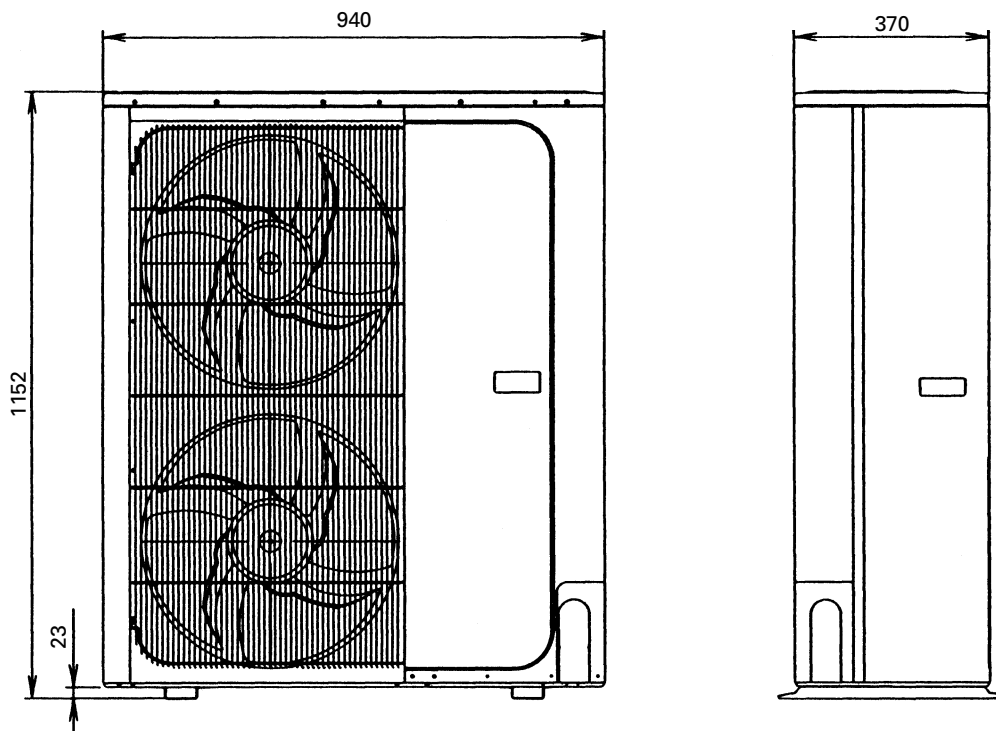
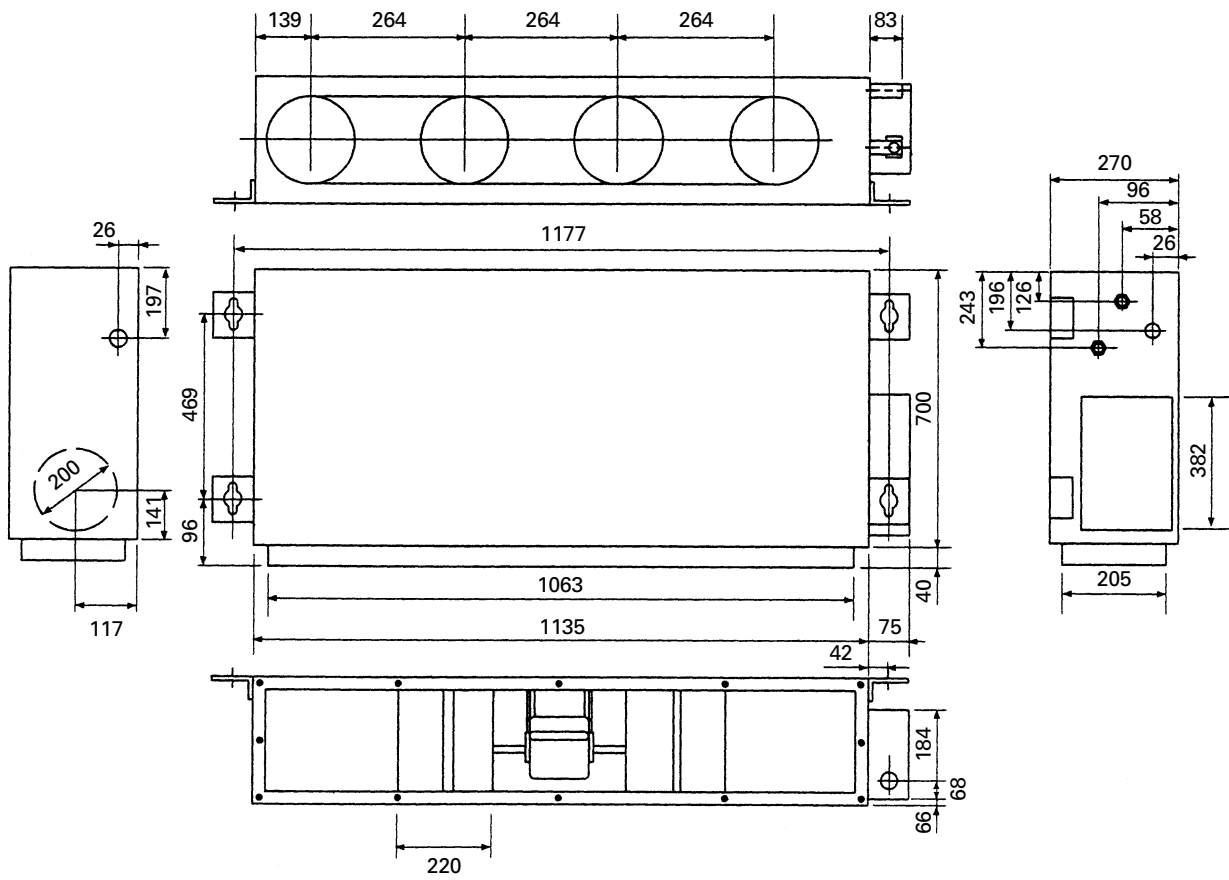
MODELS				ARY36ELA3	ARY45ELA3	
				AOY36EPA3L	AOY45EPA3L	
REFRIGERANT CIRCUIT	DISCHARGE PRESSURE	kg/cm ² G	21.5			
	SUCTION PRESSURE	kg/cm ² G	5.0	4.8		
	DISCHARGE TEMP.	°C	85	80		
	REFRIG. PIPE LENGTH	m	7.5			
	DISCHARGE AIR TEMP.	°C	13			
CONDITION	INDOOR ENTERING AIR TEMP.	DB/WB °C	27.0 / 19.0			
	OUTDOOR ENTERING AIR TEMP.	DB/WB °C	35.0 / 24.0			
PIPING	PIPE DIA. SIZE	LIQUID	mm	9.53		
		GAS	mm	19.05		
	CONNECTION METHOD			Flare		
	BETWEEN	HEIGHT	m	30 Max.		
		PIPE LENGTH	m	50 Max.		
STATIC PRESSURE		Pa	98 (176 Max.)			

ADDITIONAL REFRIGERANT CHARGE

MODELS	PIPE LENGTH	10 m	20 m	30 m	40 m	50 m	Additional refrigerant g/m
		(33 ft.)	(66 ft.)	(99 ft.)	(132 ft.)	(164 ft.)	
FULL CHARGE AMOUNT (R407C)	ARY36ELA3	2,300 g (81.1 oz)	2,600 g (91.7 oz)	2,900 g (102.3 oz)	3,200 g (112.9 oz)	3,400 g (119.9 oz)	30 g/m (1.06 oz / 3.3 ft)
	ARY45ELA3	2,600 g (91.7 oz)	2,900 g (102.3 oz)	3,200 g (112.9 oz)	3,400 g (119.9 oz)	3,700 g (130.5 oz)	

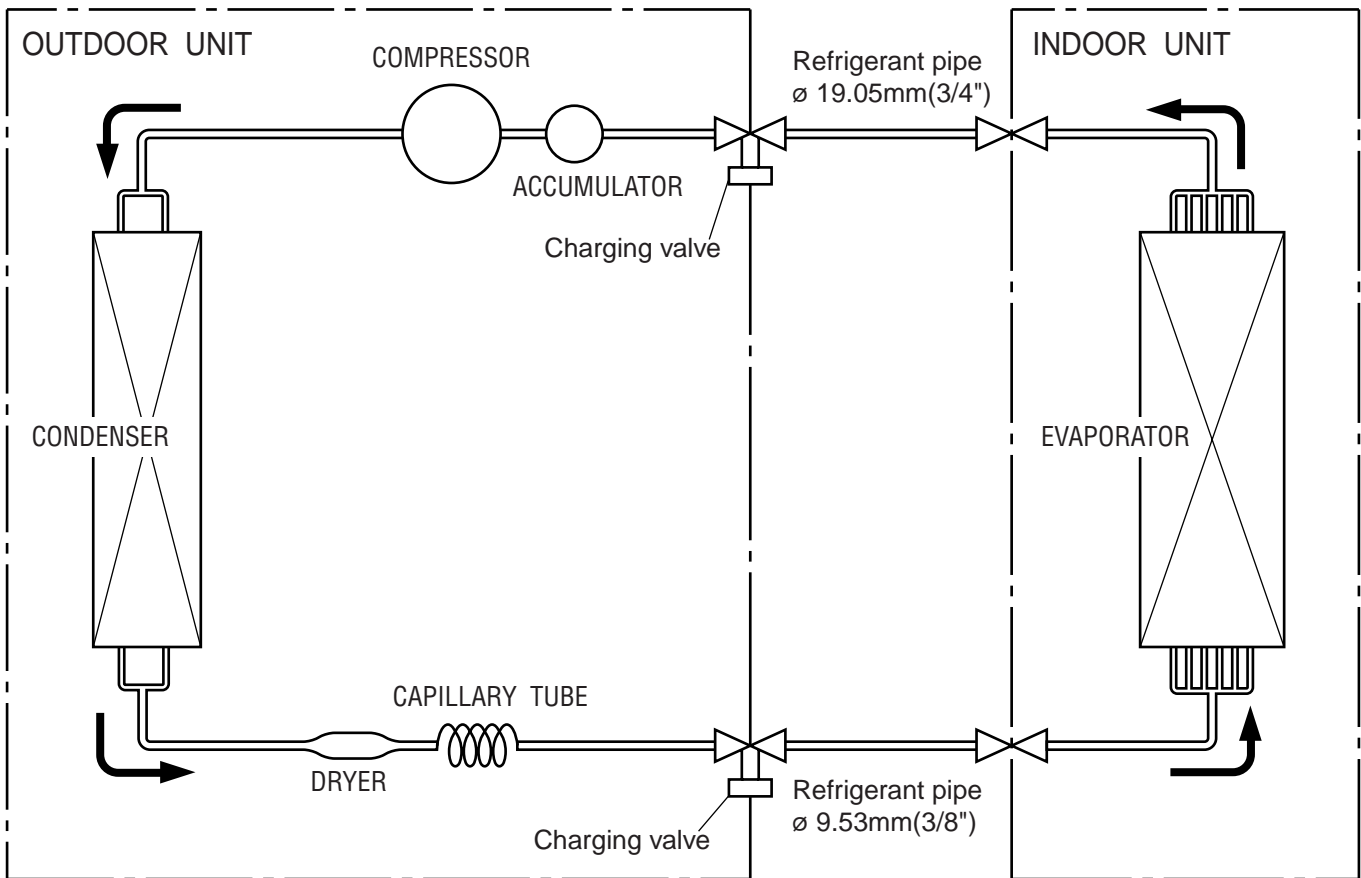
DIMENSIONS

Unit : mm

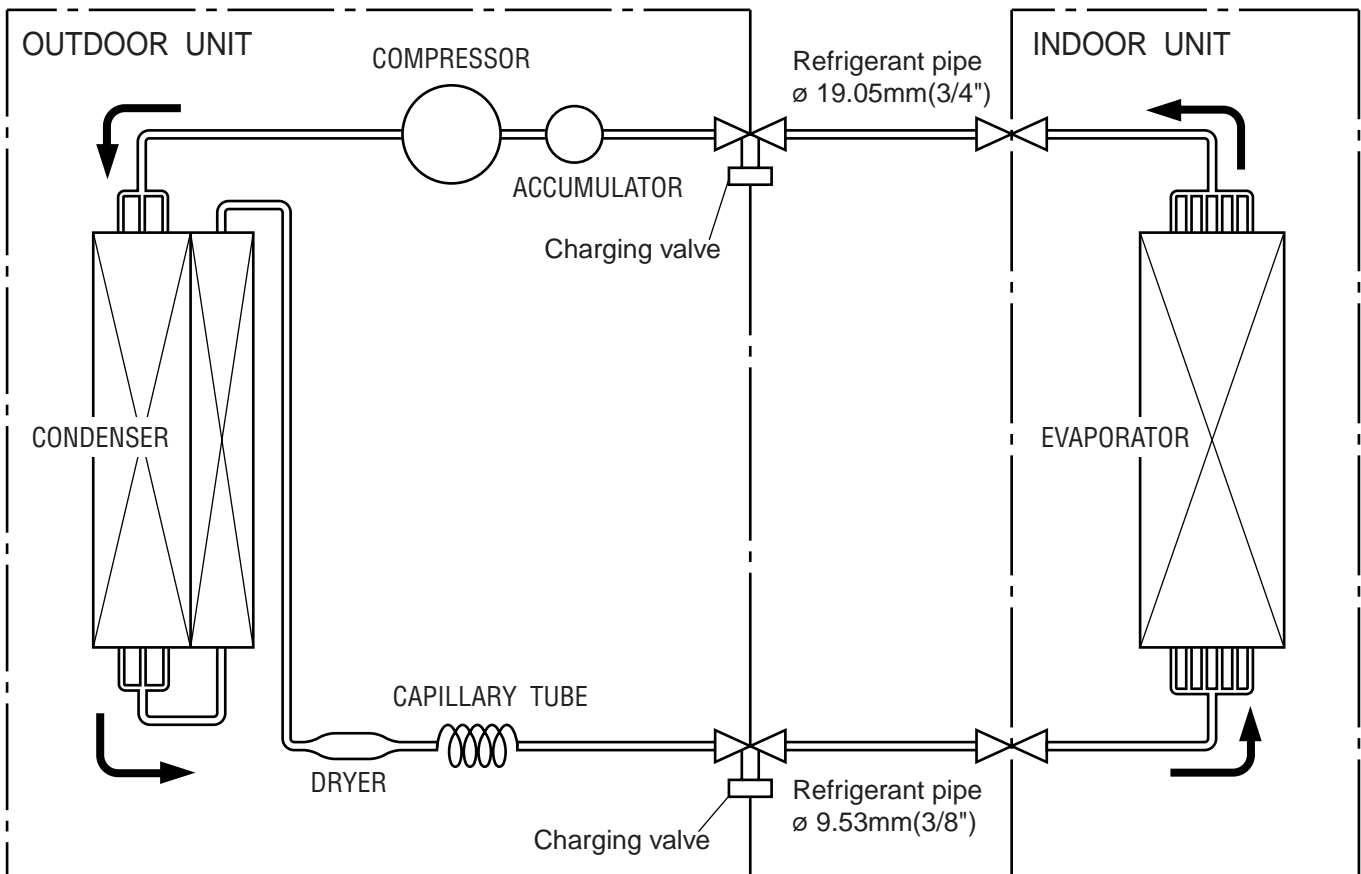


REFRIGERANT SYSTEM DIAGRAM

Models : ARY36ELA3W / AOY36EPA3L



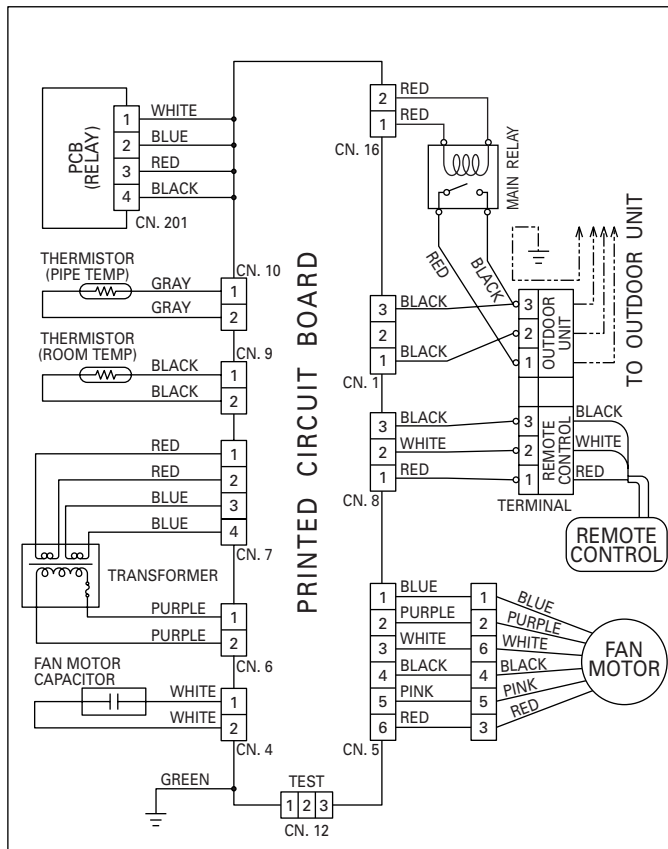
Models : ARY45ELA3W / AOY45EPA3L



CIRCUIT DIAGRAM

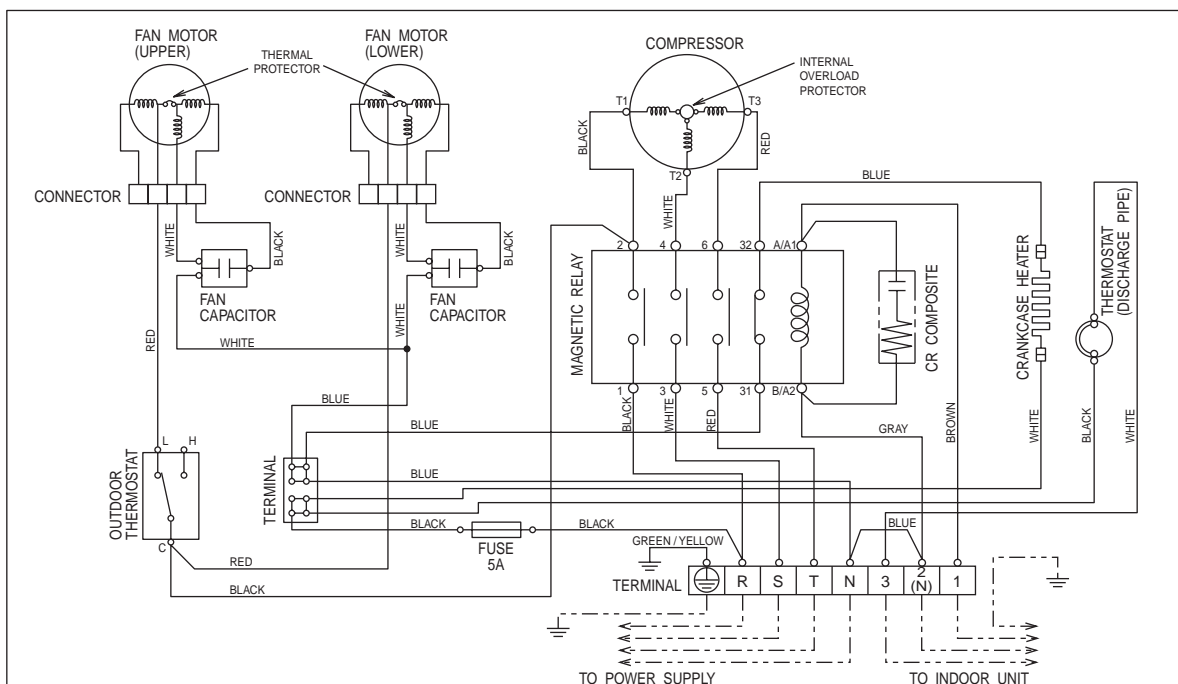
Models : ARY36ELA3 / AOY36EPA3L
ARY45ELA3 / AOY45EPA3L

INDOOR UNIT



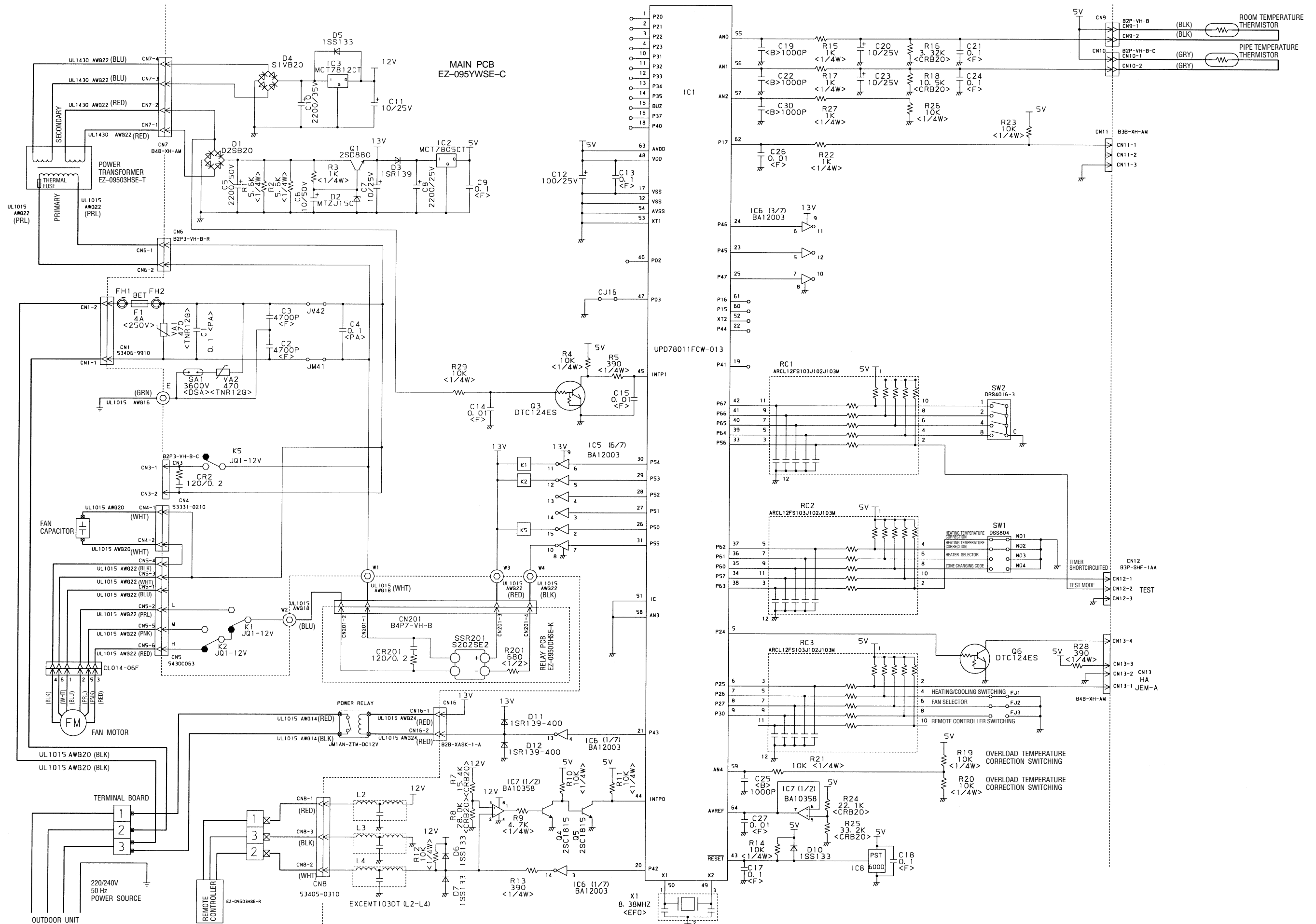
	ARY36ELA3	ARY45ELA3
FAN MOTOR CAPACITOR	10.0 μ F	15.0 μ F

OUTDOOR UNIT



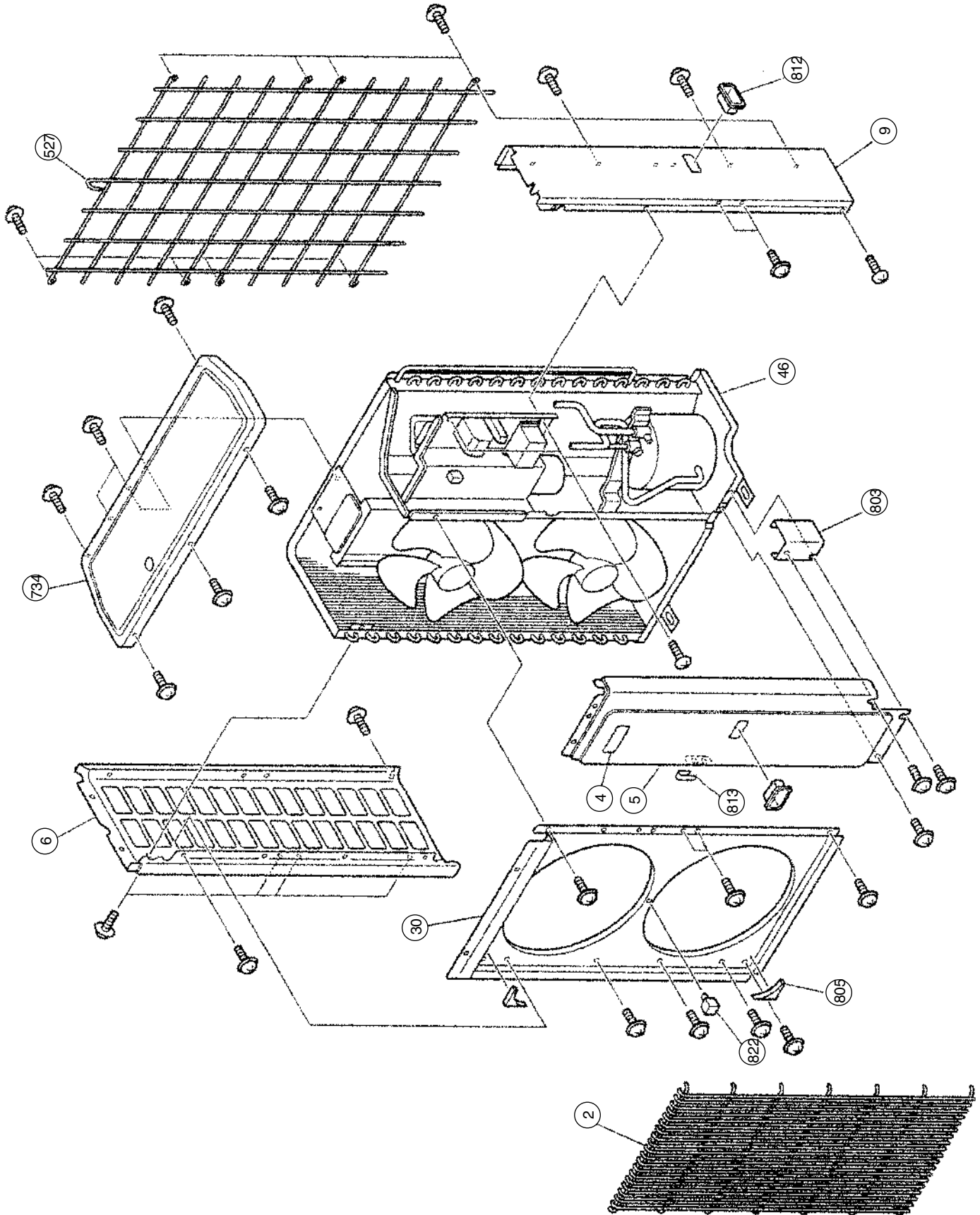
FAN MOTOR CAPACITOR	3.5 μ F
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INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

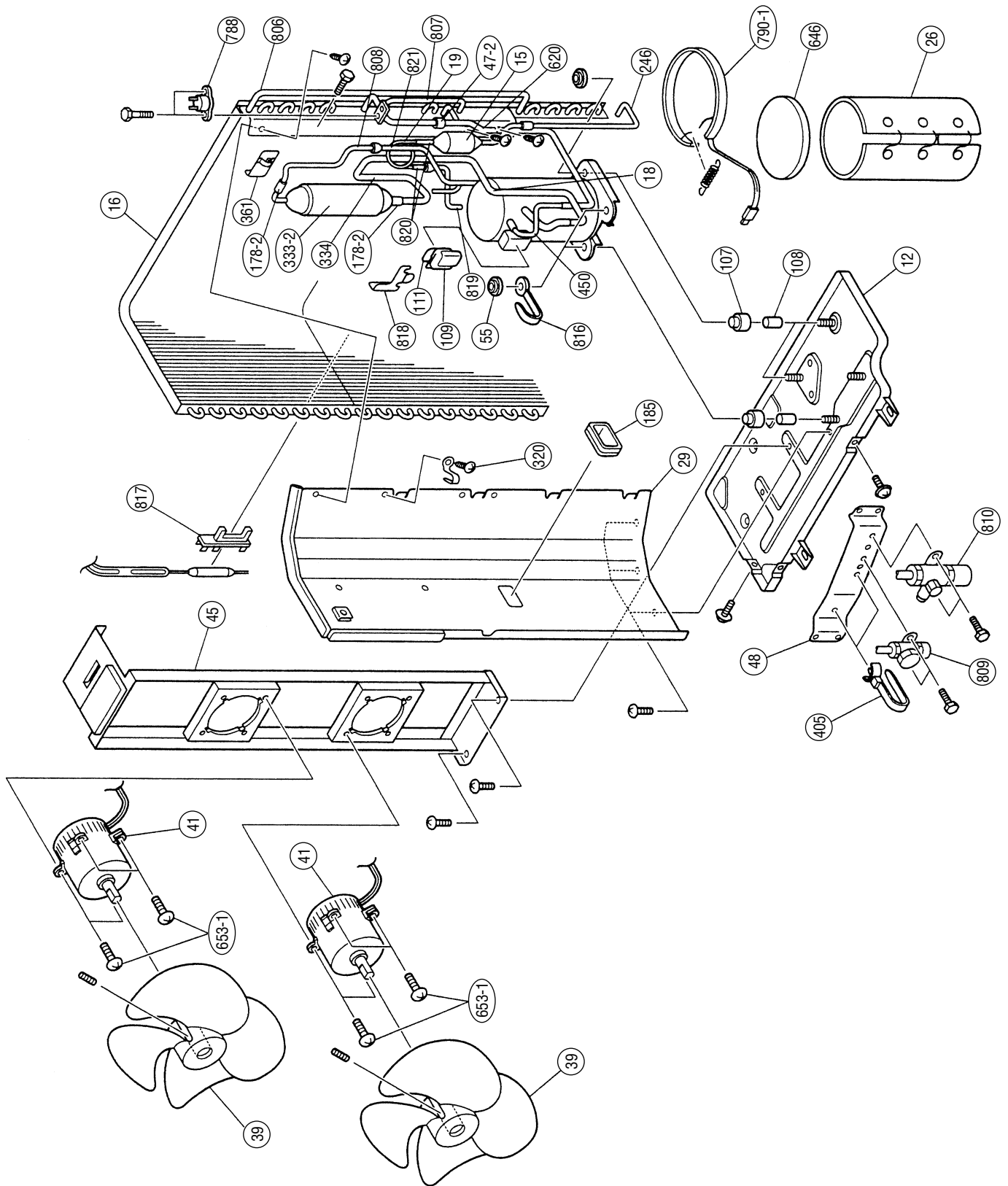


DISASSEMBLY ILLUSTRATION

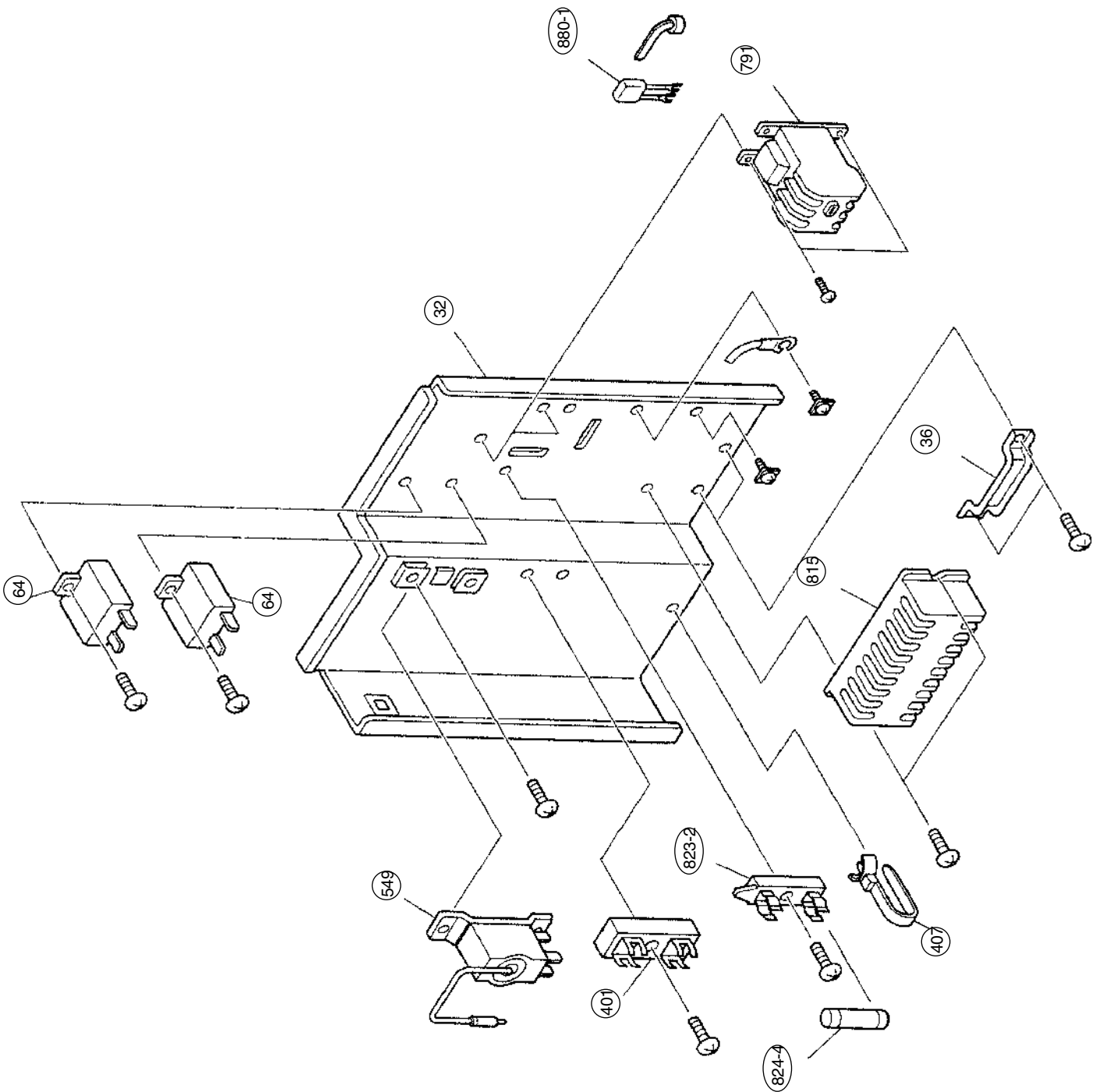
Models : AOY36EPA3L
AOY45EPA3L



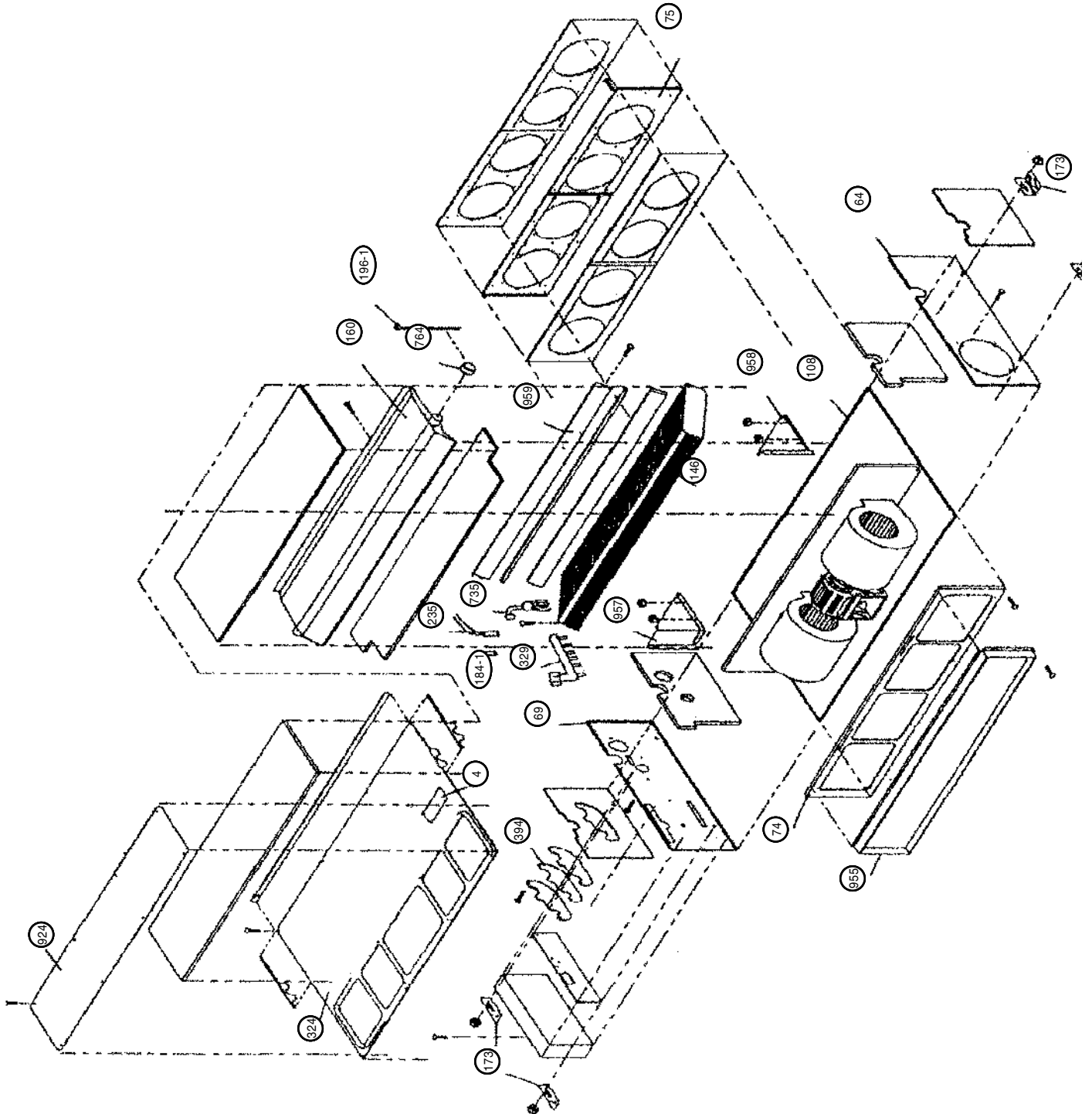
Model : AOY36EPA3L



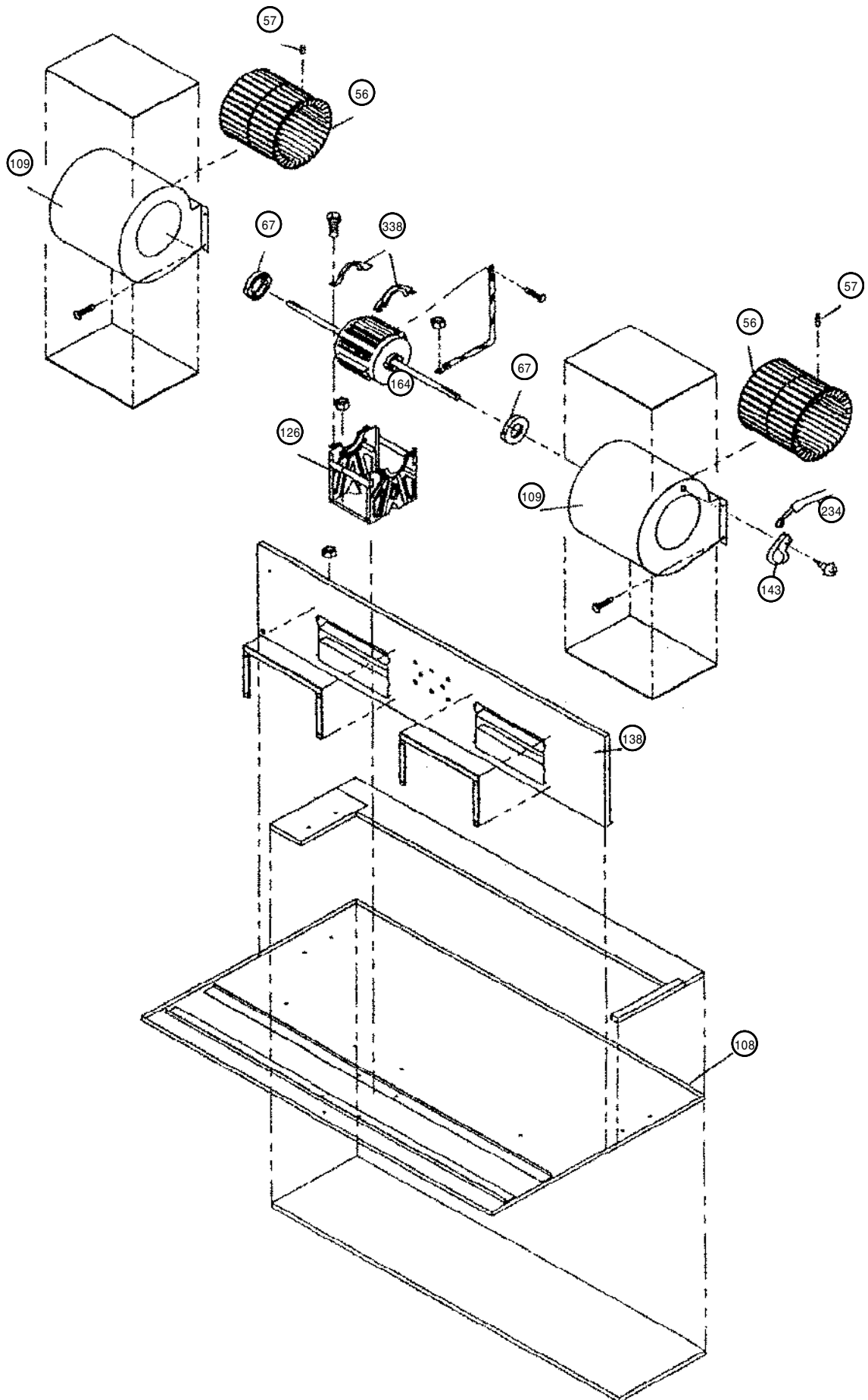
Models : AOY36EPA3L
AOY45EPA3L



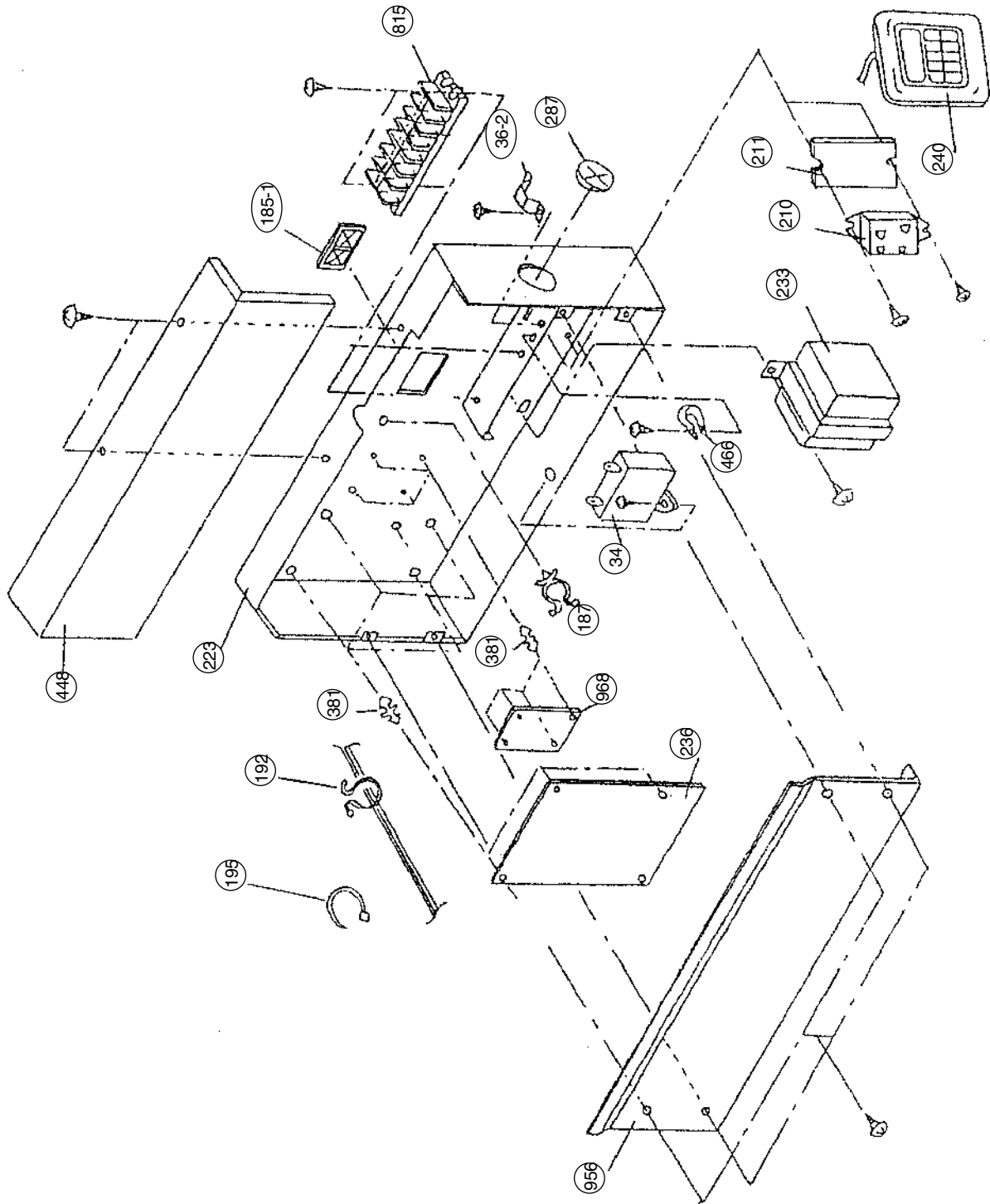
Models : ARY36ELA3
ARY45ELA3



Models : ARY36ELA3
ARY45ELA3



Models : ARY36ELA3
ARY45ELA3



PARTS LIST

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

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty	Ref. No.	Description	Part No.		Ord. Q'ty
		ARY36ELA3	ARY45ELA3				ARY36ELA3	ARY45ELA3	
4	Emblem-Rear	9351355005	9351355005		211	Cushion Rubber	313806328306	313806328306	
34	Capacitor (Fan Motor)	9700468035	9700468042		223	Control Box Metal Assy	9356558005	9356558005	
36-2	Cord Holder Metal	9356362008	9356362008		233	Power Transformer	9701678013	9701678013	
56	Sirocco Fan Assy	9356531022	9356531022		234	Thermistor Assy	9302745008	9302745008	
57	Hex. Socket Screw	313616213202	313616213202		235	Thermistor Assy-Pipe	9701329076	9701329076	
64	Cabinet-Left Metal	9356551006	9356551006		236	Controller PCB Assy	9701705016	9701705016	
67	Rubber (Vibration-proof)	313659068604	313659068604		240	Remote Control Unit	9701673032	9701673032	
69	Cabinet-Right Metal	9356547009	9356547009		287	Cap (Power)	9352173011	9352173011	
74	Intake Panel	9356537000	9356537000		324	Top Plate	9356546002	9356546002	
75	Outlet Panel Assy	9356538007	9356538007		329	Coupling Pipe Assy	9364734002	9364734002	
108	Base Assy	9356518009	9356518009		338	Motor Fixture	9356536003	9356536003	
109	Casing Assy	9356527001	9356527001		381	Locking Spacer	313209391506	313209391506	
126	Motor Fixing Table Assy	9356533002	9356533002		394	Pipe Fixing Plate	9356554007	9356554007	
138	Separate Wall	9356523003	9356523003		448	Control Box Metal-B	9356560008	9356560008	
143	Clamp NK-3N	313361274700	313361274700		466	Clamp NK-4N	313714328805	313714328805	
146	Evaporator Assy	9364732008	9364732008		735	Distributor Assy	9364733005	9364733005	
160	Drain Pan Assy	9356542028	9356542028		764	Drain Cap	9356541007	9356541007	
164	Fan Motor Assy	9600434024	9600434024		815	Terminal-7P	9358660102	9358660102	
173	Hanger Bracket	9356563009	9356563009		924	Intake Seal Plate	9356553000	9356553000	
184-1	Thermo. Spring -A	313728262708	313728262708		955	Square Flange Assy	9356555004	9356555004	
185-1	Rubber Bushing	9357376004	9357376004		956	Control Box Metal-E	9356900002	9356900002	
187	Clamp No.1219	313361271706	313361271706		957	Eva. Fixing Plate-R	9356521009	9356521009	
192	Clamp No.062	313361271402	313361271402		958	Eva. Fixing Plate-L	9356522006	9356522006	
195	Clamp SKB-100	313361275805	313361275805		959	Eva. Seal Plate	9356540000	9356540000	
196-1	Clamp SKB-3M	312300787605	312300787605		968	Relay PCB Assy	9701594030	9701594030	
210	Main Relay	9356781007	9356781007						

OUTDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty	Ref. No.	Description	Part No.		Ord. Q'ty
		AOY36EPA3L	AOY45EPA3L				AOY36EPA3L	AOY45EPA3L	
2	Fan Cover	9352159015	9352159015		361	Accumulator Support Assy	9355351003	---	
4	Emblem-Rear	9351355005	9351355005		401	Terminal-2P	9701971015	9701971015	
5	Cabinet-A, Painted	9352146015	9352146015		405	Clamp No.1763	313816345304	313816345304	
6	Cabinet-C, Painted	9352149016	9352149016		407	Clip (Cable) No.1259	313739340109	313739340109	
9	Cabinet-B, Painted	9352147012	9352147012		450	Discharge Pipe-A	9364079004	9364079004	
12	Base Assy, Painted	9352136016	9352136016		527	Protection Net	9352163012	9352163012	
15	Dryer	9362498005	9362498005		549	Thermistor Outdoor	9352426001	9352426001	
16	Condenser Assy	9364074009	---		620	Inlet Pipe (Cond.) Assy	9364068008	9364090009	
16-1	Condenser-A Assy	---	9364064000		646	Compressor Cover-B	9364089003	9364089003	
16-2	Condenser-B Assy	---	9364061009		653-1	Bolt (Fan Motor Fixing)	070015614	070015614	
18	Suction Pipe Assy	9364514000	9364514000		734	Cabinet Top Plate	9352161018	9352161018	
19	Capillary Tube	9364083001	9364053004		788	Thermistor-Overheat	9354061002	9354061002	
20	Discharge Pipe Assy	---	9364132006		790-1	Belt Heater-A	9361140042	9361140042	
26	Compressor Cover-A	9364088006	9364088006		791	Magnetic Relay	9363277005	9363277005	
29	Separate Wall	9355277013	9355277013		803	Cabinet-D, Painted	9352150012	9352150012	
30	Blower Cover, Painted	9352151019	9352151019		805	Blower Cover Corner	9352160011	9352160011	
32	Control Box Metal	9352134012	9352134012		806	Cond. Pass Pipe-A	9364075006	---	
36	Cord Holder Metal	9356934007	9356934007		807	Cond. Pass Pipe-B	9364076003	---	
39	Propeller Fan Assy	9300855013	9300855013		808	Inlet Pipe (Accumulator)	9364066004	9362558006	
41	Fan Motor Assy-Out	9600266014	9600266014		809	Ball Valve-A	9362578004	9362578004	
45	Bracket (Motor) Assy	9352141003	9352141003		810	Ball Valve-B	9362579001	9362579001	
46	Compressor Assy	9363836004	9363451009		812	Grip	9352157004	9352157004	
47-2	Rubber (Discharge Pipe)	313185159802	313185159802		813	Cabinet Hook	9352148002	9352148002	
48	Bracket (Coupler) Assy	9355281010	9355281010		815	Terminal-8P	9358640029	9358640029	
55	Special Nut M8 (For Comp.)	313252257701	313252257701		816	Wire Clamp Metal	313584219902	313584219902	
64	Capacitor (Fan Motor)	9357965024	9357965024		817	Thermostat Fixture	9352164019	9352164019	
107	Rubber Seat-A (For Comp.)	9364084008	9364084008		818	Accumulator Support-B Assy	9355350006	---	
108	Sleeve-A (For Comp.)	9364085005	9364085005		819	Valve-A Coupl. Pipe	9364081007	9364052007	
109	Terminal Cover (For Comp.)	9364087009	9364087009		820	Joint Pipe (Capillary)	9364082004	---	
111	Terminal Packing	9364086002	9364086002		821	Joint Pipe Assy	9364080000	9362564007	
178-2	Capillary Holder Rubber	313394274808	---		822	Fan Cover Fixture-A	9352158018	9352158018	
185	Rubber Bushing	313005066051	313005066051		823-2	Fuse Holder	0500063024	0500063024	
246	Outlet Pipe (Cond.) Assy	9364178004	9364060002		824-4	Fuse	0600222529	0600222529	
320	Wire Clamp Metal	313483219905	313483219905		826	Condensing Pipe-B	---	9364062006	
333-2	Accumulator (B)	9301942019	9357987002		863	Joint Pipe (Capillary)-B	---	9362563000	
334	Suction Pipe-B	9364065007	9362557009		880-1	Network	9700987017	9700987017	

[INDOOR UNIT]
CONTROLLER PCB ASSEMBLY (Ref. No.236)



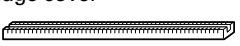




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Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
IC1	IC μ PD78011FCW-013	9701722013		C9,13,17,18,21,24	Cap. Ceramic 0.1 μ F	0300988251	
IC2	IC NJM7805FA	0100462081		C10	Cap. Elec. 35V 2200 μ F	0300915042	
IC3	IC NJM7812FA	0100462104		C12	Cap. Elec. 25V 100 μ F	0300051375	
IC5,6	IC BA12003	0101650012		C14,15,26,27	Cap. Ceramic 50V 0.01 μ F	0300013113	
IC7	IC BA10358	0101854014		C19,22,25,30	Cap. Ceramic 50V 1000pF	0300011096	
IC8	IC PST600D-2-TP	0101461113		X1	Ceramic Resonator EF0EC8384T4	9701261017	
Q1	Xstr 2SD880	0000001014		L2-4	EMI Filter EXCEMT103DT	0400406396	
Q3,6	Xstr DTC124ES	0000517010		F1	Fuse BET 4A - 250V	0600222543	
Q4,5	Xstr 2SC1815	0000002011		FH1,2	Fuse Holder PFC5000-0502	0500158072	
D1	Diode D2SB20	0000599023		VA1,2	Varistor TNR12G471K	0000038010	
D2	Diode MTZJ15C	0000852203		K1,2,5	Relay JQ1-12V	9701316014	
D3,11,12	Diode 1SR139-400	0000353137		CR2	CR Absorber RPEL-12204-C	9701125012	
D4	Diode S1VB20	0000292054		RC1-3	CR Module ARCL12FS103J102J	0200301013	
D5,7,10	Diode 1SS133	0000572019		SA1	Arrester DSA-362MA-05	0600168032	
R1,2	Res. Carbon 1/4W 5.6k Ω \pm 5%	0200994192		SW1	Switch, Slide DSS804	9701393015	
R3,15,17,22,27	Res. Carbon 1/4W 1k Ω \pm 5%	0200994017		SW2	Switch, Rotary DRS4016-5	9701694013	
R4,10-12,14,19-21,23,26,29	Res. Carbon 1/4W 10k Ω \pm 5%	0200994253		HT1	Heat Sink PUG26-25	9701428014	
R5,13,28	Res. Carbon 1/4W 390 Ω \pm 5%	0200993874		HT2	Heat Sink B. PUE-16	9701376018	
R7	Res. Metal 15.4k Ω	0201028759		CN1	Plug, PCB 53406-9910	0500951048	
R8	Res. Metal 28k Ω	0201028742		CN3	Plug, PCB B2P3-VH-B-C	0500011773	
R9	Res. Carbon 1/4W 4.7 Ω \pm 5%	0200994178		CN4	Plug, PCB 53331-0210	0501033019	
R16	Res. Metal 3.32k Ω	0201028568		CN5	Plug, PCB 5430C063	0500957026	
R18	Res. Metal 10.5k Ω	0201028537		CN6	Plug, PCB B2P3-VH-B-R	0500011766	
R24	Res. Metal 22.1k Ω	0201028513		CN7, 13	Plug, PCB B4B-XH-AM	0500005314	
R25	Res. Metal 33.2k Ω	0201028544		CN8	Plug, PCB 53405-0310	0500940035	
C1,4	Cap. Plastic 0.1 μ F	0300894835		CN9	Plug, PCB B2P-VH-B	0500011124	
C2,3	Cap. Ceramic 4700pF	0300727546		CN10	Plug, PCB B2P-VH-B-C	0500011568	
C5	Cap. Elec. 50V 2200 μ F	0301206026		CN11	Plug, PCB B3B-XH-AM	0500005338	
C6	Cap. Elec. 50V 10 μ F	0300003145		CN12	Plug, PCB B3P-SHF-1AA	0500006021	
C7,11,20,23	Cap. Elec. 25V 10 μ F	0300004258		CN16	Plug, PCB B2B-XASK-1-A	0501045012	
C8	Cap. Elec. 25V 2200 μ F	0300915417		E	Wire w/Terminal GRN L=300	9701755011	

RELAY PCB ASSEMBLY (Ref. No.968)

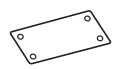









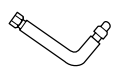
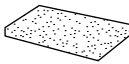
Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
HT201	Heat Sink OSH-4730C-SP	9701754014		R201	Res. Carbon 1/2W 680 Ω \pm 5%	0200012681	
SSR201	Relay S202SE2	9701719013		CN201	Plug, PCB B4P7-VH-B	0500011742	
CR201	CR Absorber RPEL-121204-C	9701125012					

OUTDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Parts No.
Power cap 	1	For power cord installation	9352173011
Auxiliary pipe assembly 	1	For wiring conduit (gas side) connection (May not be supplied, depending on the model)	9355292016
Edge cover 	1	For wiring conduit installation hole edge protection	9352436000
Tapping screw 	2	• For cabinet A and cabinet D mounting (1) • Spare (1)	301463040100
Binder 	1	For power cord binding	313035356905
Putty 	1	For sealing	303020200114
Coupler heat insulation 	1	For outdoor side pipe joint	313005074759

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INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Parts No.
Installation template 	1	For positioning the indoor unit	9357036007
Hanger 	4	For suspending the indoor unit from ceiling	9356563009
Special nut A (large flange) 	4	For suspending the indoor unit from ceiling	313005446653
Special nut B (small flange) 	4		313005446759
Coupler heat insulation (large) 	2	For indoor side pipe joint (large pipe)	9350716029
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)	9352766015
Nylon fastener 	1	For fixing the drain hose	312300787605
Remote control unit 	1		9701673032
Remote control unit cord clamp 	10	For installing the remote control unit cord	313714181904
Tapping screw (flush heads) 	10	For installing the remote control unit cord clamp	301141153027
Auxiliary pipe assembly 	1	For wiring conduit (gas side) connection	9357038001
Drain hose insulation 	1	Insulates the drain hose and vinyl hose connection	313806217708



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<https://splitsystema48.ru/instrukcii-po-ekspluatacii-kondicionerov.html>

каталоги, инструкции, сервисные мануалы, схемы.