

SERVICE MANUAL



Models

Indoor unit

RC-12LA
RC-14LA
RC-18LA

Outdoor unit

ROM-30LA4

CONTENTS

SPECIFICATIONS	1
OUTLINE AND DIMENSIONS	3
REFRIGERANT SYSTEM DIAGRAM	5
CIRCUIT DIAGRAM	6
INDOOR PCB CIRCUIT DIAGRAM	8
OUTDOOR PCB CIRCUIT DIAGRAM	9
ERROR CONTENTS	12
DISASSEMBLY ILLUSTRATION	13
PARTS LIST	22

SPECIFICATIONS

INDOOR UNIT

TYPE	COOL & HEAT	
MODEL NAME	RC-12LA , RC-14LA	RC-18LA

ELECTRICAL DATA

POWER SOURCE	(V)	230	
FREQUENCY	(Hz)	50	
AIR CIRCULATION-Hi	(m³/hr)	550	600

FAN MOTOR

POWER SOURCE		(V)	230	
INDOOR UNIT	DISCRIMINATION		MFA-14GTCT	MFA-18GTBT
	HI-SPEED	(r.p.m.)	730	800
	MED-SPEED	(r.p.m.)	670	700
	LO-SPEED	(r.p.m.)	590	600

DIMENSIONS

INDOOR UNIT	H x W x D	(mm)	235 x 580 x 580 +70
GRILLE	H x W x D	(mm)	35 x 650 x 650

WEIGHT

INDOOR UNIT	NET / GROSS	(kg)	18 / 23
GRILLE	NET / GROSS	(kg)	2.2 / 4.3

OUTDOOR UNIT

TYPE	Colling & Heating
MODEL NAME	ROM-30LA4
COOLING CAPACITY (kW)	8.0
HEATING CAPACITY (kW)	9.6

ELECTRICAL SPECIFICATIONS

POWER SUPPLY (V)		(220) - 230 - (240)
FREQUENCY (Hz)		50
RUNNING CURRENT (A)	COOLIING	9.7
	HEATING	10.5
INPUT (kW)	COOLIING	2.22
	HEATING	2.40
EER (kW/kW)	COOLIING	3.60
	HEATING	4.00
AIR CIRCULATION - Hi (m³ /hr)		3,300

COMPRESSOR

TYPE	Hermetic type, Inverter, 4 poles, 3-phase, DC motor, Twin Rotary
DISCRIMINATION	TNB220FPBM9
REFRIGERANT R410 (g)	3,300

FAN MOTOR

DISCRIMINATION	MFE-60PO
HI-SPEED (COOL / HEAT) (r.p.m.)	820 / 780

DIMENSIONS H x W x D (mm)	830 x 900 x 330
WEIGHT NET / GROSS (kg)	68 / 78

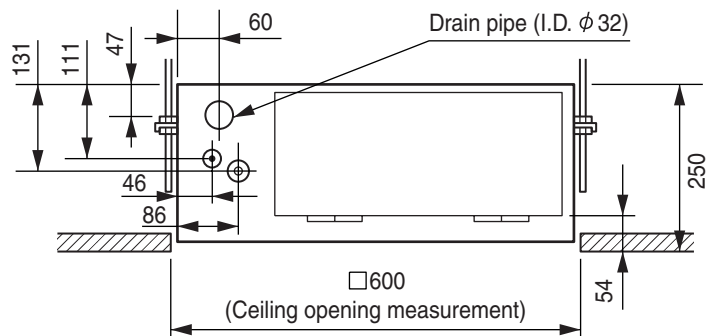
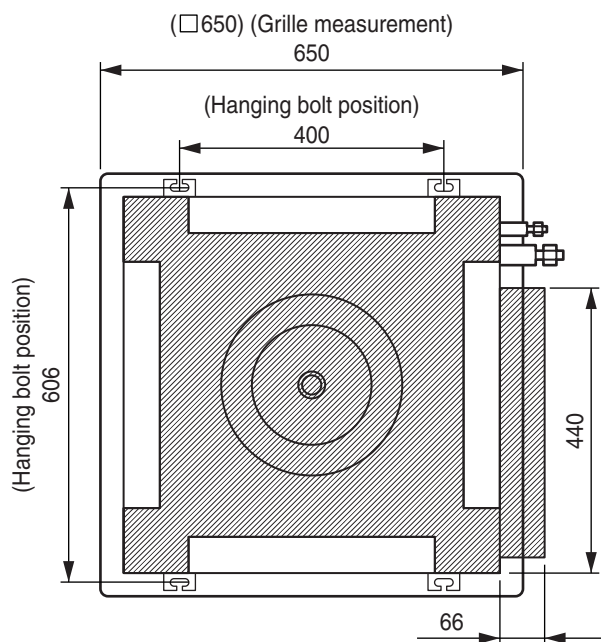
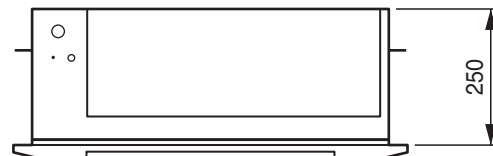
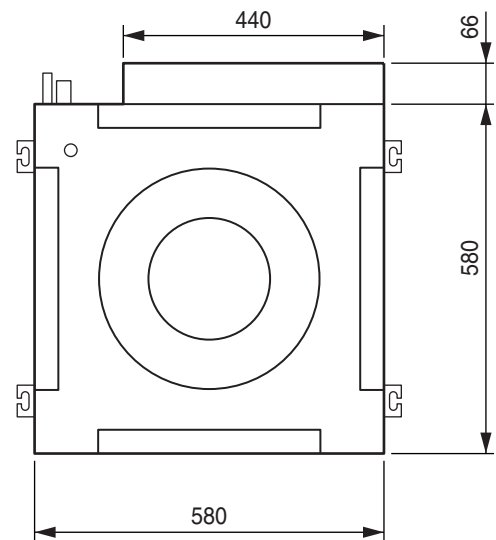
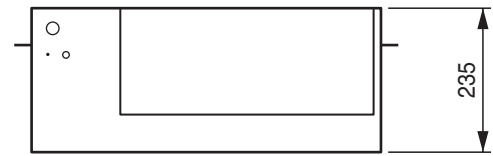
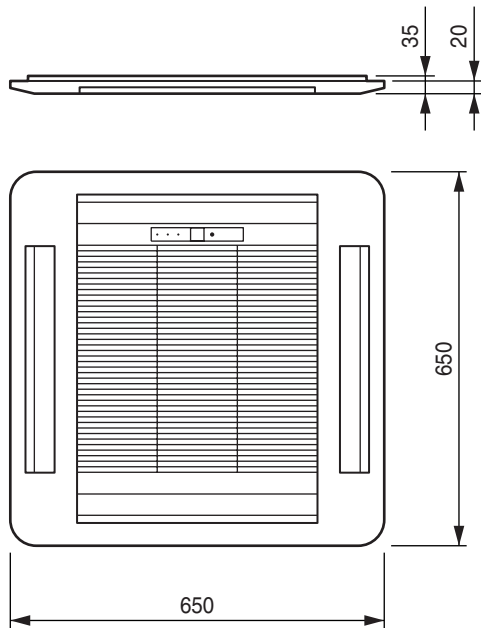
REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	Total Pipe Length 50.0 m	3,300 g
	60.0 m	3,550 g
	70.0 m	3,800 g
ADDITIONAL CHARGE		25 g / m
CHARGELESS		50 m
MAX PIPE LENGTH (each unit)		25 m
MAX PIPE LENGTH (total)		70 m
MAX ELEVATION (between indoor units)		10 m
MAX ELEVATION (between indoor and outdoor units)		10 m
MIN. PIPE LENGTH (each unit)		5 m

OUTLINE AND DIMENSIONS

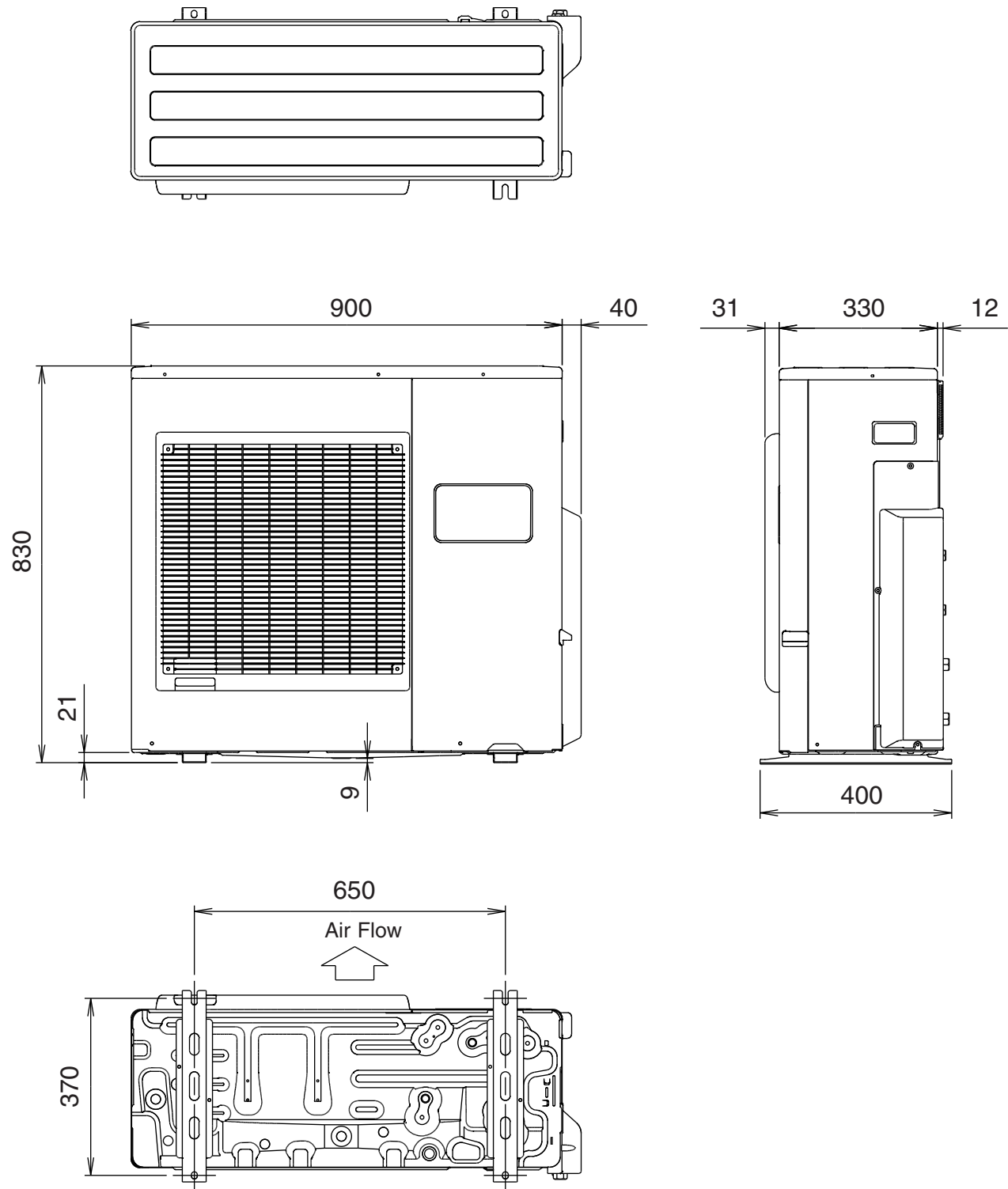
INDOOR UNIT

(unit : mm)



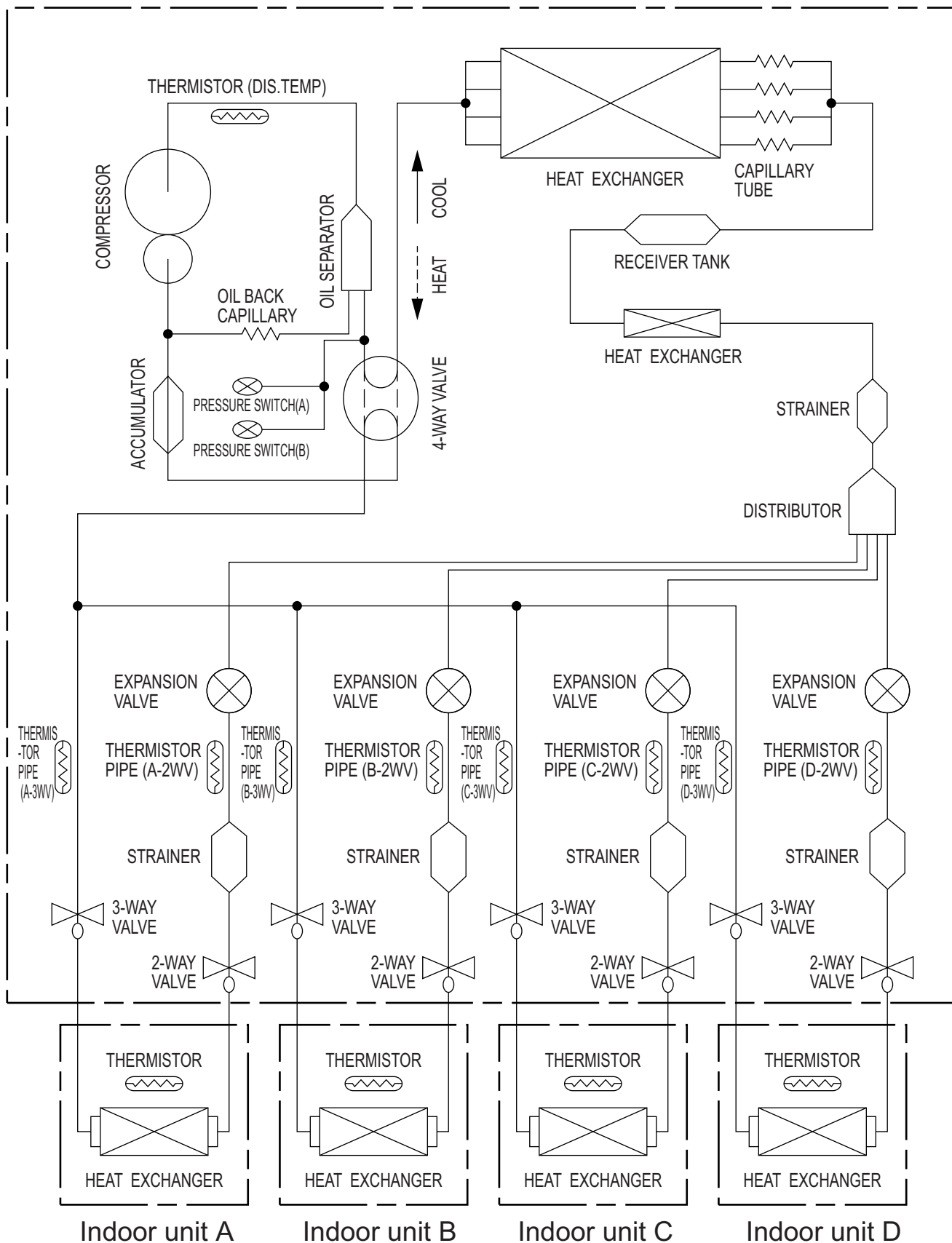
OUTDOOR UNIT (Unit : mm)

Model : ROM-30LA4



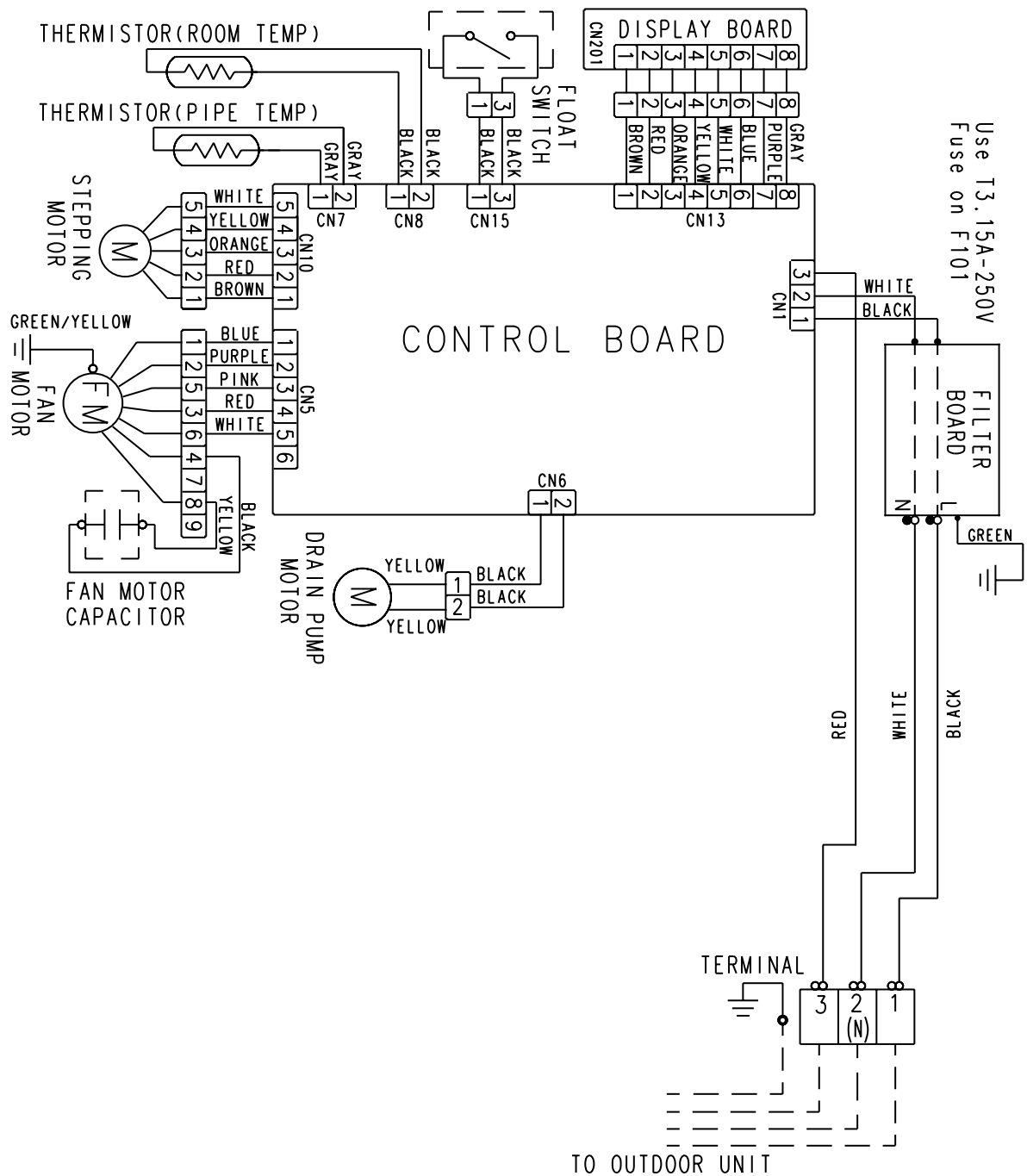
REFRIGERANT SYSTEM DIAGRAM

Outdoor unit

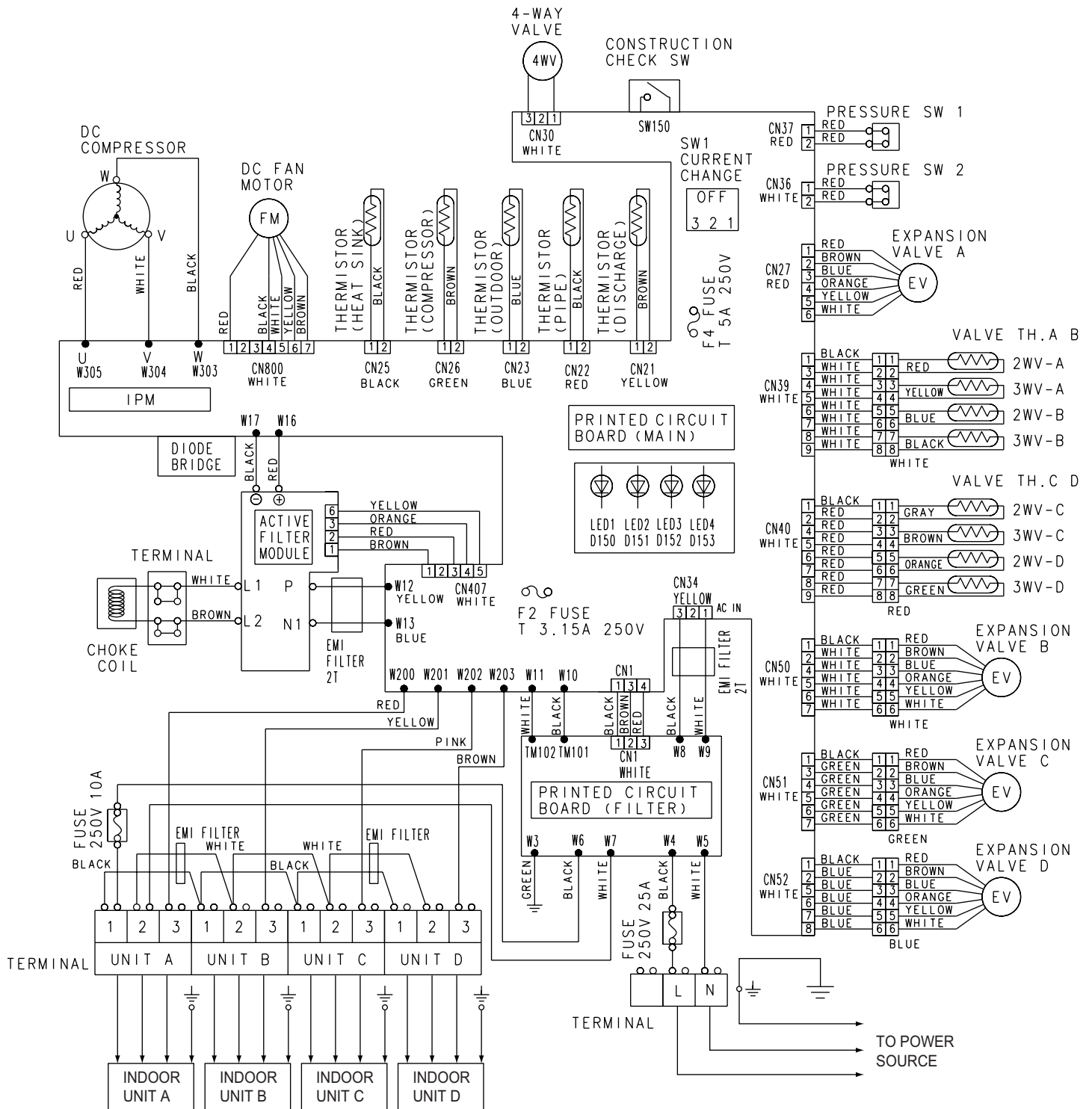


CIRCUIT DIAGRAM

INDOOR UNITS



Model : ROM-30LA4



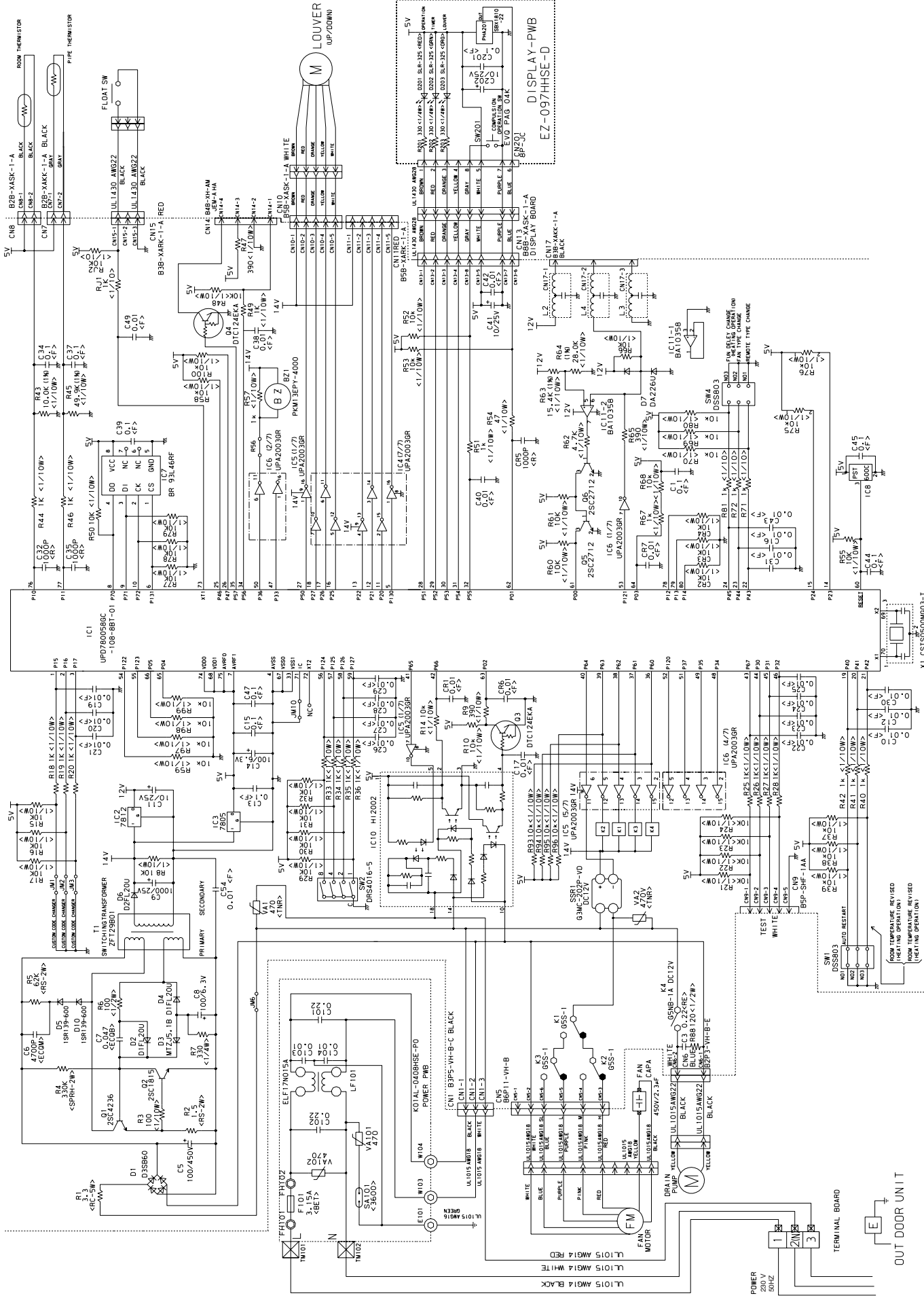
INDOOR PCB CIRCUIT DIAGRAM

CONTROLLER PCB ASSY (MAIN PCB)

RC-12LA : K01AL-040THSE-C1

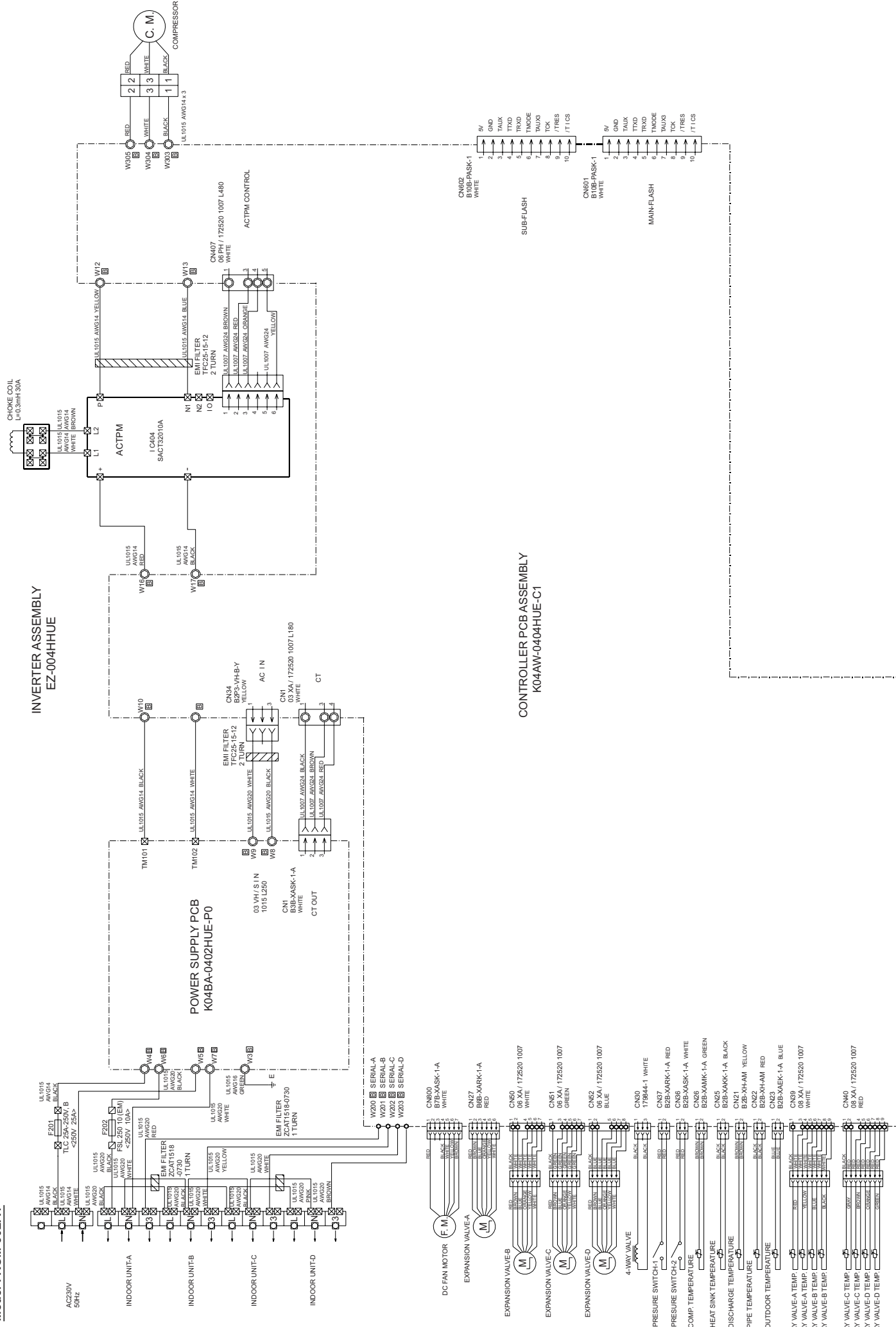
RC-14LA : K01AL-040WHSE-C1

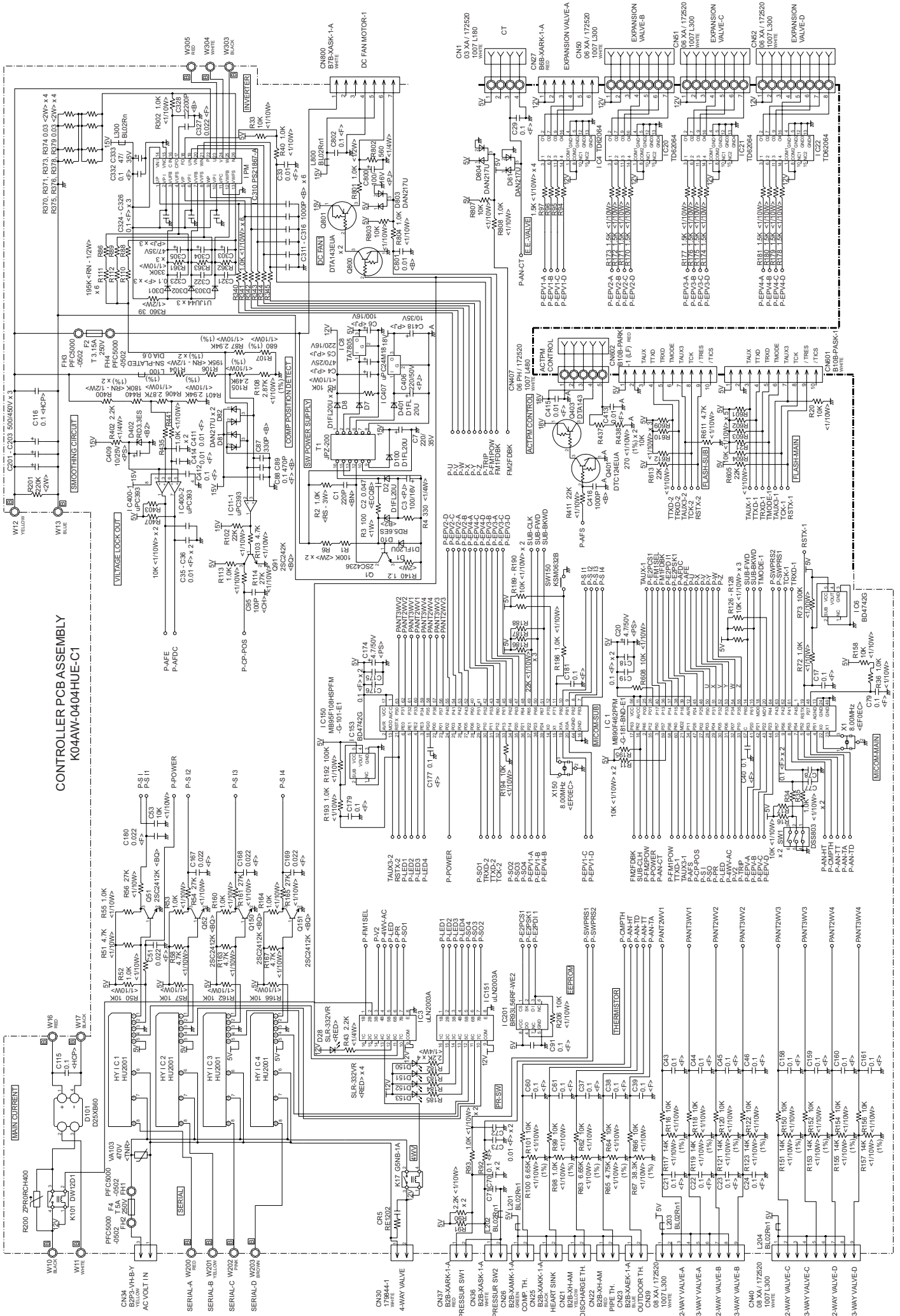
RC-18LA : K01AL-040EHSE-C1



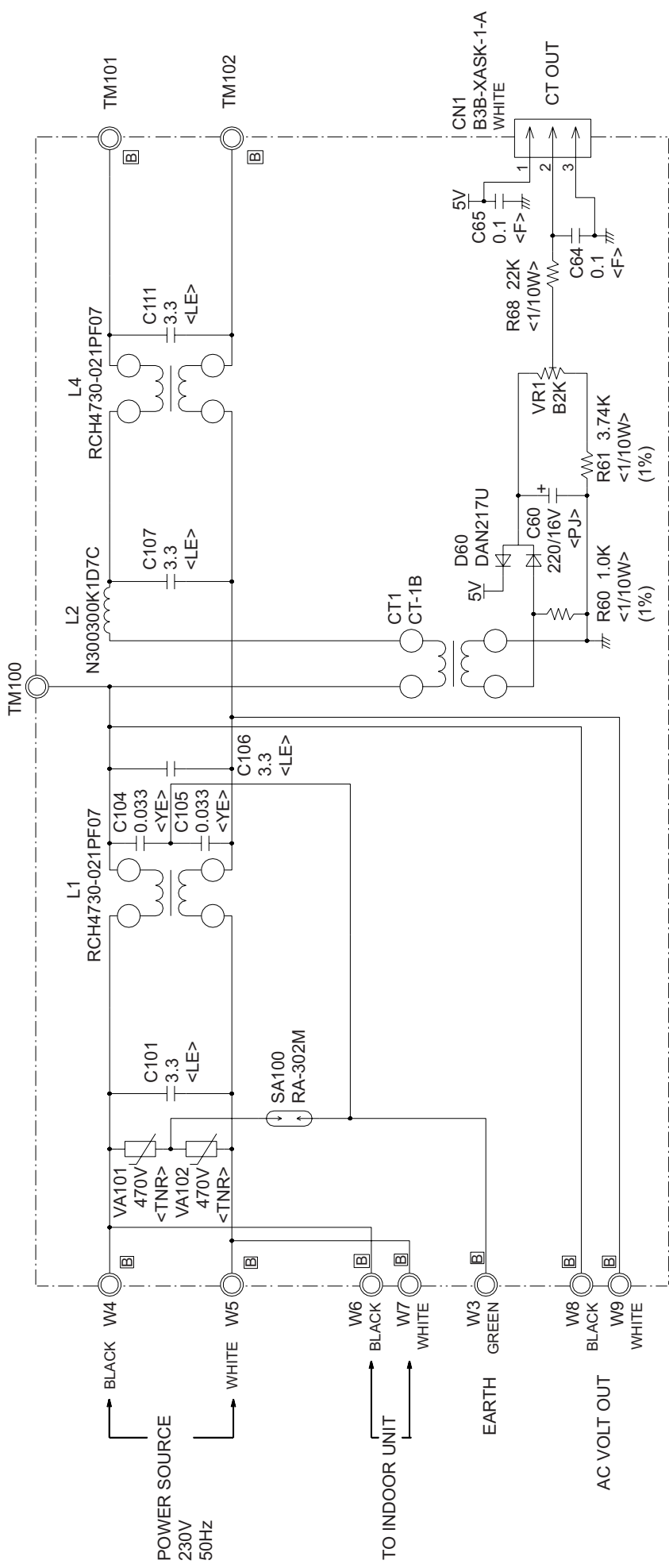
OUTDOOR PCB CIRCUIT DIAGRAM

Model : ROM-30LA4



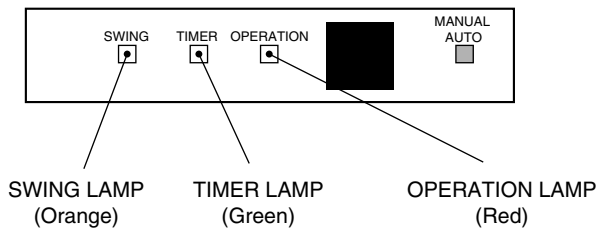


POWER SUPPLY PCB ASSEMBLY
K04BA-0400HUE-P0



ERROR CONTENTS

Operation can be checked by lighting and flashing of the grille display section OPERATION and TIMER lamps.
Perform judgment in accordance with the following.



TEST RUNNING

When the air conditioner is run by pressing the remote control unit test run button, the OPERATION and TIMER lamps flash slowly at the same time.

CHECK ITEMS

1. INDOOR UNIT

- (1) Is operation of each button on the remote control unit normal?
- (2) Does each lamp light normally?
- (3) Do not air flow direction louvers operate normally?
- (4) Is the drain normal?
- (5) Is there any abnormal noise and vibration during operation?

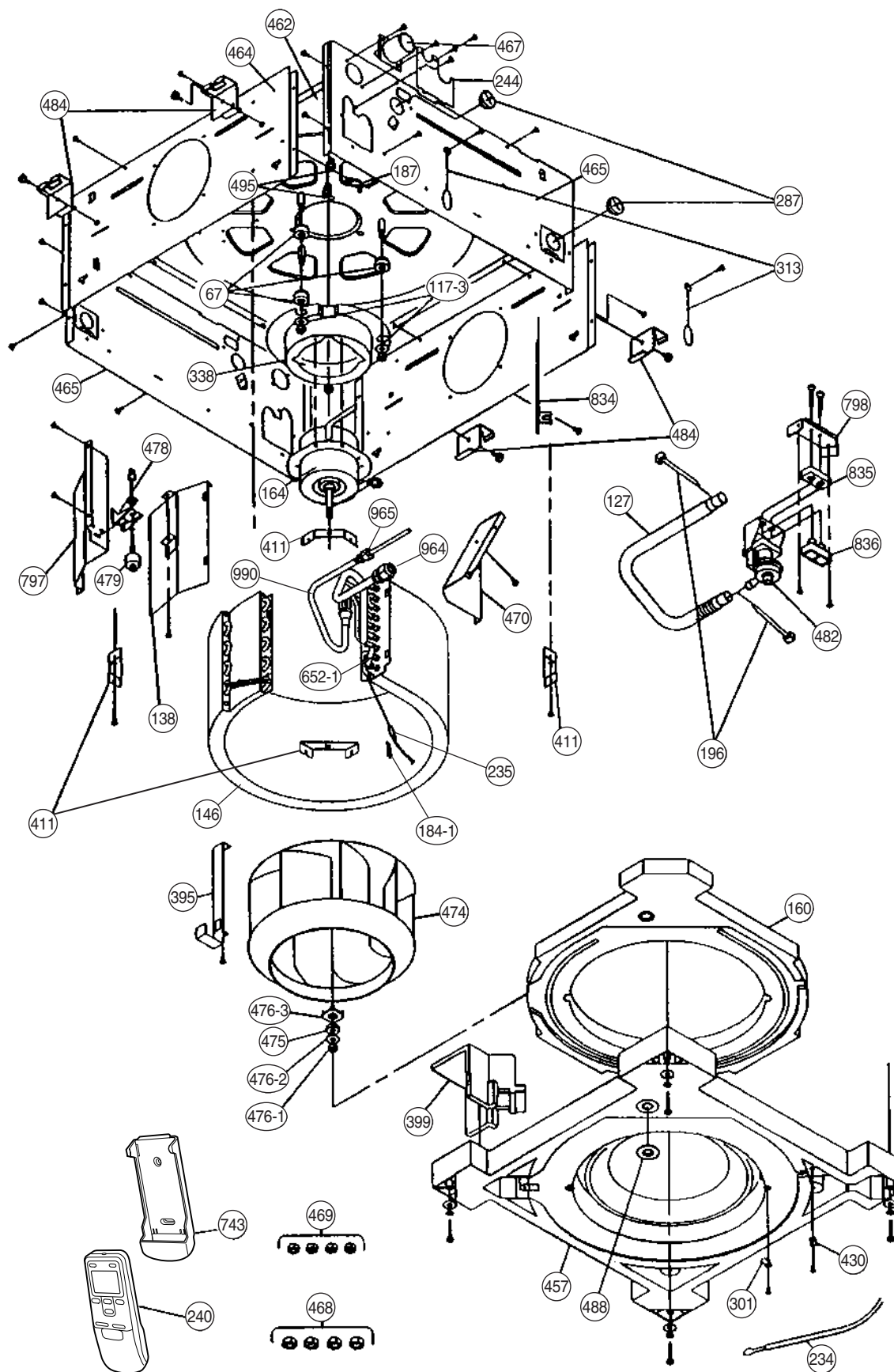
INDOOR UNIT

Error display			Error contents
OPERATION lamp	TIMER lamp	SWING lamp	
Blinks	Blinks	Goes off	Indoor unit Model information abnormal (permanent type)
Pulses 4 times	Blinks	Goes off	Indoor unit Drain abnormal (permanent type)
Pulses 6 times	Blinks	Goes off	Indoor fan abnormal
Pulses 2 times	Blinks	Goes off	Room air temperature thermistor open circuit
		Blinks	Room air temperature thermistor short circuit
Pulses 3 times	Blinks	Goes off	Indoor unit Piping thermistor open circuit
		Blinks	Indoor unit Piping thermistor short circuit
Pulses 5 times	Blinks	Goes off	Outdoor unit circuit board error or miswiring between outdoor unit and indoor unit
Blinks	Pulses 5 times	Goes off	Outdoor unit discharge temperature sensor error
Blinks	Pulses 3 times	Goes off	Outdoor unit piping sensor error
Blinks	Pulses 4 times	Goes off	Outdoor unit outdoor temperature sensor error

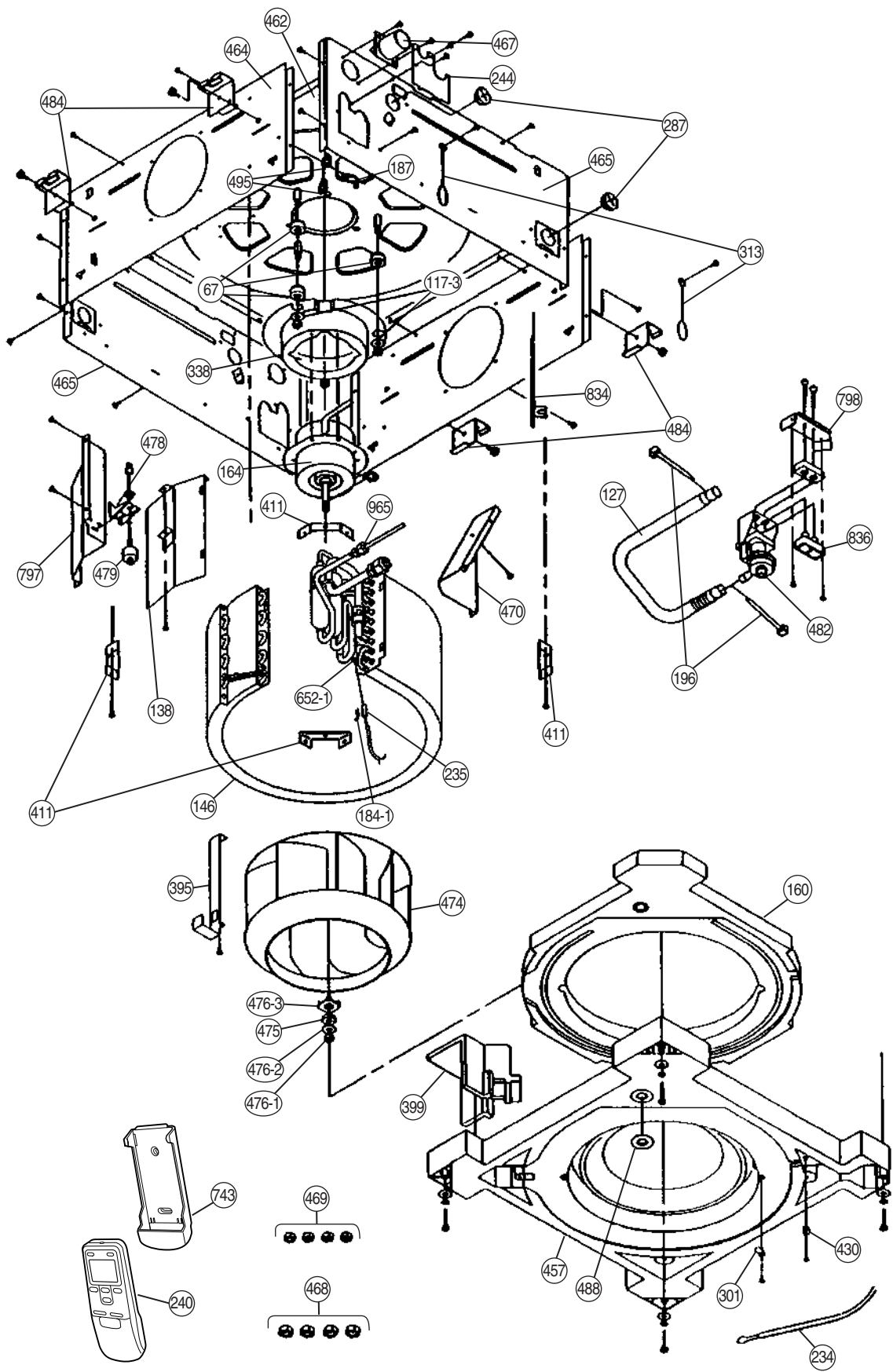
DISASSEMBLY ILLUSTRATION

INDOOR UNITS

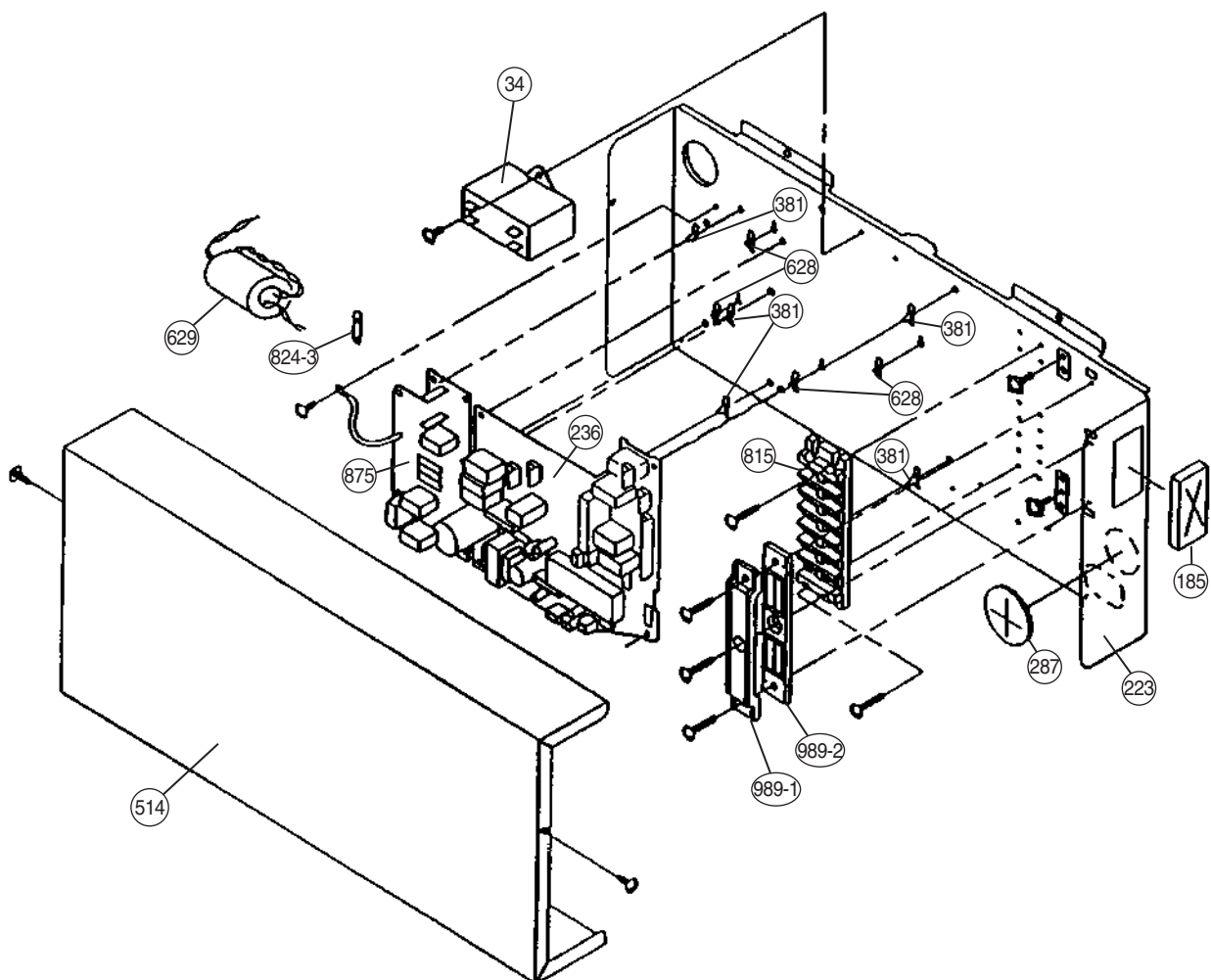
Models : RC-12LA, RC-14LA



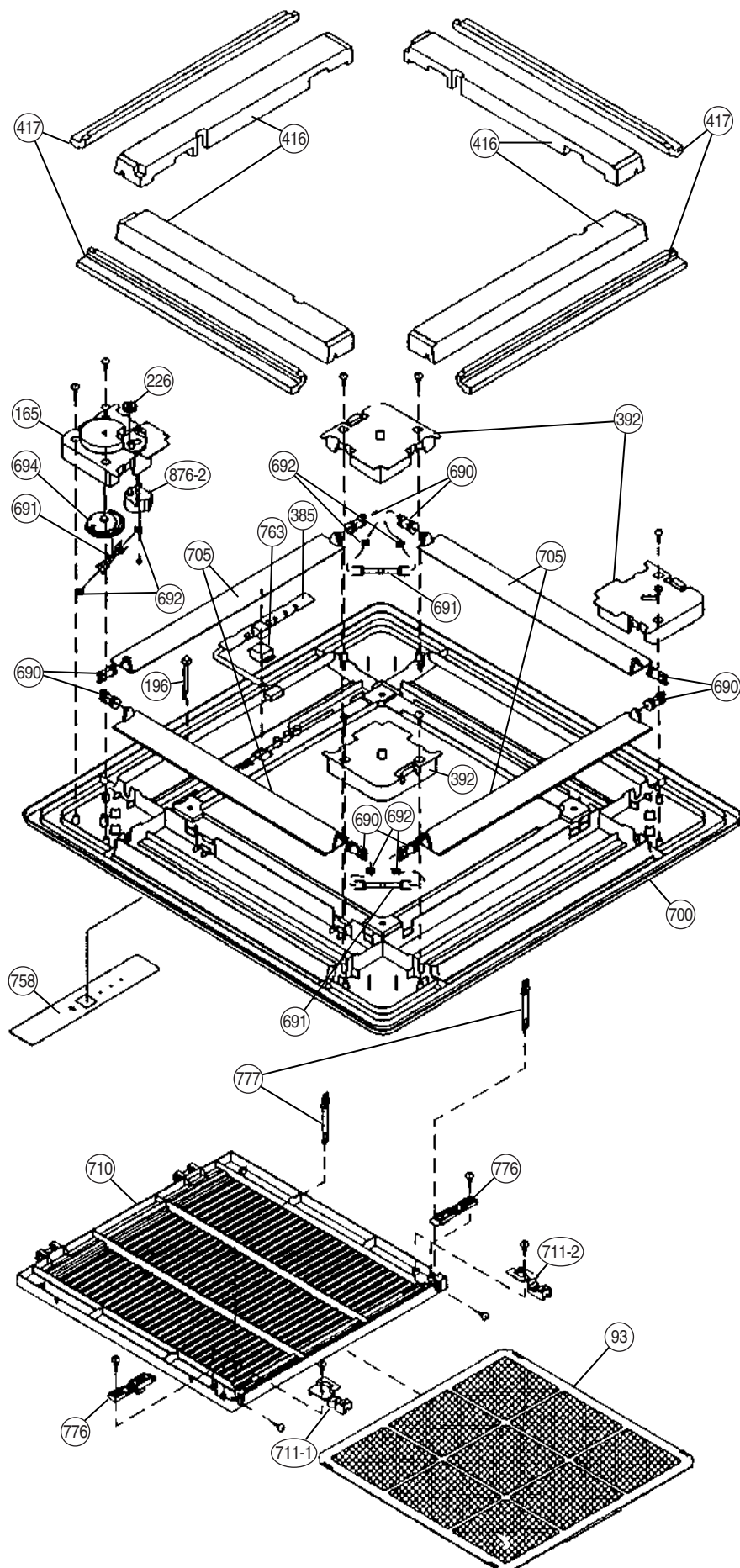
Model : RC-18LA



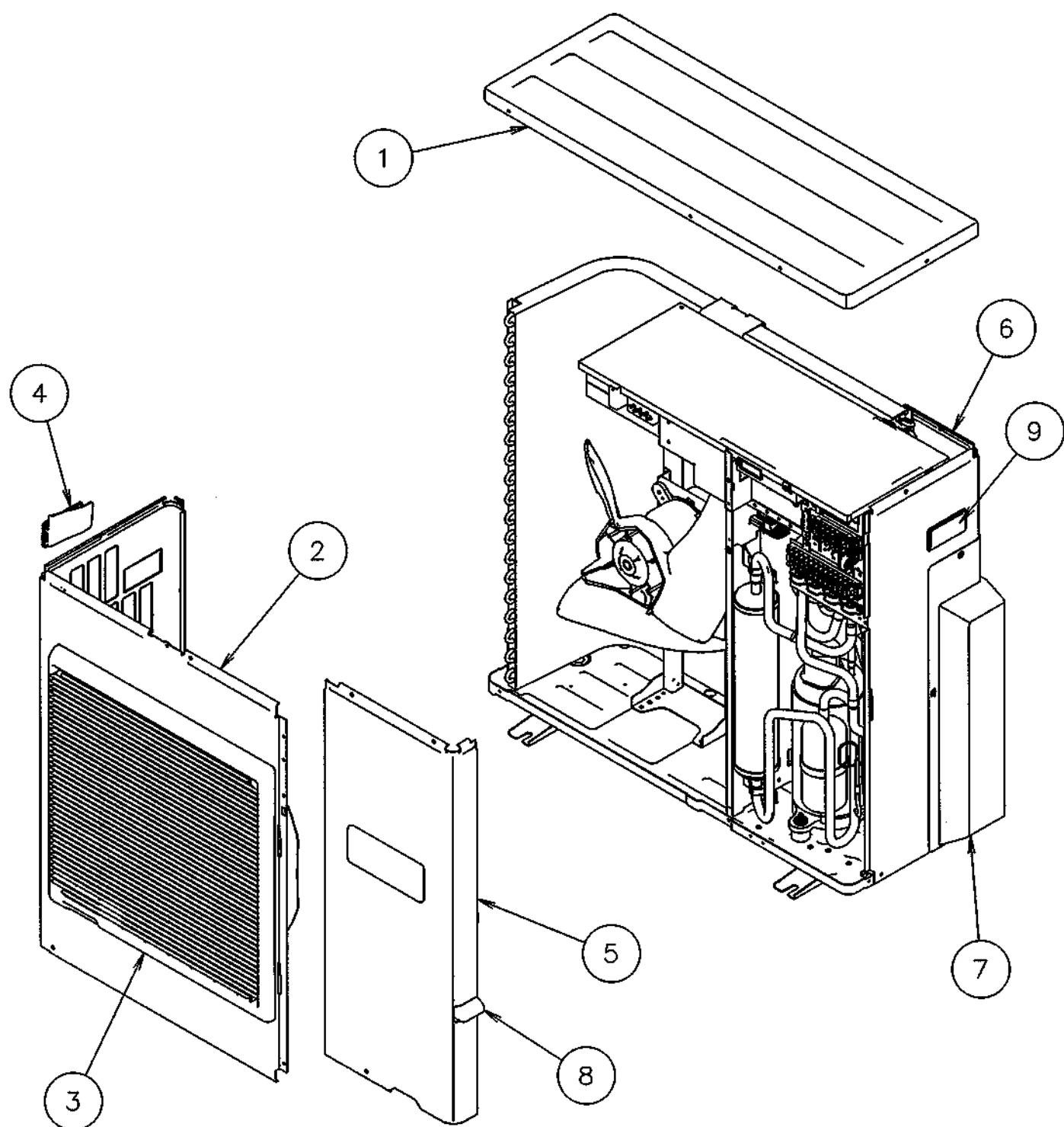
**Models : RC-12LA
RC-14LA
RC-18LA**



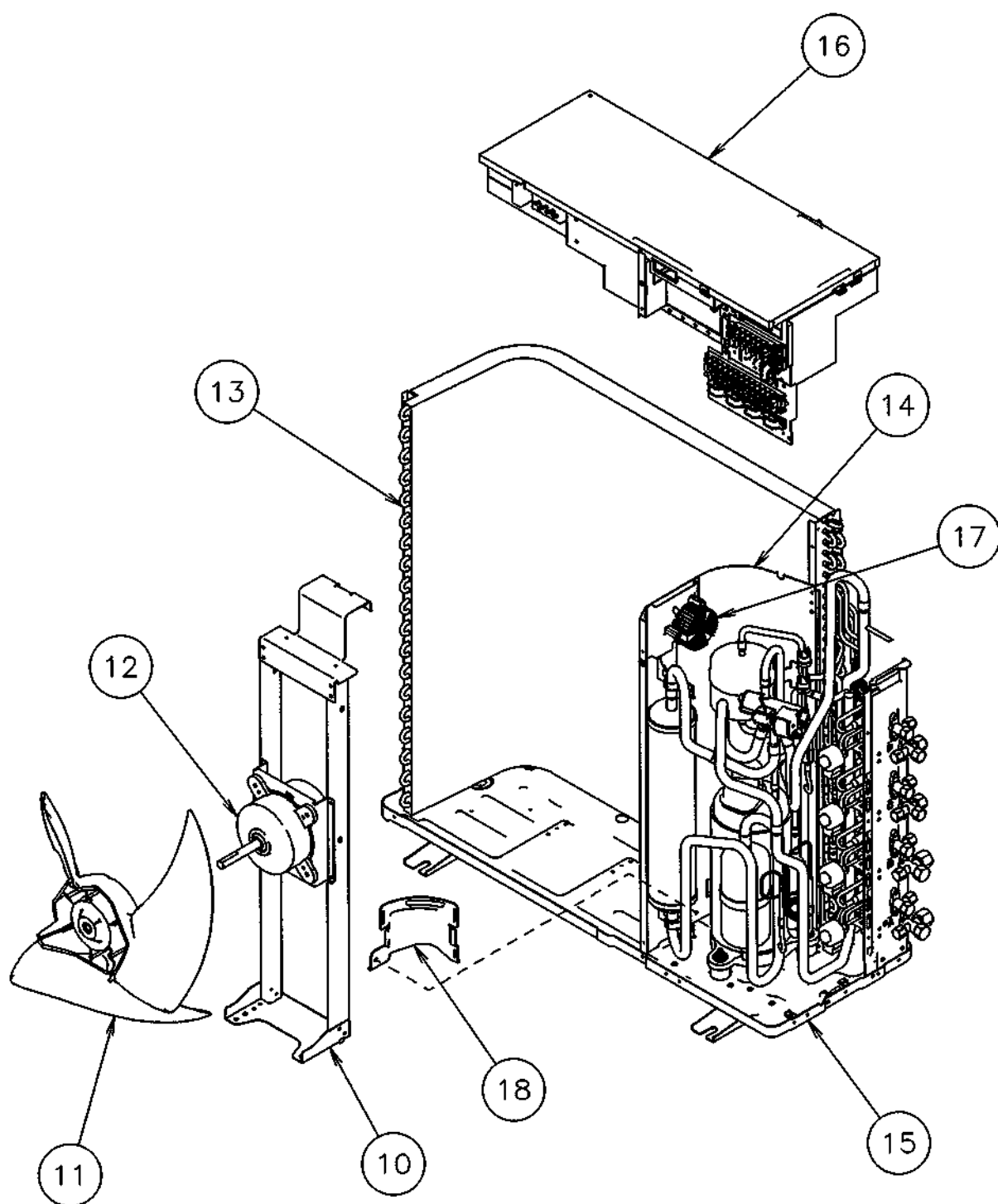
Model : UTG-UDFB-W



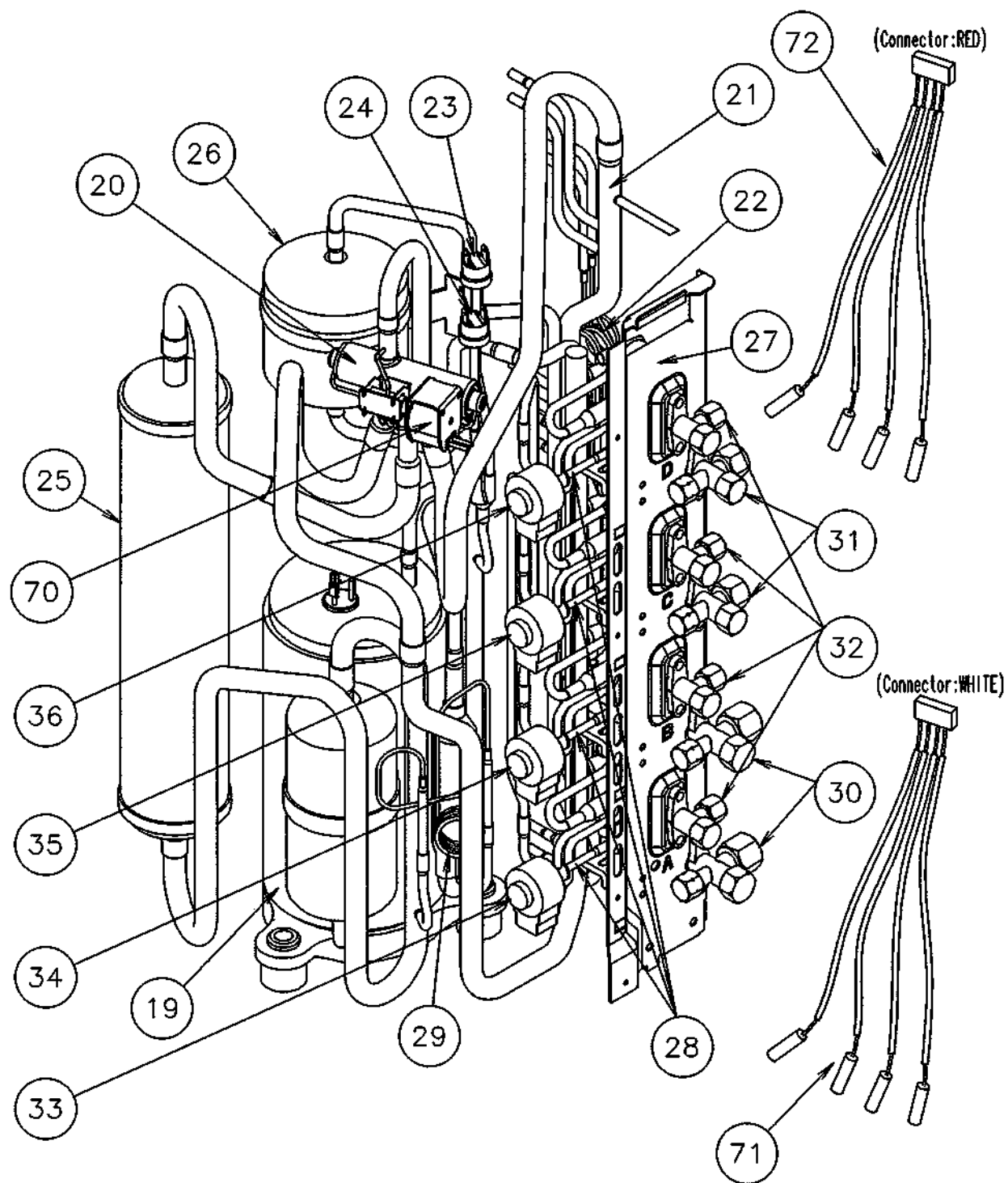
Model : ROM-30LA4

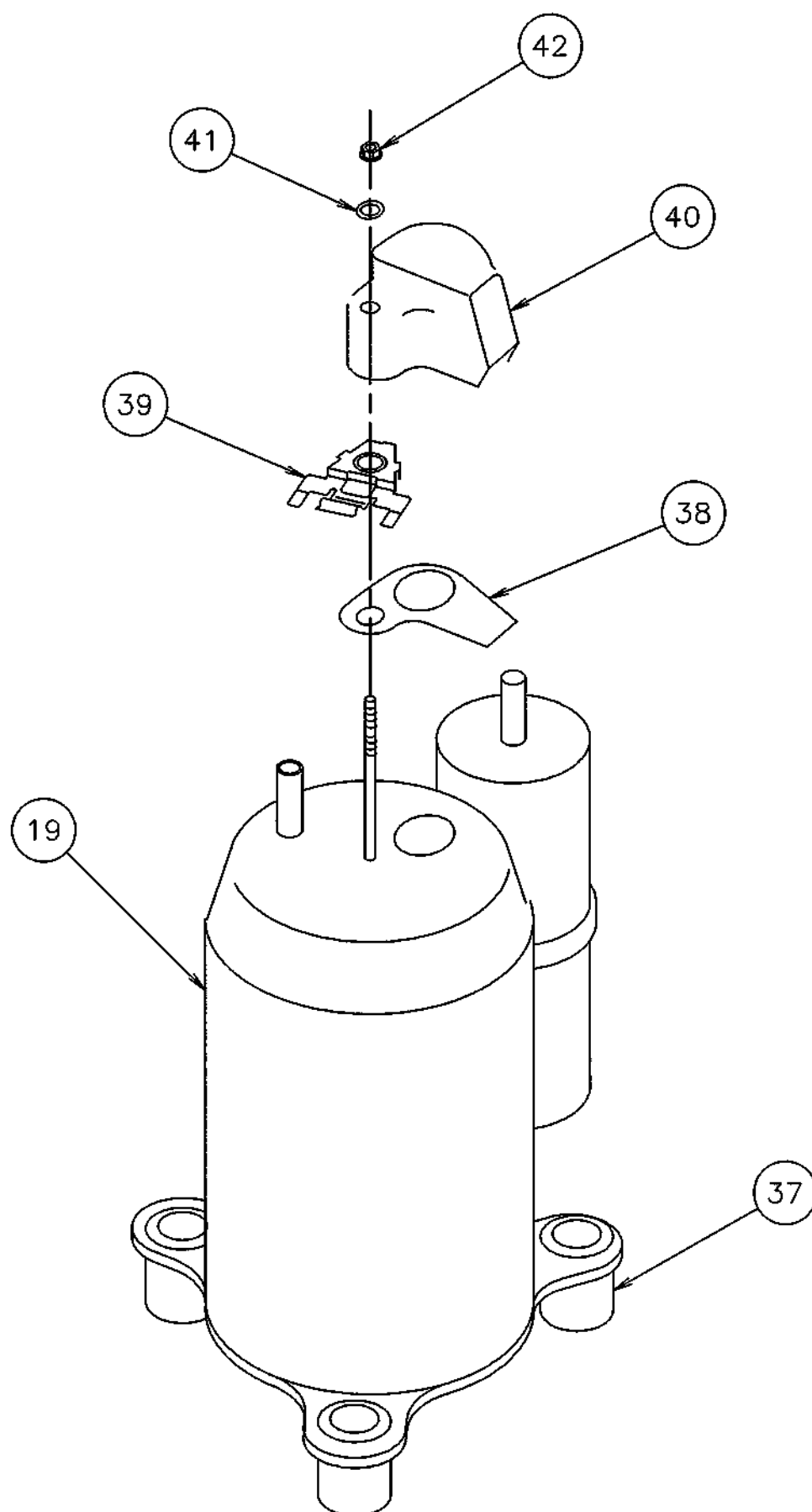


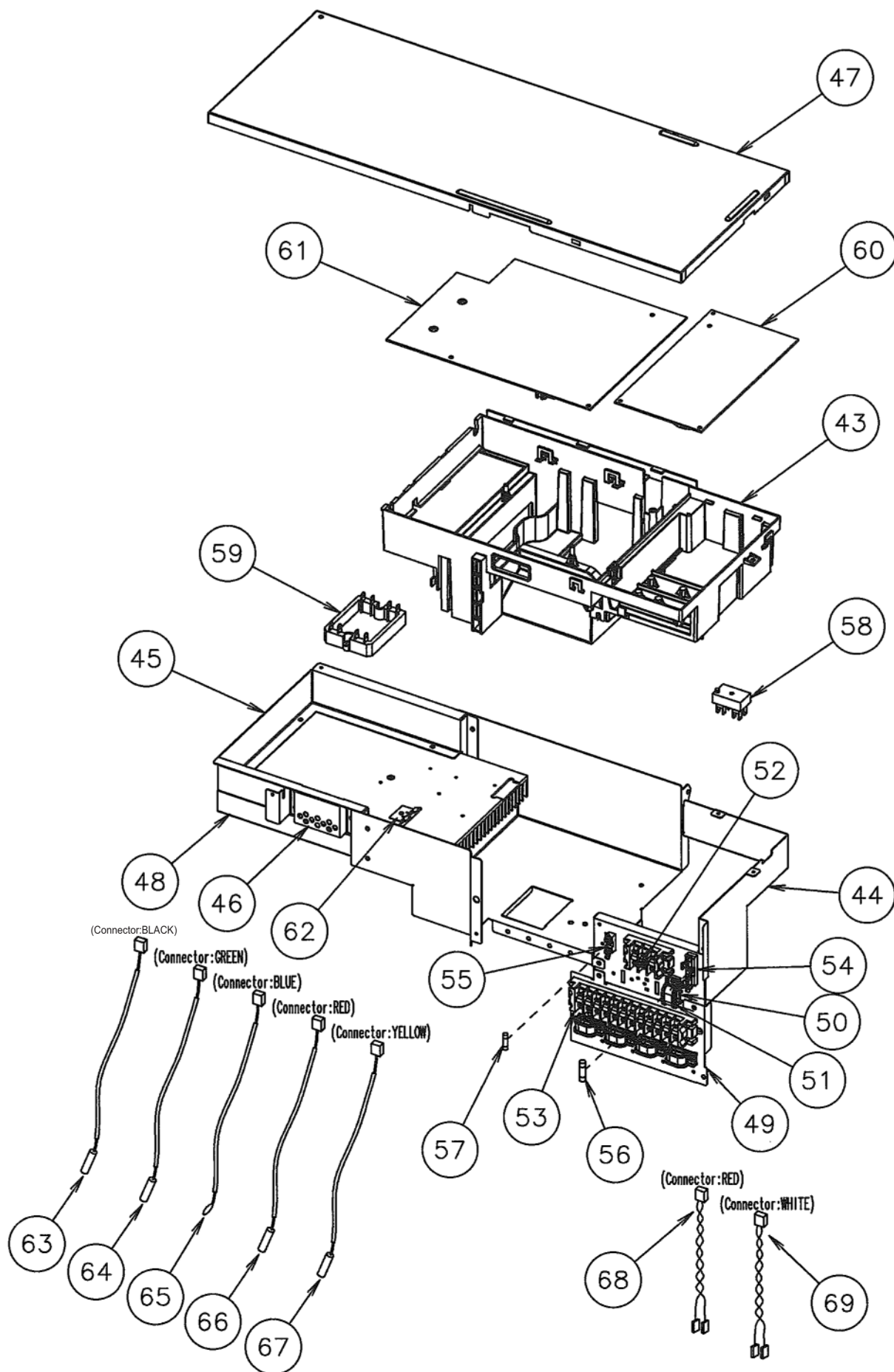
Model : ROM-30LA4



Model : ROM-30LA4







PARTS LIST

INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		RC-12LA	RC-14LA	
34	Capacitor (Fan Motor)	9704305046	9704305046	
67	Rubber	9361279001	9361279001	
117-3	Special Washer M6	313306391007	313306391007	
127	Drain Hose	9359659013	9359659013	
138	Separate Wall-A	9359647003	9359647003	
146	Evaporator Assy-IN	9373214014	9373214014	
160	Drain Pan	9359651000	9359651000	
164	Fan Motor Assy-IN	9601040064	9601040064	
184-1	Thermo. Spring-A	313728262708	313728262708	
185	Rubber Bushing	313005066051	313005066051	
187	Clamp No. 1219	313361271706	313361271706	
196	Clamp SKB-150	313035356905	313035356905	
223	Control Box	9359661016	9359661016	
234	Thermistor Assy-Room	9703299032	9703299032	
235	Thermistor Assy-Pipe	9703297014	9703297014	
236	Controller PCB Assy	9704557933	9704557940	
240	Remote Control Unit	9371190037	9371190037	
244	Pipe Cover	9359646006	9359646006	
287	Cap (Power)	9352173011	9352173011	
301	Clamp NK-2N	313985355201	313985355201	
313	Hooking Wire	9359983002	9359983002	
338	Motor Fixture	9359656005	9359656005	
381	Locking Spacer	313209391506	313209391506	
395	Supporter (Eva.)	9373179016	9373179016	
399	Air Duct	9359660002	9359660002	
411	Supporter-A	9359655008	9359655008	
430	Clamp NK-7N	313095365602	313095365602	
457	Drain Pan Support	9359652007	9359652007	
462	Top Cover Plate	9359642015	9359642015	
464	Body-A	9359643005	9359643005	
465	Body-B	9359645009	9359645009	
467	Drain Port	313005415658	313005415658	
468	Special Nut-A (Large)	313005446653	313005446653	
469	Special Nut-B (Small)	313005446759	313005446759	
470	Separate Wall-B	9359648000	9359648000	
474	Turbo Fan	9359658009	9359658009	
475	Turbo Fan Rubber	9366013006	9366013006	
476-1	Special Nut M8	313005360755	313005360755	
476-2	Special Washer	301801185049	301801185049	
476-3	Special Washer	9359954002	9359954002	
478	Sensor M. Bracket	9359654001	9359654001	
479	Float Switch	313005416154	313005416154	
482	Pump Unit	9359974000	9359974000	
484	Hanger Metal	9359644002	9359644002	
488	Drain Pan Plug	9359653004	9359653004	
495	Clamp No. 2U46	9352715006	9352715006	
514	Control Box Cover	9359662006	9359662006	
628	Locking Spacer-B	313005446558	313005446558	
629	EMI Filter	0400197119	0400197119	
652-1	Therm. Holder Pipe	313806262805	313806262805	
743	Remote Control Holder Case	9305642014	9305642014	
797	Separate Wall-C	9359649007	9359649007	
798	Pump Hook Bracket	9359650003	9359650003	
815	Terminal-3P	9900203016	9900203016	
824-3	Fuse	0600222512	0600222512	
834	Wire Cover	9359878001	9359878001	
835	Cushion-A (For Pump)	9352211003	9352211003	
836	Cushion-B (For Pump)	9356084016	9356084016	
875	Filter PCB Assy	9704561213	9704561213	
964	Flare Nut-1/2	-----	9373267010	
965	Flare Nut-B	9351062019	9351062019	
989-1	Cord Clamp-A	9359822011	9359822011	
989-2	Cord Clamp-B	9359823018	9359823018	
990	Distributor Assy	9373034049	9373034049	

INDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		RC-18LA				RC-18LA	
34	Capacitor (Fan Motor)	9703306044		465	Body-B	9359645009	
67	Rubber	9361279001		467	Drain Port	313005415658	
117-3	Special Washer M6	313306391007		468	Special Nut-A (Large)	313005446653	
127	Drain Hose	9359659013		469	Special Nut-B (Small)	313005446759	
138	Separate Wall-A	9359647003		470	Separate Wall-B	9359648000	
146	Evaporator Assy-IN	9373214014		474	Turbo Fan	9359658009	
160	Drain Pan	9359651000		475	Turbo Fan Rubber	9366013006	
164	Fan Motor Assy-IN	9601040057		476-1	Special Nut M8	313005360755	
184-1	Thermo. Spring-A	313728262708		476-2	Special Washer	301801185049	
185	Rubber Bushing	313005066051		476-3	Special Washer	9359954002	
187	Clamp No. 1219	313361271706		478	Sensor M. Bracket	9359654001	
196	Clamp SKB-150	313035356905		479	Float Switch	313005416154	
223	Control Box	9359661016		482	Pump Unit	9359974000	
234	Thermistor Assy-Room	9703299032		484	Hanger Metal	9359644002	
235	Thermistor Assy-Pipe	9703297014		488	Drain Pan Plug	9359653004	
236	Controller PCB Assy	9704557797		495	Clamp No. 2U46	9352715006	
240	Remote Control Unit	9371190037		514	Control Box Cover	9359662006	
244	Pipe Cover	9359646006		628	Locking Spacer-B	313005446558	
287	Cap (Power)	9352173011		629	EMI Filter	0400197119	
301	Clamp NK-2N	313985355201		652-1	Therm. Holder Pipe	313806262805	
313	Hooking Wire	9359983002		743	Remote Control Holder Case	9305642014	
338	Motor Fixture	9359656005		797	Separate Wall-C	9359649007	
381	Locking Spacer	313209391506		798	Pump Hook Bracket	9359650003	
395	Supporter (Eva.)	9373179016		815	Terminal-3P	9900203016	
399	Air Duct	9359660002		824-3	Fuse	0600222512	
411	Supporter-A	9359655008		834	Wire Cover	9359878001	
430	Clamp NK-7N	313095365602		836	Cushion-B (For Pump)	9356084016	
457	Drain Pan Support	9359652007		875	Filter PCB Assy	9704561213	
462	Top Cover Plate	9359642015		965	Flare Nut-B	9351062019	
464	Body-A	9359643005		989-1	Cord Clamp-A	9359822011	
				989-2	Cord Clamp-B	9359823018	

GRILLE ASSY (UTG-UDFB-W)

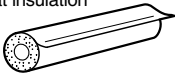
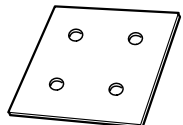
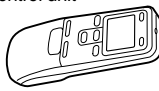
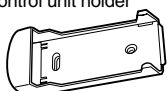
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93	Filter	9359632009		694	Cam Gear	9359628002	
165	Motor Cover	9359623014		700	Panel	9359619017	
196	Clamp SKB-150	313035356905		705	Louver	9359624011	
226	Motor Gear	9359629009		710	Intake Grille	9360543011	
385	Indicator PCB Assy	9702224011		711-1	Filter Clamp-A	9359634003	
392	Cover-A	9359622017		711-2	Filter Clamp-B	9359635000	
416	Insulation (Panel)-A	9359620006		758	Decoration Plate-A	9360862013	
417	Insulation (Panel)-B	9359621003		763	Receiver Cover	9359630005	
690	Joint-A	9359626008		776	Grille Stopper	9359633013	
691	Joint-B	9359627005		777	Grille Hook	9359761006	
692	Joint Shaft	9359625001		876-2	Step Motor-V	9360307019	

OUTDOOR UNIT

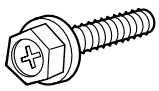
Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		ROM-30LA4				ROM-30LA4	
1	Top Panel Sub Assy	9374417025		41	Washer (Rubber)	9358078006	
2	Front Panel M	9374094066		42	Frang Nut	9358079003	
3	Fan Guard	9374330010		43	Inverter Box A	9374603015	
4	Grip Side	9374173013		44	Inverter Box B Assy	9374625017	
5	Service Panel M	9374093069		45	Inverter Box C	9374605019	
6	Right Panel M	9374599028		46	Inverter Box Duct	9374609017	
7	Valve Cover Sub Assy	9374827015		47	Inverter Box Cover	9374608010	
8	Grip Service	9374171019		48	Heat Sink A	9374607013	
9	Grip	9374172016		49	Inverter Box D	9374606016	
10	Motor Bracket Sub Assy	9374418053		50	Clamp (Cord) C	9359677000	
11	Propeller Fan Assy	9366378020		51	Clamp (Cord)	9356857009	
12	Motor. DC Brushless	9601882015		52	Terminal (3P)	9900203016	
13	Condenser A Assy	9374433056		53	Terminal (12P)	9358660164	
14	Separate Wall Assy S	9374629022		54	Fuse Holder (Big)	0501454012	
15	Base Assy	9374166084		55	Fuse Holder (Small)	0501456016	
16	Inverter Assy	9705824010		56	Fuse (Big)	0600086039	
17	Coil. Choke	9703458019		57	Fuse (Small)	0600376116	
18	Cap Foot	9374345014		58	Terminal	9701971015	
19	Compressor Sub Assy	9374423064		59	ACTPM	9703457012	
20	4-Way Valve Assy	9374425044		60	PWB Assy (Power Supply)	9705647039	
21	Inlet Pipe (Cond) A Assy	9373461067		61	PWB Assy (Controller)	9705642058	
22	Outlet Pipe (Cond) A Assy	9374266067		62	Holder (Thermo)	9372797013	
23	Pressure Switch A Assy	9367726028		63	Heat Sink Thermistor	9900311018	
24	Pressure Switch B Assy	9367727025		64	Compressor Temp Thermistor	9900156022	
25	Accumulator Sub Assy	9374426072		65	Thermistor (Outdoor Temp)	9703516078	
26	Receiver Tank Sub Assy	9373426028		66	Heat Exchanger Thermistor	9704220059	
27	Valve Plate A Assy	9374628025		67	Discharg Temp Thermistor	9704219114	
28	Expansion Valve Assy	9370947106		68	Wire (Pressure Sw)(Red)	9367595037	
29	Capillary Assy	9372197370		69	Wire (Pressure Sw)(White)	9367595044	
30	3-Way Valve Assy (1/2")	9372205051		70	Solenoid	9900165055	
31	3-Way Valve Assy (3/8")	9372205044		71	Thermistor (Pipe)(White)	9900322014	
32	2-Way Valve Assy	9372204054		72	Thermistor (Pipe)(Red)	9900289010	
33	Coil (Expansion Valve)(A=Red)	9900057084					
34	Coil (Expansion Valve)(B=White)	9900057053					
35	Coil (Expansion Valve)(C=Green)	9900057060					
36	Coil (Expansion Valve)(D=Blue)	9900057077					
37	Rubber Seat (For Comp)	9358080009					
38	Gasket	9370290004					
39	Holder	9372066010					
40	Terminal Cover (Comp)	9370289008					

STANDARD ACCESSORIES

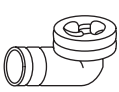
INDOOR UNIT ACCESSORIES

Name and Shape	Application	Part No.
Coupler heat insulation 	For indoor side pipe joint	9350716029
		9352766015
Special nut A (large flange) 	For installing indoor unit	313005446653
Special nut B (small flange) 	For installing indoor unit	313005446759
Template 	For ceiling hole cutting	9360256003
Remote control unit 	Use for air conditioner operation	9371190037
Battery (penlight) 	For remote control unit	0600185534
Remote control unit holder 	For mounting the remote control unit	9305642014
Tapping screw (φ3 x 12) 	For remote control unit holder installation	301141533125

GRILLE ASSY ACCESSORIES

Name and Shape	Application	Part No.
Bolt 	For opening the refrigerant valve on the outdoor unit	0700139116
Washer 	For mounting grille	301801155020
Blower cover insulation 	For discharged air	9360047007

OUTDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Name and Shape	Q'ty	Application
Drain pipe 	1	For outdoor unit drain piping work (May not be supplied, depending on the model.)	Adapter E (1/4"→3/8") 6.35mm → 9.52mm 	1	For connecting a pipe with different diameter to the outdoor unit.
Drain cap 	2		Adapter G (1/2"→5/8") 12.7mm → 15.88mm 	1	
Putty 	1	For filling in a gap at the entrance of connection cords.	Adapter D (1/2"→3/8") 12.7mm → 9.52mm 	2	

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