

SPLIT TYPE ROOM AIR CONDITIONER CEILING type (50Hz)

SERVICE MANUAL

Models

Indoor unit

ABY45RBA3W

Outdoor unit

AOY45RPA3L

preliminary

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SPECIFICATIONS

TYPE	COOLING & HEATING
INDOOR UNIT	ABY45RBA3W
OUTDOOR UNIT	AOY45RPA3L
COOLING CAPACITY (kW)	12.4 - 12.7
HEATING CAPACITY (kW)	13.4 - 13.7

ELECTRICAL DATA

POWER SOURCE (V)			380 - 415
FREQUENCY			3~ 50Hz
RUNNING CURRENT (A)	COOLING	8.1 - 8.3	
	HEATING	8.4 - 8.4	
INPUT WATTS (kW)	COOLING	4.35 - 4.45	
	HEATING	4.45 - 4.50	
E.E.R. (kW / kW)	COOLING	2.85 - 2.85	
	HEATING	3.01 - 3.04	
MOISTURE REMOVAL (ℓ /hr)			5.5
AIR CIRCULATION (m³/hr)			1,850

COMPRESSOR

TYPE	Hermetic type, 2 poles, 3 phase, Induced by condenser, Scroll
DISCRIMINATION	ZR61KC-TFD-599

FAN MOTOR

POWER SOURCE (V)		220 - 240
INDOOR UNIT (r.p.m.)	DISCRIMINATION	MFA-45DZM
	HI-SPEED	1,100
	MED-SPEED	1,000
	LO-SPEED	850
OUTDOOR UNIT (r.p.m.)	DISCRIMINATION	MFB-362FT
	HI-SPEED	770

DIMENSIONS

INDOOR UNIT	H x W x D (mm)	240 x 1,660 x 700
OUTDOOR UNIT	H x W x D (mm)	1,152 x 940 x 370

WEIGHT

INDOOR UNIT	GROSS / NET (kg)	61 / 48
OUTDOOR UNIT	GROSS / NET (kg)	124 / 110

REFRIGERANT CHARGE (R-22)

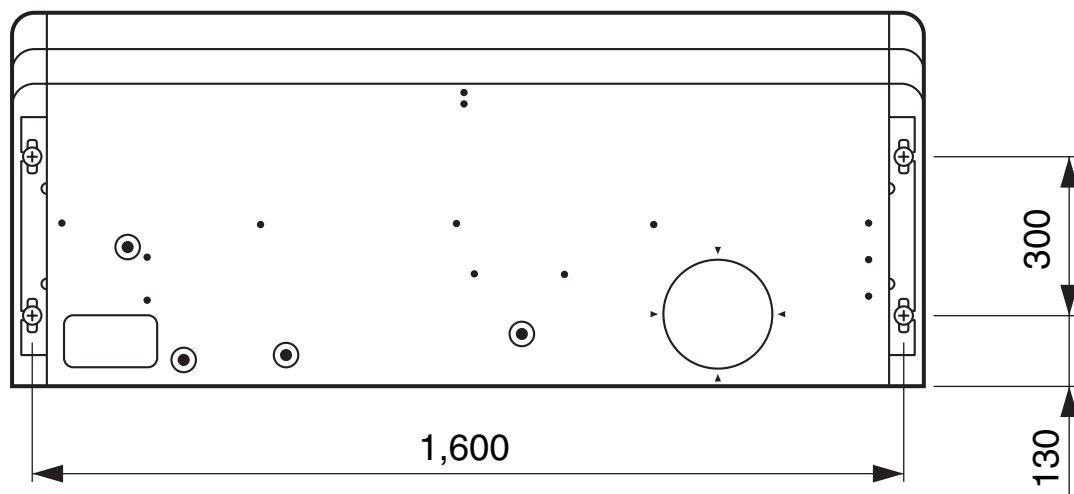
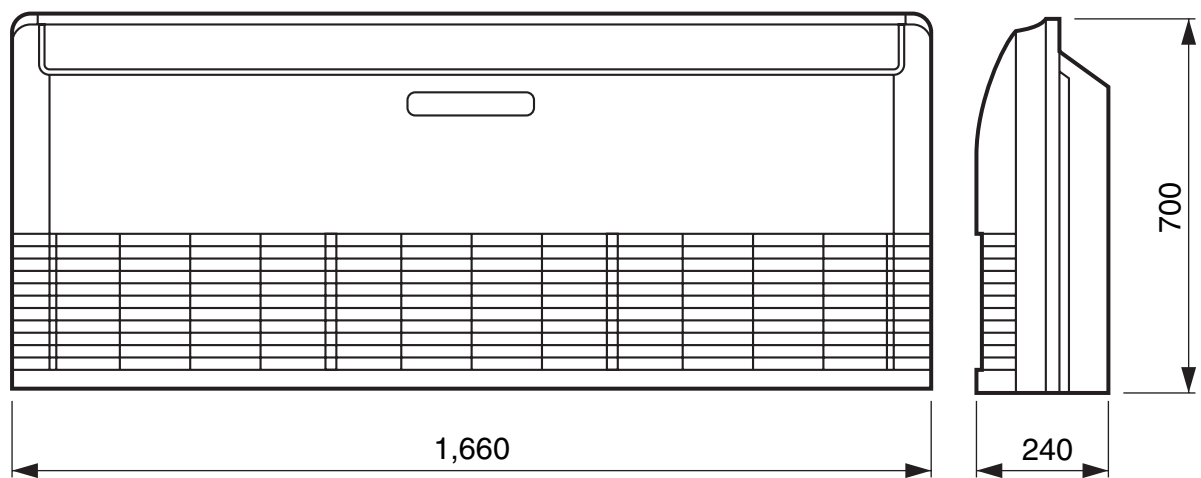
FULL CHARGE AMOUNT	Pipe length 20.0 m (66 ft)	3,500 g (123.5 oz)
	25.0 m (82 ft)	3,700 g (130.5 oz)
	30.0 m (99 ft)	3,900 g (137.6 oz)
	40.0 m (132 ft)	4,300 g (151.7 oz)
	50.0 m (164 ft)	4,700 g (165.8 oz)
ADDITIONAL CHARGE		40 g/m (0.46 oz/ft)

OUTLINE AND DIMENSIONS

(Unit : mm)

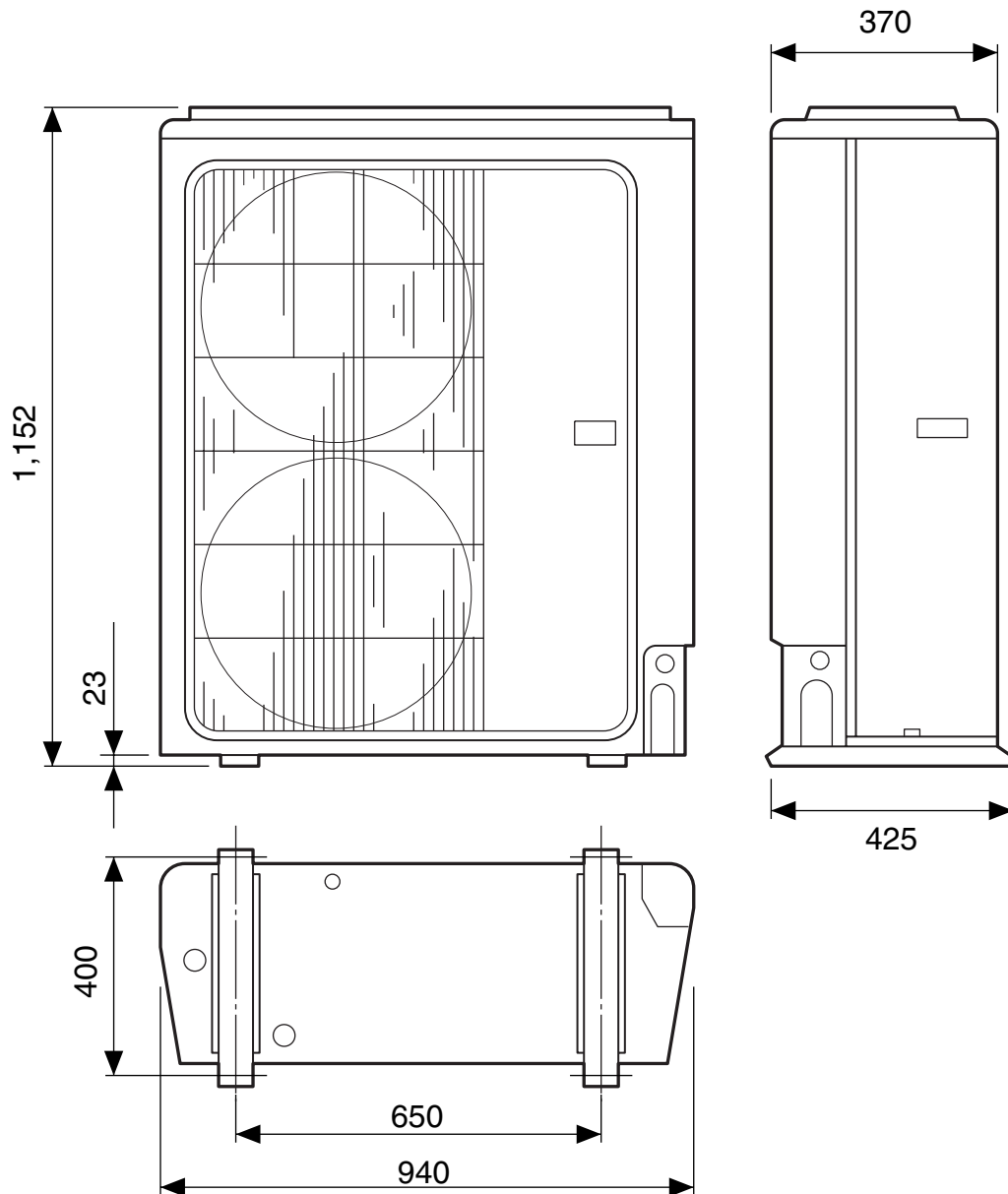
INDOOR UNIT

Models : ABY45RBA3W



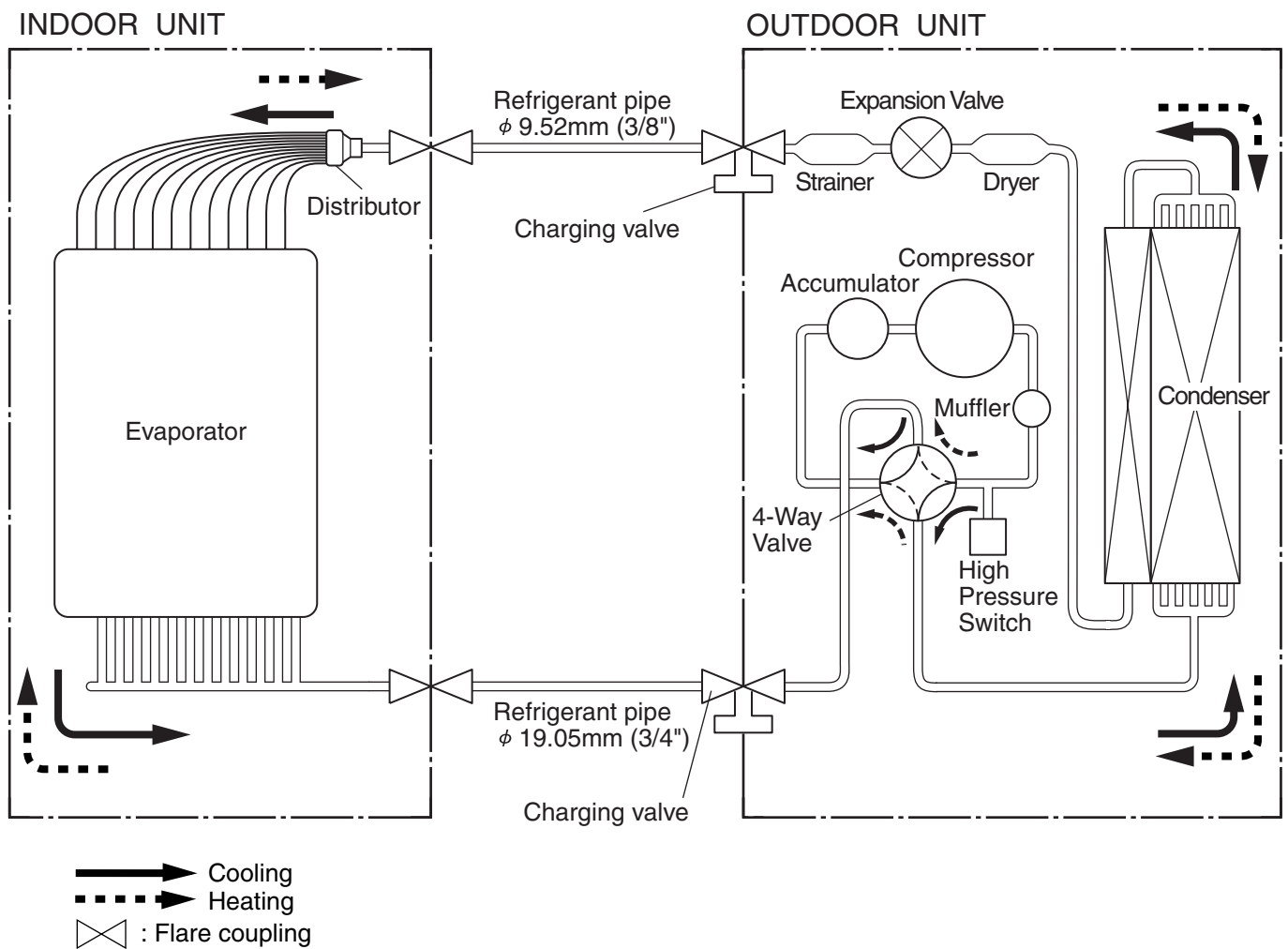
OUTDOOR UNIT

Models : AOY45RPA3L



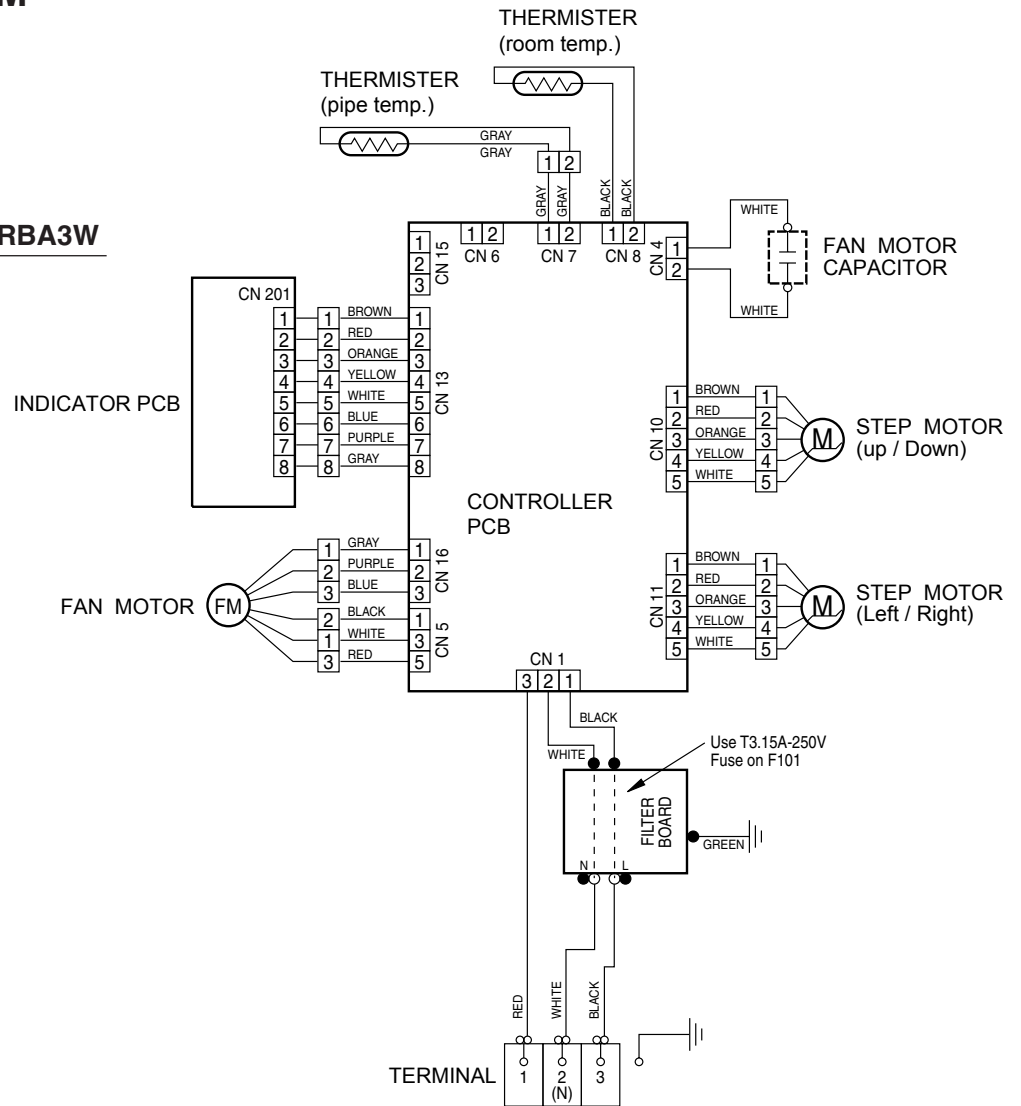
REFRIGERANT SYSTEM DIAGRAM

Models : ABY45RBA3W / AOY45RPA3L

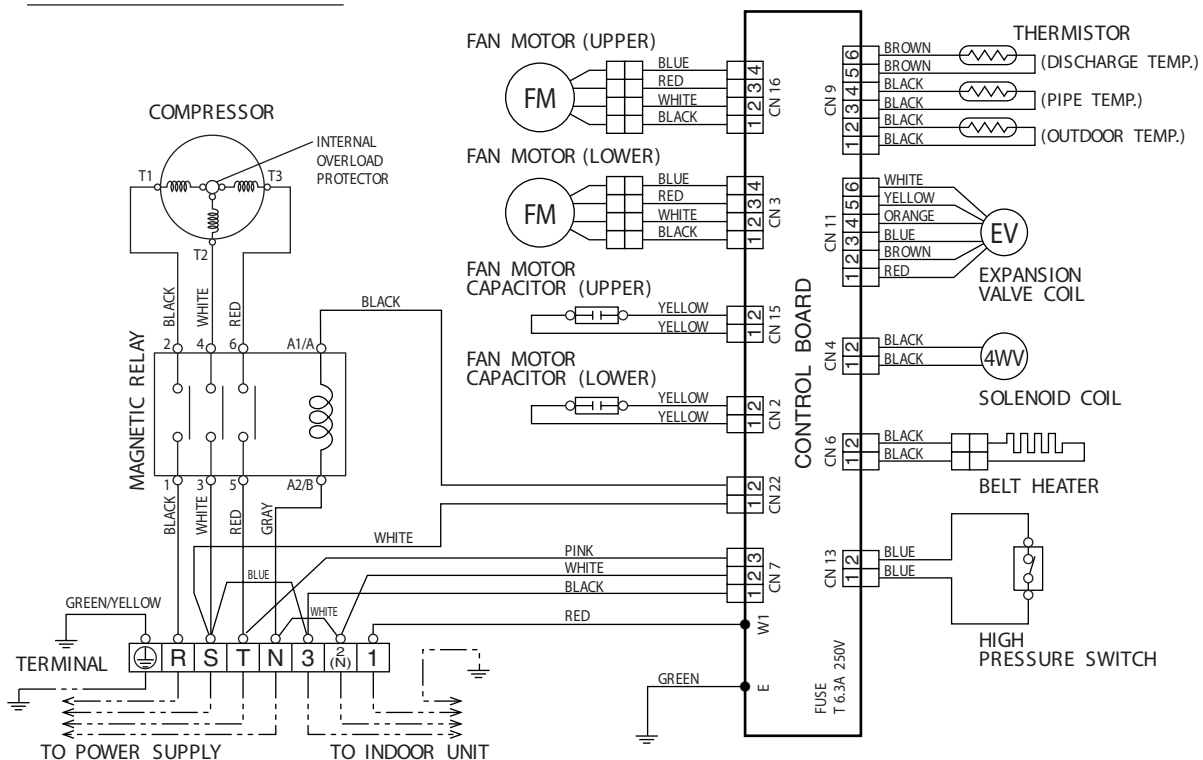


CIRCUIT DIAGRAM

Models : ABY45RBA3W



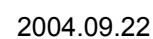
Models : AOY45RPA3L



EZ-0022AHSE-C



EZ-002HHUE-C

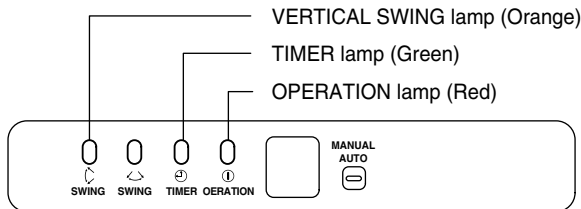


ERROR CONTENTS

1. INDOOR UNIT

Operation can be checked by lighting and flashing of the display section OPERATION, TIMER, and VERTICAL SWING 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, TIMER, and VERTICAL SWING lamps flash slowly at the same time.

ERROR

The OPERATION, TIMER, and VERTICAL SWING lamps operate as follows (Table 1) according to the error contents.

Table 1

Error contents	Error display		
	OPERATION lamp	TIMER lamp	VERTICAL SWING lamp
Indoor EEPROM abnormal	○	○	X
Outdoor EEPROM abnormal	○	○	○
Indoor room temperature sensor open	(2 times) ●	○	X
Indoor room temperature sensor short-circuited	(2 times) ●	○	○
Indoor heat exchanger temperature sensor open	(3 times) ●	○	X
Indoor heat exchanger temperature sensor short-circuited	(3 times) ●	○	○
Float switch operated	(4 times) ●	○	X
Indoor signal abnormal	(5 times) ●	○	X
Outdoor signal abnormal	(5 times) ●	○	○
Indoor fan abnormal	(6 times) ●	○	X
Outdoor power source connection abnormal	○	(2 times) ●	X
Outdoor heat exchanger temperature sensor open	○	(3 times) ●	X
Outdoor heat exchanger temperature sensor short-circuited	○	(3 times) ●	○
Outdoor temperature sensor open	○	(4 times) ●	X
Outdoor temperature sensor short-circuited	○	(4 times) ●	○
Outdoor discharge pipe temperature sensor open	○	(5 times) ●	X
Outdoor discharge pipe temperature sensor short-circuited	○	(5 times) ●	○
Outdoor high pressure abnormal	○	(6 times) ●	X
Outdoor discharge pipe temperature abnormal	○	(7 times) ●	X

○ : 0.1s ON / 0.1s OFF (flash) X : OFF

● : 0.5s ON / 0.5s OFF (flash)

2. OUTDOOR UNIT

When the outdoor temperature drops, the outdoor unit's fans may switch to low speed, or one of the fans may stop intermittently.

ERROR : Reverse cycle only

The LED lamps operate as follows (Table 2) according to the error contents.

Table 2

Error contents	LED1	LED2	LED3	LED4	LED5	LED6
Signal abnormal	—	—	X	○	X	X
Indoor unit abnormal	—	—	X	X	○	X
Discharge pipe temperature abnormal	—	—	X	X	X	○
Outdoor heat exchanger temperature abnormal	—	—	X	X	○	○
Outdoor temperature abnormal	—	—	X	○	X	○
Power source connection error	—	—	○	X	X	X
EEPROM abnormal	—	—	○	○	○	○
	◎	◎	◎	◎	◎	◎
Outdoor high pressure abnormal	○	—	—	—	—	—
Discharge pipe temperature abnormal	—	○	—	—	—	—

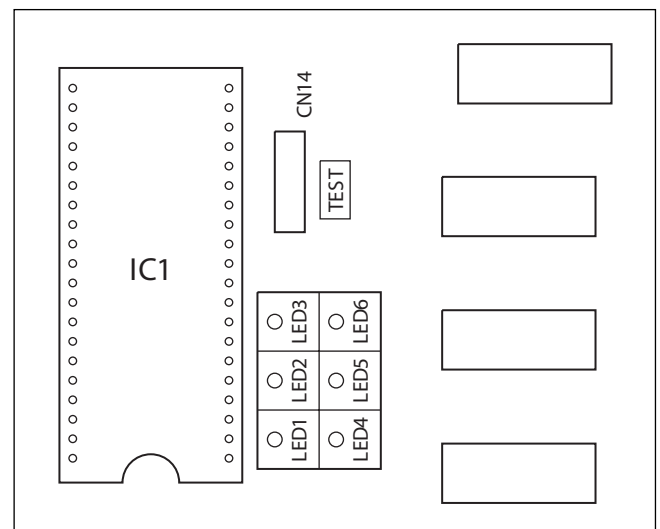
○ : 0.5s ON / 0.5s OFF (flash) X : OFF

◎ : 0.1s ON / 0.1s OFF (flash) — : Indefinite

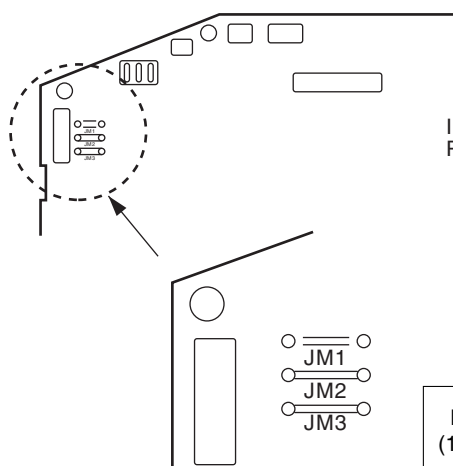
When the fault is cleared, the LED lamp goes off.

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.

ERROR LED DISPLAY LAYOUT



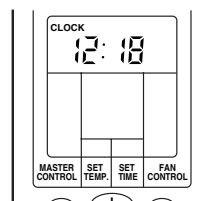
REMOTE CONTROL UNIT CODE SWITCHING



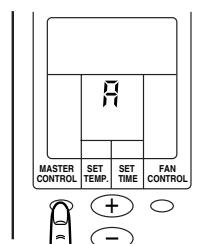
Indoor unit
Printed circuit board

Remote control unit settings

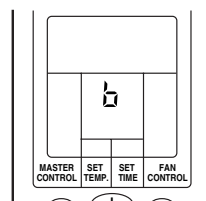
- (1) Press the START/STOP button and display only the clock.



- (2) Press the MASTER CONTROL button continuously for more than five seconds to display the current signal code.



- (3) Change the signal code with the $\oplus/\ominus$ button (A → B → C → D).



- (4) Press the MASTER CONTROL button again to return to the clock display and change the signal code.

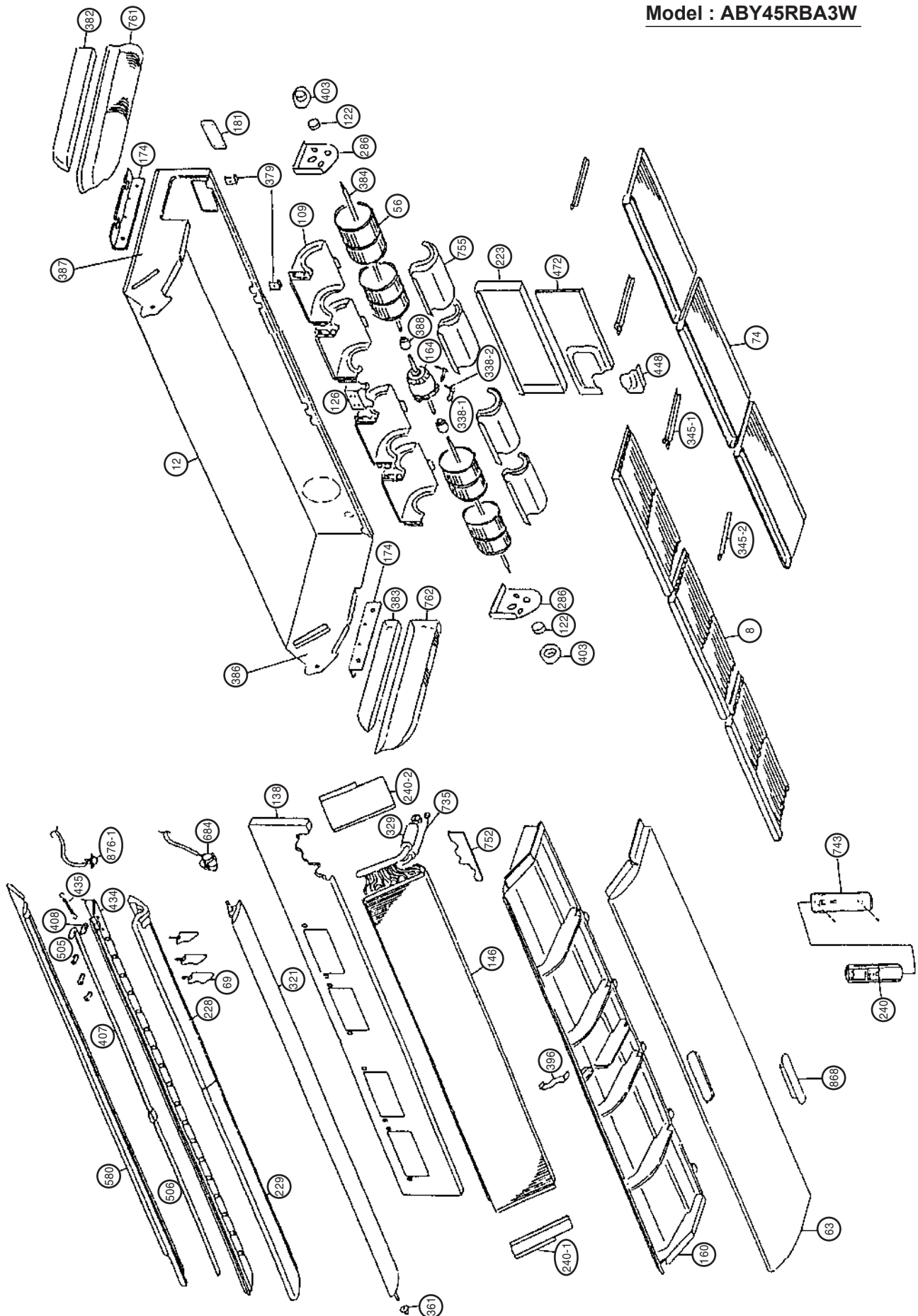
Confirm the setting of the remote control unit signal codes setting and the printed circuit board setting.
If these are not confirmed, the remote control unit cannot be used to operate for the air conditioner.

Jumper wire		Remote control unit signal selector switch
JM 2	JM 3	
Connect	Connect	A (Primary setting)
Connect	Disconnect	B
Disconnect	Connect	C
Disconnect	Disconnect	D

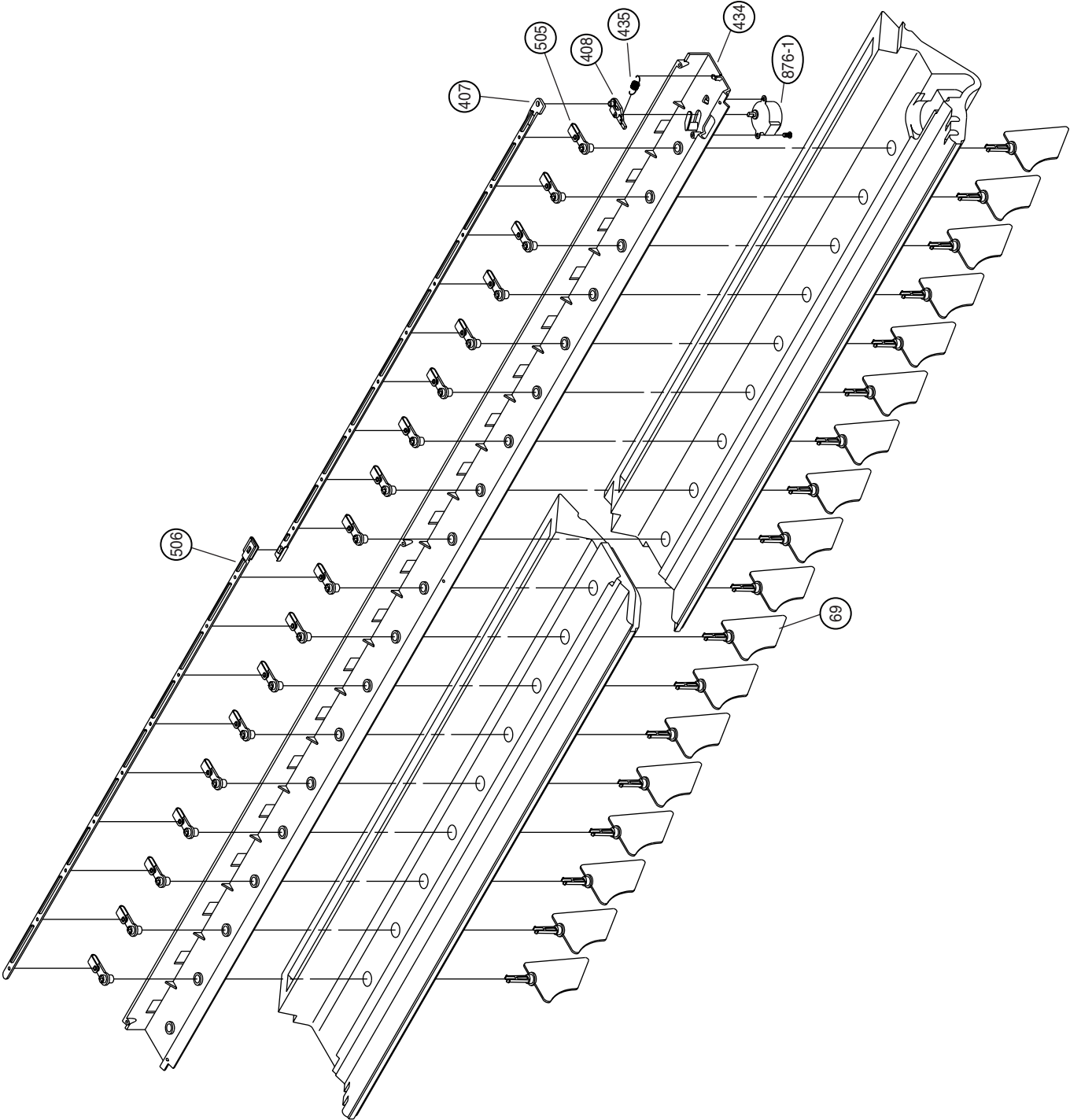
DISASSEMBLY ILLUSTRATION

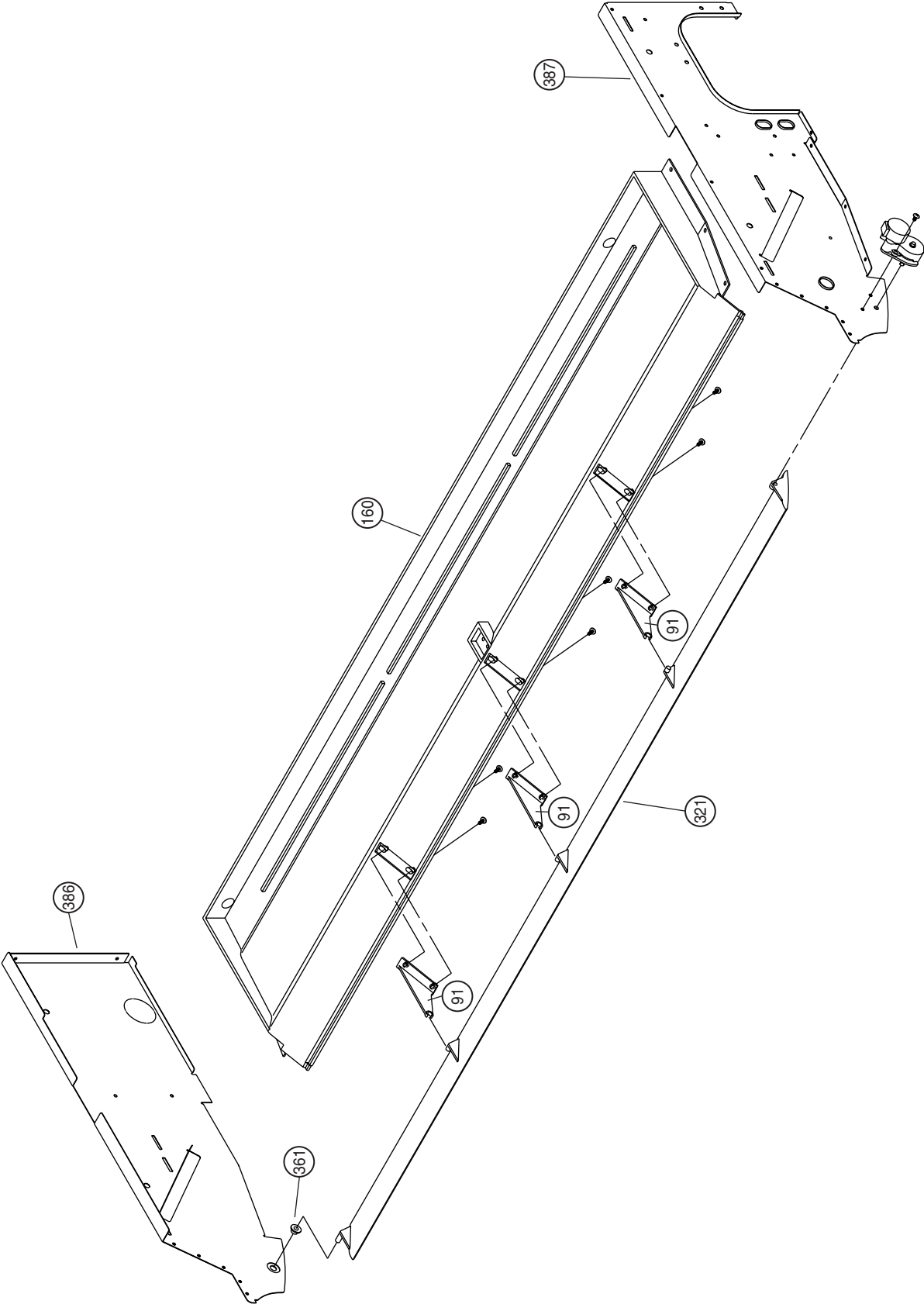
INDOOR UNIT

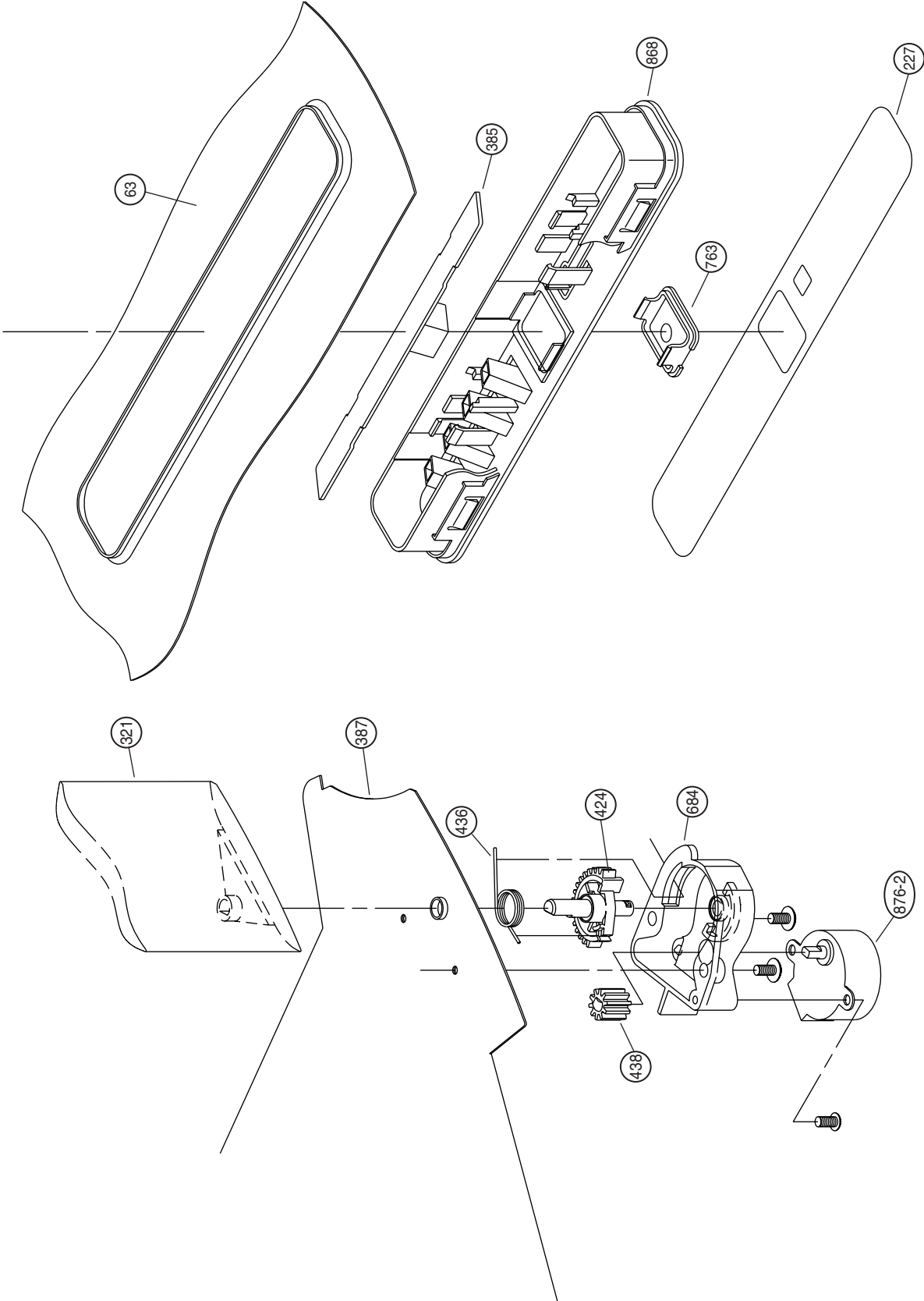
Model : ABY45RBA3W



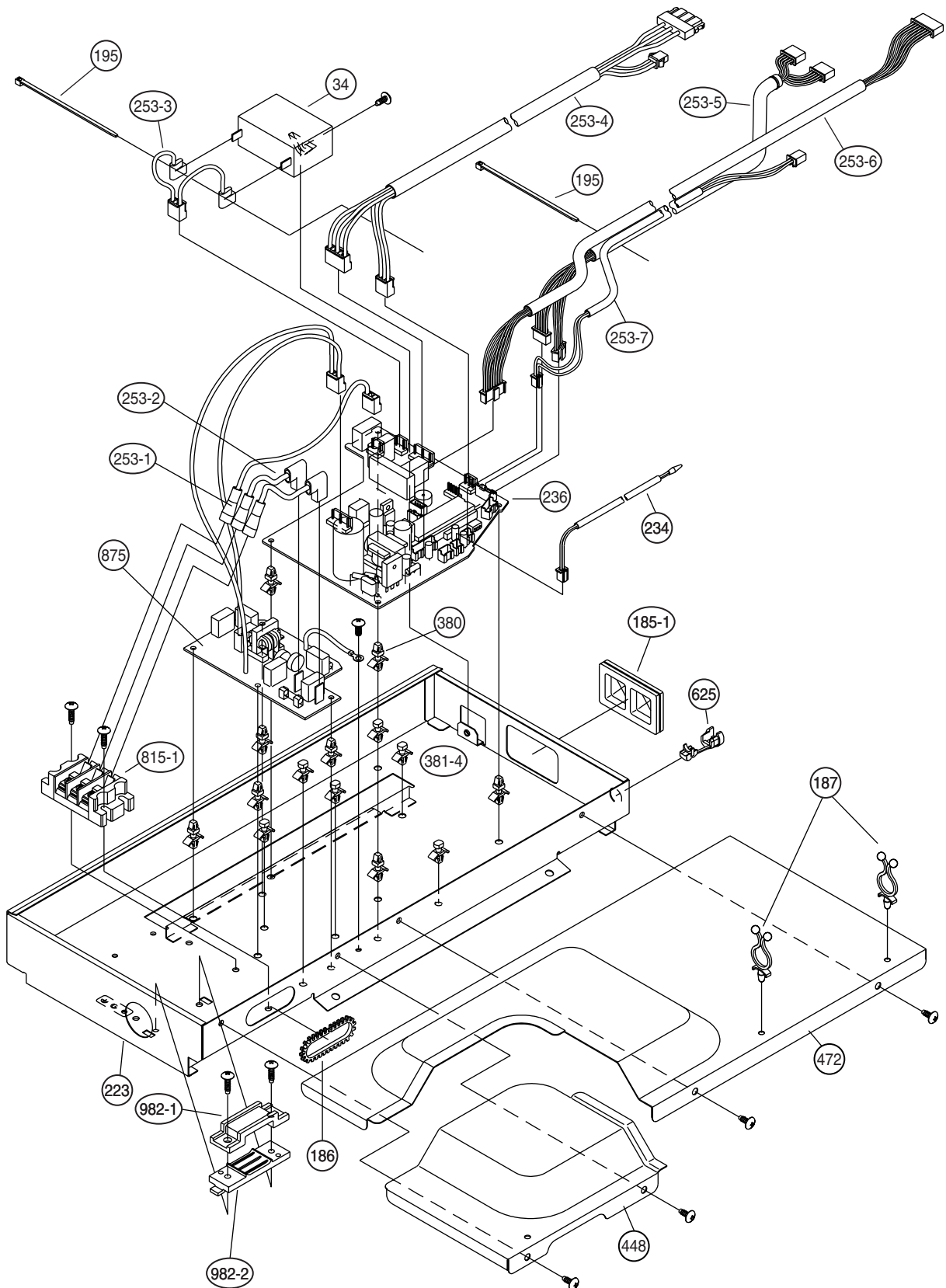
Model : ABY45RBA3W



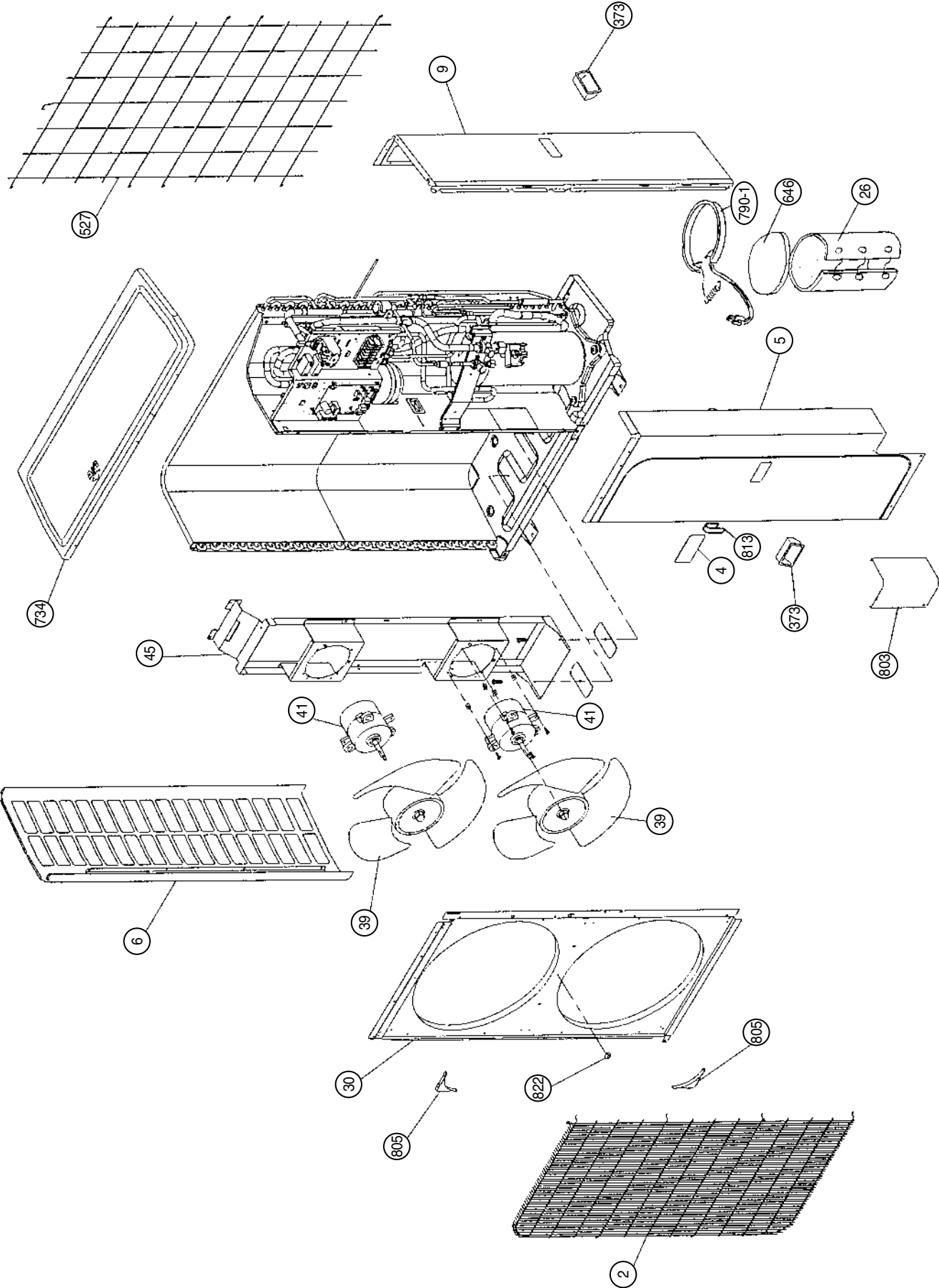


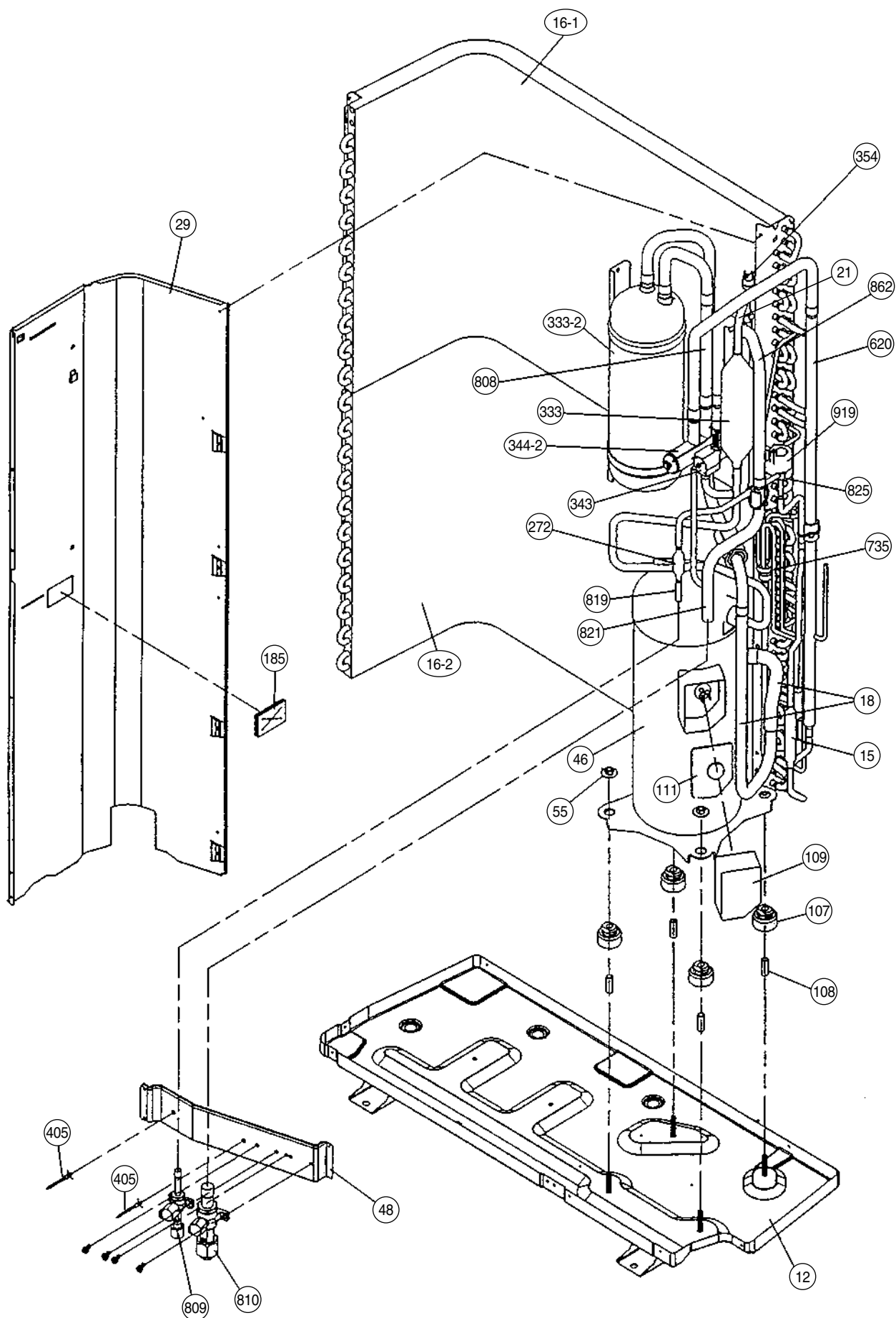


Model : ABY45RBA3W

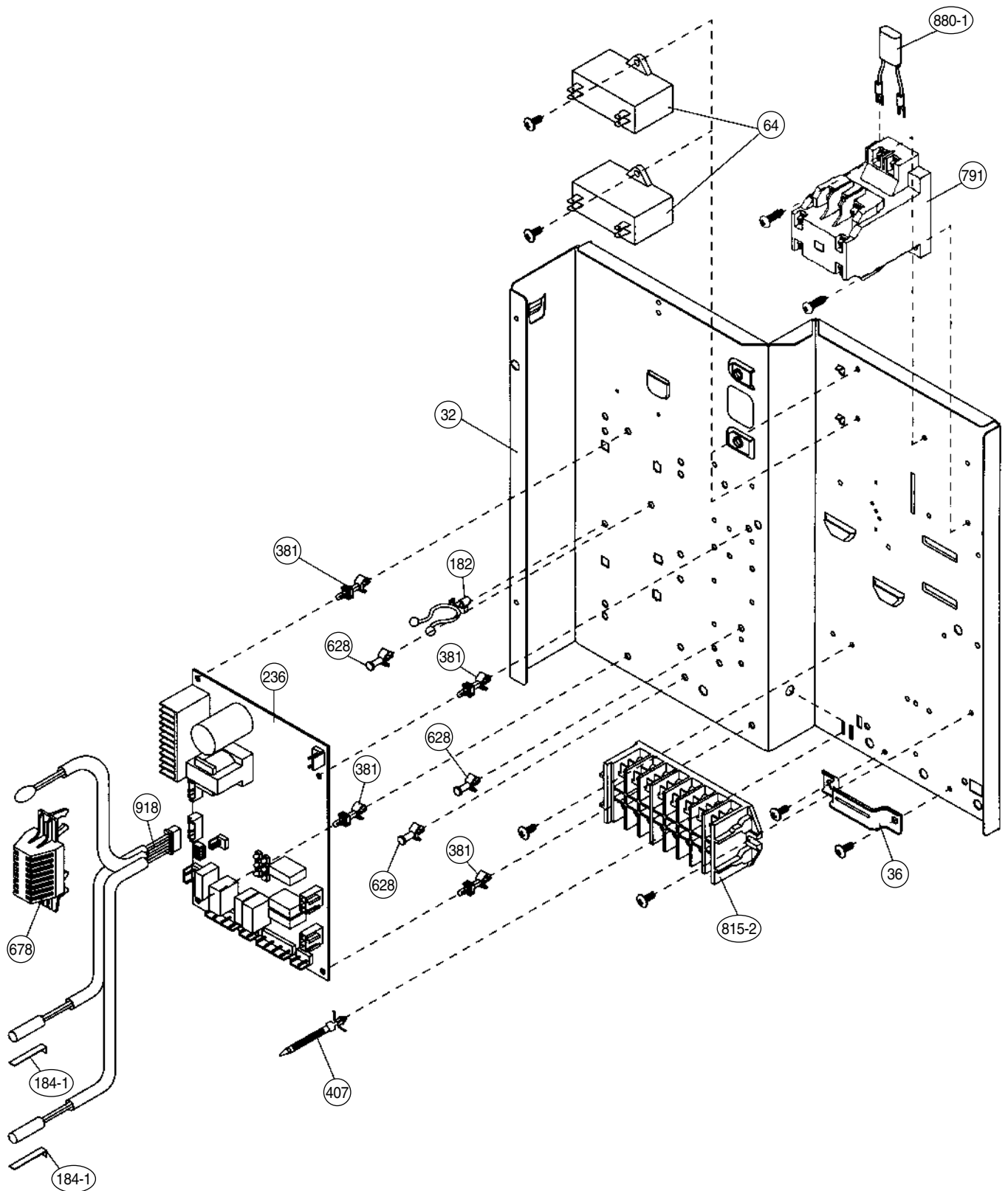


Model : AOY45RPA3L





Model : AOY45RPA3L



PARTS LIST

INDOOR UNIT

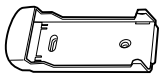
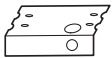
Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		ABY45RBA3W				ABY45RBA3W	
8	Air Filter	9359739005		338-1	Fixture (Motor)	9359702009	
12	Base Assy	9359680000		338-2	Fixture (Motor)-B	9359703006	
34	Capacitor (Fan Motor)	9703306068		345-1	Filter Guide-R	9359692003	
56	Sirocco Fan Assy	9359701002		345-2	Filter Guide-L	9359693000	
63	Panel (Front)	9359734000		361	Bushing	9359733003	
69	Louver	9359719007		379	Hinge Plate (Grille)	9359694007	
74	Intake Grille	9359738008		380	Locking Spacer KGLS-6S	313209391403	
91	Hinge	9359699002		381-4	Spacer	0600118075	
109	Casing	9359704003		382	Cover (Decoration)-R	9359744009	
122	Bearing-B Assy	9357921006		383	Cover (Decoration)-L	9359745006	
126	Bracket (Motor)	9359681007		384	Shaft	9359707004	
138	Separate Wall	9359700005		385	Indicator PCB Assy	9702260019	
146	Evaporator Assy	9371073019		386	Panel-Left Assy	9359685005	
160	Drain Pan	9359698005		387	Panel-Right Assy	9359683001	
164	Fan Motor Assy-IN	9360457004		388	Joint Assy	9359706007	
174	Hanger	9359742005		396	Rfm Bracket Metal	9359697008	
181	Hole Cover	9359691006		403	Fixture (Bearing)	9359687009	
185-1	Rubber Bushing	9357376004		407	Rod (Motor)	9359723004	
186	Cover (Edge)	9361049017		408	Link (Louver)	9359726005	
187	Clamp No.1219	313361271706		424	Sector Gear	9359729006	
195	Clamp SKB-100	313361275805		434	Base (Louver)	9359718000	
223	Control Box Assy	9359708001		435	Louver Spring	9359720003	
227	Badge "FUJITSU"	9359735014		436	Flap Spring	9359730002	
228	Insulation (Louver)-R	9359721000		438	Pinion Gear	9359728009	
229	Insulation (Louver)-L	9359722007		448	Control Box-B	9359713005	
234	Thermistor	9703299025		472	Control Box-A	9359712008	
236	Controller PCB Assy	9704557261		505	Stopper (Louver)	9359724001	
240	Remote Control Unit	9371190013		506	Rod (Louver)	9359725008	
240-1	Cover Panel (Pipe)-L	9359690009		580	Cover (Top)	9359737001	
240-2	Cover Panel (Pipe)-R	9359689003		625	Cord Bushing	9359240006	
253-1	Wire Assy	9702321017		684	Motor Base	9359727002	
253-2	Wire Assy	9702322014		735	Distributor Assy	9360455000	
253-3	Wire Assembly	9702311018		743	Remote Control Holder Case	9305642014	
253-4	Wire Assy (Connector)	9702323011		752	Bracket Panel (Pipe)	9359688006	
253-5	Wire Assy (Connector)	9702319014		755	Cover (Casing)	9359705000	
253-6	Wire Assy (Connector)	9702317010		761	Cover (Side)-R	9359740001	
253-7	Wire Assy (Connector)	9702318017		762	Cover (Side)-L	9359741008	
286	Bracket (Bearing)	9359686002		763	Cover (Receiver)	9359714002	
321	Flap Assy	9359731009		815-1	Terminal-3P	9358660027	
329	Coupling Pipe Assy	9371075013		868	PCB Holder	9359736004	
				875	Filter PCB Assy	9704561060	
				876-1	Motor, Step-H	9360479013	
				876-2	Motor, Step-V	9360307026	
				982-1	Cord Clamp-A	9359820017	
				982-2	Cord Clamp-B	9359821014	
				---	Thermistor (Pipe)	9900022020	

OUTDOOR UNIT

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
		AOY45RPA3L				AOY45RPA3L	
2	Fan Cover	9352159015		236	Controller PCB Assy	9704764096	
4	Emblem-Rear	9351355005		272	Strainer Assy	9354139008	
5	Cabinet-A, Painted	9352146015		333	Accumulator	9350363018	
6	Cabinet-C, Painted	9352149016		333-2	Accumulator Assy (B)	9371615011	
9	Cabinet-B, Painted	9352147012		343	Solenoid Coil	9900165024	
12	Base Assy, Painted	9352136016		344-2	4-Way Valve	9970035012	
15	Dryer	9368111014		354	Pressure Switch	9704045003	
16-1	Condenser-A Assy	9355338011		373	Grip	9352157004	
16-2	Condenser-B Assy	9353363008		381	Locking Spacer	313209391506	
18	Suction Pipe Assy	9372226018		405	Clamp No. 1763	313816345304	
21	Discharge Pipe-B	9372246016		407	Clamp (Cable) No. 1259	313739340109	
26	Compressor Cover-A	9370774030		527	Protection Net	9352163012	
29	Separate Wall Assy	9355277013		620	Inlet Pipe (Cond.) Assy	9372224014	
30	Blower Cover, Painted	9352151019		628	Locking Spacer	313005446558	
32	Control Box Metal	9352134012		646	Compressor Cover-B	9370774047	
36	Cord Holder Metal	9356934007		678	Bracket (Thermistor)	313557406106	
39	Propeller Fan Assy	9366378013		734	Cabinet Top Plate	9352161018	
41	Fan Motor Assy-Out	9600832028		735	Distributor Assy	9372230015	
45	Bracket (Motor) Assy	9368108007		790-1	Belt Heater-A	9361140042	
46	Compressor Assy	9371396026		791	Magnetic Relay	9900078010	
48	Bracket (Coupler) Assy	9355281010		803	Cabinet-D, Painted	9352150012	
55	Special Nut M8 (For Comp.)	9355091008		805	Blower Cover Corner	9352160011	
64	Capacitor (Fan Motor)	9357965024		808	Inlet Pipe (Accumulator)-A	9372244012	
107	Rubber Seat-A (For Comp.)	9364084008		809	Ball Valve-A	9371799049	
108	Sleeve-A (For Comp.)	9364085005		810	Ball Valve-B	9371799056	
109	Terminal Cover (For Comp.)	9364087009		813	Cabinet Hook	9352148002	
111	Terminal Packing	9364086002		815-2	Terminal 8P	9363276022	
182	Clamp No. 249	313361271505		819	Valve-A Couple. Pipe	9363457001	
184-1	Thermo. Spring-A	313728262708		821	Joint Pipe Assy (Valve-B)	9352284007	
185	Rubber Bushing	313005066051		822	Fan Cover Fixture-A	9352158018	
				825	Expansion Valve	9900170028	
				862	Valve-B Couple. Pipe	9372243015	
				880-1	Network	9700987017	
				918	Thermistor Assy	9900129019	
				919	Expansion Valve Coil	9900172015	

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

Name and Shape	Q'ty	Application	Parts No.
Remote control unit 	1	Use for air conditioner operation	9371190013 (AR-JW1)
Battery (penlight) 	2	For remote control unit	313187358304
Remote control unit holder 	1	For mounting the remote control unit	9305642014
Tapping screw (ø3 x 12) 	3	For remote control unit holder installation	301141533125
Drain hose insulation 	1	Adhesive type 70 x 230	9360464002
VT wire 	1	For fixing the drain L 280 mm	313806350303
Coupler heat insulator (large) 	2	For indoor side pipe joint (large pipe)	9350716029
Coupler heat insulator (small) 	1	For indoor side pipe joint (small pipe)	9352766015
Nylon fastener 	Large 4	For fixing the coupler heat insulator	9301501001
	Small 4		312300787605
Special nut A (large flange) 	4	For installing indoor unit	313005446653
Special nut B (small flange) 	4	For installing indoor unit	313005446759
Installation template 	1	For positioning the indoor unit	9360022004
Auxiliary pipe assembly 	1	For connecting the piping	9360463005

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
Pipe (drain) 	2	For outdoor unit drain piping work	313728031005
Flexible tube 	2		313013042915
Cap (drain) 	2		313166024302

