



SPLIT TYPE
ROOM AIR CONDITIONER
WALL MOUNTED type

SERVICE
MANUAL

Models	Indoor unit	Outdoor unit
	RS-24LA	RO-24LA
	RS-30LA	RO-30LA



Preliminary

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SPECIFICATIONS

TYPE		COOL & HEAT	COOL & HEAT
INDOOR UNIT		RS-24LA	RS-30LA
OUTDOOR UNIT		RO-24LA	RO-30LA
COOLING CAPACITY	(kW)	6.8	8.0
HEATING CAPACITY	(kW)	7.0	8.5

ELECTRICAL DATA

POWER SOURCE (V)		230	
FREQUENCY (Hz)		50	
RUNNING CURRENT (A)	COOLING	9.3	13.3
	HEATING	8.5	12.3
INPUT WATTS (kW)	COOLING	2.12	3.04
	HEATING	1.94	2.81
E.E.R. (kW/kW)	COOLING	3.21	2.63
	HEATING	3.61	3.02
MOISTURE REMOVAL (ℓ /hr)		3.0	3.6
AIR CIRCULATION-Hi (m³/hr)		1,020	1,020

COMPRESSOR

TYPE	Hermetic type, Inverter, 4 poles, Single phase, Induction motor, Rotary		
DISCRIMINATION	TNB220FPCM9		
REFRIGERANT	R410A	(g)	1,850

FAN MOTOR

POWER SOURCE	(V)	230	
INDOOR UNIT	DISCRIMINATION	MFA-30HTT	
	HI-SPEED (r.p.m.)	1,290	
	MED-SPEED (r.p.m.)	1,100	
	LO-SPEED (r.p.m.)	870	
	QUIET (r.p.m.)	730	
OUTDOOR UNIT	DISCRIMINATION	MFB-30NTAT	
	(r.p.m.)	730	

DIMENSIONS

INDOOR UNIT	H x W x D	(mm)	320 x 1,120 x 220
OUTDOOR UNIT	H x W x D	(mm)	900 x 900 x 350

WEIGHT

INDOOR UNIT	GROSS / NET	(kg)	22 / 16
OUTDOOR UNIT	GROSS / NET	(kg)	78 / 70

TYPE	COOL & HEAT	COOL & HEAT
INDOOR UNIT	RS-24LA	RS-30LA
OUTDOOR UNIT	RO-24LA	RO-30LA

NOISE LEVEL

INDOOR UNIT	HI-SPEED (dB)	COOL 47 / HEAT 45
	MED-SPEED (dB)	COOL 41 / HEAT 41
	LO-SPEED (dB)	COOL 36 / HEAT 36
	QUIET-SPEED (dB)	COOL 32 / HEAT 32
OUTDOOR UNIT (dB)		COOL 52 / HEAT 53

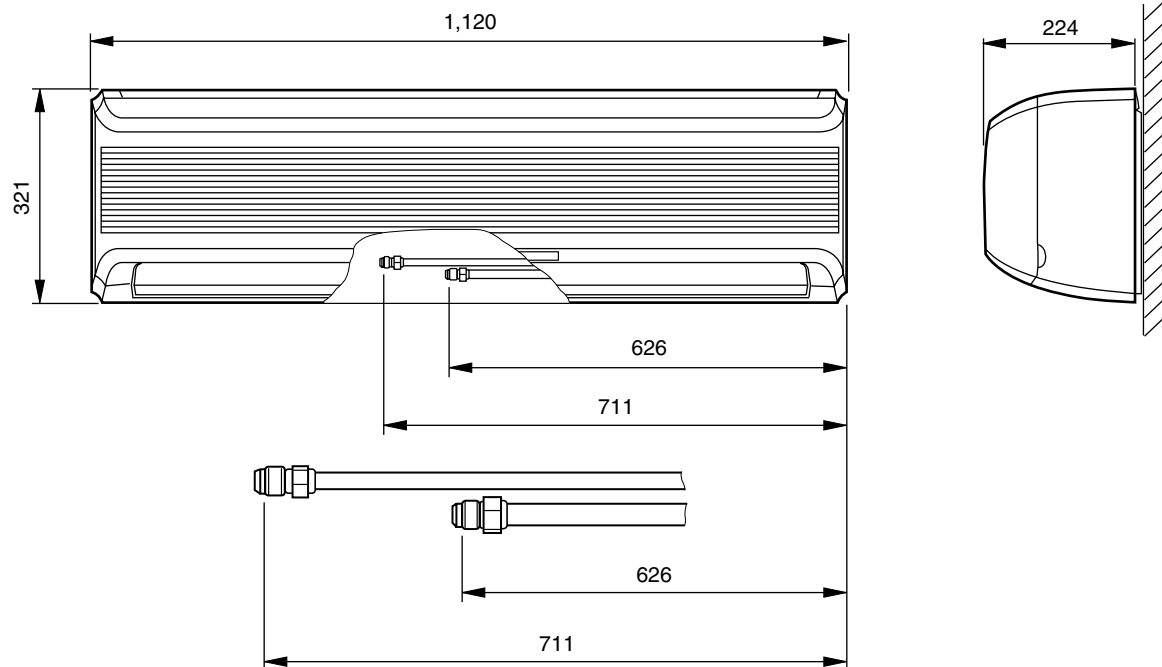
REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	PIPE LENGTH 10 m (33 ft.)	1,850 g (65.1 oz)
	15 m (49 ft.)	2,100 g (73.9 oz)
	20 m (66 ft.)	2,350 g (82.7 oz)
	25 m (82 ft.)	2,600 g (91.7 oz)
Additional refrigerant		50 g / m (1.76 oz / 3.3 ft.) (over 10 m)

OUTLINE AND DIMENSIONS

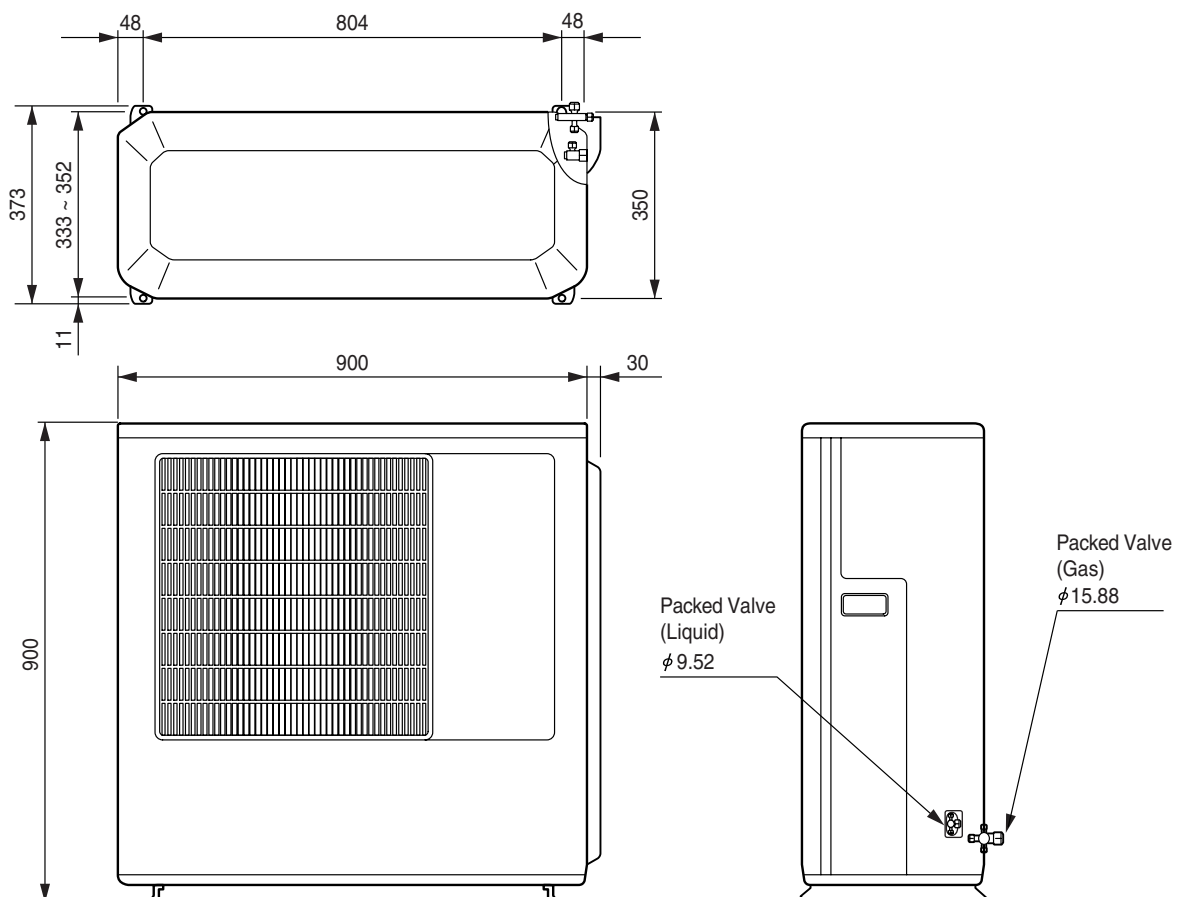
**Models : RS-24LA
RS-30LA**

Unit : mm



**Models : RO-24LA
RO-30LA**

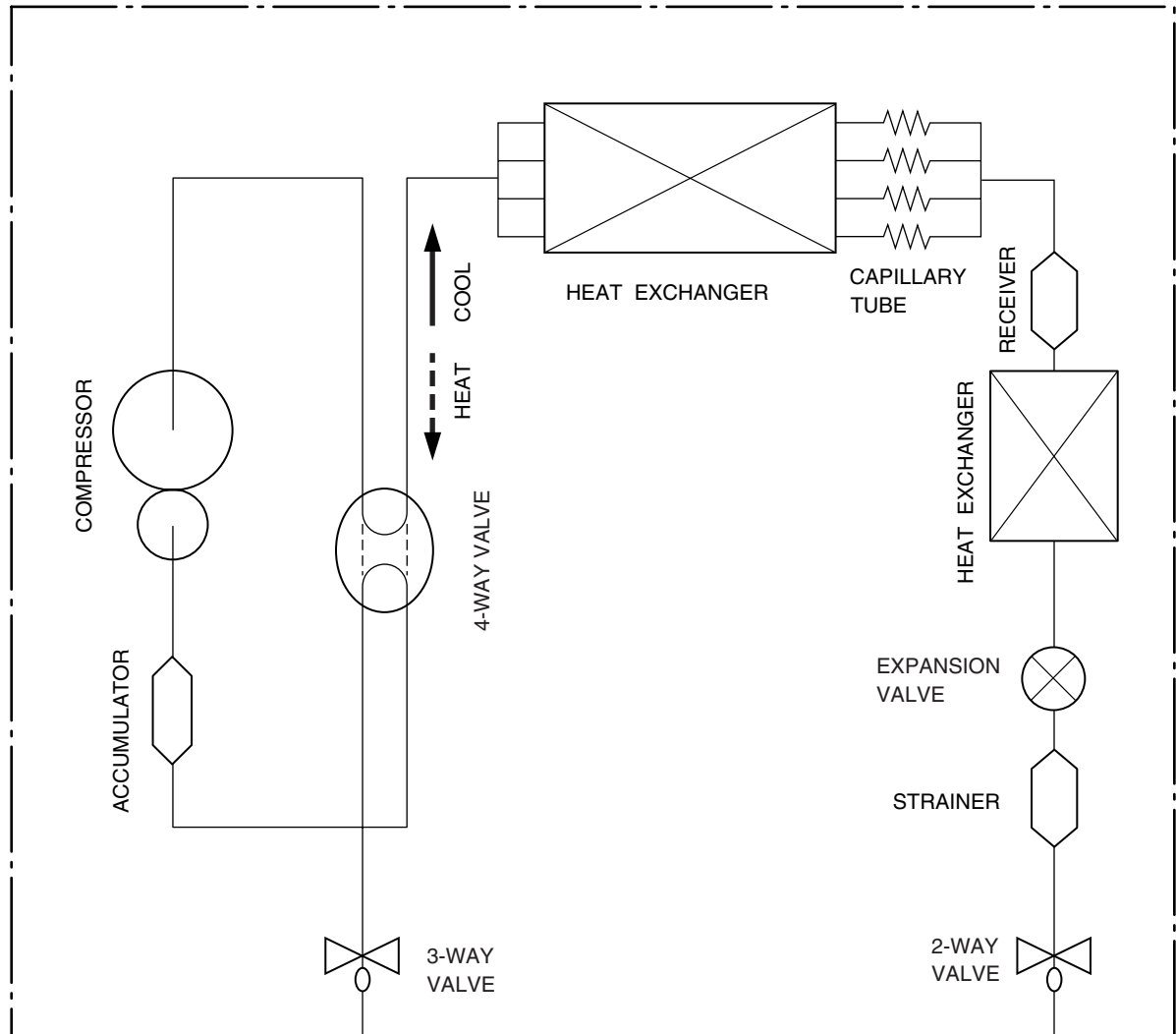
Unit : mm



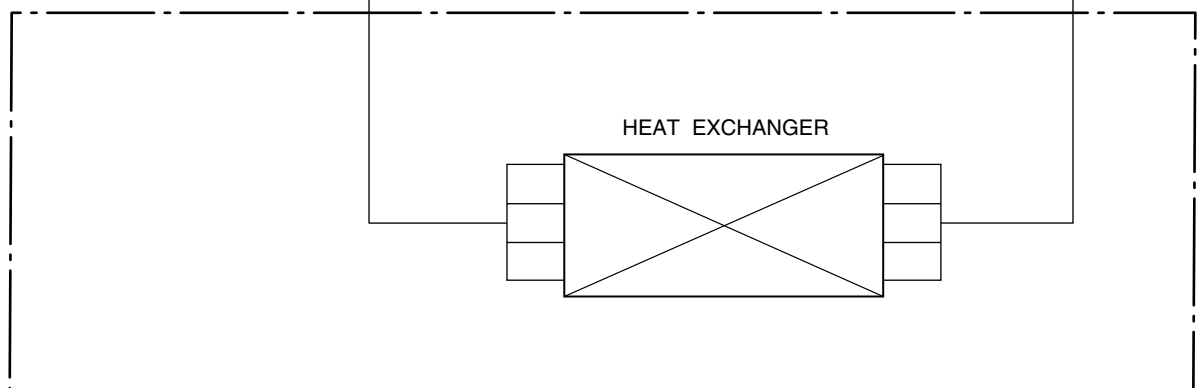
REFRIGERANT SYSTEM DIAGRAM

Models : RS-24LA / RO-24LA
RS-30LA / RO-30LA

OUTDOOR UNIT



INDOOR UNIT

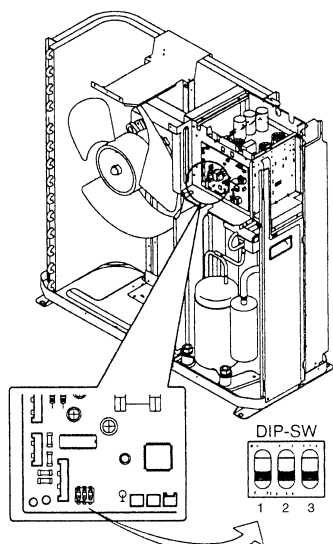


ERROR CONTENTS

The OPERATION, TIMER and SWING lamps operate as follows according to the error contents.

Error contents	Error display		
	OPERATION (RED)	TIMER (GREEN)	SWING (ORANGE)
Indoor unit circuit board error	○	○	—
Indoor unit room temperature sensor wire opened	2 times ●	○	—
Indoor unit room temperature sensor wire short circuited	2 times ●	○	○
Indoor unit piping sensor wire opened	3 times ●	○	—
Indoor unit piping sensor short circuited	3 times ●	○	○
Serial error	5 times ●	○	—
Outdoor unit circuit board error or miswiring between outdoor unit and indoor unit	5 times ●	○	○
Indoor unit fan error	6 times ●	○	—
Outdoor unit piping sensor	○	3 times ●	—
Outdoor unit outdoor temperature sensor error	○	4 times ●	—
Outdoor unit discharge temperature sensor error	○	5 times ●	—
Outdoor unit compressor temperature sensor error	○	9 times ●	—
IPM error	○	10 times ●	—
Current transformer error	○	11 times ●	—
Active filter module error	○	12 times ●	—
Compressor location error	○	13 times ●	—
Outdoor fan motor error	○	14 times ●	—

○ : Fast flashing ● : Slow flashing — : Off



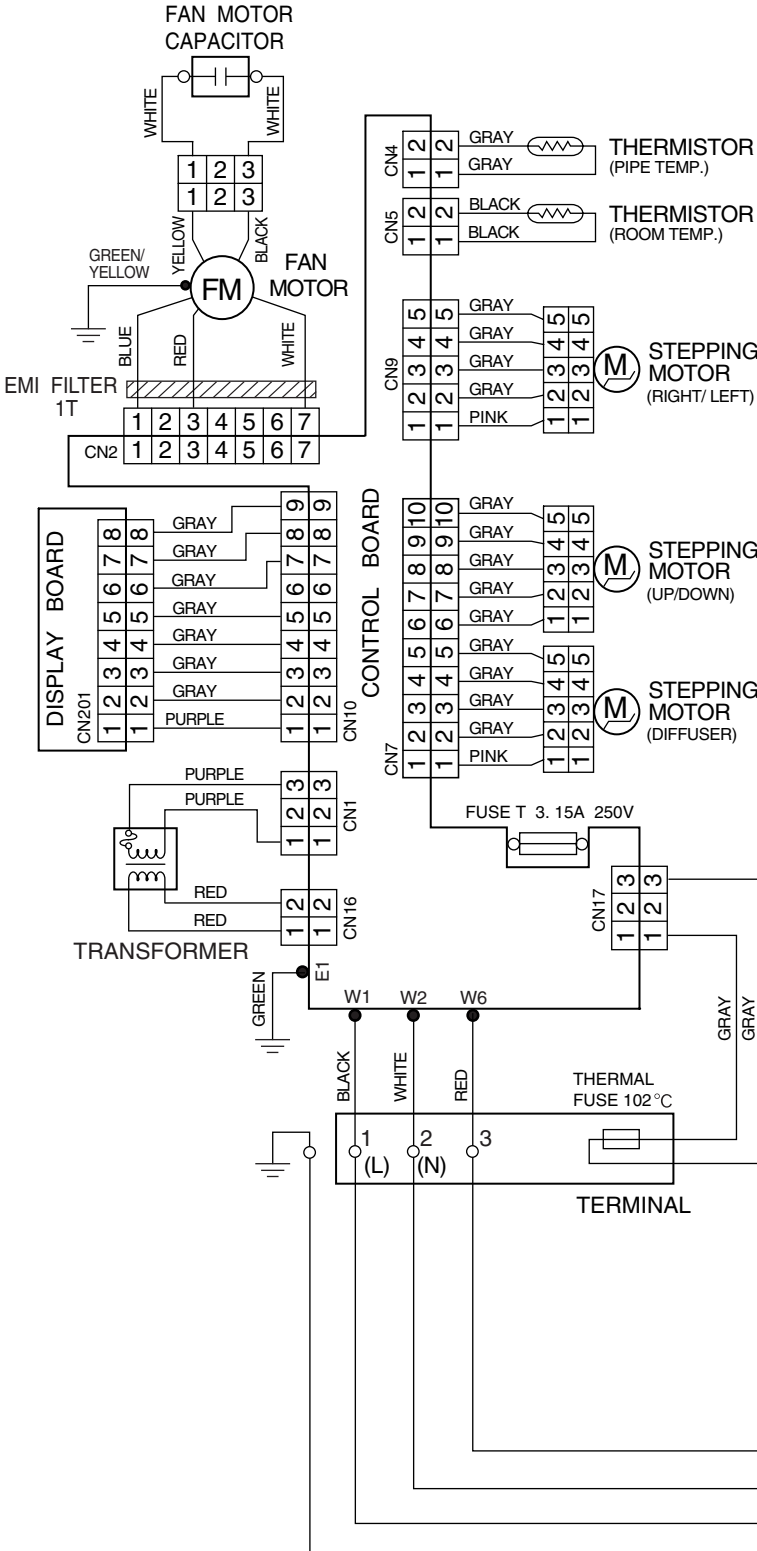
DIP switch

DIP-SW			Current (Max.)	Model
1	2	3		
OFF	OFF	OFF	16.5A	RO-30LA
ON	OFF	OFF	14.5A	RO-24LA
OFF	ON	OFF	12.0A	
ON	ON	OFF	9.5A	

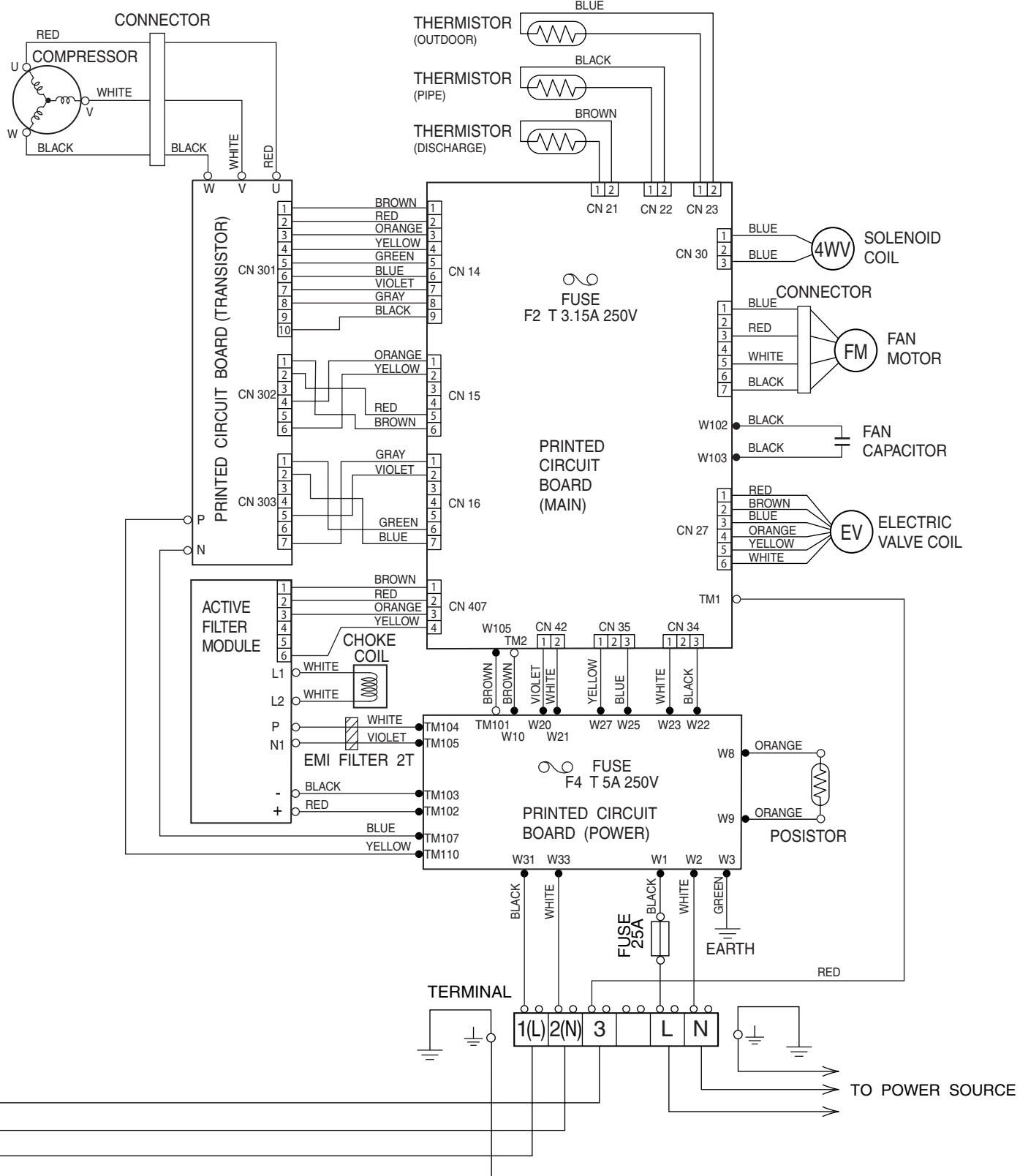
CIRCUIT DIAGRAM

**Models : RS-24LA / RO-24LA
RS-30LA / RO-30LA**

INDOOR UNIT



OUTDOOR UNIT



INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

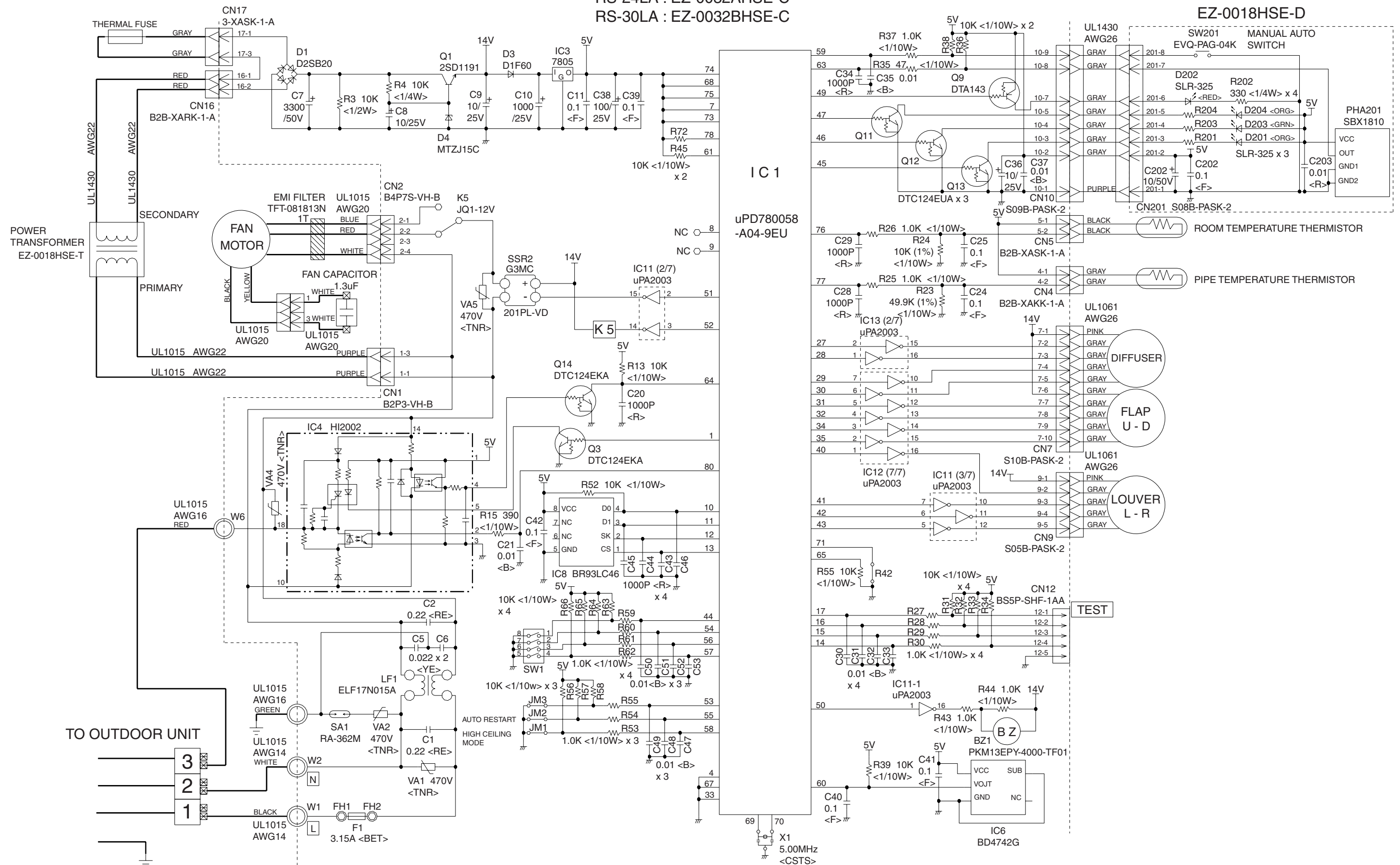
Models : RS-24LA
RS-30LA

CONTROLLER PCB ASSEMBLY (MAIN PCB)

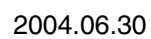
RS-24LA : EZ-0032AHSE-C

RS-30LA : EZ-0032BHSE-C

INDICATOR PCB
EZ-0018HSE-D

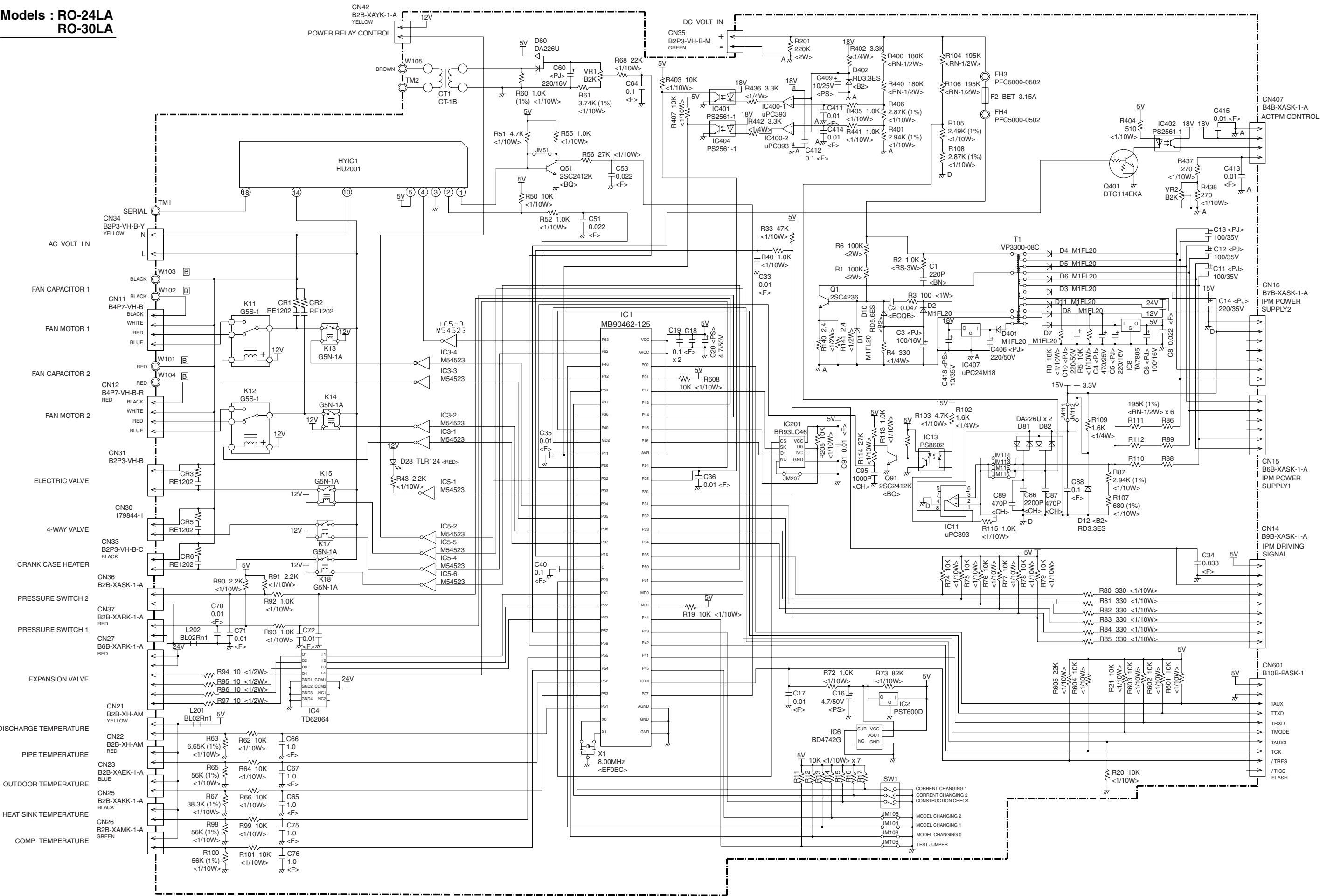


**Models : RO-24LA
RO-30LA**



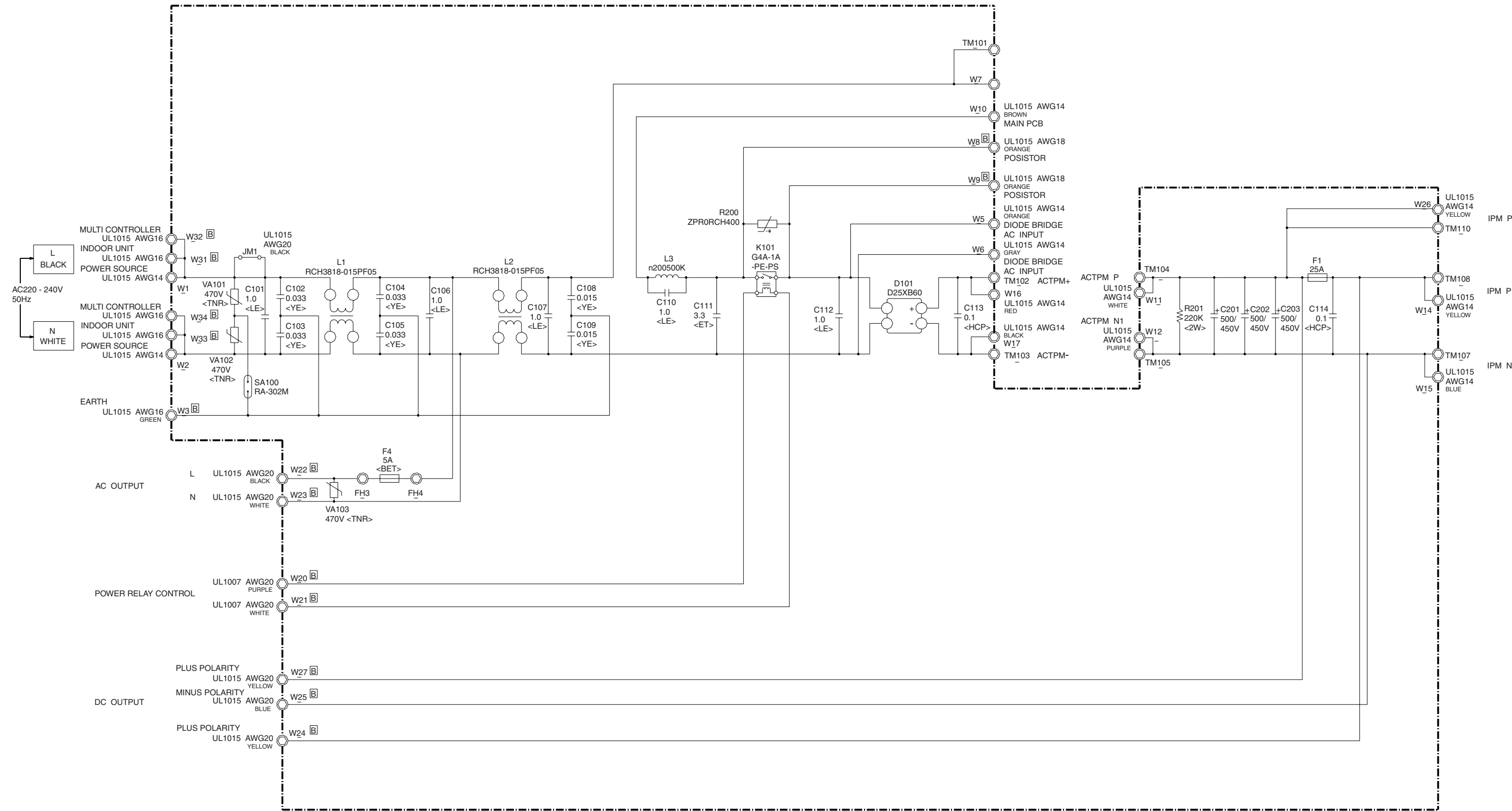
Models : RO-24LA
RO-30LA

CONTROLLER PCB ASSEMBLY
RO-24LA : EZ-003PHUE-C
RO-30LA : EZ-003RHUE-C



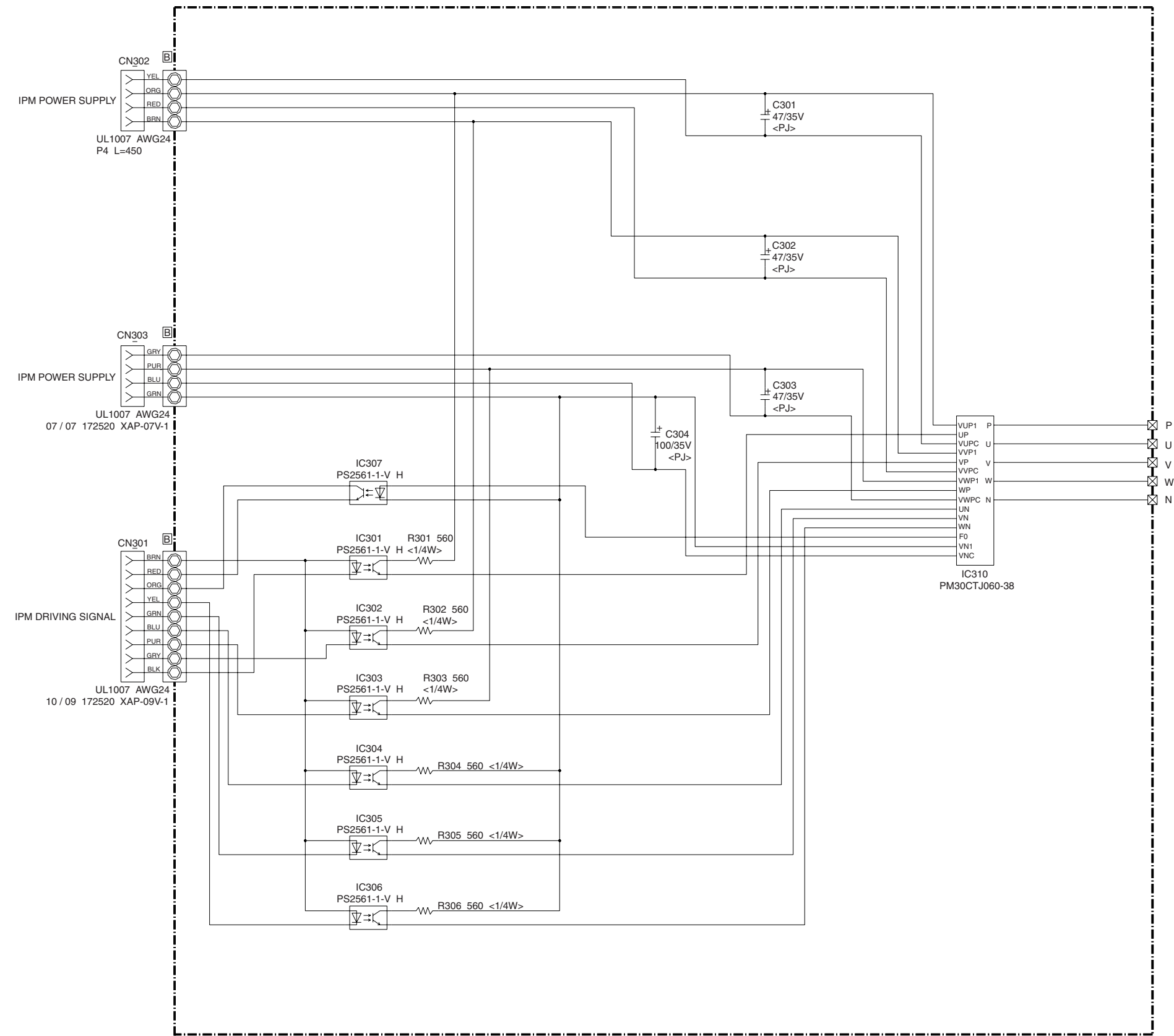
Models : RO-24LA
RO-30LA

POWER SUPPLY PCB ASSEMBLY
EZ-001AHUE-P



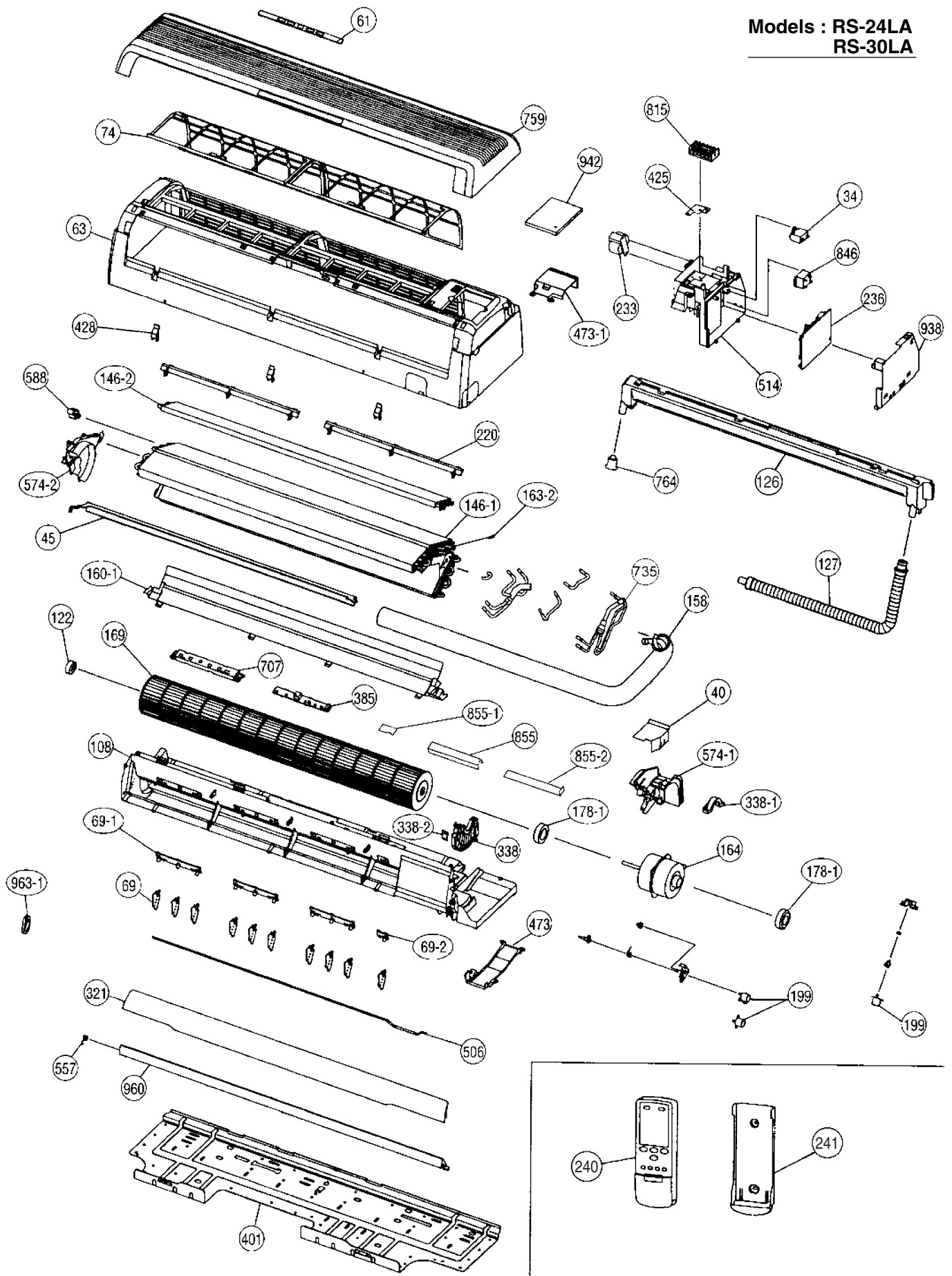
Models : RO-24LA
RO-30LA

TR PCB ASSEMBLY
EZ-001AHUE-TR

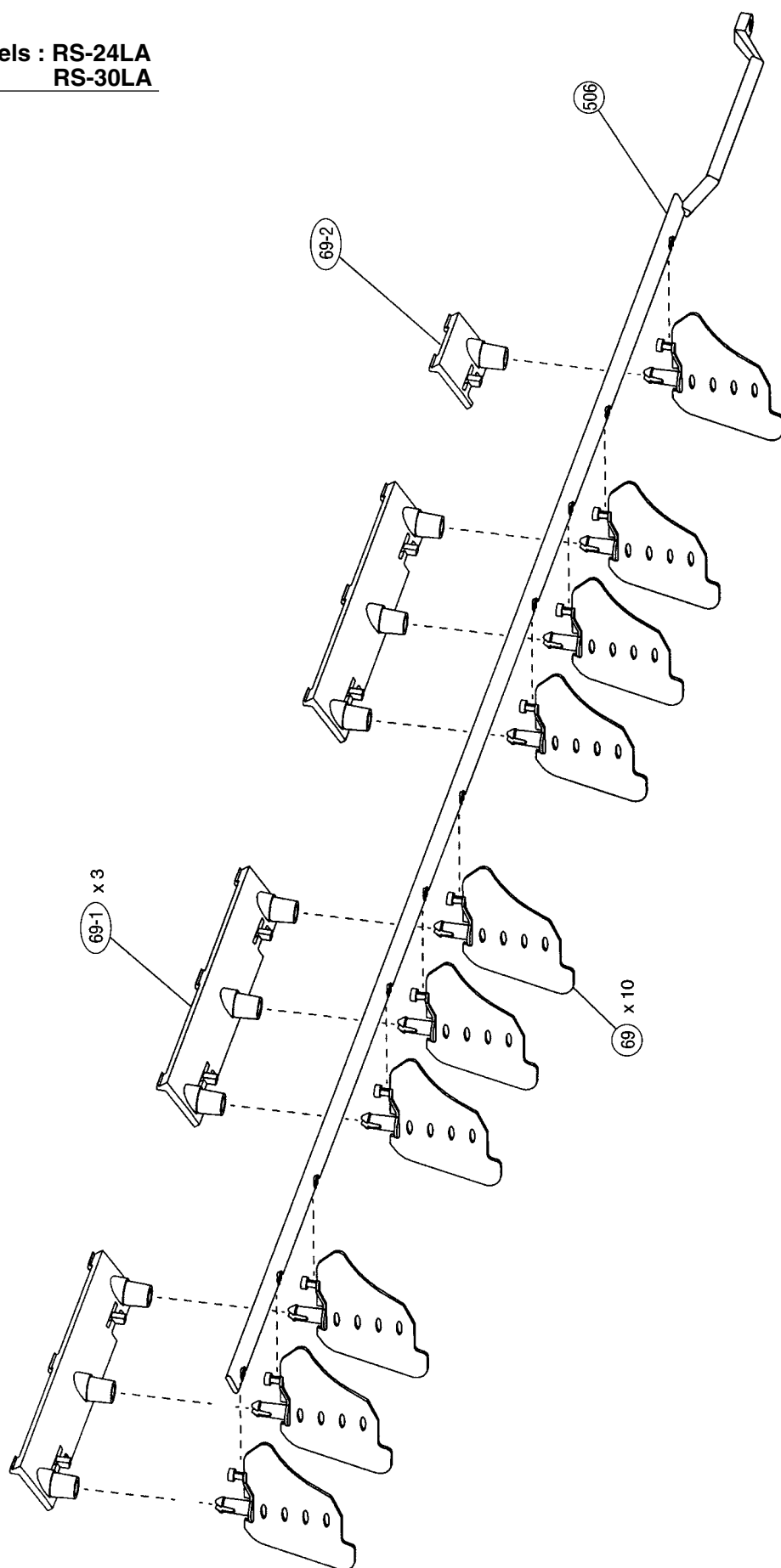


DISASSEMBLY ILLUSTRATION

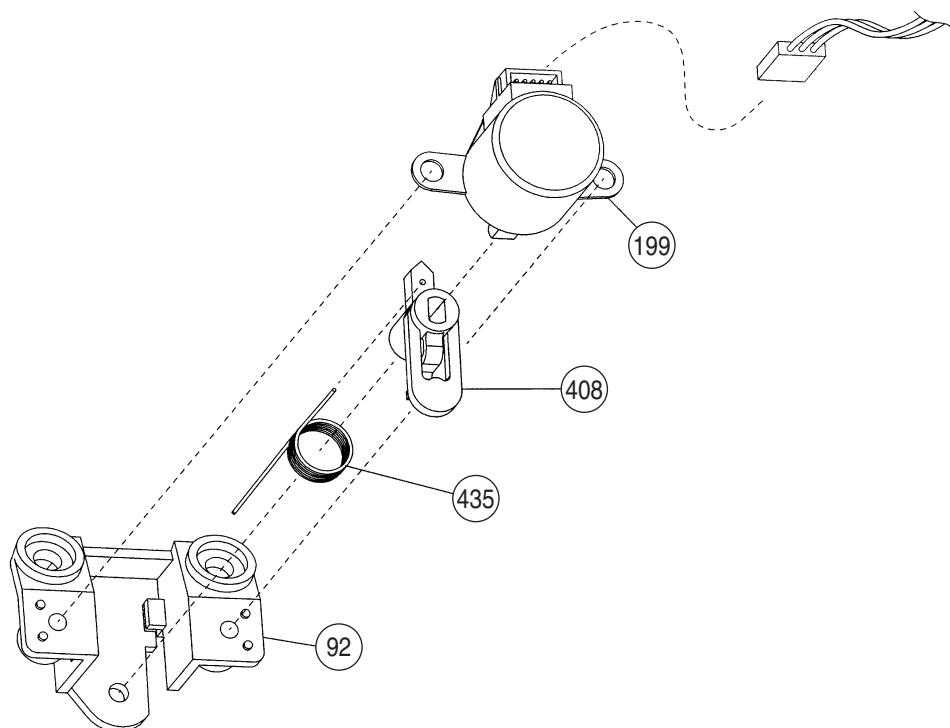
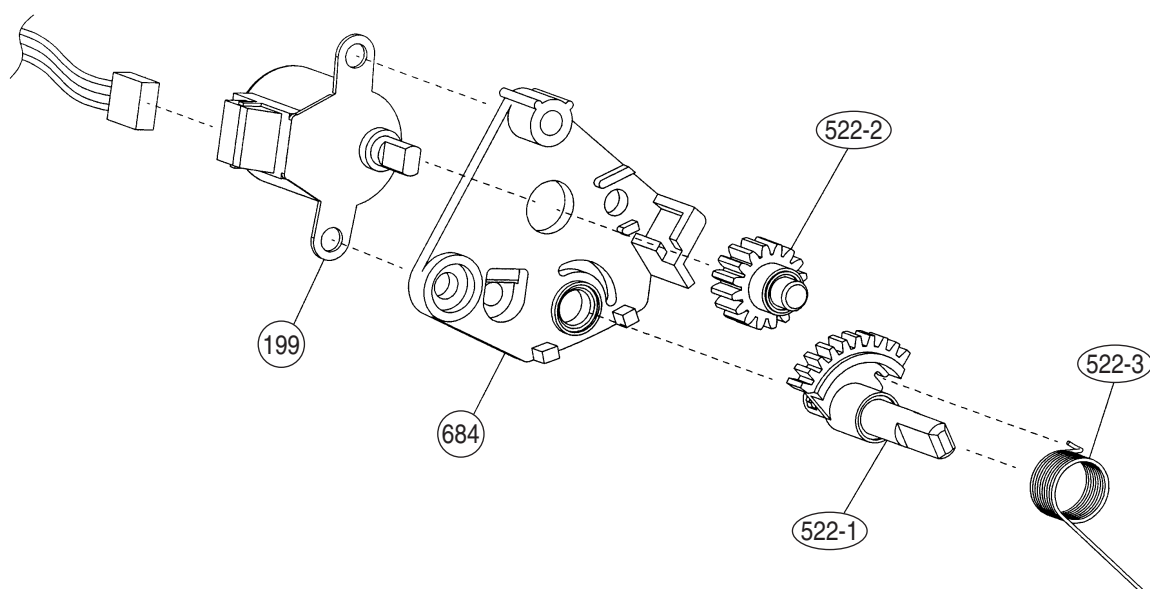
Models : RS-24LA
RS-30LA

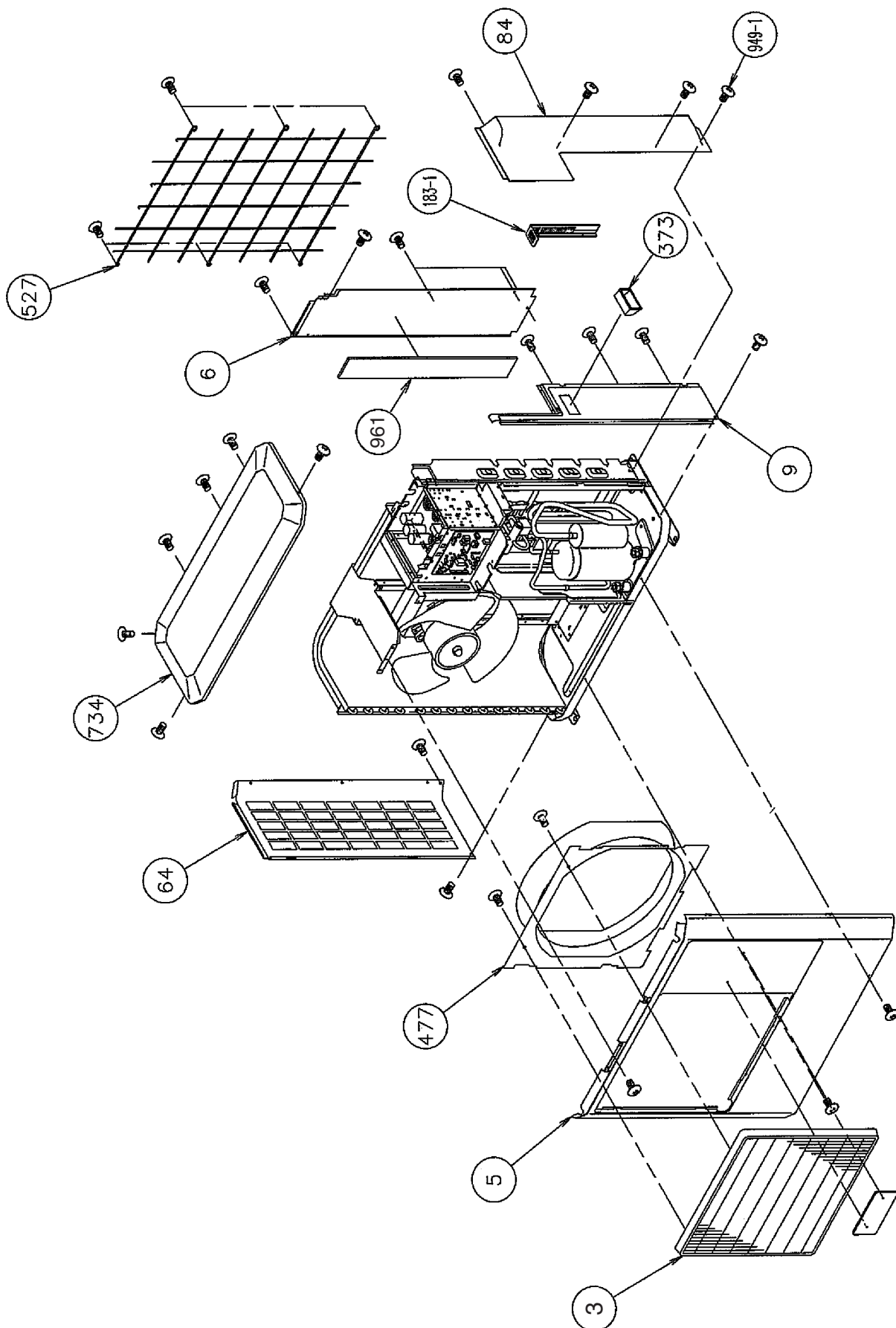


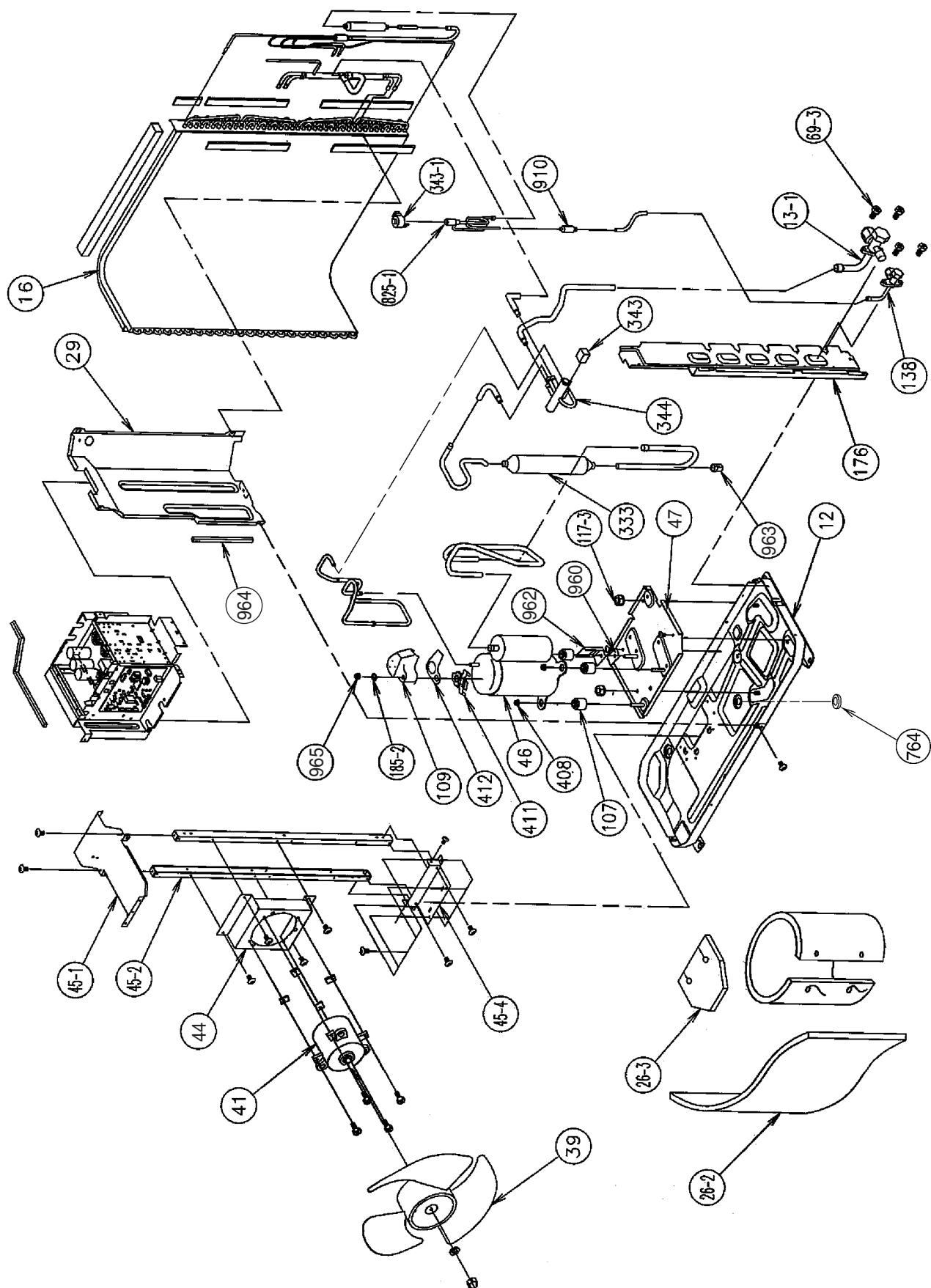
Models : RS-24LA
RS-30LA

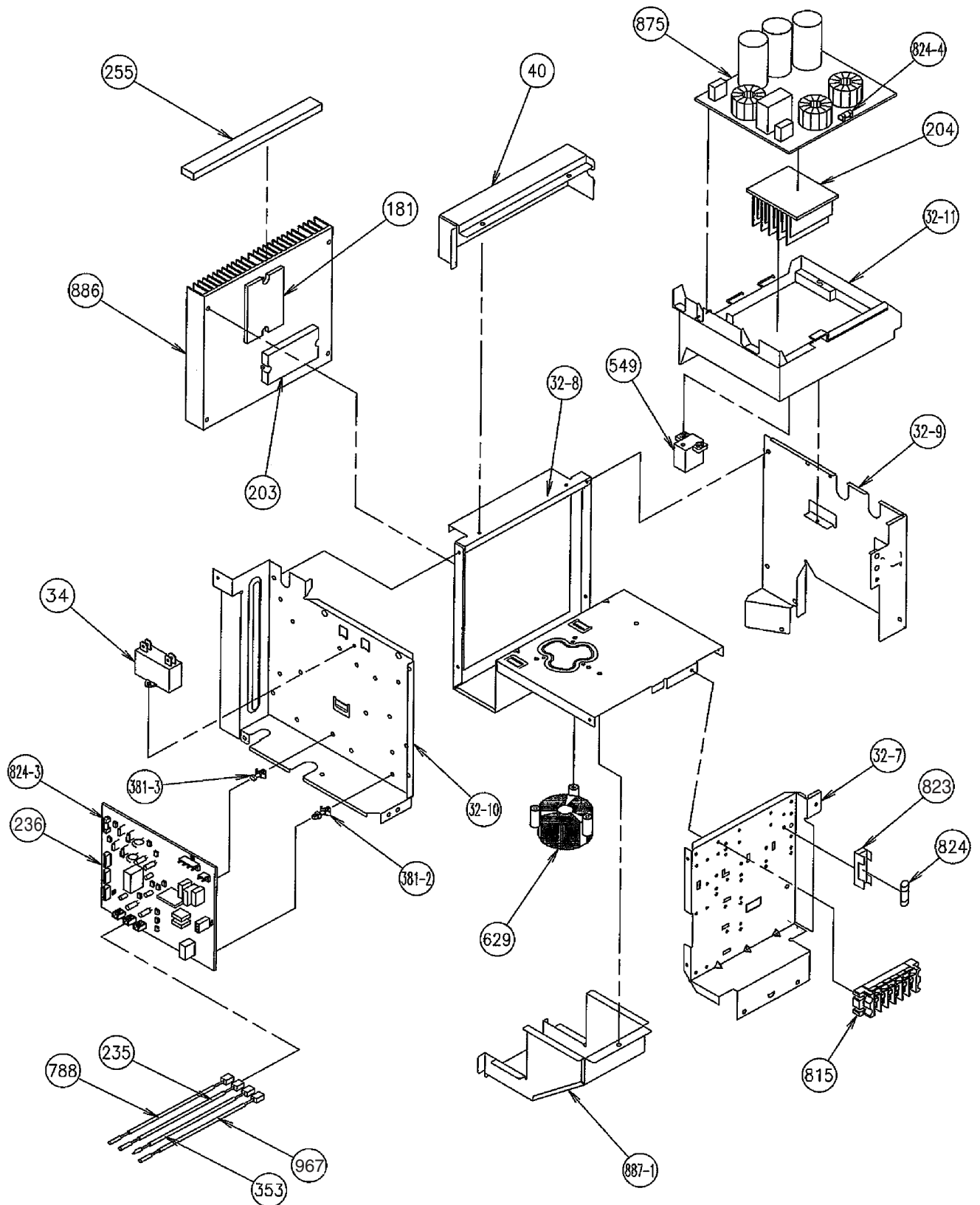


**Models : RS-24LA
RS-30LA**









PARTS LIST

INDOOR UNIT

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
		RS-24LA	RS-30LA				RS-24LA	RS-30LA	
34	Capacitor (Fan Motor)	9704305060	9704305060		338-1	Motor Holder-B	9368551001	9368551001	
40	Water Seal Plate	9369684005	9369684005		338-2	Motor Holder-C	9368769000	9368769000	
45	Bracket (Eva.)	9369372001	9369372001		385	Indicator PCB Assy	9702307011	9702307011	
61	Decoration Plate-F	9368757014	9368757014		401	Wall Hook Bracket	9368579005	9368579005	
63	Front Panel	9368540012	9368540012		408	Louver Link	9368562007	9368562007	
69	Louver	9368560010	9368560010		425	Earth Plate	9368580001	9368580001	
69-1	Louver Base-A	9368558017	9368558017		428	Screw Cover	9368576011	9368576011	
69-2	Louver Base-B	9368559014	9368559014		435	Louver Spring	9368613006	9368613006	
74	Air Filter	9368552008	9368552008		473	Pipe Holder	9368565008	9368565008	
92	Link Holder	9368563004	9368563004		473-1	Cord Holder	9368566005	9368566005	
108	Base	9369209017	9369209017		506	Louver Rod	9368561017	9368561017	
122	Bearing Assy	9368574000	9368574000		514	Control Box	9368543006	9368543006	
126	Front Drain Pan	9370932010	9370932010		522-1	Sector Gear	9368556006	9368556006	
127	Drain Hose	9367695003	9367695003		522-2	Pinion Gear	9368557003	9368557003	
146-1	Evaporator-A Assy	9371199009	9371199009		522-3	Flap Spring	9368612009	9368612009	
146-2	Evaporator-B Assy	9369373008	9369373008		557	Diffuser Spring	9368587000	9368587000	
158	Joint Pipe Assy	9370301007	9370301007		574-1	Evaporator Support-R	9368549008	9368549008	
160-1	Rear Drain Pan	9368547004	9368547004		574-2	Evaporator Support-L	9368548001	9368548001	
163-2	Thermistor Spring-A	313728262708	313728262708		588	Evaporator Holder	9368775001	9368775001	
164	Fan Motor Assy-IN	9601388012	9601388012		684	Motor Base	9368555009	9368555009	
169	Cross Flow Fan Assy	9368586003	9368586003		707	Display Cover	9368564001	9368564001	
178-1	Rubber (Motor)	9368575007	9368575007		735	Distributor Assy	9373249016	9373249016	
199	Step Motor	9900020019	9900020019		759	Intake Grill	9368541057	9368541057	
220	Water Plate	9368569006	9368569006		764	Drain Cap	9367677009	9367677009	
233	Power Transformer	9900069018	9900069018		815	Terminal	9306489106	9306489106	
236	Controller PCB Assy	9704714107 (EZ-0032AHSE-C)	9704714114 (EZ-0032BHSE-C)		846	Relay G5NB-1A	9900007010	9900007010	
240	Remote Control Unit	9371190112	9371190112		855	Cover Display	9369264016	9369264016	
241	Remocon Holder	9305642014	9305642014		855-1	Cover Display-B	9369594014	9369594014	
321	Flap	9368544010	9368544010		855-2	Cover Display-C	9369683015	9369683015	
338	Motor Holder-A	9368550004	9368550004		938	Control Box Cover-R	9369631009	9369631009	
					942	Control Box Cover	9368611002	9368611002	
					960	Diffuser Assy	9368545017	9368545017	
					963-1	Fan Guard Holder	9368554002	9368554002	

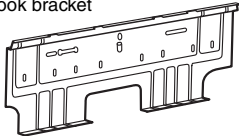
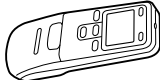
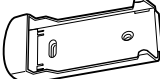
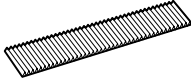
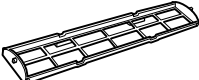
OUTDOOR UNIT

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
		RO-24LA	RO-30LA				RO-24LA	RO-30LA	
3	Fan Guard	9371187013	9371187013		236	Controller PCB Assy	9704719072	9704719089	
5	Cabinet-A, Painted	9359797029	9359797029				(EZ-003PHUE-C)	(EZ-003RHUE-C)	
6	Cabinet-C, Painted	9363798029	9363798029		255	Insulation (Heat Sink)	9370844009	9370844009	
9	Cabinet-B	9363797022	9363797022		333	Accumulator	9351997014	9351997014	
12	Base Assy, Painted	9364145020	9364145020		343	Solenoid	9900165024	9900165024	
13-1	3-Way Valve Assy	9372205075	9372205075		343-1	Coil (EXP Valve)	9970006012	9970006012	
16	Condenser Assy	9373254010	9373254010		344	4-way Valve	9900163013	9900163013	
17	Condenser Sub Assy	9360274182	9360274182		353	Thermistor Assy-Out	9703516054	9703516054	
26-2	Compressor Cover-B	9372067017	9372067017		373	Grip	9352157004	9352157004	
26-3	Compressor Cover-C	9370186000	9370186000		381-2	Locking Spacer	0600035020	0600035020	
29	Separate Wall-B	9369625015	9369625015		381-3	Locking Spacer	0600118051	0600118051	
32-7	Control Box Metal-G	9369616006	9369616006		408	Special Nut M8	9355091008	9355091008	
32-8	Control Box Metal-H	9369617003	9369617003		411	Holder	9372066010	9372066010	
32-9	Control Box Metal-I	9369618000	9369618000		412	Terminal Packing	9370290004	9370290004	
32-10	Control Box Metal-J	9369619007	9369619007		477	Bell-Mouth	9359809012	9359809012	
32-11	Control Box-K	9369620010	9369620010		527	Protection Net	9359844013	9359844013	
34	Capacitor (Fan Motor)	9704305015	9704305015		549	PTC Thermistor	9704265012	9704265012	
39	Propeller Fan	9359837015	9359837015		629	Coil, Choke	9703458019	9703458019	
40	Air seal Plate	9369623004	9369623004		734	Cabinet Top Plate	9359799023	9359799023	
41	Fan Motor Assy Out	9601754015	9601754015		764	Drain Cap	313166024302	313166024302	
44	Motor Bracket CTR	9373076018	9373076018		788	Thermistor (Disc Temp.)	9704219077	9704219077	
45-1	Motor Bracket-A	9369627002	9369627002		815	Terminal-6P	9358660089	9358660089	
45-2	Motor Bracket-B	9369628009	9369628009		823	Fuse Holder	0500158072	0500158072	
45-4	Motor Bracket-D	9369630002	9369630002		824	Fuse	0600086039	0600086039	
46	Compressor Assy	9373531012	9373531012		824-3	Fuse	0600222512	0600222512	
47	Comp Plate Assy	9363800005	9363800005		824-4	Fuse	0600222529	0600222529	
64	Cabinet Left.	9359840022	9359840022		825-1	EXP Valve Assy	9373251019	9373251019	
69-3	Bolt, Hex.Socket	301210060360	301210060360		875	Filter PCB Assy	9704722010	9704722010	
84	Valve Cover	9363802009	9363802009		886	Heat Sink-A	9369792007	9369792007	
107	Rubber Seat-A	9358080009	9358080009		887-1	Reactor Cover	9369622007	9369622007	
109	Terminal Cover	9370289008	9370289008		910	Strainer-B	9365099018	9365099018	
117-3	Hex. Nut w/SP. Washer	301721180114	301721180114		949-1	Screw , Painted	9305648009	9305648009	
138	2-Way Valve Assy	9372204061	9372204061		960	Accum Support Sheet	9354022010	9354022010	
176	Valve Fixing Plate-A	9363799064	9363799064		961	Noise Ins A	9370181005	9370181005	
181	ACTPM	9703457012	9703457012		962	Accum SPT AS	313986353804	313986353804	
183-1	Water Seal Plate-B	9369626012	9369626012		963	Acum HLD Rub	9354022010	9354022010	
185-2	Rubber Washer	9358078006	9358078006		964	Seperate Wall Ins B	9360074201	9360074201	
203	TR PCB Assy	9704009029	9704009029		965	Frange nut	9358079003	9358079003	
204	Heat Sink-B	9369793004	9369793004		967	Comp Temp Thermo.	9900156015	9900156015	
235	Thermo.(Heat Exchi)	9704220059	9704220059						

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Part No.
Wall hook bracket 	9368579005
Remote control unit 	9371190112
Battery (penlight) 	0600185534
Remote control unit holder 	9305642014
Tapping screw (big) (ø4 x 20) 	301141164200
Tapping screw (big) (ø4 x 12) 	301171164129
Tapping screw (small) (ø3 x 12) 	301141533125
Air cleaning filter 	DEODORANT FILTER 9370525007 ELECTRIC FILTER 9370528015
Air cleaning filter frame 	9368568009

OUTDOOR UNIT ACCESSORIES

Name and Shape	Part No.
Hexagon wrench 	9351228019
Cable clip 	313739340109
Tapping screw 	301463040100
Drain pipe 	9303029015
Drain cap 	313166024302
Putty 	303020200114

Thermistor resistance values <Indoor unit side>

1) Room temperature thermistor (TH_{IA})

Room temperature (°C)	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	27.5	30
Resistance value (kΩ)	33.6	29.5	25.9	22.8	20.2	17.9	15.8	14.1	12.5	11.2	10.0	9.0	8.0

Room temperature (°C)	32.5	35	37.5	40	42.5	45	47.5	50
Resistance value (kΩ)	7.2	6.5	5.9	5.3	4.8	4.3	3.9	3.6

2) Indoor heat exchanger temperature thermistor (TH_{HM}, TH_{HI})

Heat exchanger temperature (°C)	0	2.5	5	7.5	10	12.5	15	17.5	20	22.5	25	27.5	30
Resistance value (kΩ)	176.0	153.5	134.2	117.6	103.3	91.0	80.3	71.0	62.9	55.9	49.7	44.3	39.6

Heat exchanger temperature (°C)	32.5	35	37.5	40	42.5	45	47.5	50	52.5	55	57.5	60
Resistance value (kΩ)	35.4	31.7	28.5	25.6	23.1	20.8	18.8	17.1	15.5	14.1	12.8	11.6

