



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

DUCT type

SERVICE MANUAL

Models	Indoor unit	Outdoor unit
	RD-25FA	RO-25FA
	RD-25UA	RO-25UA



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

TYPE	COOLING	COOLING & HEATING
INDOOR UNIT	RD-25FA	RD-25UA
OUTDOOR UNIT	RO-25FA	RO-25UA
COOLING CAPACITY (kW)	7.05	7.00
HEATING CAPACITY (kW)	-----	7.70

ELECTRICAL DATA

POWER SOURCE (V)	230		
FREQUENCY (Hz)	50		
RUNNING CURRENT (A)	COOLING	11.5	11.8
	HEATING	-----	10.5
INPUT WATTS (kW)	COOLING	2.60	2.65
	HEATING	-----	2.33
E.E.R. (kW / kW)	COOLING	2.71	2.64
	HEATING	-----	3.30
STARTING CURRENT (A)	60		
MOISTURE REMOVAL (ℓ /hr)	2.5		

Note : The above list shows values at the external static pressure of 98Pa (10mm Ag), setting the fan speed high notch.

COMPRESSOR

TYPE	Hermetic type, 2 pole, Single phase, Induction motor, Rotary		
DISCRIMINATION	5JS290DAA		
REFRIGERANT R410A (g)	1,550	2,000	

FAN SPEED (r.p.m.)	INDOOR	HIGH	1,160	
		MED	1,060	
		LOW	960	
	OUTDOOR		780	
AIR FLOW (m³/h)	INDOOR		1,050	
	OUTDOOR		3,200	
DIMENSIONS H x W x D (mm)	INDOOR		270 x 1,210 x 700	
	OUTDOOR		650 x 830 x 320	
WEIGHT NET / GROSS (kg)	INDOOR		43 / 58	
	OUTDOOR		58 / 62	59 / 63
MAX PIPE LENGTH / HEIGHT (m)	25 / 15			
REMOTE CONTROLLER TYPE	WIRED			

Note : The above list shows values at the external static pressure of 98Pa (10mm Ag), setting the fan speed high notch.

TYPE	COOLING	COOLING & HEATING
INDOOR UNIT	RD-25FA	RD-25UA
OUTDOOR UNIT	RO-25FA	RO-25UA

NOISE LEVEL

INDOOR UNIT	HI-SPEED (dB)	39
	MED-SPEED (dB)	37
	LO-SPEED (dB)	35
OUTDOOR UNIT (dB)		53
		COOL 53 / HEAT 54

Note : Static pressure : 100Pa
Duct length : Inlet 1m, Outlet 2m

REFRIGERANT CHARGE

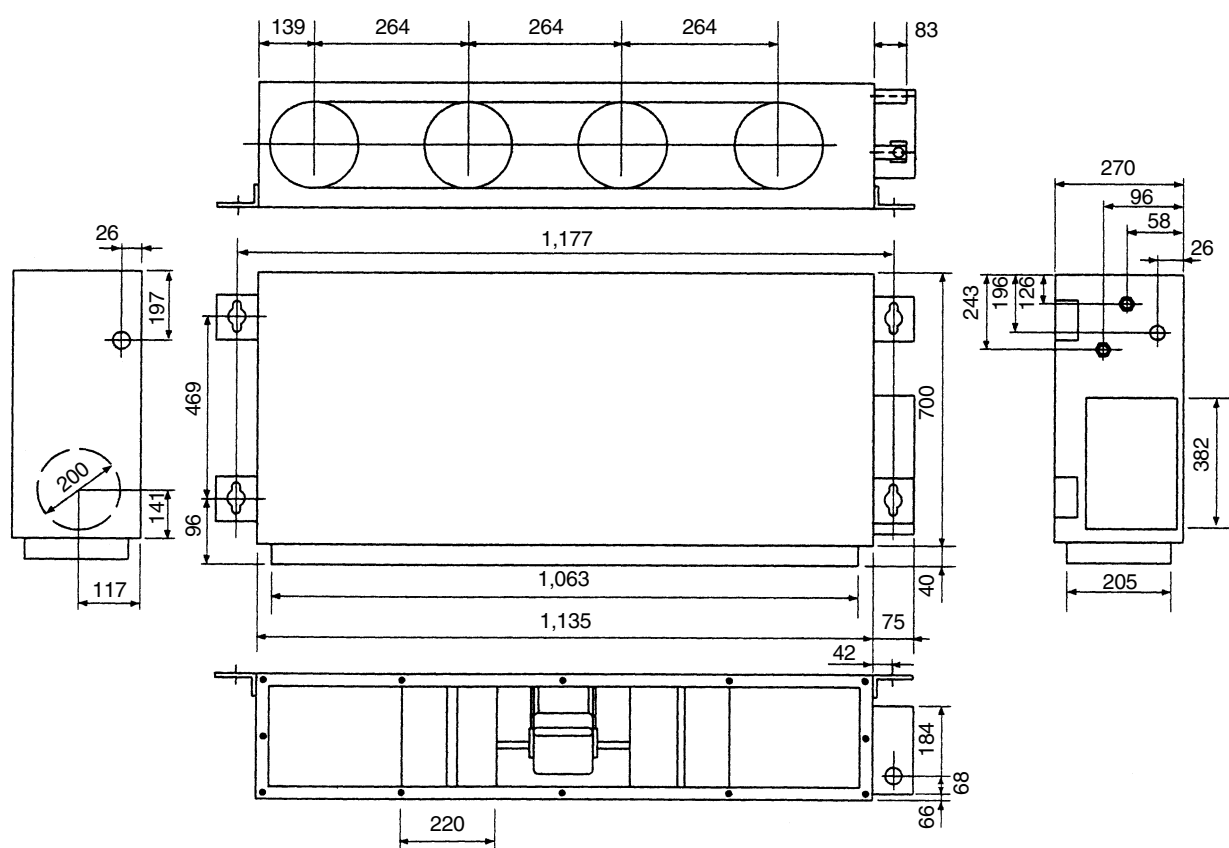
FULL CHARGE AMOUNT	PIPE LENGTH	7.5 m (24 ft.)	1,550 g (54.7 oz)	2,000 g (70.6 oz)
		10 m (33 ft.)	1,600 g (56.4 oz)	2,100 g (74.1 oz)
		15 m (49 ft.)	1,700 g (60.0 oz)	2,300 g (81.1 oz)
		20 m (66 ft.)	1,800 g (63.5 oz)	2,500 g (88.2 oz)
		25 m (82 ft.)	1,900 g (67.0 oz)	2,700 g (95.2 oz)
ADDITIONAL REFRIGERANT			20 g / m (0.7 oz / 3.3 ft.)	40 g / m (1.4 oz / 3.3 ft.)

DIMENSIONS

INDOOR UNIT

Models : RD-25FA
RD-25UA

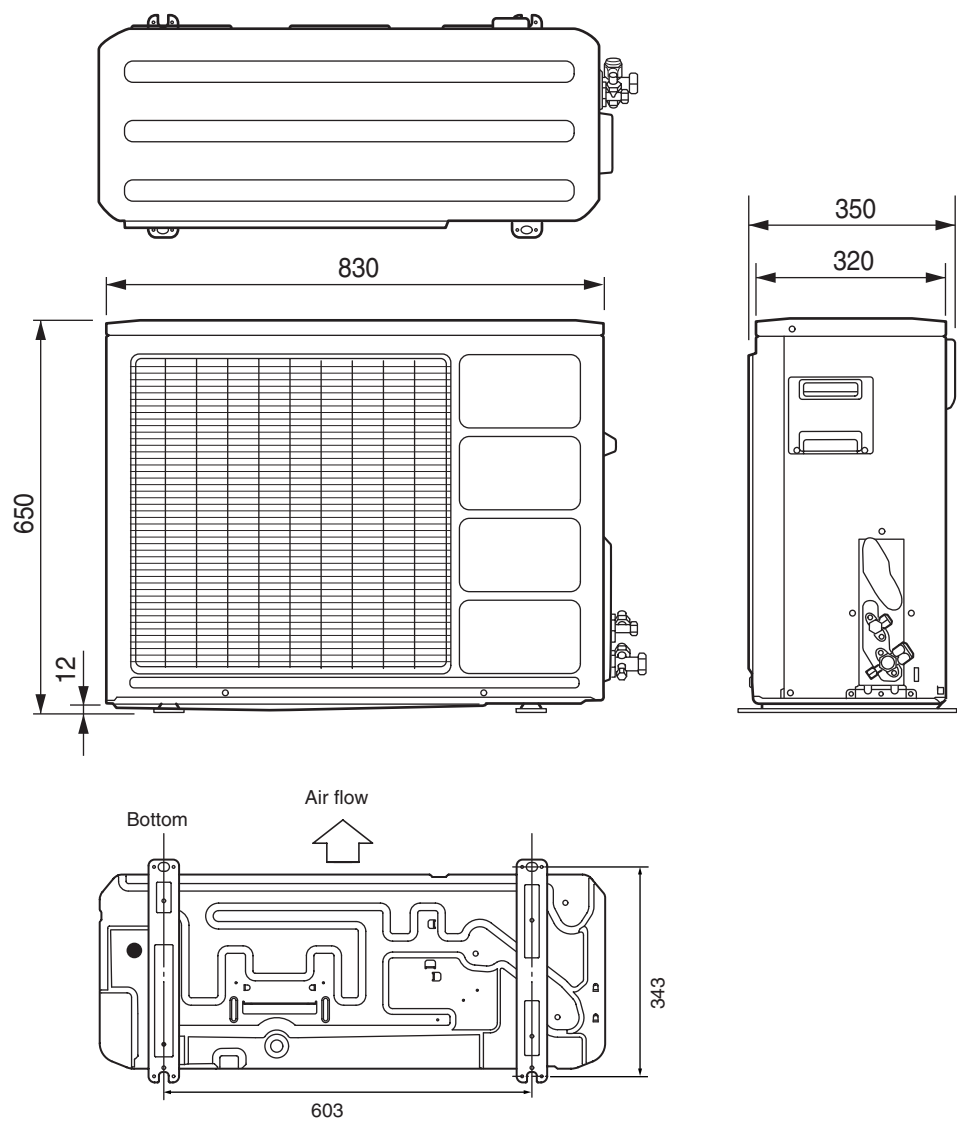
Unit : mm



OUTDOOR UNIT

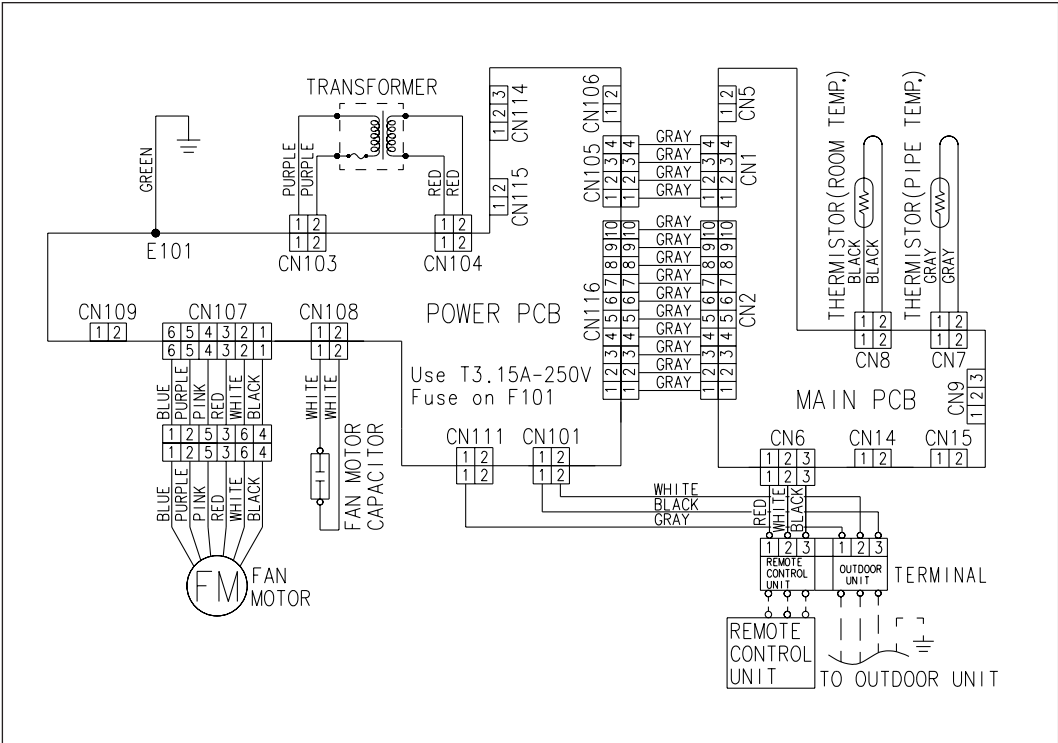
Models : RO-25FA
RO-25UA

Unit : (mm)



CIRCUIT DIAGRAM

Model : RD-25FA



Model : RO-25FA

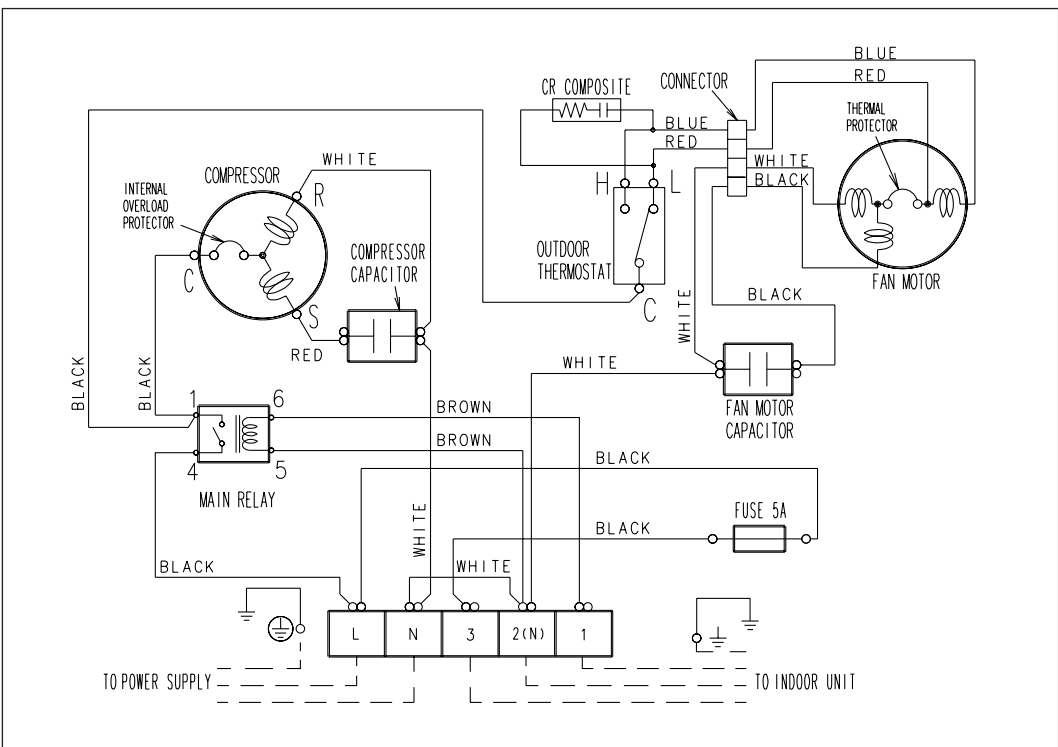


Diagram illustrating the wiring connections for the outdoor unit control board, showing components and their interconnections:

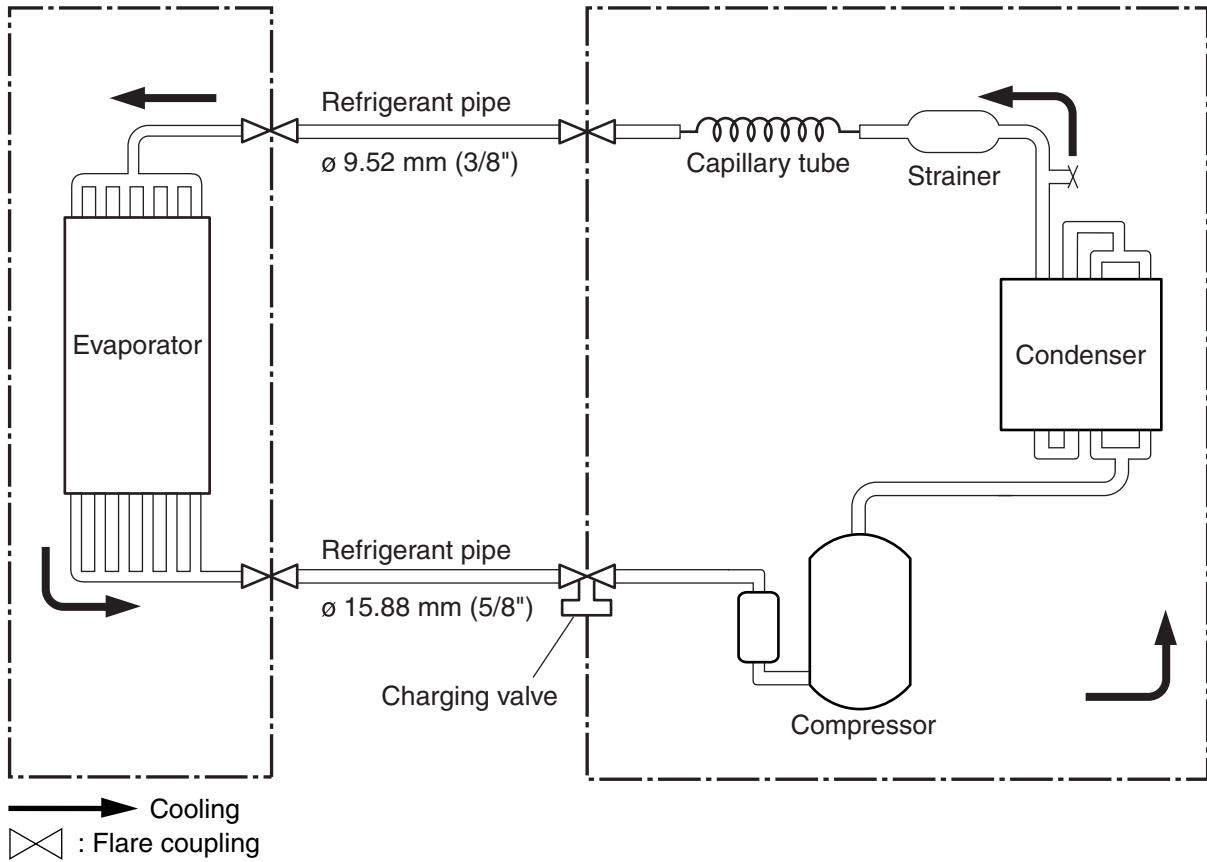
- Thermistors:**
 - Thermistor (PIPE TEMP.): Connected to CN11 (GRAY).
 - Thermistor (OUTDOOR TEMP.): Connected to CN12 (BLACK).
 - Thermistor (DISCHARGE TEMP.): Connected to CN13 (BROWN).
- Control Board:**
 - Terminals: L, N, 3, 2, 1.
 - Connections: CN15, CN9, CN1, CN4, CN3, CN2, CN8, CN5.
- Compressor and Main Relay:**
 - Compressor: Connected to RED, WHITE, and BLACK lines.
 - Main Relay: Connected to RED, WHITE, and BLACK lines.
 - Compressor Capacitor: Connected to RED and WHITE lines.
- Solenoid Coil:**
 - 4WV Solenoid Coil: Connected to BLACK and WHITE lines.
- Fan Motor and Capacitor:**
 - Fan Motor: Connected to BLUE, RED, WHITE, and BLACK lines.
 - Fan Motor Capacitor: Connected to YELLOW and WHITE lines.
- Transformer and Belt Heater:**
 - Transformer: Connected to RED and WHITE lines.
 - Belt Heater: Connected to BLACK and WHITE lines.
- Wiring Details:**
 - GREEN: Ground connection.
 - GRAY: Connected to CN11.
 - BLACK: Connected to CN12.
 - BROWN: Connected to CN13.
 - RED: Connected to CN15, CN9, CN1, CN4, CN3, CN2, CN8, CN5.
 - WHITE: Connected to CN15, CN9, CN1, CN4, CN3, CN2, CN8, CN5.
 - BLACK: Connected to CN15, CN9, CN1, CN4, CN3, CN2, CN8, CN5.
 - BLUE: Connected to CN5.
 - YELLOW: Connected to CN4.
 - PURPLE: Connected to CN2.
- Power and Grounding:**
 - TO POWER SUPPLY: Connected to L, N, and 3 terminals.
 - TO INDOOR UNIT: Connected to 2 and 1 terminals.
 - Ground: Connected to the 1 terminal.

REFRIGERANT SYSTEM DIAGRAM

Models : RD-25FA / RO-25FA

INDOOR UNIT

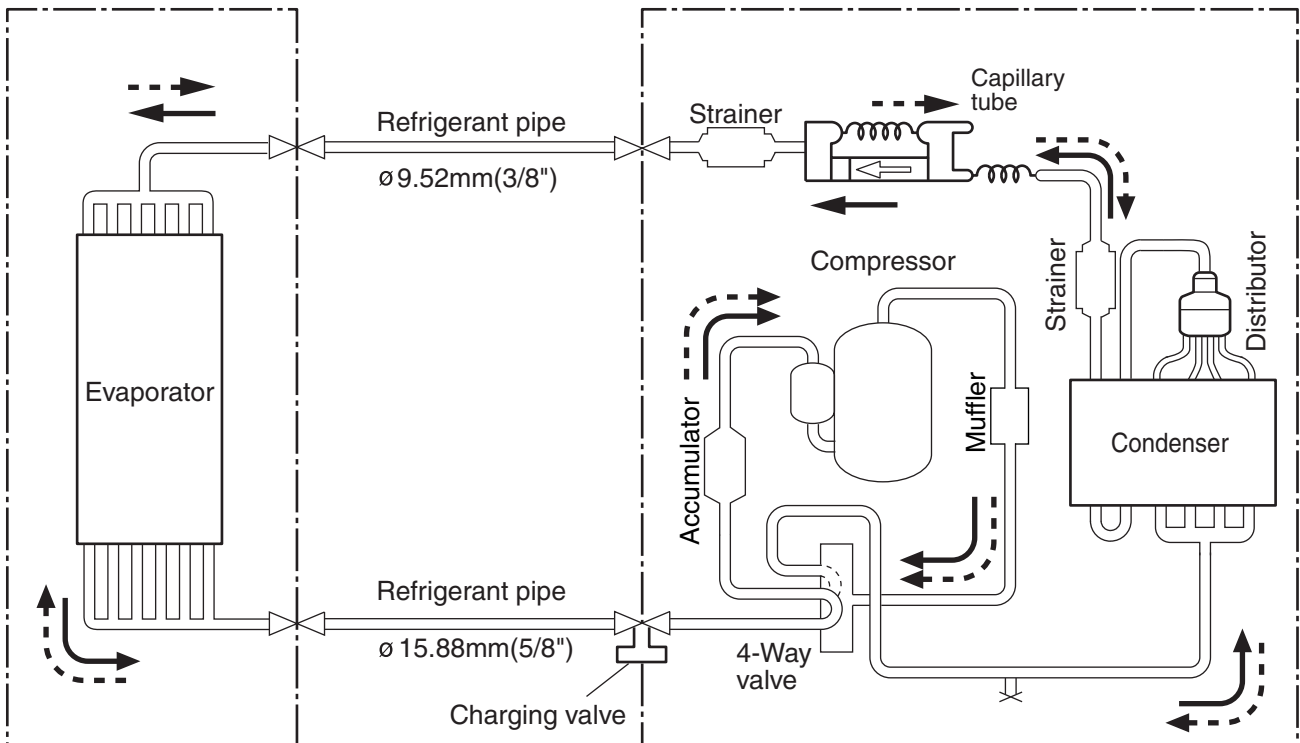
OUTDOOR UNIT



Models : RD-25UA / RO-25UA

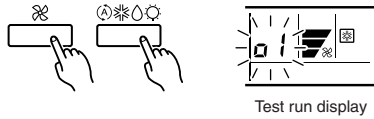
INDOOR UNIT

OUTDOOR UNIT



ERROR CONTENTS

- Stop the air conditioner operation.
- Press the master control button and the fan control button simultaneously for 2 seconds or more to start the test run.



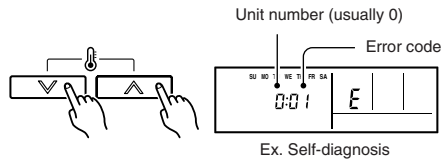
- Press the start/stop button to stop the test run.

[SELF-DIAGNOSIS]

When the error indication E:EE is displayed, follow the following items to perform the self-diagnosis. E:EE indicates an error has occurred.

1. REMOTE CONTROLLER DISPLAY

- Stop the air conditioner operation.
- Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to start the self-diagnosis.
Refer to the following tables for the description of each error code.



- Press the set temperature buttons Δ / ∇ simultaneously for 5 seconds or more to stop the self-diagnosis.

Error code	Error contents
00	Communication error (indoor unit $\leftrightarrow$ remote controller)
01	Communication error (indoor unit $\leftrightarrow$ outdoor unit)
02	Room temperature sensor open
03	Room temperature sensor short-circuited
04	Indoor heat exchanger temperature sensor open
05	Indoor heat exchanger temperature sensor short-circuited
06	Outdoor heat exchanger temperature sensor open
07	Outdoor heat exchanger temperature sensor short-circuited
08	Power source connection error
09	Float switch operated
0A	Outdoor temperature sensor open
0b	Outdoor temperature sensor short-circuited
0c	Discharge pipe temperature sensor open
0d	Discharge pipe temperature sensor short-circuited
0E	Outdoor high pressure abnormal
0F	Discharge pipe temperature abnormal
11	Model abnormal
12	Indoor fan abnormal
13	Outdoor signal abnormal
14	Outdoor EEPROM abnormal

2. OUTDOOR UNIT LEDS

When the outdoor temperature drops, the outdoor units fans may switch to low speed.

ERROR : HEAT & COOL MODEL (REVERSE CYCLE) ONLY

The LED lamps operate as follows according to the error contents.

Error display		
LED1	LED2	Error contents
Quick flash continued	Quick flash continued	Model abnormal or EEPROM abnormal
1 quick flash repeated	Lighting continued	Power source connection error
2 quick flash repeated	Lighting continued	Discharge temperature sensor error
3 quick flash repeated	Lighting continued	Outdoor heat exchanger temperature sensor error
4 quick flash repeated	Lighting continued	Outdoor temperature sensor error
5 quick flash repeated	Lighting continued	Communication signal error
6 quick flash repeated	Lighting continued	Indoor unit error
7 quick flash repeated	Lighting continued	Discharge temperature abnormal
8 quick flash repeated	Lighting continued	High pressure abnormal

When the fault is cleared, the LED lamp goes off.

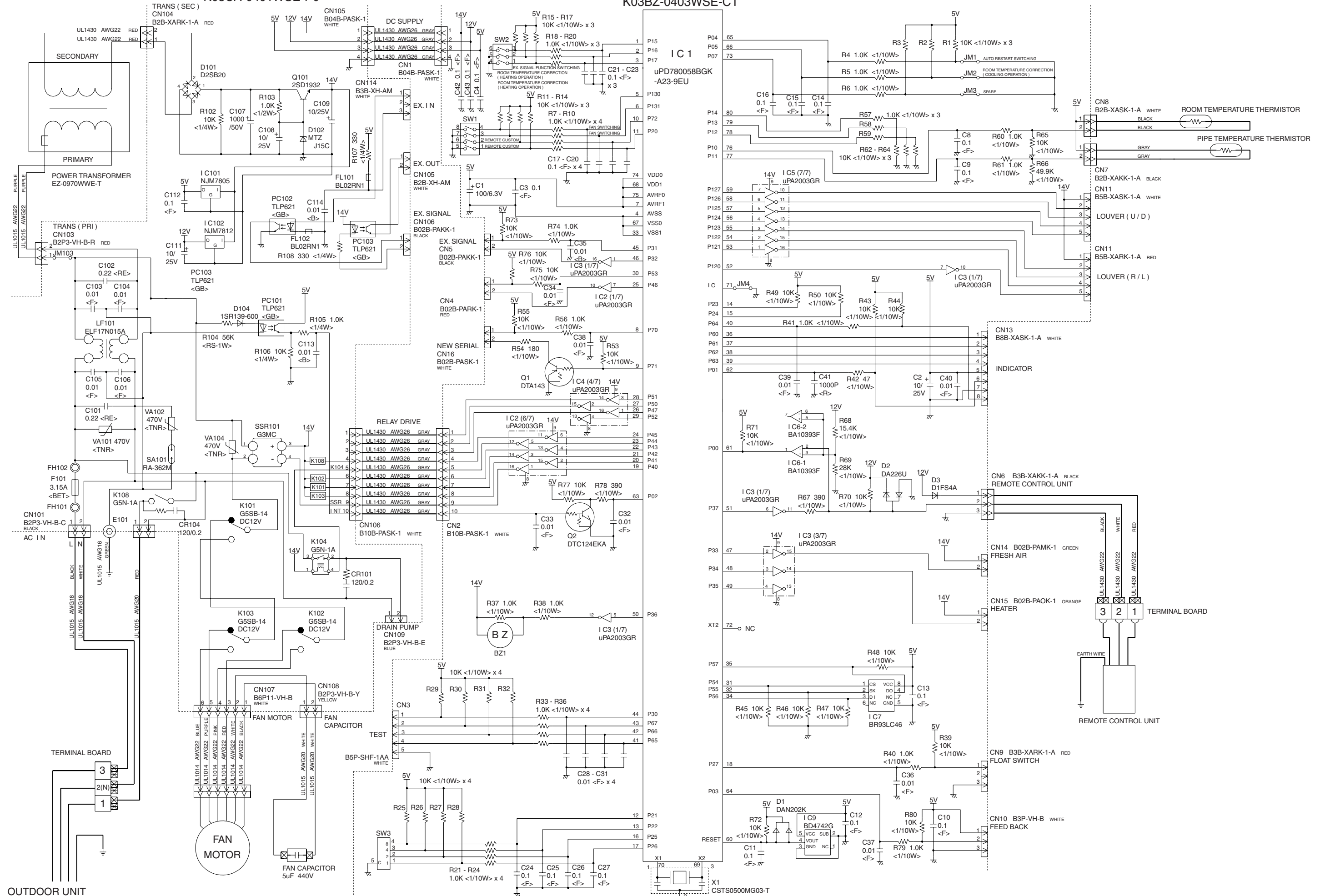
However, for discharge pipe temperature abnormal and high pressure abnormal, the LED lamp lights continuously for 24 hours, as long as the power is not turned off.

INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

Model : RD-25FA

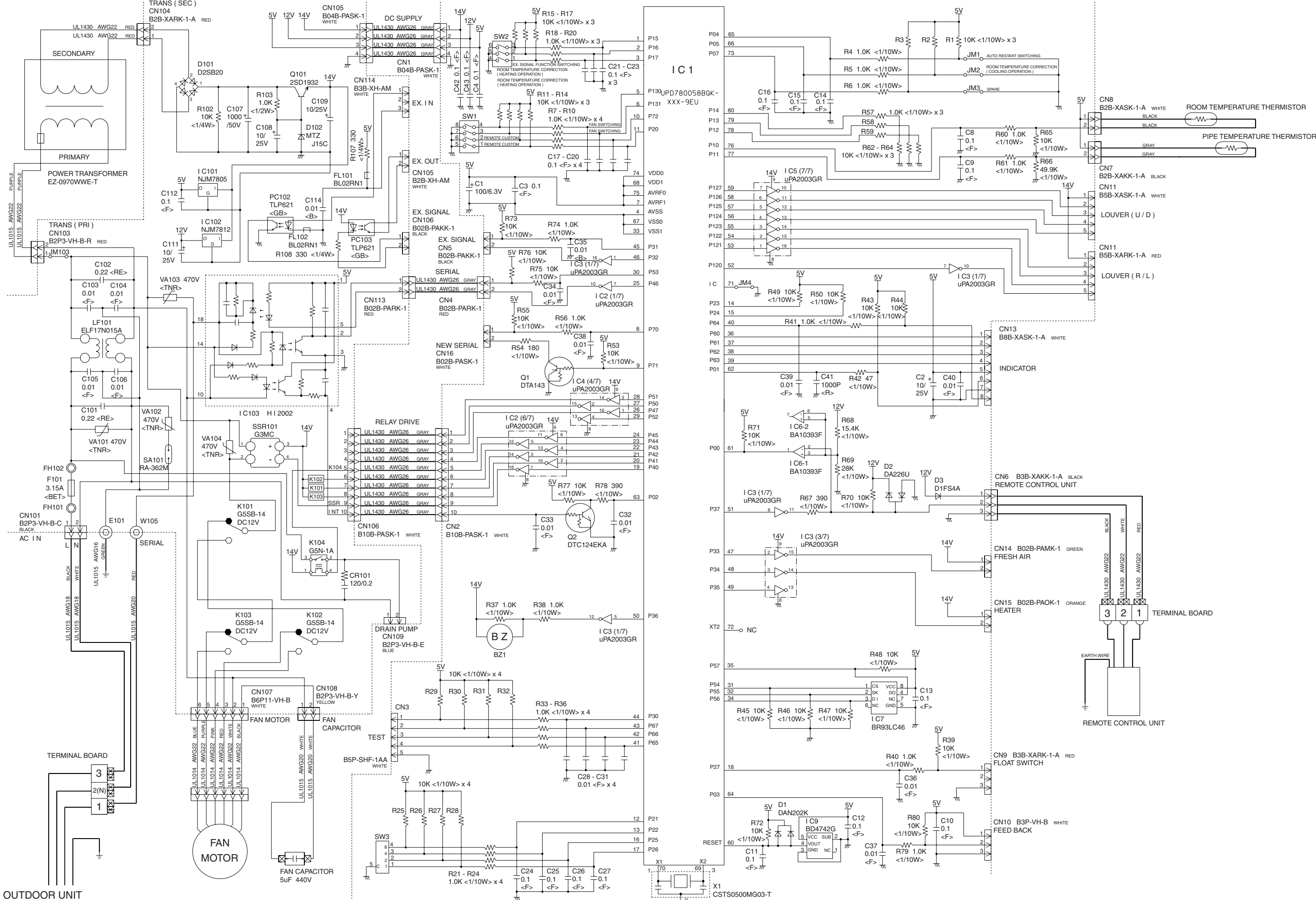
POWER SUPPLY PCB
K03CA-0401WSE-P0

CONTROLLER PCB ASSEMBLY (MAIN PCB)
K03BZ-0403WSE-C1



POWER SUPPLY PCB
K03CA-0400HSE-P0

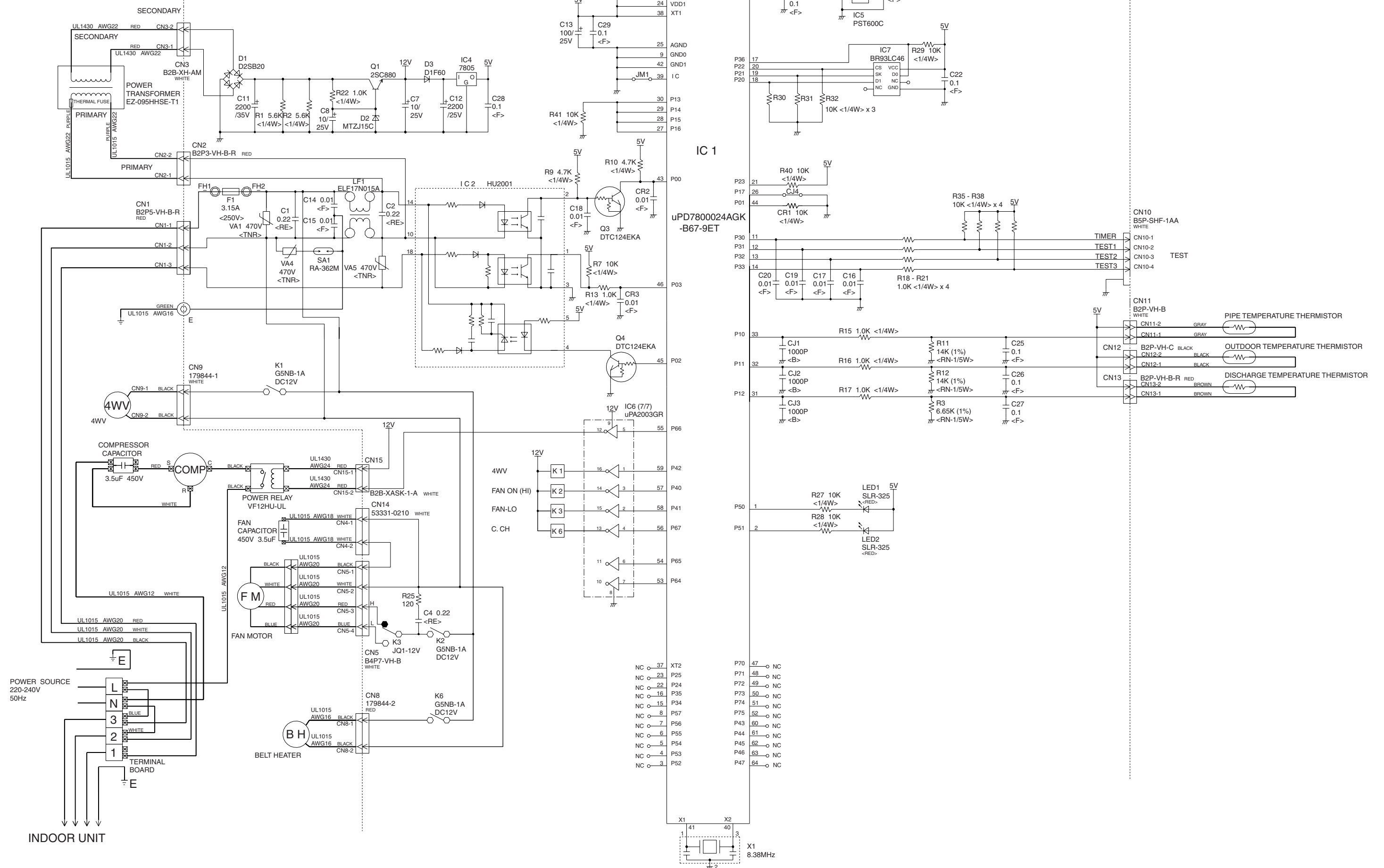
CONTROLLER PCB ASSEMBLY (MAIN PCB)
K03BZ-0402HSE-C1



OUTDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

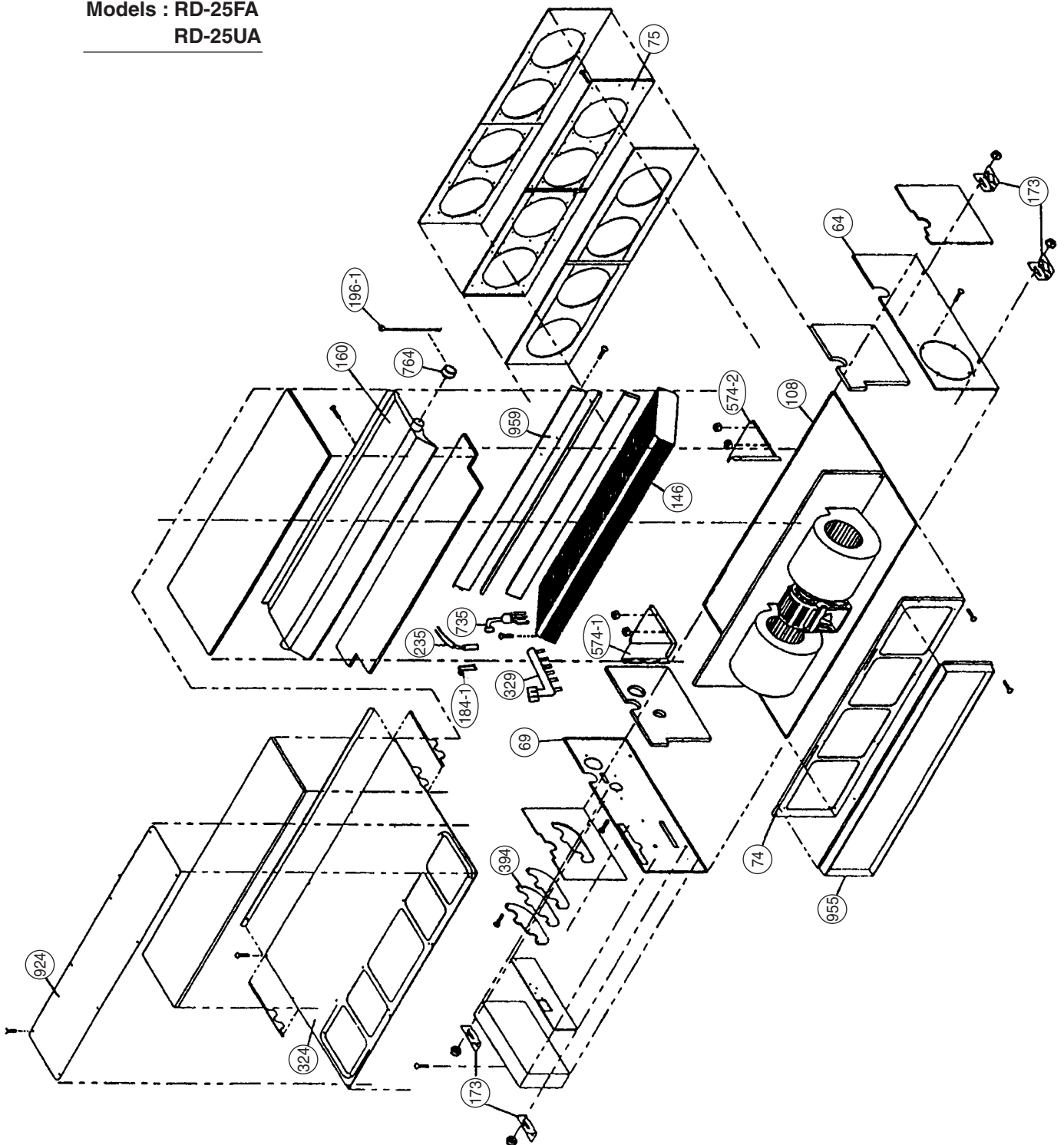
Model : RO-25UA

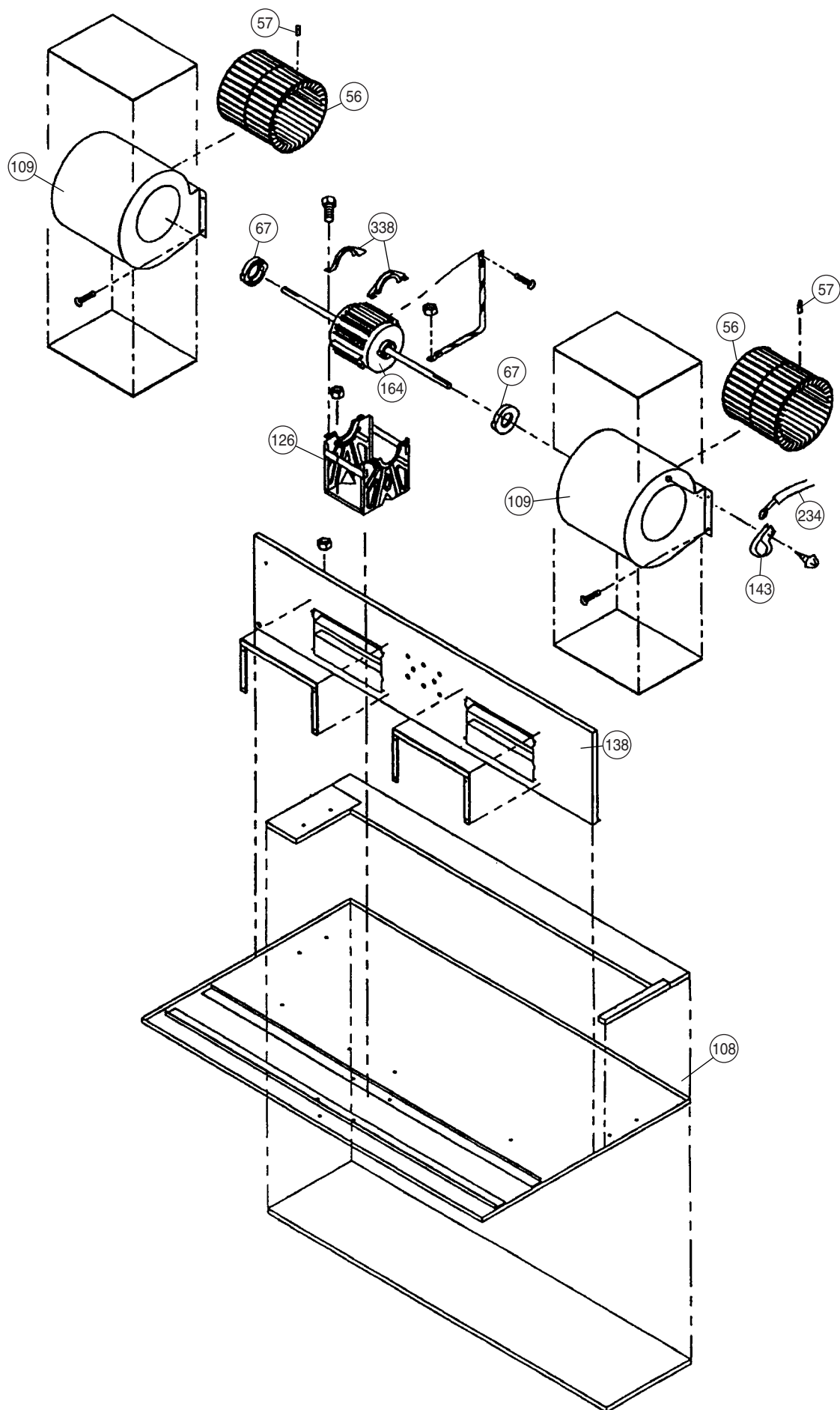
CONTROLLER PCB ASSEMBLY (MAIN PCB) K01D1-0400HUE-C1

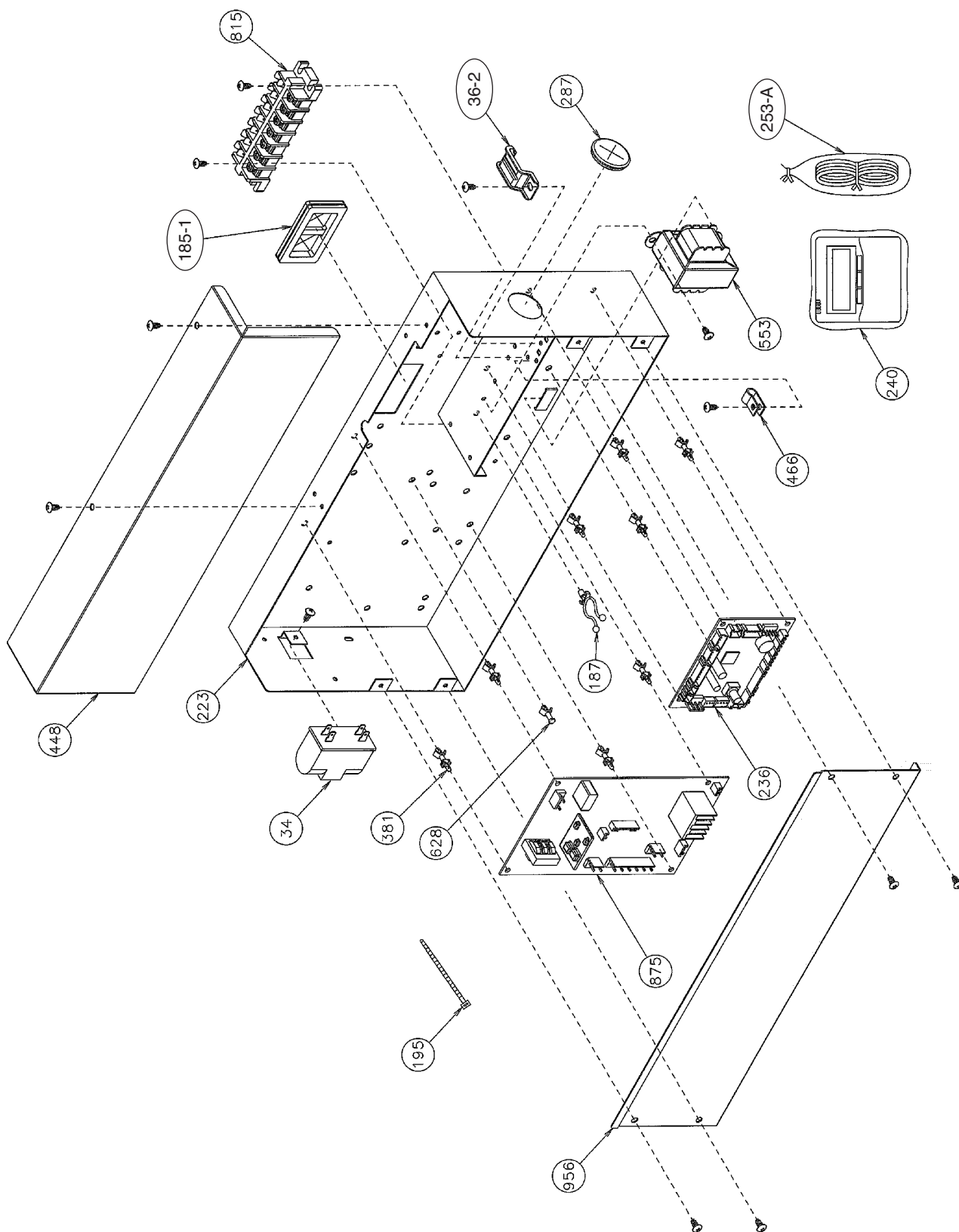


DISASSEMBLY ILLUSTRATION

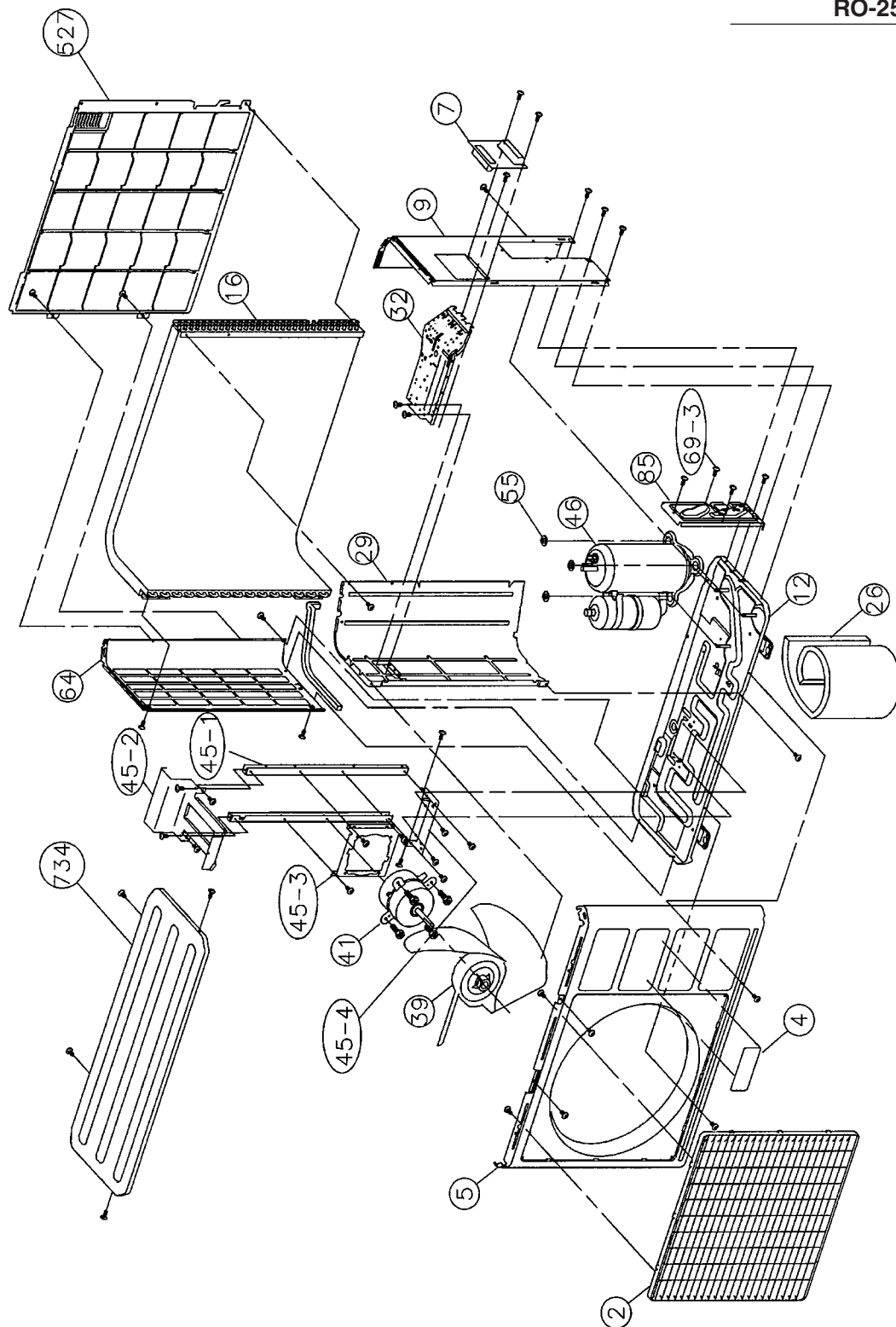
Models : RD-25FA
RD-25UA



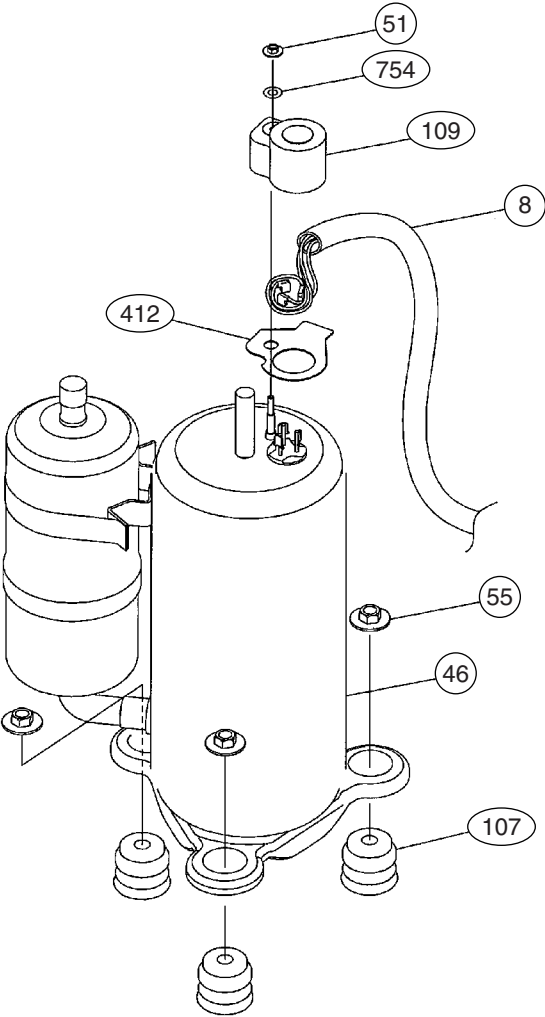




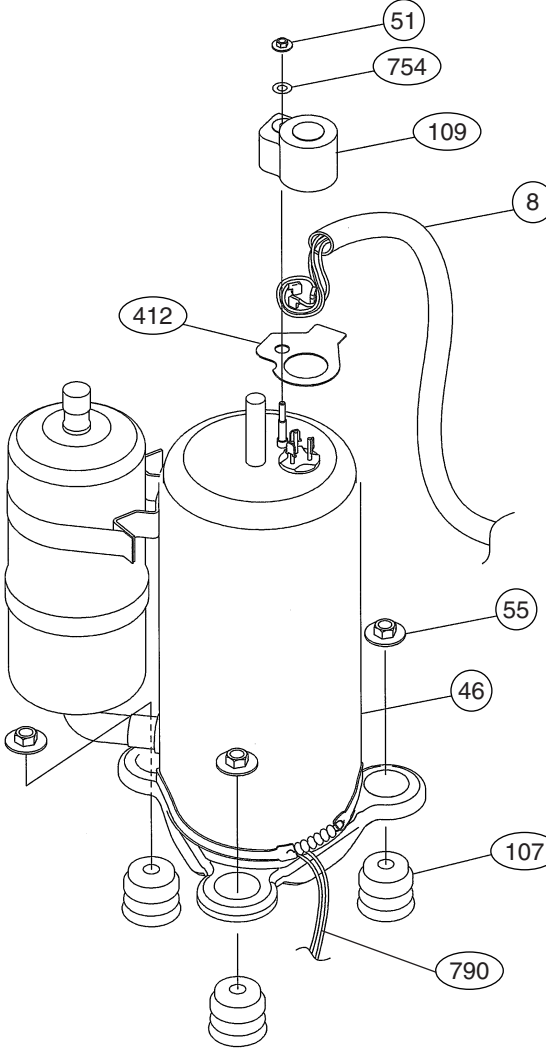
Models : RO-25FA
RO-25UA



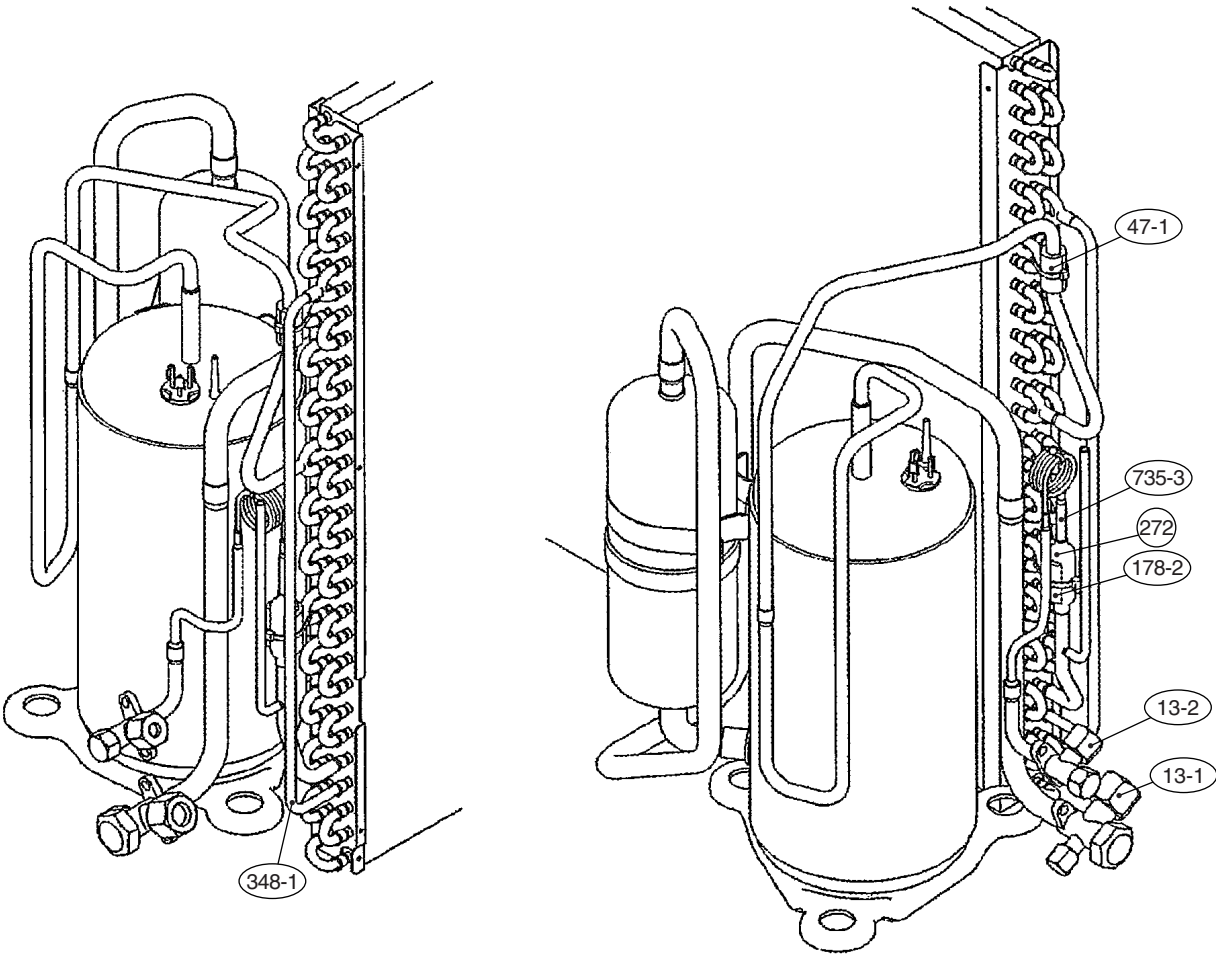
Model : RO-25FA

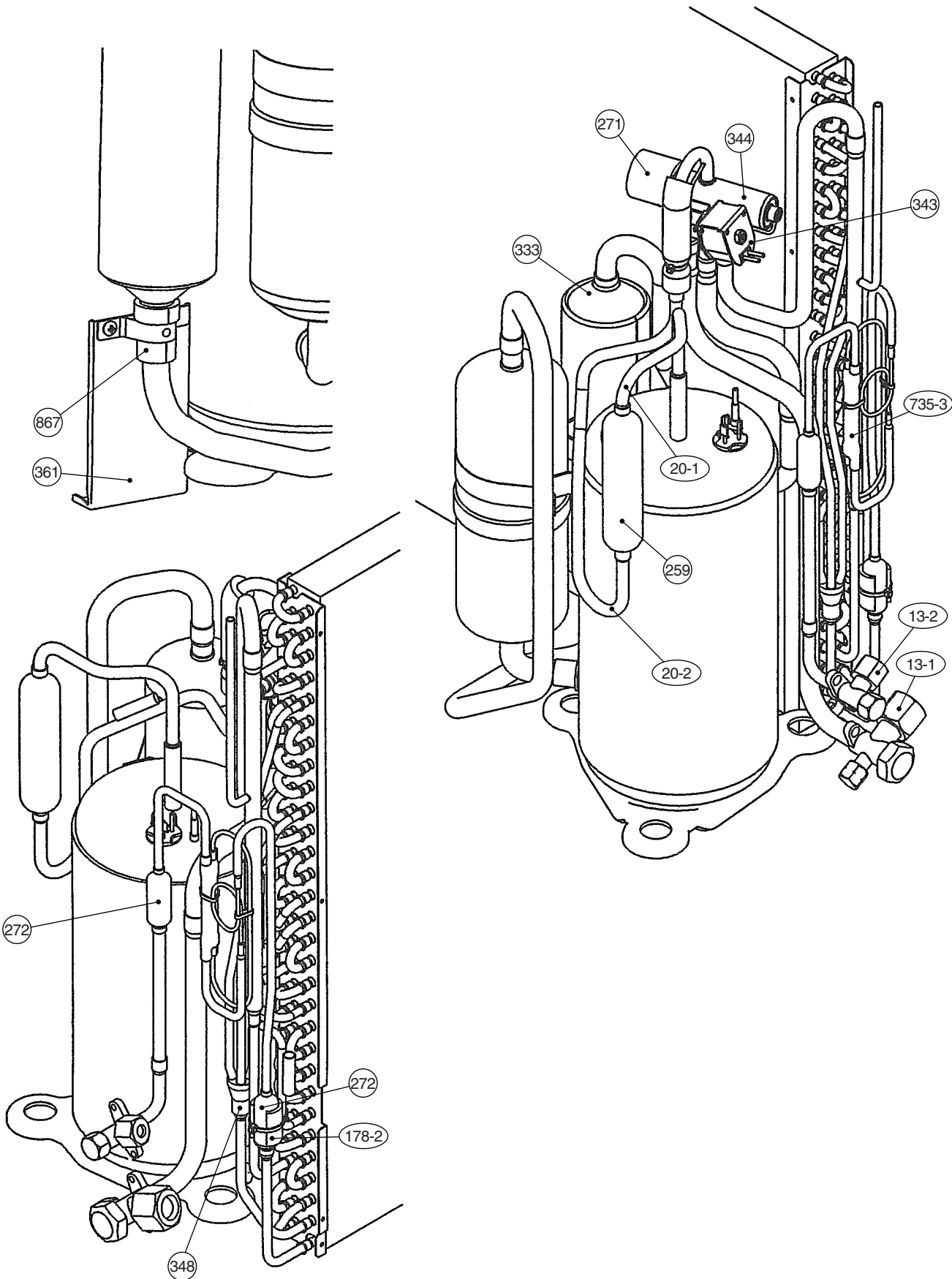


Model : RO-25UA

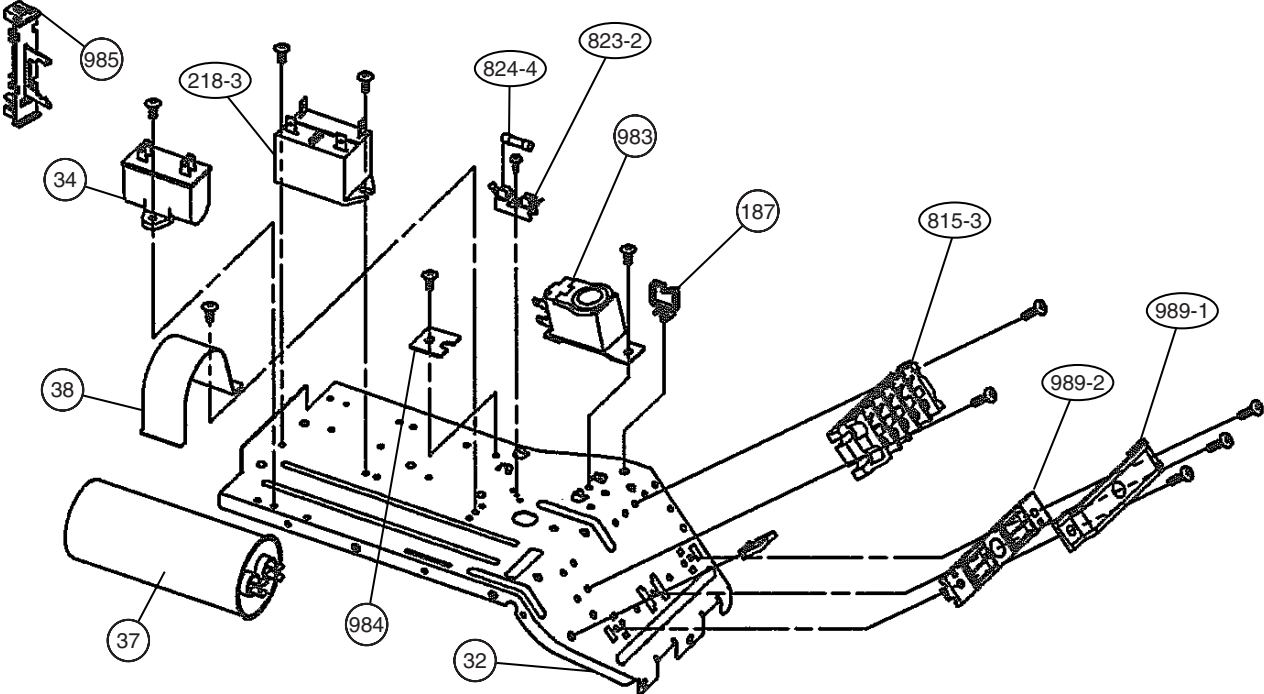


Model : RO-25FA

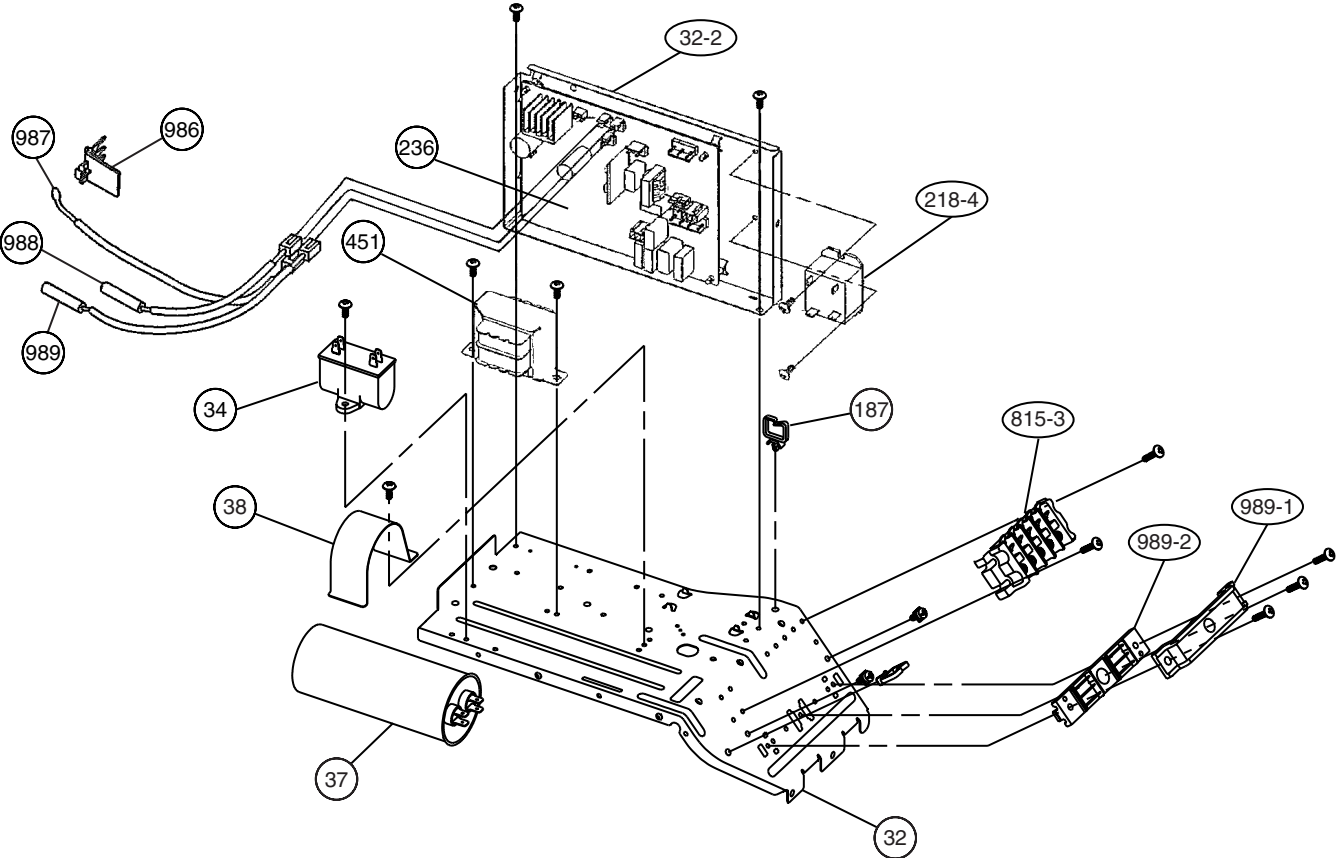




Model : RO-25FA



Model : RO-25UA



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
		RD-25FA	RD-25UA	
34	Capacitor (Fan Motor)	9900230012	9900230012	
36-2	Cord Holder Metal	9356362008	9356362008	
56	Sirocco Fan Assy	9356531022	9356531022	
57	Hex. Socket Screw	313616213202	313616213202	
64	Cabinet-Left Metal	9356551006	9356551006	
67	Rubber (Vibration-proof)	313659068604	313659068604	
69	Cabinet-Right Metal	9356547009	9356547009	
74	Intake Panel	9356537000	9356537000	
75	Outlet Panel Assy	9356538007	9356538007	
108	Base Assy	9356518009	9356518009	
109	Casing Assy	9356527001	9356527001	
126	Motor Fixing Table Assy	9356533002	9356533002	
138	Separate Wall	9356523003	9356523003	
143	Clamp NK-3N	313361274700	313361274700	
146	Evaporator Assy	9373255048	9373255048	
160	Drain Pan Assy	9356542028	9356542028	
164	Fan Motor Assy-IN	9600830024	9600830024	
173	Hanger Bracket	9356563009	9356563009	
184-1	Thermo. Spring-A	313728262708	313728262708	
185-1	Rubber Bushing	9357376004	9357376004	
187	Clamp No. 1219	313361271706	313361271706	
195	Clamp SKB-100	313361275805	313361275805	
196-1	Clamp SKB-3M	312300787605	312300787605	
223	Control Box Metal Assy	9373905011	9373905011	
234	Thermistor Assy	9703299056	9703299056	
235	Thermistor Assy-Pipe	9703297045	9703297045	
236	Controller PCB Assy	9705246065 (K03BZ-0403WSE-C1)	9705246058 (K03BZ-0402HSE-C1)	
240	Remote Control Unit	9372266021	9372266014	
253-A	Wire Assy	9372714010	9372714010	
287	Cap (Power)	9352173011	9352173011	
324	Top Plate	9356546002	9356546002	
329	Coupling Pipe Assy	9371333021	9371333021	
338	Motor Fixture	9356536003	9356536003	
381	Loking Spacer	313209391506	313209391506	
394	Pipe Fixing Plate	9356554007	9356554007	
448	Control Box Metal-B	9356560008	9356560008	
466	Clamp NK-4N	313714328805	313714328805	
553	Transformer (Power)	9704129017	9704129017	
574-1	Eva. Fixing Plate-R	9356521009	9356521009	
574-2	Eva. Fixing Plate-L	9356522006	9356522006	
628	Locking Spacer B	313005446558	313005446558	
735	Distributor Assy	9371325026	9371325026	
764	Drain Cap	9356541007	9356541007	
815	Terminal-7P	9703403019	9703403019	
875	Filter PCB Assy	9705271043	9705271036	
924	Intake Seal Plate	9356553000	9356553000	
955	Square Flange Assy	9356555004	9356555004	
956	Control Box Metal-E	9356900002	9356900002	
959	Eva. Seal Plate	9356540000	9356540000	

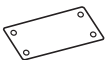
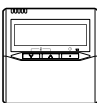
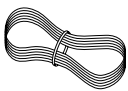
OUTDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty
		RO-25FA	
2	Fan Guard	9371187013	
4	Emblem-Rear	9372171011	
5	Front Panel Ptd	9371924014	
7	Connector Cover (Cabinet)	9366398004	
8	Wire Assy (Comp)	9372334010	
9	Side Panel R Ptd	9371927015	
12	Base Assy, Ptd	9371920016	
13-1	3-Way Valve Assy	9372205013	
13-2	2-Way Valve Assy	9372204023	
16	Condenser Assy	9372181027	
26	Compressor Cover A	9372327012	
29	Separate Wall	9371933016	
32	Control Box	9371935010	
34	Capacitor, Plastic	9900130022	
37	Running Capacitor	9703107023	
38	Capacitor Clamp Metal	313791061807	
39	Propeller Fan Assy	9366378013	
41	Motor Induct	9601671046	
45-1	Motor Bracket	9371929019	
45-2	Motor Bracket-Top	9371931012	
45-3	Motor Bracket Ctr	9371930015	
45-4	Motor Bracket Bottom	9371932019	
46	Compressor Assy	9372558010	
47-1	Rubber (Discharge Pipe)	313194159807	
51	Special Nut M5	9300301015	
55	Special Nut M8	9355091008	
64	Side Panel L Ptd	9371926018	
69-3	Bolt, Hex. Socket	301210060360	
85	Valve Plate Ptd	9371928012	
107	Rubber Seat-A	9351049010	
109	Teminal Cover (Comp)	9371511016	
178-2	Capillary Holder Rubber	313394274808	
187	Clip (Cable)	9352715006	
218-3	Relay	9900074012	
272	Strainer	9369287008	
348-1	Outlet Pipe (Cond)	9372190029	
412	Cover Gasket (Comp.)	9371512013	
527	Protectiive Net	9371934013	
734	Top Panel	9371925011	
735-3	Capillary Assy	9372197059	
754	Terminal Gask. Washer	9351053017	
815-3	Terminal-5P	9900203023	
823-2	Fuse Holder	0500063024	
824-4	Fuse	0600222529	
983	Outdoor Thermostat	9352553004	
984	Bracket (switch)	313986353607	
985	Bracket (thermostat)	9372643013	
989-1	Cord Clamp-A	9359822011	
989-2	Cord Clamp-B	9359823018	

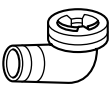
Ref. No.	Description	Part No.	Ord. Q'ty
		RO-25UA	
2	Fan Guard	9371187013	
4	Emblem-Rear	9372171011	
5	Front Panel Ptd	9371924014	
7	Connector Cover (Cabinet)	9366398004	
8	Wire Assy (Comp)	9372334010	
9	Side Panel R Ptd	9371927015	
12	Base Assy, Ptd	9371920016	
13-1	3-Way Valve Assy	9372205013	
13-2	2-Way Valve Assy	9372204023	
16	Condenser Assy	9372181010	
26	Compressor Cover A	9372327012	
29	Separate Wall	9371933023	
32	Control Box	9371935010	
32-2	Control Box B	9371936017	
34	Capacitor, Plastic	9900130022	
37	Running Capacitor	9703107023	
38	Capacitor Clamp Metal	313791061807	
39	Propeller Fan Assy	9366378013	
41	Motor Induct	9601671046	
45-1	Motor Bracket	9371929019	
45-2	Motor Bracket-Top	9371931012	
45-3	Motor Bracket Ctr	9371930015	
45-4	Motor Bracket Bottom	9371932019	
46	Compressor Assy	9372558010	
51	Special Nut M5	9300301015	
55	Special Nut M8	9355091008	
64	Side Panel L Ptd	9371926018	
69-3	Bolt, Hex. Socket	301210060360	
85	Valve Plate Ptd	9371928012	
107	Rubber Seat-A	9351049010	
109	Teminal Cover (Comp)	9371511016	
178-2	Capillary Holder Rubber	313394274808	
187	Clip (Cable)	9352715006	
218-4	Power Relay	9353611017	
236	PCB Assy	9704299062	
259	Muffler	9372369012	
271	4-Way Valve Rubber	313728251908	
272	Strainer	9369287008	
333	Accumulator	9368391003	
343	Solenoid	9900165024	
344	4-Way Valve	9900163013	
361	Accum Support Assy	9372252017	
412	Cover Gasket (Comp.)	9371512013	
451	TRANSFORMER	9900039011	
527	Protectiive Net	9371934013	
734	Top Panel	9371925011	
735-3	Capillary Assy	9372197288	
754	Terminal Gask. Washer	9351053017	
790	Belt Heater	9361140165	
815-3	Terminal-5P	9900203023	
867	Accumulator Holder Rubber	9354022010	
986	Bracket (thermo)	9373154013	
987	Outdoor Temp thermistor	9900037031	
988	Discharge Temp thermistor	9900038014	
989	Heat Exchanger thermistor	9900043032	
989-1	Cord Clamp-A	9359822011	
989-2	Cord Clamp-B	9359823018	

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Part No.	
			RD-25FA	RD-25UA
Installation template 	1	For positioning the indoor unit	9357036007	9357036007
Hanger 	4	For suspending the indoor unit from ceiling	9356563009	9356563009
Special nut A (large flange) 	4	For suspending the indoor unit from ceiling	313005446653	313005446653
Special nut B (small flange) 	4		313005446759	313005446759
Coupler heat insulation (large) 	2	For indoor side pipe joint (large pipe)	9350716029	9350716029
Coupler heat insulation (small) 	1	For indoor side pipe joint (small pipe)	9352766015	9352766015
Nylon fastener 	1	For fixing the drain hose	312300787605	312300787605
Remote control unit 	1		9372266021	9372266014
Tapping screw 	2	For installing the remote control unit cord clamp	0700181108	0700181108
Drain hose insulation 	1	Insulates the drain hose and vinyl hose connection	313806217708	313806217708
Remote controller cord 	1		9372714010	9372714010

OUTDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Part No.	
		RO-25FA	RO-25UA
Drain pipe 	1	—	9303029015
Drain cap 	1	—	313166024302

