

**FUJI**  
**ELECTRIC**

**HIGH POWER MULTI  
AIR CONDITIONER  
WALL MOUNTED type**

**SERVICE  
MANUAL**

<b>Models</b>	<b>Indoor unit</b>	<b>Outdoor unit</b>
	RSWM-9BN	ROM-20AN

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# SPECIFICATIONS

TYPE	COOL		
OPERATION	1 UNIT (UNIT A <sub>1</sub> or A <sub>2</sub> )	1 UNIT (UNIT B)	3 UNITS (UNIT A <sub>1</sub> + A <sub>2</sub> + B)
INDOOR UNIT	RSWM - 9BN x 3		
OUTDOOR UNIT	ROM - 20AN		
COOLING CAPACITY (kW)	2.58 - 2.64	2.28 - 2.34	5.68 - 5.86

## ELECTRICAL DATA

POWER SOURCE (V)	220 - 240		
FREQUENCY (Hz)	50		
RUNNING CURRENT (A)	5.1 - 5.3	3.9 - 3.7	8.5 - 8.2
INPUT WATTS (kW)	1.06 - 1.12	0.83 - 0.87	1.85 - 1.90
EER (kW/kW)	2.43 - 2.36	2.75 - 2.68	3.07 - 3.08
MOISTURE REMOVAL (ℓ/hr)	1.0	0.8	2.0
AIR CIRCULATION-HI (m <sup>3</sup> /hr)	400		

## COMPRESSOR

TYPE	Hermetic type, Permanent split condenser, 2 pole, Single phase, Induction motor		
CODE	UNIT A	RH189VHAT 220/240V - 50Hz	
	UNIT B	RH135VHAT 220/240V - 50Hz	
REFRIGERANT R-22 (g)	900 x 2		

## FAN MOTOR

POWER SOURCE (V)	240		
INDOOR UNIT	HI-SPEED (r.p.m.)	1,330	
	MED-SPEED (r.p.m.)	1,250	
	LO-SPEED (r.p.m.)	1,170	
	QUIET (r.p.m.)	1,080	
OUTDOOR UNIT (r.p.m.)	735		

## DIMENSIONS

INDOOR UNIT	H x W x D (mm)	260 x 815 x 168
OUTDOOR UNIT		643 x 840 x 335

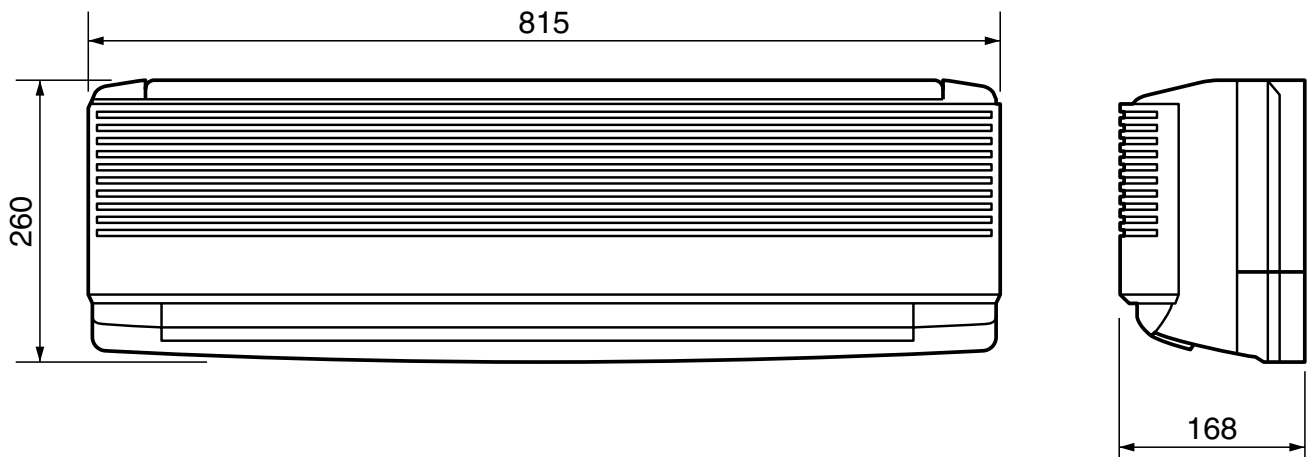
## WEIGHTS

INDOOR UNIT	GROSS / NET (kg)	10 / 8
OUTDOOR UNIT		72 / 64

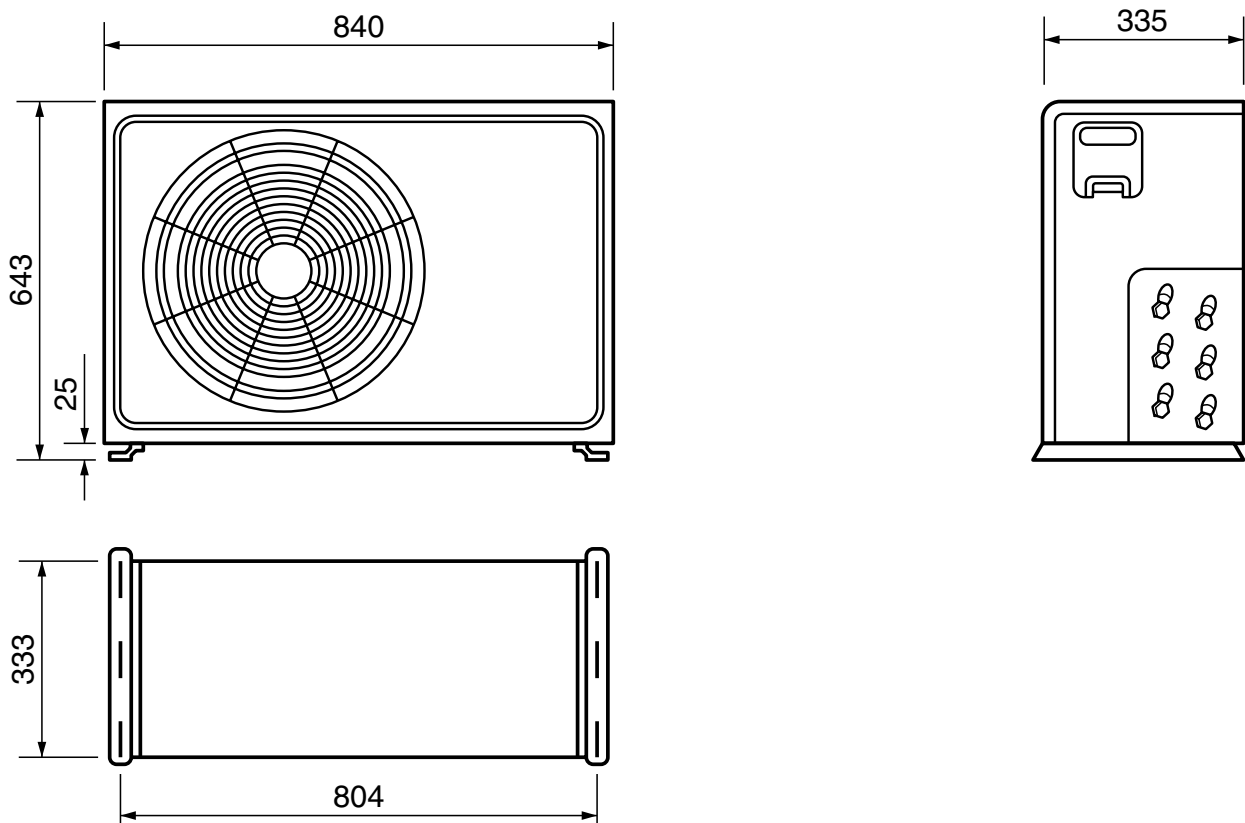
# OUTLINE AND DIMENSIONS

## INDOOR UNIT

Unit : mm

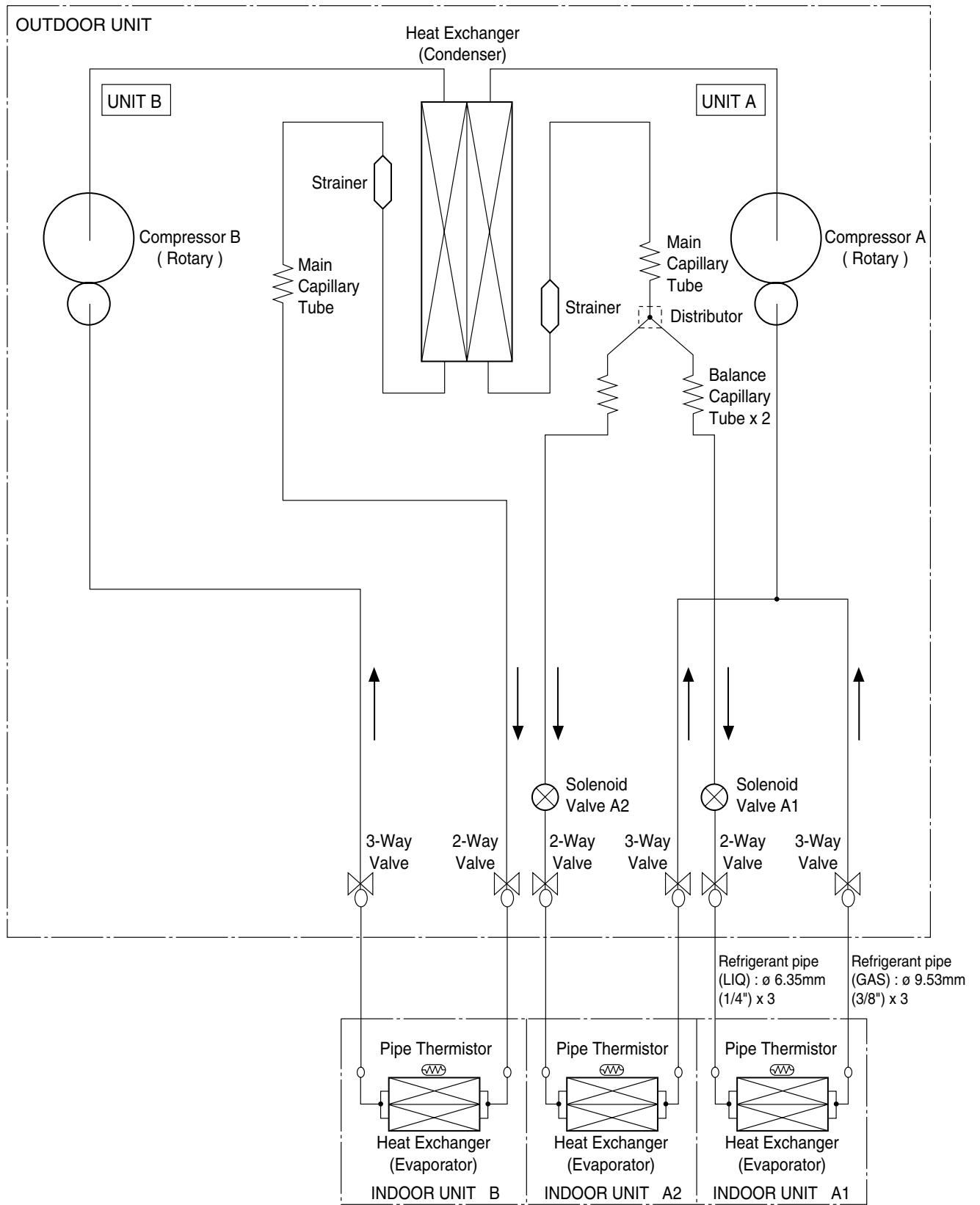


## OUTDOOR UNIT



# REFRIGERANT SYSTEM DIAGRAM

Models : RSWM-9BN x 3 / ROM-20AN



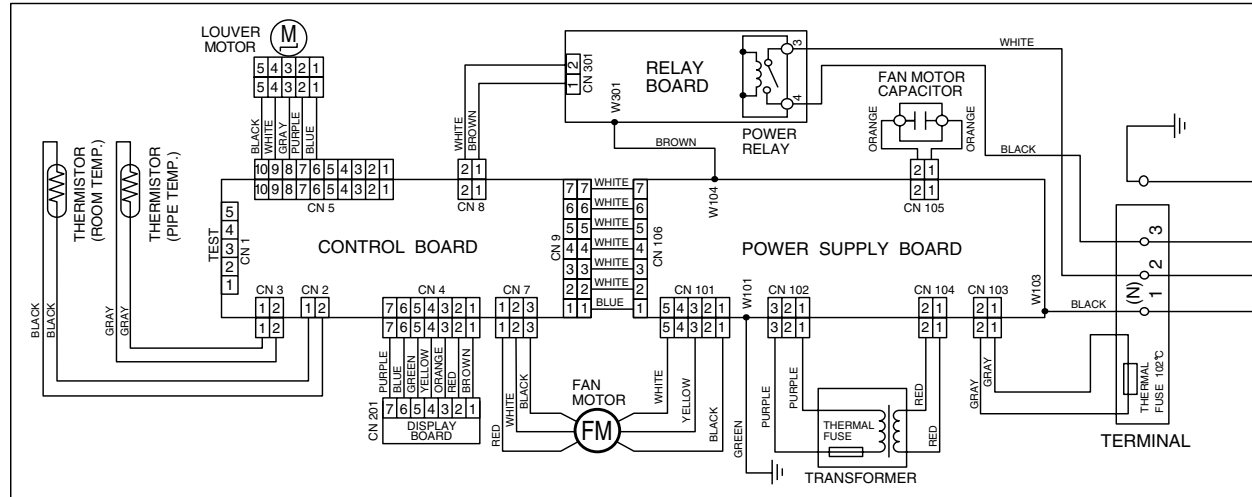
# CIRCUIT DIAGRAM

Models : RSWM-9BN x 3 / ROM-20AN

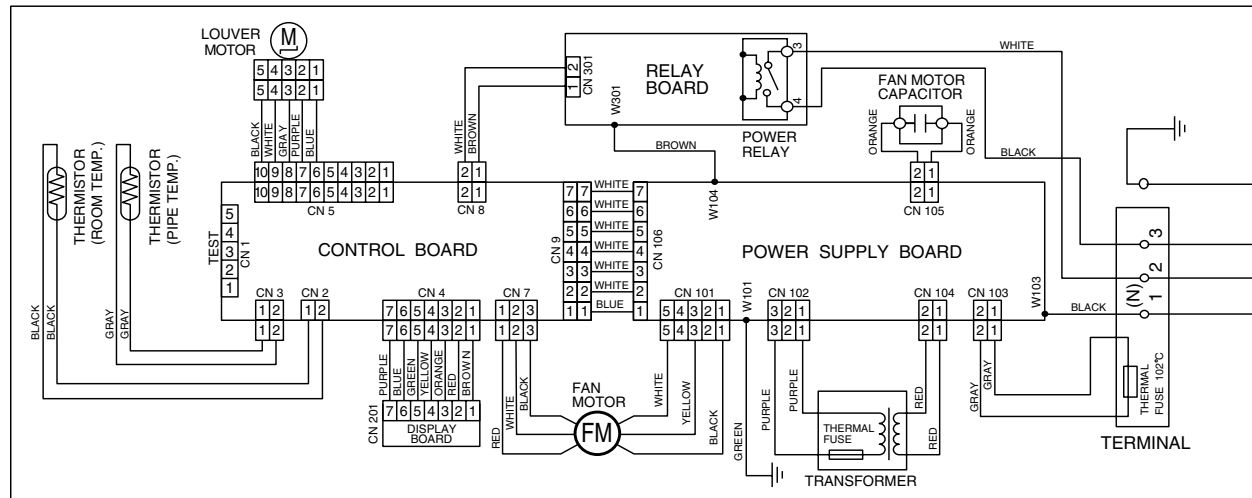
## INDOOR UNIT

## OUTDOOR UNIT

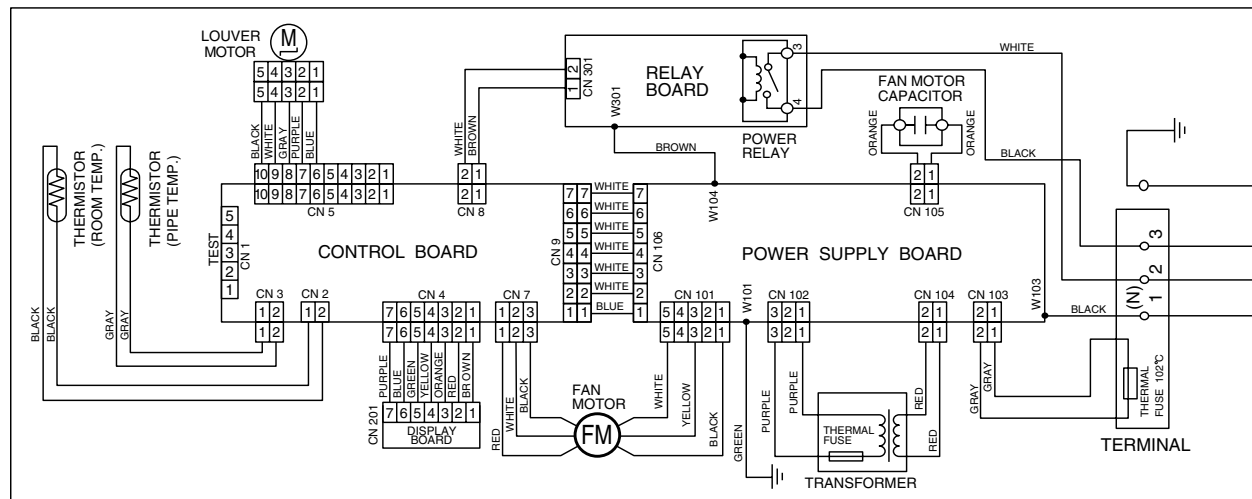
UNIT A1



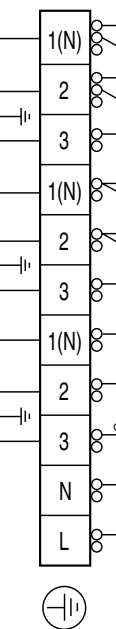
UNIT A2



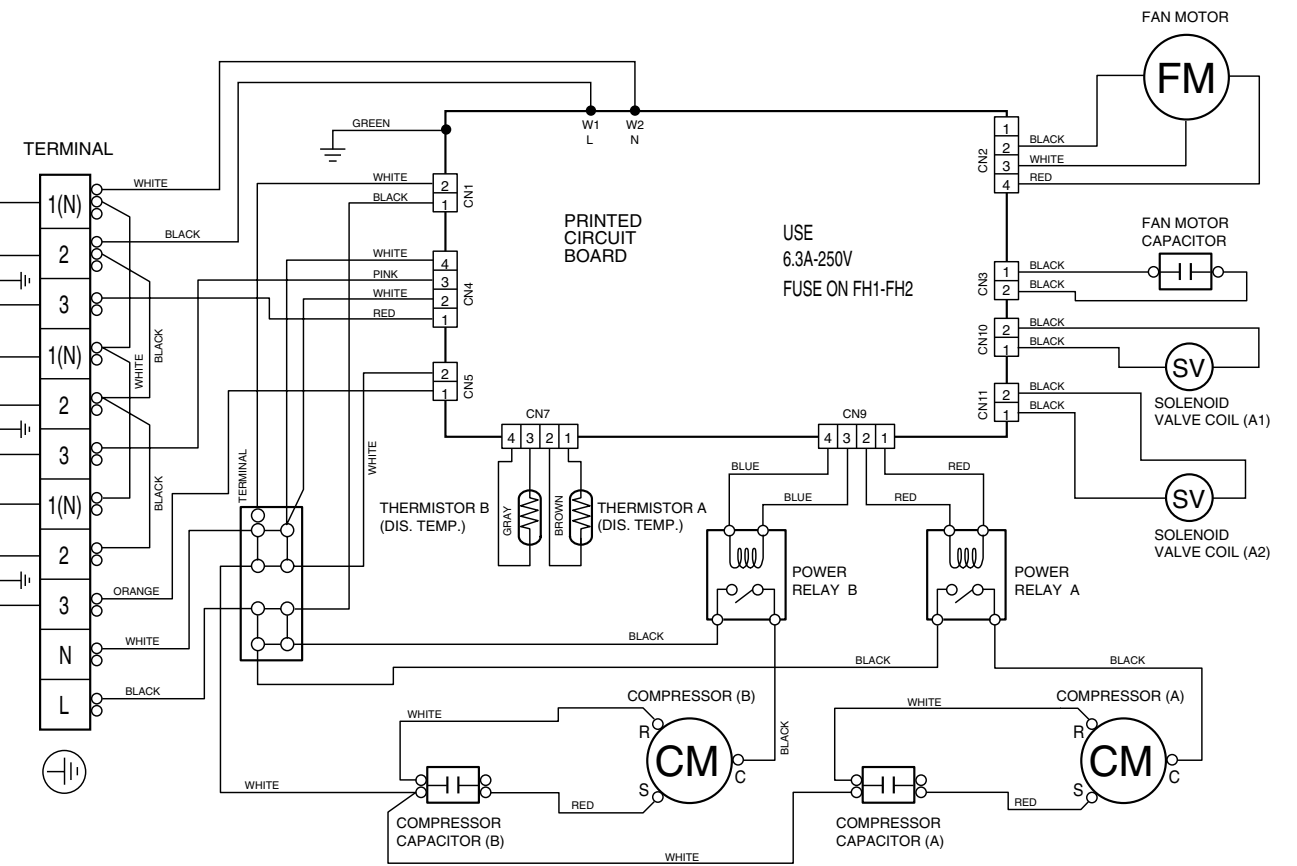
UNIT B



TERMINAL

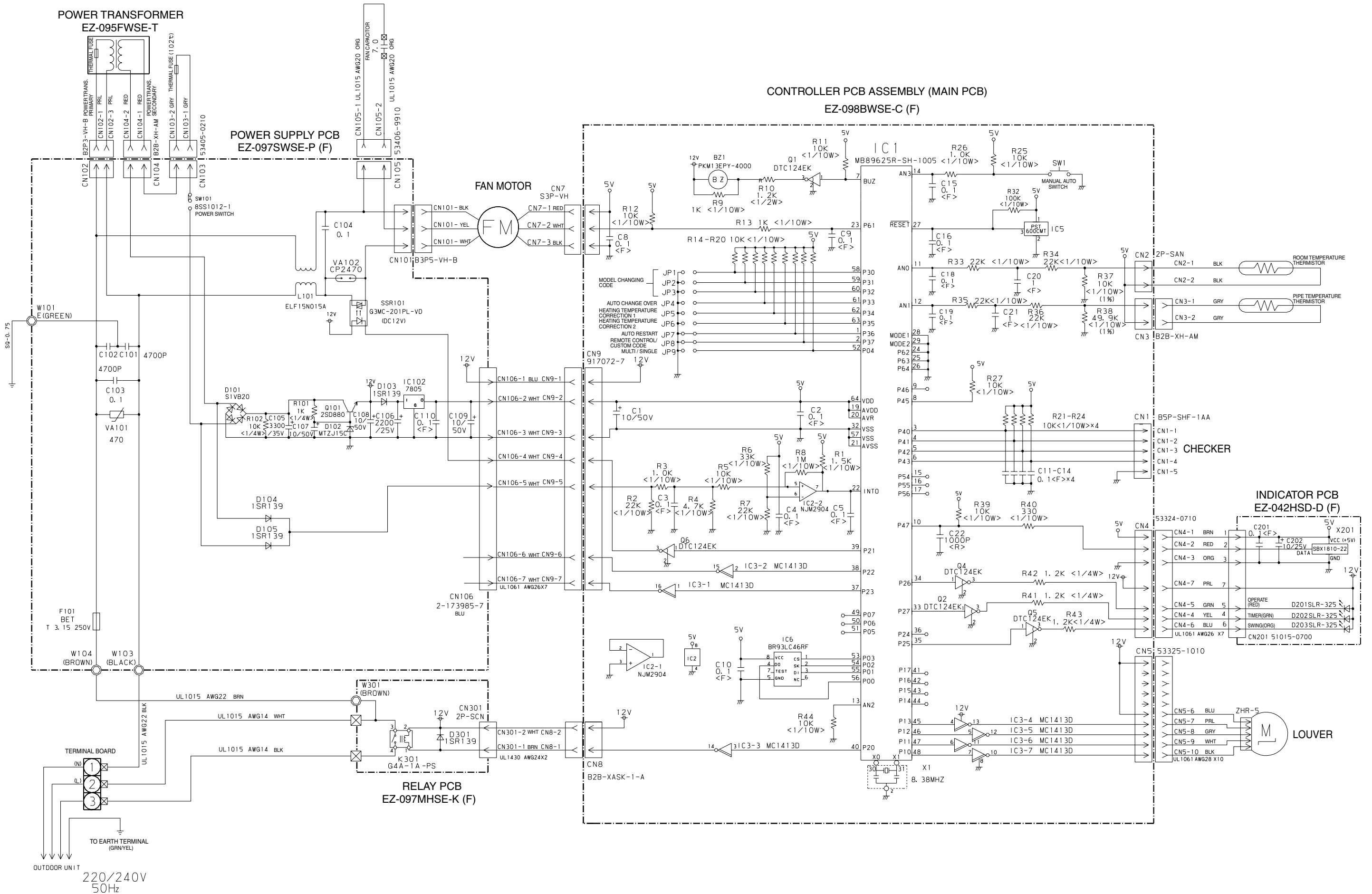


PRINTED CIRCUIT BOARD  
USE  
6.3A-250V  
FUSE ON FH1-FH2



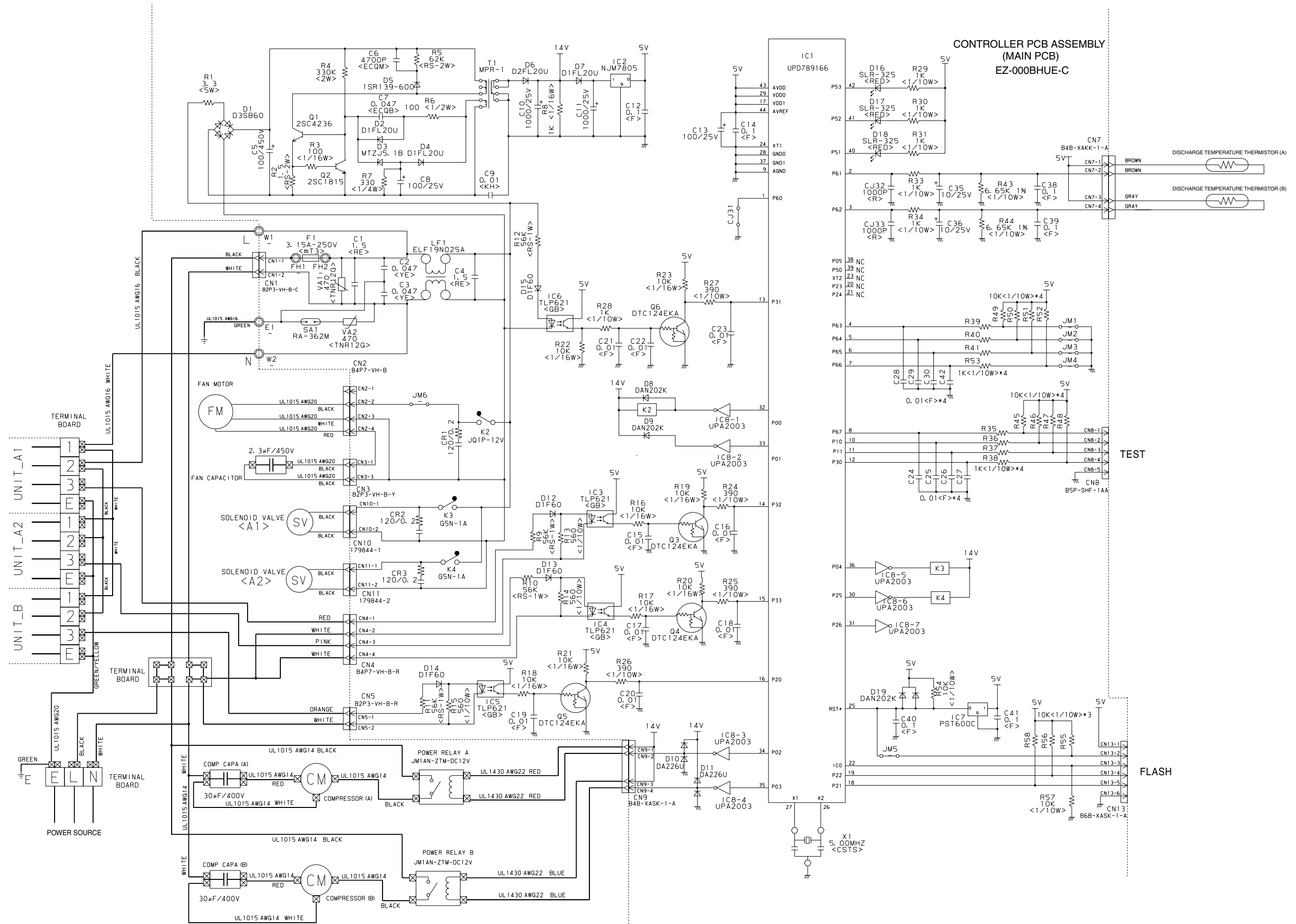
# INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Model : RSWM-9BN



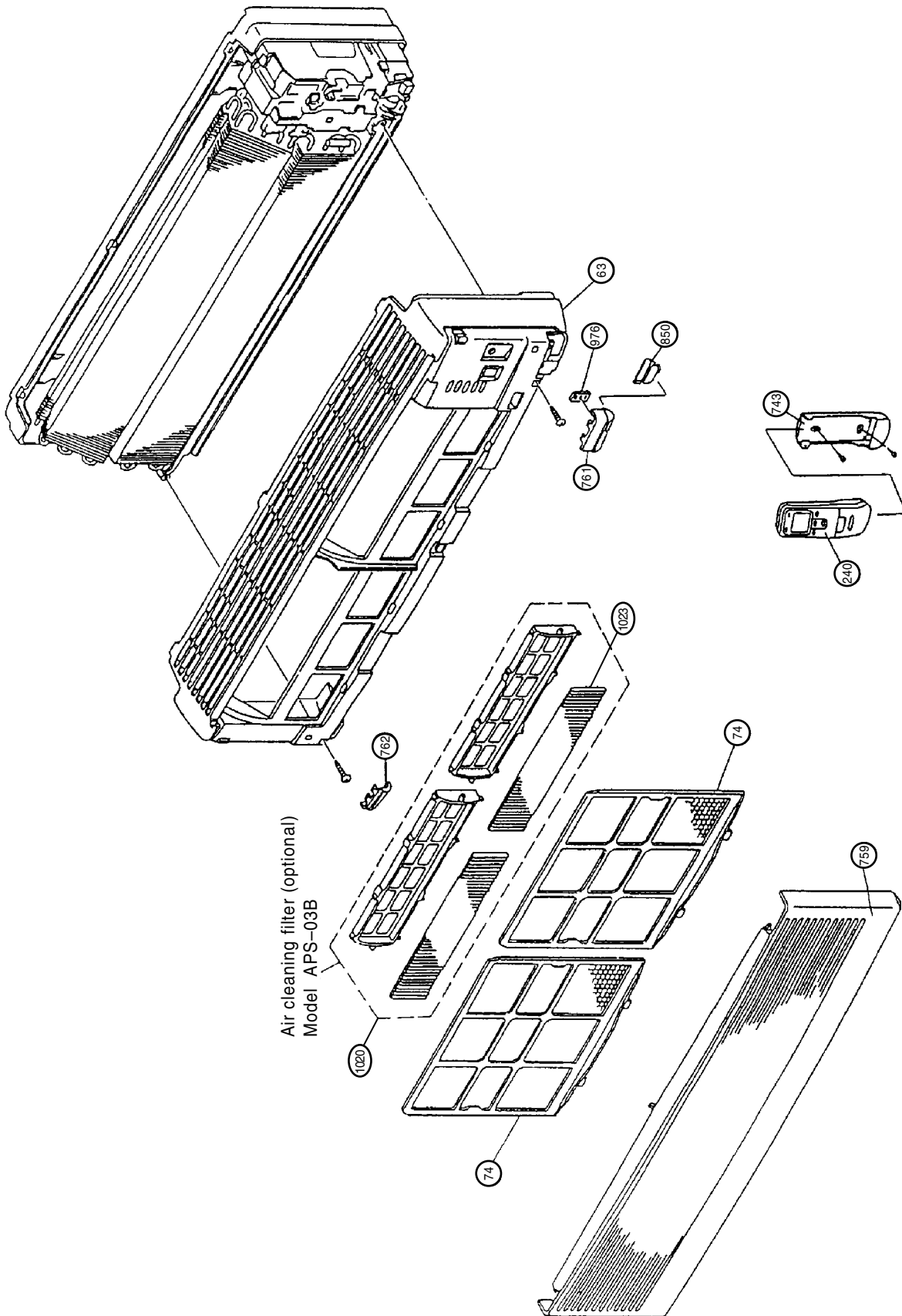
# OUTDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Model : ROM-20AN



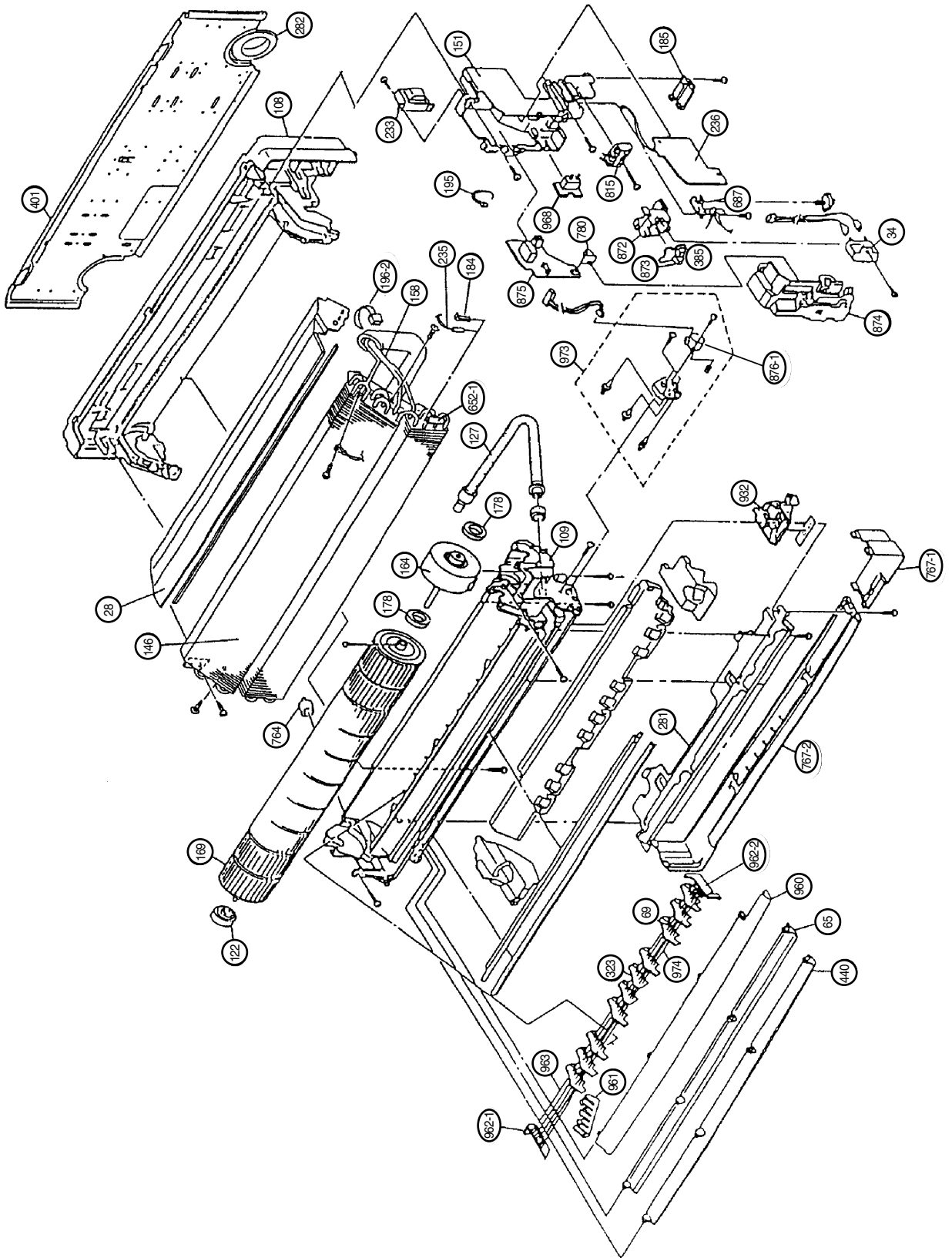
# DISASSEMBLY ILLUSTRATION

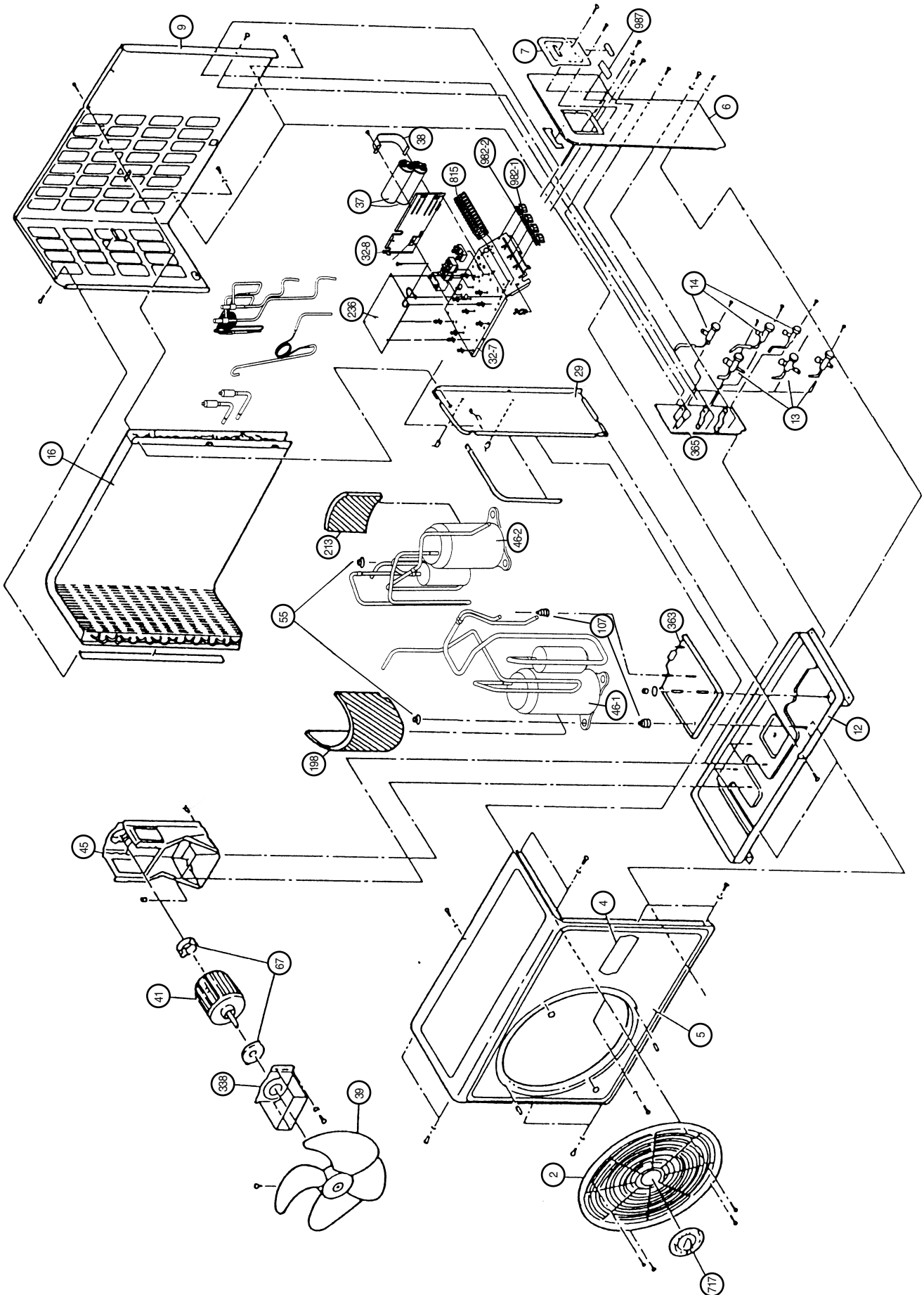
Model : RSWM-9BN



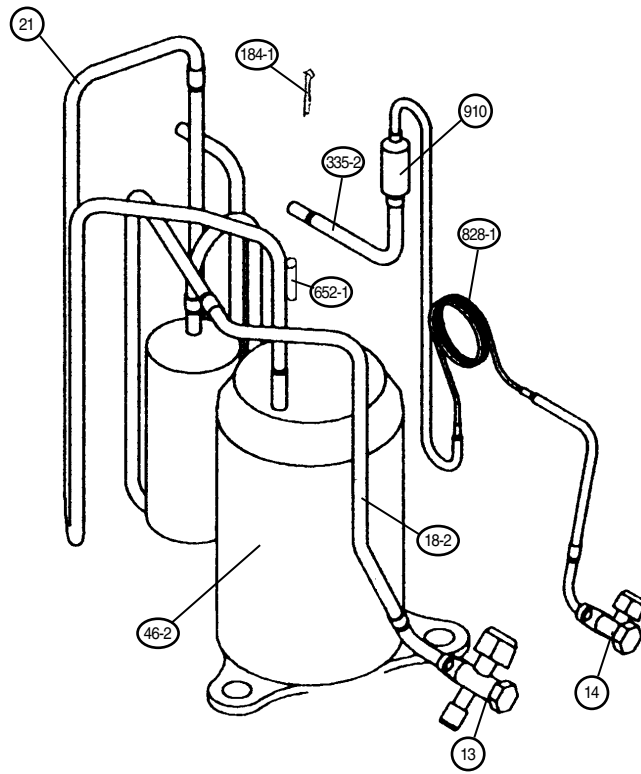


Model : RSWM-9BN

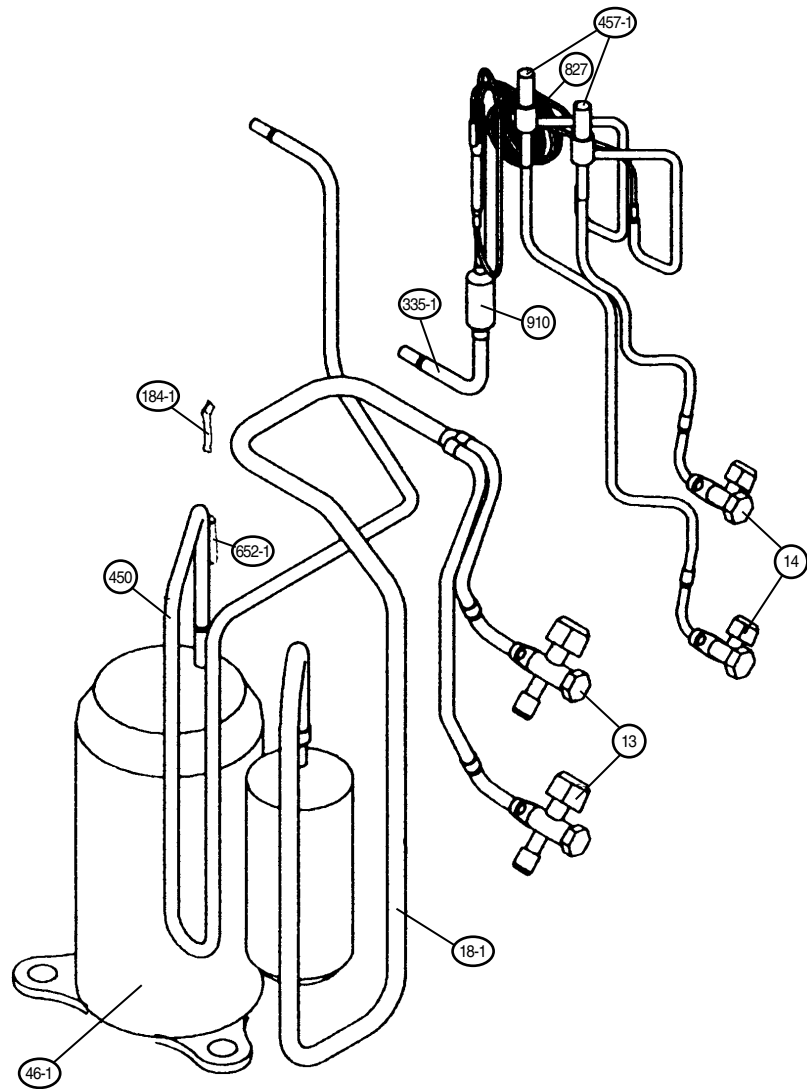


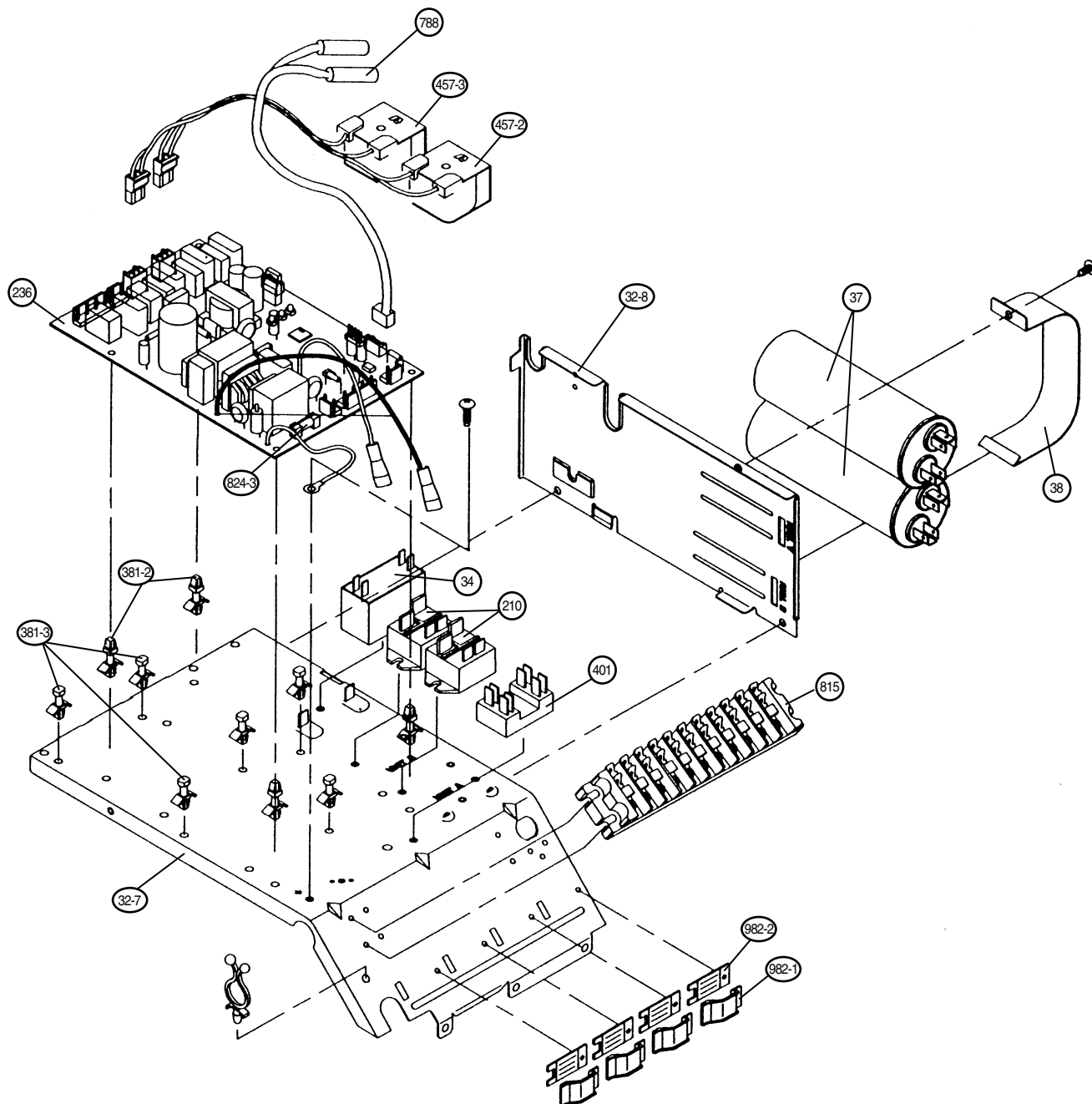


UNIT B

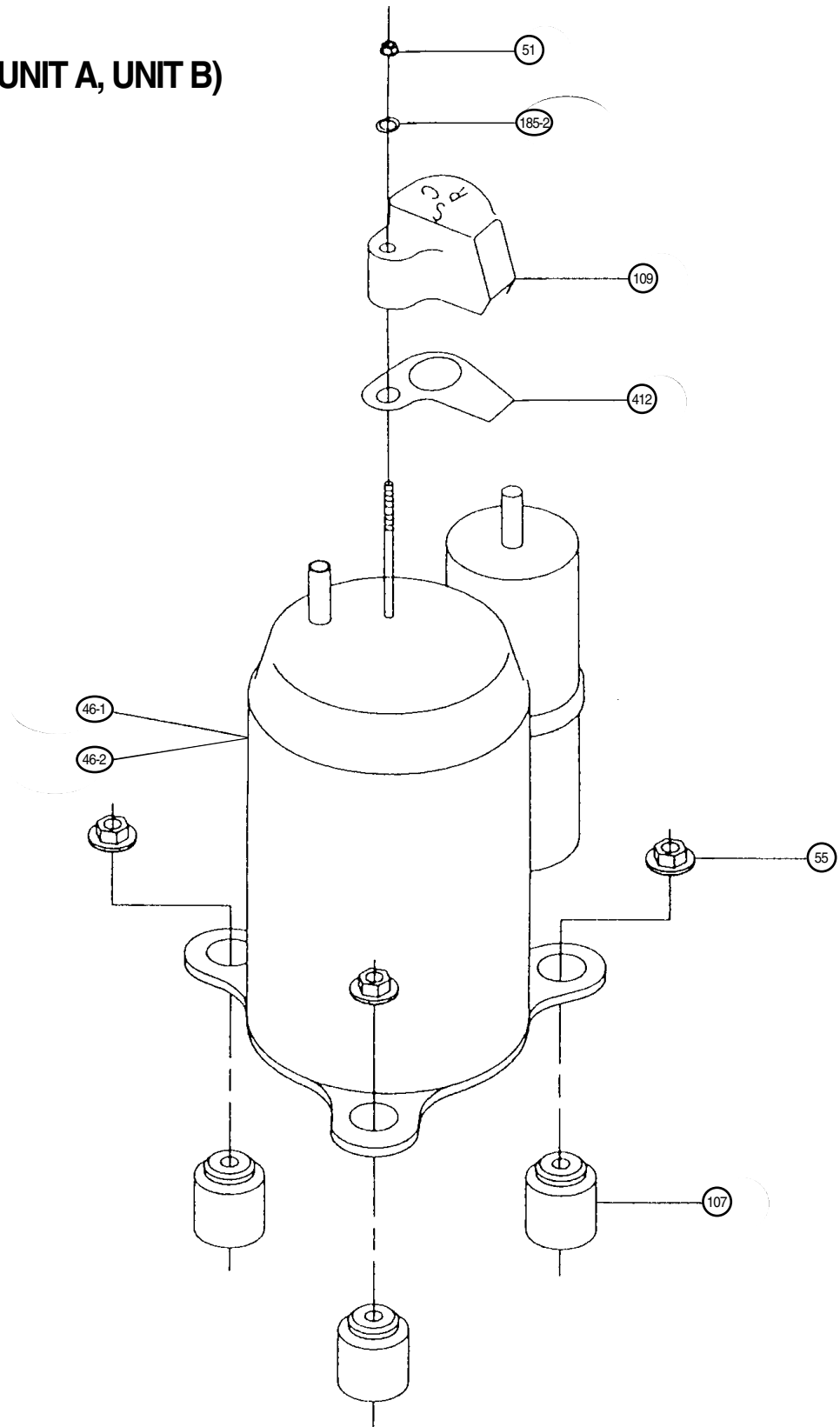


UNIT A





**(UNIT A, UNIT B)**



# PARTS LIST

## INDOOR UNIT [RSWM-9BN]

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

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
28	Blower Cover	9306462000		652-1	Thermistor Holder Pipe	313714262805	
34	Capacitor (Fan Motor)	9700468103		687	Earth Terminal	9306483005	
63	Front Panel Assy	9305656110		743	Remote Control Holder Case	9305642014	
65	Flow Control Panel-Z	9305443017		759	Intake Grille-"FUJI ELECTRIC"	9305441082	
69	Louver-A	9305415014		761	Side Cover-R	9305996032	
74	Filter	9305444014		762	Side Cover-L	9305437061	
108	Base	9309755017		764	Drain Cap Assy	9304150008	
109	Casing	9305411016		767-1	Bottom Cover-A	9309801011	
122	Shaft Holder-B	9303066010		767-2	Bottom Cover-B	9309802018	
127	Drain Hose Assy	9305550029		780	Key Top (Slide Switch)	9303526002	
146	Evaporator Assy	9362971003		815	Terminal-3P	9701955046	
151	Control Box	9305448036		850	Window (Receiver)	9305439010	
158	Connecting Pipe Assy	9357750002		872	Indicator Case	9305978014	
164	Fan Motor Assy-IN	9600917015		873	Lamp Cover	9305451012	
169	Cross-flow Fan Assy	9307836015		874	Control Box Cover	9305977017	
178	Motor Cushion-A	9306274009		875	Power Supply PCB Assy	9702440213	
184	Thermistor Spring	313104262701		876-1	Step Motor	9305780006	
185	Wire Clamp	9305940004		932	Outlet Cover	9305414017	
195	Clamp SKB-100	313361275805		960	Diffuser	9306013011	
196-2	Clamp SKB-150	313035356905		961	Guard Clamp	9306332013	
233	Power Transformer	9701565023		962-1	Guard Holder-L	9305753017	
235	Thermistor Assy-(Pipe)	9702039035		962-2	Guard Holder-R	9305752010	
236	Controller PCB Assy	9702889043		963	Fan Guard	9305751013	
240	Remote Control Unit	9307113062		968	Relay PCB Assy	9702443214	
281	Clamp Metal (Pipe)	9306192006		973	Gear Assy (w/Step Motor)	9305452002	
282	Wall Cap-B (Accessory)	313714296205		974	Joint (Louver)	9305416011	
323	Louver-B	9305597017		976	Window (Indicator)	9305440016	
385	Indicator PCB Assy	9701364213		1020	Air Cleaning Filter Set APS-03B (Optional)	9305868018	
401	Wall Hook Bracket	9309248014		1023	Air Cleaning Filter APS-02F (Optional)	9305864010	
440	Flow Control Panel-U	9306173043					

## OUTDOOR UNIT [ROM-20AN]

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
2	Fan Cover	9350214020		185-2	Rubber Washer	9358078006	
4	Emblem-Rear "FUJI ELECTRIC"	9361328006		198	Noise Insulation-A	9355787000	
5	Cabinet-A, Painted (Front)	9303876015		210	Main Relay	9356781007	
6	Cabinet-C, Painted (Side)	9355533010		213	Insulation-B	9355788007	
7	Compressor Cover	9357972015		236	Controller PCB Assy	9704031013	
9	Cabinet-B, Painted (Back)	9356422023		335-1	Outlet Pipe-A	9366671008	
12	Base, Painted	9352577017		335-2	Outlet Pipe-B	9366672005	
13	3-Way Valve	9357968001		338	Motor Fixing Table	313029297108	
14	2-Way Valve	9357967004		363	Bracket (Compressor) Assy	9363840001	
16	Condenser Assy	9366667001		365	Base Fixing 3-Way Valve, Painted	9355532013	
18-1	Suction Pipe-A Assy	9366663003		381-2	Locking Spacer	0600035020	
18-2	Suction Pipe-B Assy	9366664000		381-3	Locking Spacer	0600118051	
21	Discharge Pipe-B Assy	9366662006		401	Terminal-2P	9701971015	
29	Separate Wall	313111033209		412	Terminal Gasket (For Comp.)	9358077009	
32-7	Control Box Metal-U	9365924006		450	Discharge Pipe-A Assy	9366661009	
32-8	Control Box Metal-S	9365925003		457-1	Solenoid Valve, Main	9353564009	
34	Capacitor (Fan Motor)	9703306044		457-2	Solenoid Coil-A1	9361026001	
37	Capacitor (Running)	9356386059		457-3	Solenoid Coil-A2	9361027008	
38	Clamp Metal (Capacitor)	9352123009		652-1	Thermostat Holder Pipe	313714262805	
39	Propeller Fan Assy	9300855013		717	Center Plate (For Fan Cover)	9351253011	
41	Motor Induction Outer MFB-20GFT	9600738146		788	Thermistor - Discharge	9702650025	
45	Motor Fixing Table Assy	313029311100		815	Terminal-11P	9358660157	
46-1	Compressor Assy RH189VHAT	9358075005		824-3	Fuse	0600222574	
46-2	Compressor Assy RH135VHAT	9360104007		827	Capillary-A Assy	9366665007	
51	Special Nut (For Comp.)	9358079003		828-1	Capillary-B Assy	9367804009	
55	Special Nut M8 (For Comp.)	313252257701		910	Strainer-B	9365099018	
67	Rubber (Vibration-proof)	313659068604		982-1	Cord Clamp	9356857009	
107	Rubber Seat (For Comp.)-A	9358080009		982-2	Cord Clamp-B	9356858006	
109	Terminal Cover (For Comp.)	9358076002		987	Insulation Sheet	9358401002	
184-1	Thermo. Spring-A	313728262708					

**INDOOR UNIT  
CONTROLLER PCB ASSEMBLY (Ref. No. 236)**

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

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
IC1	IC MB89625R-SH-1005	1301471025		R41-43	Res. 1/4W 1.2kohm±5%	0200708768	
IC2	IC NJM2904M	0100534054		C1	Cap. Elec. 50V 10mfd	0301192541	
IC3	IC MC1413D	0101736013		C2-5,8-16,18,19	Cap. Ceramic 25V 0.1mfd	0300266748	
IC5	IC PST600CMT	0101461120		C20,21	Cap. Ceramic 16V 1mfd	0300316153	
IC6	IC BR93LC46RF-E2	0100295016		C22	Cap. Ceramic 50V 1000pF	0300308509	
Q1,2,4-6	Xstr DTC124EK	0000517034		SW1	Push Switch KSM0632B	9703476013	
R1	Res. 1/10W 1.5kohm±5%	0200212784		X1	Ceramic Resonator CST8.38MTW-TF01	0400061021	
R2,7,33-36	Res. 1/10W 22kohm±5%	0200213095		BZ1	Buzzer PKM13EPY-4000-TF01	9701298013	
R3,9,13,26	Res. 1/10W 1kohm±5%	0200212746		CN1	Plug, PCB B5P-SHF-1AA	0500006069	
R4	Res. 1/10W 4.7kohm±5%	0200212906		CN2	Thermistor 150-103-86116	9702324018	
R5,11,12,14-25, 27,39,44,46,47	Res. 1/10W 10kohm±5%	0200213019		CN3	Thermistor(Pipe) 150-503-96064	9702039035	
R6	Res. 1/10W 33kohm±5%	0200213132		CN4	Plug, PCB 53324-0710	0501052065	
R8	Res. 1/10W 1Mohm±5%	0200213491		CN5	Plug, PCB 53325-1010	0501052591	
R10	Res. 1/2W 1.2kohm±5%	0200731766		CN7	Plug, PCB S3P-VH	0500011308	
R32	Res. 1/10W 100kohm±5%	0200213255		CN8	Plug, PCB B2B-XASK-1-A	0501045012	
R37	Res. 1/10W 10kohm±1%	0200279497		CN9	Plug, PCB 917072-7	0501065010	
R38	Res. 1/10W 49.9kohm±1%	0200279824		JP7,8,10	Wire 0.6dia L=10mm	1903332014	
R40	Res. 1/10W 330ohm±5%	0200212623		JC2-4,6-9,11-17	Res. 0 ohm	0200230016	

**[INDOOR UNIT]  
POWER SUPPLY PCB ASSEMBLY (Ref. No. 875)**

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
IC102	IC NJM 7805FA	0100462081		FH101,102	Fuse Holder PFC5000-0502	0500158072	
Q101	Xstr 2SD880	0000001014		L101	Line Filter ELF15N015A	0400165118	
D101	Diode S1VB20	0000292054		SSR101	Relay G3MB-202PL-VD	9702430016	
D102	Diode MTZJ15C	0000852203		HT101	Heat Sink 16 25	9701675012	
D103-105	Diode 1SR139-400	0000353137		CN101	Plug, PCB B3P5-VH-B	0500011735	
R101	Res. Carbon 1/4W 1kohm±5%	0201038758		CN102	Plug, PCB B2P3-VH-B	0500011728	
R102	Res. Carbon 1/4W 10kohm±5%	0201005019		CN103	Plug, PCB 53405-0210	0500940011	
C101,102	Cap. Ceramic 4700pF	0300209110		CN104	Plug, PCB B2B-XH-AM	0500005321	
C103,104	Cap. Plastic 0.1mfd	0300304075		CN105	Plug, PCB 53406-9910	0500951048	
C105	Cap. Elec. 35V 2200mfd	0300331118		CN106	Wire w/Connector L=100	9701424016	
C106	Cap. Elec. 25V 2200mfd	0300327111		W101	Wire w/Terminal L=210	9701660018	
C107-109	Cap. Elec. 50V 10mfd	0301192541		W103	Wire w/Terminal L=225 BLK	9701657018	
C110	Cap. Ceramic 0.1mfd	0300988251		W104	Wire w/Terminal L=150 BRN	9701658015	
SW101	Slide Switch 8SS1012-1	9701426010		JM101,104	Wire 0.6 mm dia. L=10 mm	9700025016	
VA101,102	Varistor ERZ-V10V471CS	0000515139		JM102	Wire Assembly IPS-1041-2	9700035015	
F101	Fuse BET 3.15A - 250V	0600222512		JM103	Wire 0.6 mm dia. L=7.5 mm	9701076017	

**[INDOOR UNIT]  
INDICATOR PCB ASSEMBLY (Ref. No.385)**

Ref. No.	Description	Part No.	Ord. Q'ty
D201	Diode SLR-325VC RED	0000813259	
D202	Diode SLR-325MC GRN	0000813242	
D203	Diode SLR-325DC ORG	0000813235	
C201	Cap. Ceramic 0.1mfd	0300988251	
C202	Cap. Elec. 25V 10mfd	0300504413	
X201	Remote Control Amplifier SBX1810-22	0101525129	
CN201	Wire w/Connector L=230 Lamp Cover	9701397013 9305451012	

**[INDOOR UNIT]  
RELAY PCB ASSEMBLY (Ref. No.968)**

Ref. No.	Description	Part No.	Ord. Q'ty
K301	Relay G4A-1A-PS	9703454011	
CN301	Wire w/Connector L=140	9701279012	

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

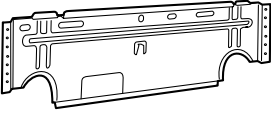
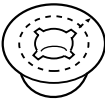


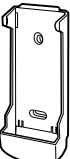



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and fill the number of the parts in the "Order" column.

Ref. No.	Description	Part No.	Ord. Qty	Ref. No.	Description	Part No.	Ord. Qty
IC1	IC uPD789166GB-543-8ES	9704078018		C8	Cap. Elec. 25V 100mfd	0301197560	
IC2	IC NJM7805FA	0100462081		C9	Cap. Ceramic 0.01mfd	0300209127	
IC3-6	IC TLP621(D4)-GB	0000117074		C10	Cap. Elec. 25V 1000mfd	0301196495	
IC7	IC PST600CMT	0101461120		C11	Cap. Elec. 25V 1000mfd	0301158264	
IC8	IC uPA2003GR	0100028041		C12,14,38-41	Cap. Ceramic 25V 0.1mfd	0301102885	
Q1	Xstr 2SC4236	0000164047		C13	Cap. Elec. 25V 100mfd	0301192350	
Q2	Xstr 2SC1740S	0000699235		C15-30,42	Cap. Ceramic 50V 0.01mfd	0301102830	
Q3-6	Xstr DTC124EKA	0000936033		C35,36	Cap. Elec. 25V 10mfd	0301192312	
D1	Diode D3SB60	0000689045		CJ32,33	Cap. Ceramic 50V 1000pF	0300277096	
D2,4,7	Diode D1FL20U	0000746519		CR1-3	CR Absorber RPEL-121204 -C	9701125012	
D3	Diode MTZJ5.1B	0000852166		VA1,2	Varistor TNR12G471K	0000038010	
D5	Diode 1SR139-600	0000353120		F1	Fuse BET 6.3A-250V	0600222574	
D6	Diode D2FL20U	0000906500		FH1,2	Fuse Holder PFC5000-0502	0500158072	
D10,11	Diode DA226U	0000625036		LF1	EMI Filter ELF19N025A	0400193098	
D12-15	Diode D1F60	0000208024		K2	Relay JQ1P-12V	9701794010	
D16-18	Diode SLR-325VC	0000813259		K3,4	Relay G5N-1A	9701566013	
D19	Diode DAN202K	0000684019		T1	Switching Transformer ETS28AS118AH	9702727017	
R1	Res. Wire Wound 5W 3.3ohm±5%	0200244372		X1	Ceramic Resonator CSTS0500MG03-T	9702840013	
R2	Res. Metal Oxide 2W 1.5ohm±5%	0201107119		SA1	Arrester RA-362M-V7-F	0600280154	
R3	Res. 1/10W 3.3ohm±5%	0201010501		CN1	Plug, PCB B2P3-VH-B-C	0500011773	
R4	Res. Metal Film 2W 330kohm±5%	0200357133		CN2	Plug, PCB B4P7-VH-B	0500011742	
R5	Res. Metal Oxide 2W 62kohm±5%	0201107997		CN3	Plug, PCB B2P3-VH-B-Y	0500011827	
R6	Res. 1/2W 100ohm±5%	0200731506		CN4	Plug, PCB B4P7-VH-B-R	0500011797	
R7	Res. 1/4W 330ohm±5%	0200230627		CN5	Plug, PCB B2P3-VH-B-R	0500011766	
R8,16-23,45-52, 54-58	Res. 1/10W 10kohm±5%	0201011010		CN7	Plug, PCB B4B-XAKK-1-A	0501045715	
R9-12	Res. Metal Oxide 1W 560kohm±5%	0201106662		CN8	Plug, PCB B5P-SHF-1AA	0500006069	
R13-15	Res. 1/10W 560ohm±5%	0201010686		CN9	Plug, PCB B4B-XASK-1-A	0501045036	
R24-27	Res. 1/10W 390ohm±5%	0201010648		CN10	Plug, PCB 179844-1	0501121013	
R28-31,33-41,53	Res. 1/10W 1kohm±5%	0201010747		CN11	Plug, PCB 179844-2	0501121020	
R43,44	Res. 1/10W 6.65kohm±1%	0201118801		CN13	Plug, PCB B6B-XASK-1-A	0501045050	
C1,4	Cap. Plastic 1.5mfd	0300304143		W1	Wire w/Terminal L=280 BLK	9704106018	
C2,3	Cap. Plastic 0.047mfd	0301052111		W2	Wire w/Terminal L=300 WHT	9704107015	
C5	Cap. Elec. 450V 100mfd	0300256060		E1	Wire w/Terminal L=120 GRN	9702066062	
C6	Cap. Plastic 4700pF	0300269091		JM1,3,5,CJ31	Res. 0 ohm	0201010013	
C7	Cap. Plastic 50V 0.047mfd	0300169339		JM6	Wire 0.6dia L=10mm	9700025016	




# STANDARD ACCESSORIES

## INDOOR UNIT ACCESSORIES (Wall Mounted type)

Name and Shape	Q'ty	Part No.
Wall hook bracket 	1	9309248014
Wall cap-B 	1	313714296205
Remote control unit 	1	9307113062 (AR-DB6)
Battery (penlight) 	1 set	0600185534
Remote control unit holder 	1	9305642014
Cloth tape 	1	9308117007
Tapping screw (big) ( $\phi$ 4 x 20) 	8	301141164200
Tapping screw (small) ( $\phi$ 3 x 12) 	2	0700019036

## OUTDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Part No.																				
Cable mark <table border="1" data-bbox="651 1617 794 1720"> <tr> <td>A1-A</td> <td>A1-A</td> <td>A1-B</td> <td>A1-B</td> </tr> <tr> <td>A2-A</td> <td>A2-A</td> <td>A2-B</td> <td>A2-B</td> </tr> <tr> <td>B1-A</td> <td>B1-A</td> <td>B1-B</td> <td>B1-B</td> </tr> <tr> <td>B2-A</td> <td>B2-A</td> <td>B2-B</td> <td>B2-B</td> </tr> <tr> <td>B3-A</td> <td>B3-A</td> <td>B3-B</td> <td>B3-B</td> </tr> </table>	A1-A	A1-A	A1-B	A1-B	A2-A	A2-A	A2-B	A2-B	B1-A	B1-A	B1-B	B1-B	B2-A	B2-A	B2-B	B2-B	B3-A	B3-A	B3-B	B3-B	1	9361059009
A1-A	A1-A	A1-B	A1-B																			
A2-A	A2-A	A2-B	A2-B																			
B1-A	B1-A	B1-B	B1-B																			
B2-A	B2-A	B2-B	B2-B																			
B3-A	B3-A	B3-B	B3-B																			
Hexagon wrench 	1	9351228019																				



MANUFACTURER :

**Fuji Denki Sosetsu Co., Ltd.**

Tokyo, Japan