

**SPLIT TYPE
AIR CONDITIONER**

CASSETTE type (50Hz)

SERVICE MANUAL

Models	Indoor unit	Outdoor unit
	AUY12FBAB	AOY12FSAJ
	AUY12UBAB	AOY12USAJL
	AUY14FBAB	AOY14FSDJ
	AUY14UBAB	AOY14USDJL



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

TYPE		COOL	COOL & HEAT
INDOOR UNIT		AUY12FBAB	AUY12UBAB
OUTDOOR UNIT		AOY12FSAJ	AOY12USAJL
COOLING CAPACITY	(kW)	3.60	3.55
HEATING CAPACITY	(kW)	—	4.00

ELECTRICAL DATA

POWER SOURCE	(V)	230		
FREQUENCY	(Hz)	50		
RUNNING CURRENT	(A)	COOLING	5.5	5.5
		HEATING	—	5.4
INPUT WATTS	(kW)	COOLING	1.24	1.24
		HEATING	—	1.21
E.E.R.	(kW/kW)	COOLING	2.90	2.86
		HEATING	—	3.31
STARTING CURRENT	(A)	30	30	
MOISTURE REMOVAL	(ℓ/hr)	1.3	1.3	
AIR CIRCULATION-HI	(m ³ /hr)	550	550	

COMPRESSOR

TYPE	Hermetic type, Rotary		
DISCRIMINATION	802 354 35(B)		
POWER SOURCE	230V 50Hz		
REFRIGERANT (R410A)	(g)	800	850

FAN MOTOR

POWER SOURCE	(V)	230	
INDOOR UNIT	DISCRIMINATION	MFA-14GTT	MFA-14GTCT
	HI-SPEED (r.p.m.)	750	730
	MED-SPEED (r.p.m.)	670	670
	LO-SPEED (r.p.m.)	590	590
OUTDOOR UNIT	DISCRIMINATION	MFB-14VTT	MFB-14NTT
	HI / LO (r.p.m.)	740	740 / 440

DIMENSIONS

INDOOR UNIT	H x W x D (mm)	235 x 580 x 580 +70
OUTDOOR UNIT	H x W x D (mm)	530 x 750 x 250
GRILLE	H x W x D (mm)	35 x 650 x 650

WEIGHT

INDOOR UNIT	GROSS / NET (kg)	23 / 18
OUTDOOR UNIT	GROSS / NET (kg)	36 / 34
GRILLE	GROSS / NET (kg)	4.3 / 2.2

MODELS				AUY12FBAB	AUY12UBAB
				AOY12FSAJ	AOY12USAJL
REFRIGERANT CIRCUIT	DISCHARGE PRESSURE	kg/cm ² G	COOLING	28.5	30.0
			HEATING	—	28.0
	SUCTION PRESSURE	kg/cm ² G	COOLING	8.5	9.0
			HEATING	—	7.0
	DISCHARGE TEMP.	°C	COOLING	82	80
			HEATING	—	78
	REFRIG. PIPE LENGTH		m	7.5	
DISCHARGE AIR TEMP.	°C	COOLING	13		
		HEATING	—	43	
CONDITION	INDOOR ENTERING AIR TEMP.	DB/WB °C	COOLING	27.0 / 19.0	
			HEATING	20.0 / —	
	OUTDOOR ENTERING AIR TEMP.	DB/WB °C	COOLING	35.0 / 24.0	
			HEATING	7.0 / 6.0	
PIPING	PIPE DIA. SIZE	LIQUID	mm	6.35	
		GAS		9.52	
	CONNECTION METHOD			Flare	
	BETWEEN	HEIGHT	m	Max. 8	
		PIPE LENGTH		Max. 20	
REFRIGERANT TYPE				R410A	

NOISE LEVEL

INDOOR UNIT	HI-SPEED (dB)	42	COOL 42 / HEAT 43
	MED-SPEED (dB)	39	COOL 39 / HEAT 40
	LO-SPEED (dB)	36	COOL 36 / HEAT 37
OUTDOOR UNIT (dB)		49	COOL 49 / HEAT 50

Note : Noise was measured in accordance with JIS standards, Japan.

REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	PIPE LENGTH	7.5 m	800g	850g
		10 m	825g	875g
		15 m	875g	925g
		20 m	925g	975g
Additional refrigerant			10 g / m	

TYPE		COOL	COOL & HEAT
INDOOR UNIT		AUY14FBAB	AUY14UBAB
OUTDOOR UNIT		AOY14FSDJ	AOY14USDJL
COOLING CAPACITY	(kW)	4.10	3.95
HEATING CAPACITY	(kW)	—	4.60

ELECTRICAL DATA

POWER SOURCE	(V)	230	
FREQUENCY	(Hz)	50	
RUNNING CURRENT	(A)	COOLING	6.3
		HEATING	—
INPUT WATTS	(kW)	COOLING	1.39
		HEATING	—
E.E.R.	(kW/kW)	COOLING	2.95
		HEATING	—
STARTING CURRENT	(A)	31	31
MOISTURE REMOVAL	(ℓ/hr)	1.5	1.5
AIR CIRCULATION-HI	(m ³ /hr)	550	550

COMPRESSOR

TYPE	Hermetic type, Rotary		
DISCRIMINATION	802 360 35(B)		
POWER SOURCE	230V 50Hz		
REFRIGERANT (R410A)	(g)	900	1,000

FAN MOTOR

POWER SOURCE	(V)	230	
INDOOR UNIT	DISCRIMINATION	MFA-14GTT	MFA-14GTCT
	HI-SPEED (r.p.m.)	750	730
	MED-SPEED (r.p.m.)	670	670
	LO-SPEED (r.p.m.)	590	590
OUTDOOR UNIT	DISCRIMINATION	MFB-14VTT	MFB-14NTT
	HI / LO (r.p.m.)	740	740 / 440

DIMENSIONS

INDOOR UNIT	H x W x D (mm)	235 x 580 x 580 +70
OUTDOOR UNIT	H x W x D (mm)	530 x 750 x 250
GRILLE	H x W x D (mm)	35 x 650 x 650

WEIGHT

INDOOR UNIT	GROSS / NET (kg)	23 / 18
OUTDOOR UNIT	GROSS / NET (kg)	37 / 35
GRILLE	GROSS / NET (kg)	4.3 / 2.2

MODELS				AUY14FBAB	AUY14UBAB
				AOY14FSDJ	AOY14USDJL
REFRIGERANT CIRCUIT	DISCHARGE PRESSURE	kg/cm ² G	COOLING	31.0	31.0
			HEATING	—	31.0
	SUCTION PRESSURE	kg/cm ² G	COOLING	9.0	9.0
			HEATING	—	7.5
	DISCHARGE TEMP.	°C	COOLING	75	77
			HEATING	—	77
REFRIG. PIPE LENGTH			m	7.5	
DISCHARGE AIR TEMP.	°C	COOLING	12		
		HEATING	—	46	
CONDITION	INDOOR ENTERING AIR TEMP.	DB/WB °C	COOLING	27.0 / 19.0	
			HEATING	20.0 / —	
	OUTDOOR ENTERING AIR TEMP.	DB/WB °C	COOLING	35.0 / 24.0	
			HEATING	7.0 / 6.0	
PIPING	PIPE DIA. SIZE	LIQUID	mm	6.35	
		GAS		12.7	
	CONNECTION METHOD			Flare	
	BETWEEN	HEIGHT	m	Max. 8	
		PIPE LENGTH		Max. 20	
REFRIGERANT TYPE				R410A	

NOISE LEVEL

INDOOR UNIT	HI-SPEED (dB)	42	COOL 42 / HEAT 43
	MED-SPEED (dB)	39	COOL 39 / HEAT 40
	LO-SPEED (dB)	36	COOL 36 / HEAT 37
OUTDOOR UNIT (dB)		49	COOL 49 / HEAT 50

Note : Noise was measured in accordance with JIS standards, Japan.

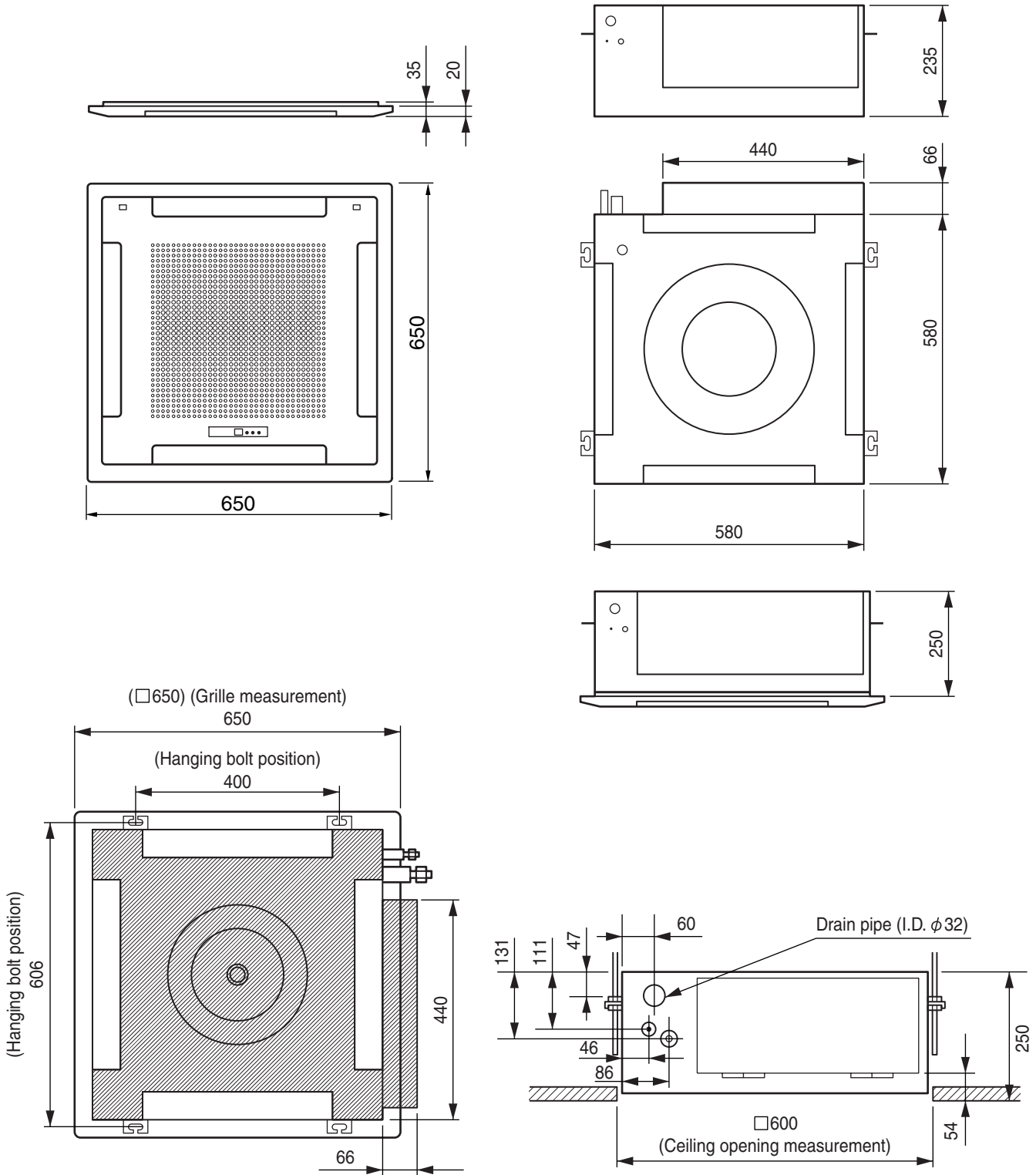
REFRIGERANT CHARGE (R410A)

FULL CHARGE AMOUNT	PIPE LENGTH	7.5 m	900g	1,000g
		10 m	925g	1,025g
		15 m	975g	1,075g
		20 m	1,025g	1,125g
Additional refrigerant			10 g / m	

OUTLINE AND DIMENSIONS

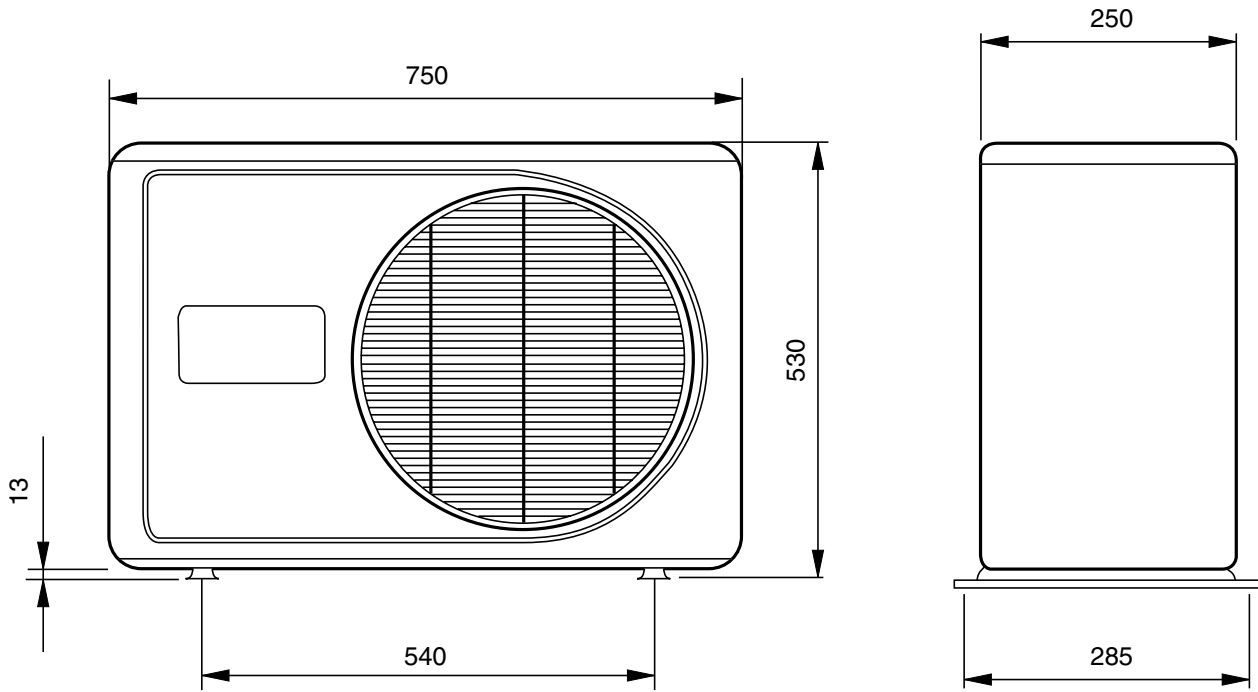
INDOOR UNIT

(unit : mm)



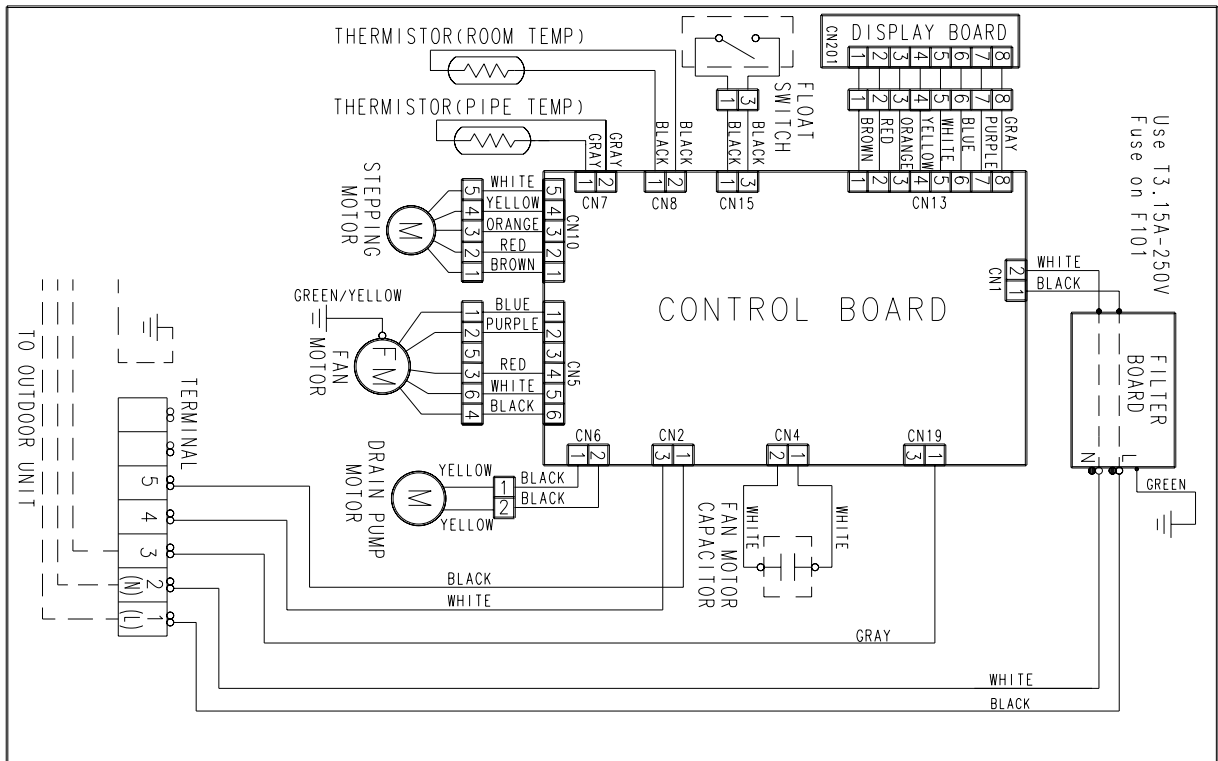
OUTDOOR UNIT

(unit : mm)

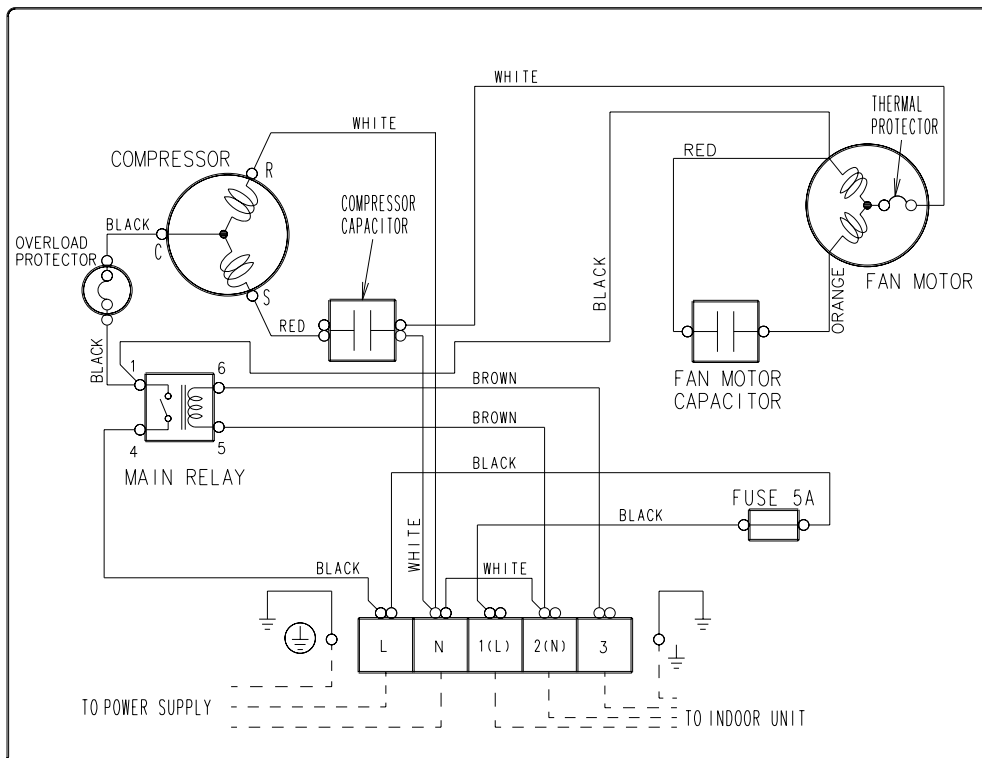


CIRCUIT DIAGRAM

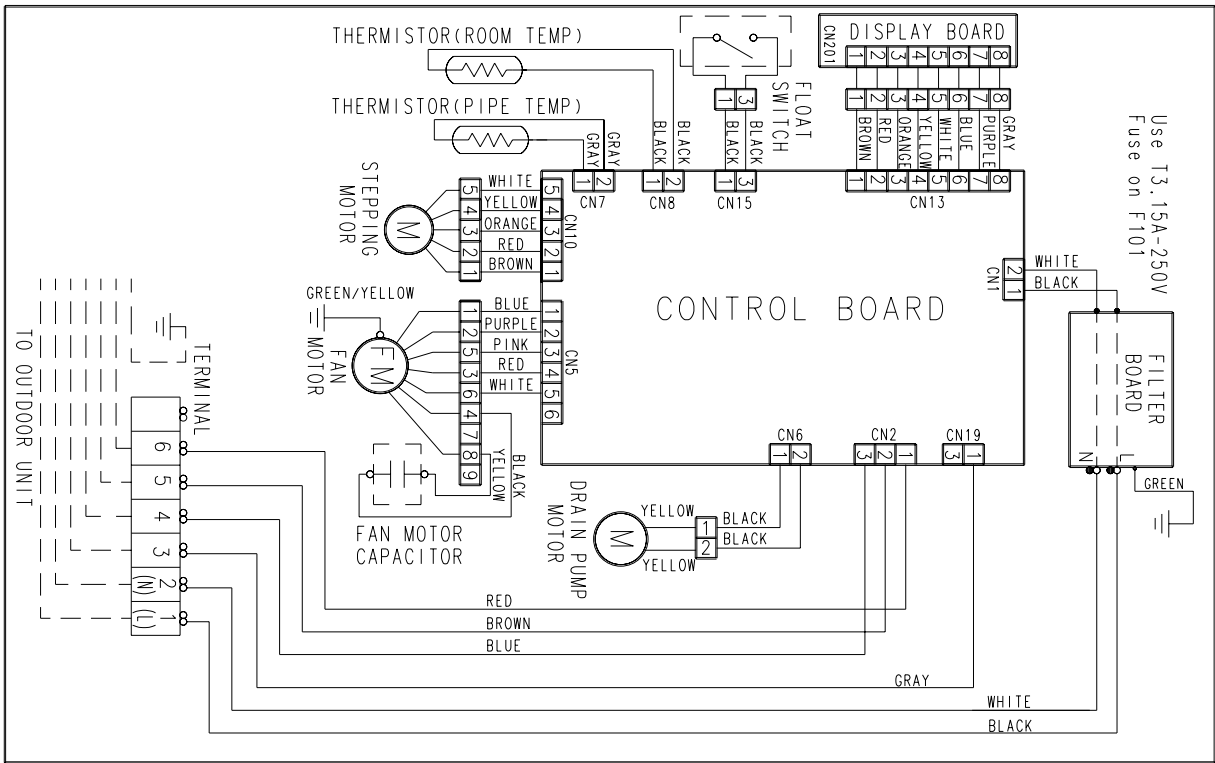
Models : AUY12FBAB, AUY14FBAB



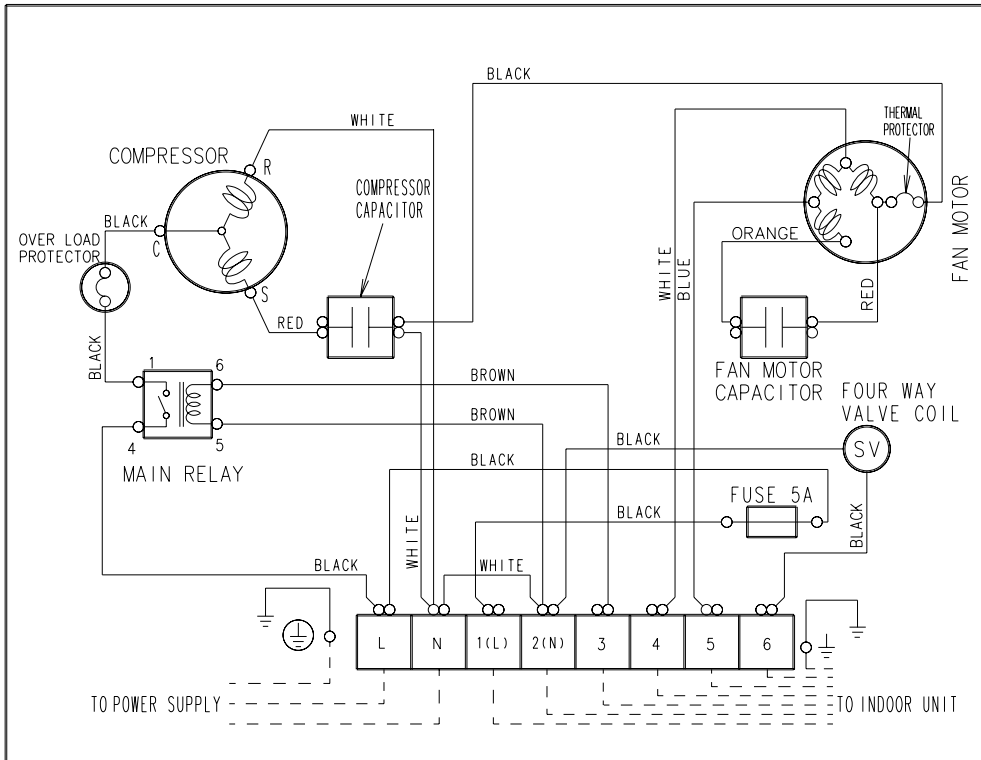
Models : AOY12FSAJ, AOY14FSDJ



Models : AUY12UBAB, AUY14UBAB

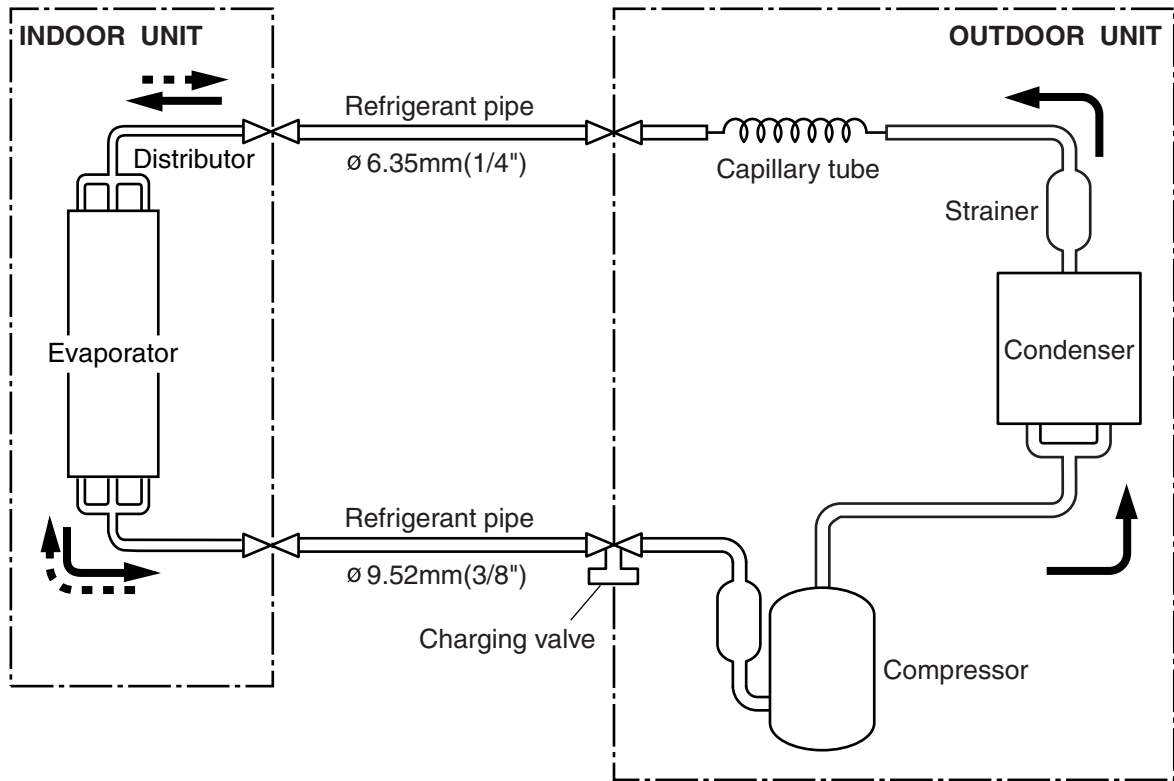


Models : AOY12USAJL, AOY14USDJL

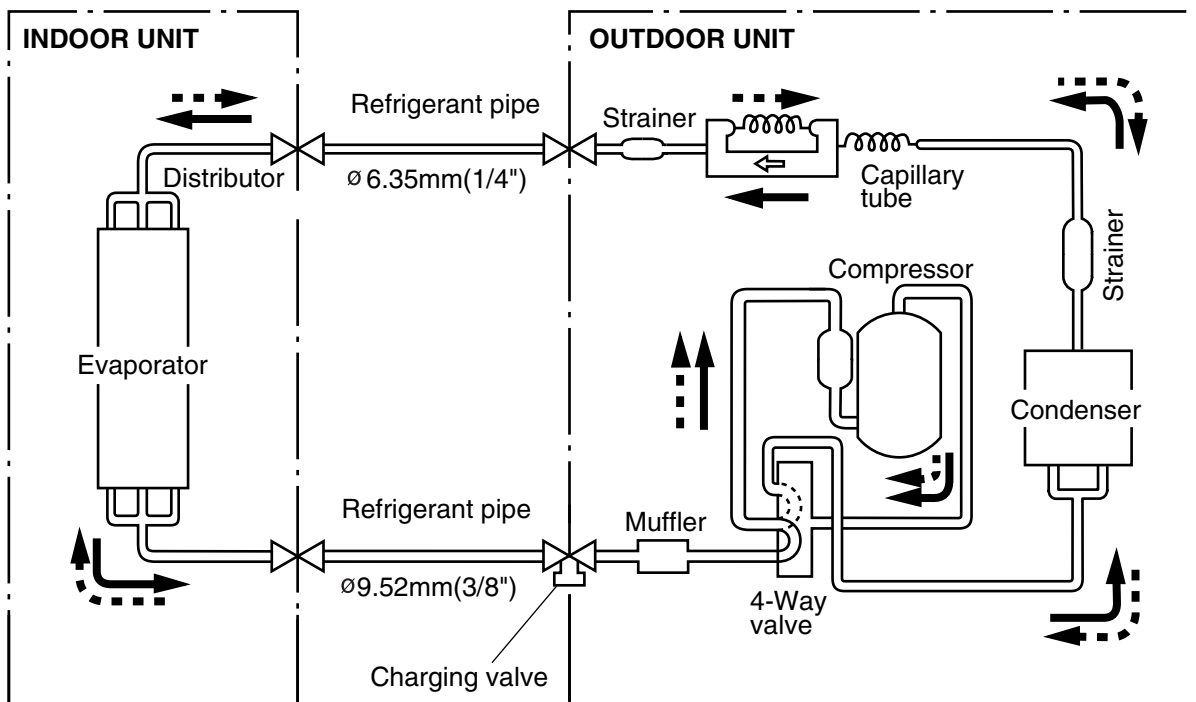


REFRIGERANT SYSTEM DIAGRAM

Models : AUY12FBAB / AOY12FSAJ

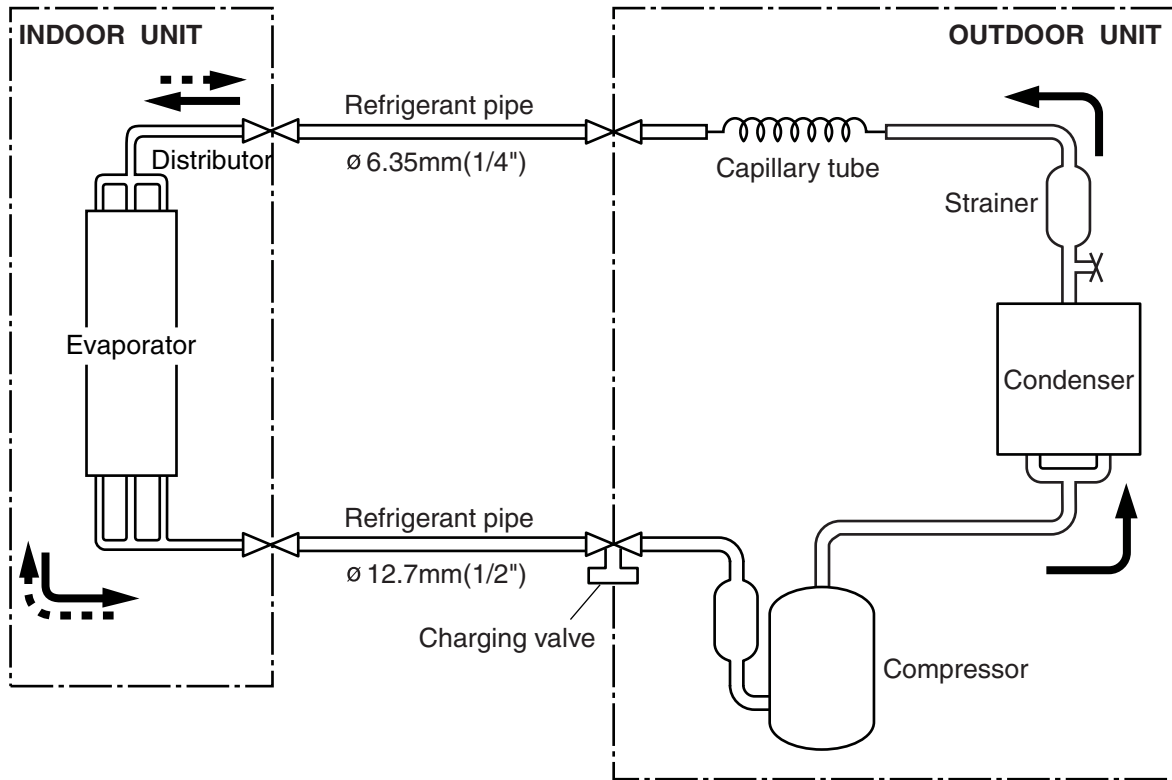


Models : AUY12UBAB / AOY12USAJL

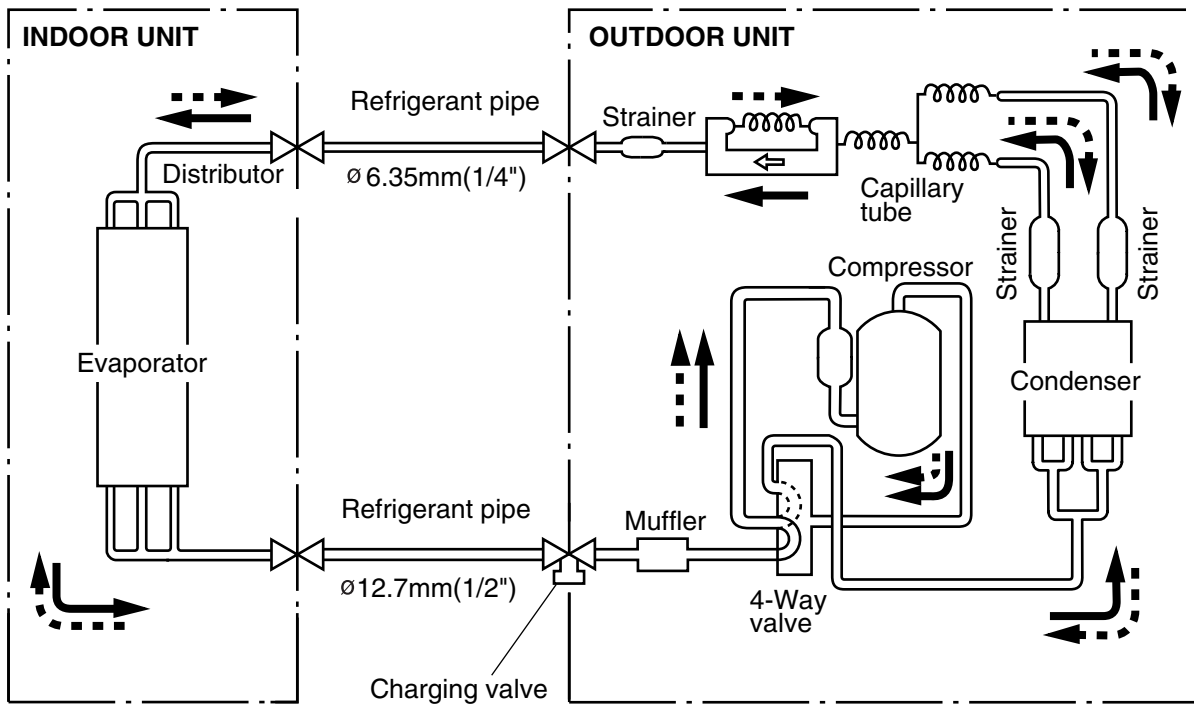


- Cooling
- - - -> Heating
- ⊗ : Flare coupling

Models : AU Y14FBAB / AO Y14FSDJ



Models : AU Y14UBAB / AO Y14USDJL

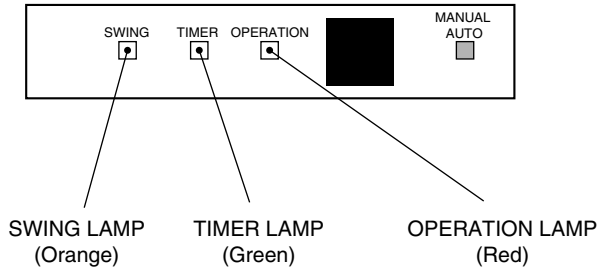


- Cooling
- Heating
- : Flare coupling

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 TEST RUN (use a metallic object to short the two metal contacts under the battery compartment lid), the OPERATION and TIMER lamps flash slowly at the same time.

ERROR

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

Table 1

Error display			Error contents
OPERATION lamp	TIMER lamp	SWING lamp	
Blinks	Blinks	Goes off	Model information abnormal (permanent type)
Pulses 4 times	Blinks	Goes off	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	Piping thermistor open circuit
		Blinks	Piping thermistor short circuit

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?

2. OUTDOOR UNIT

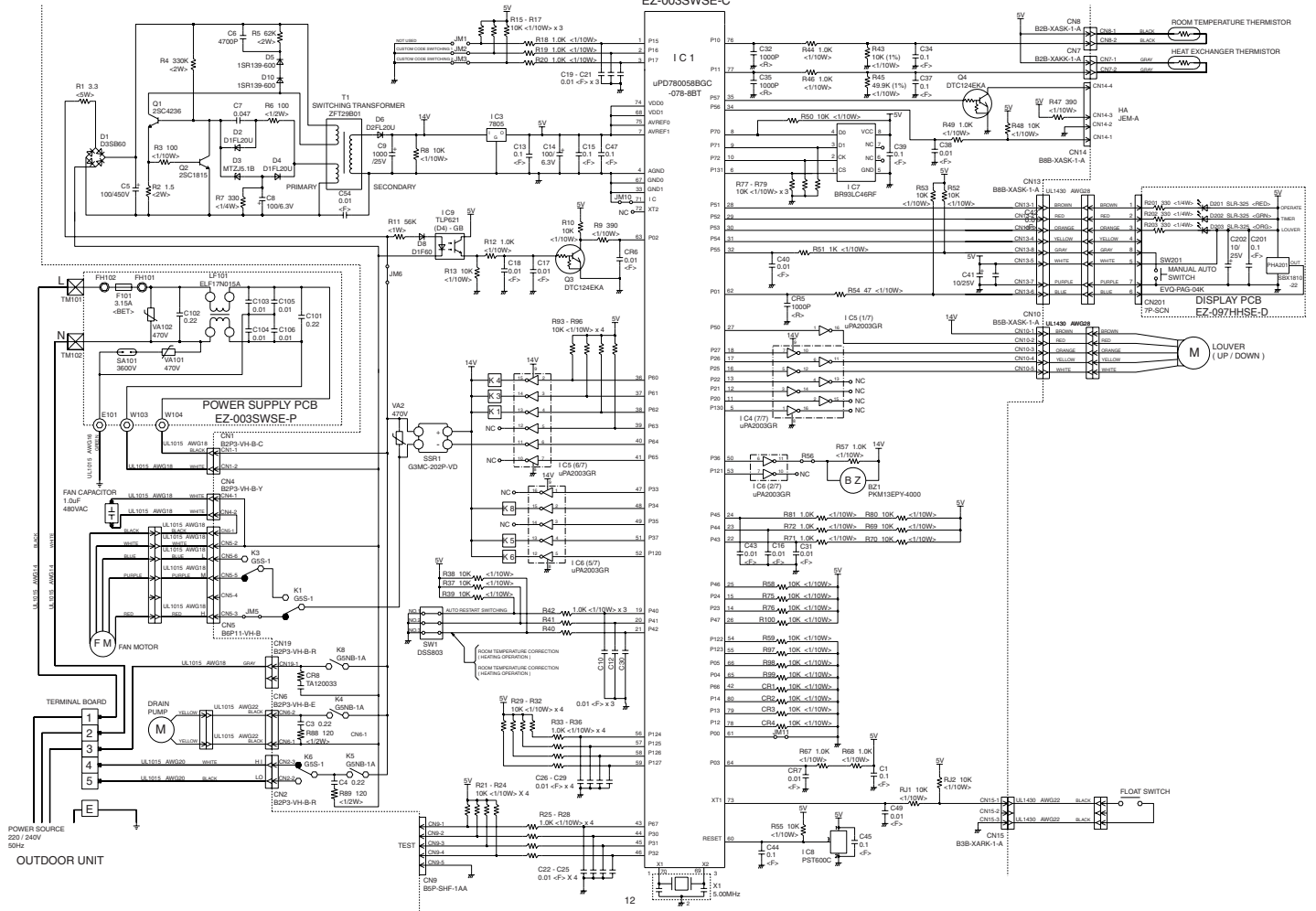
- (1) Is there any abnormal noise and vibration during operation?
- (2) Will noise, wind or drain water from the unit disturb the neighbors?
- (3) Is there any gas leakage?

Do not operate the air conditioner in the test running state for a long time.

INDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

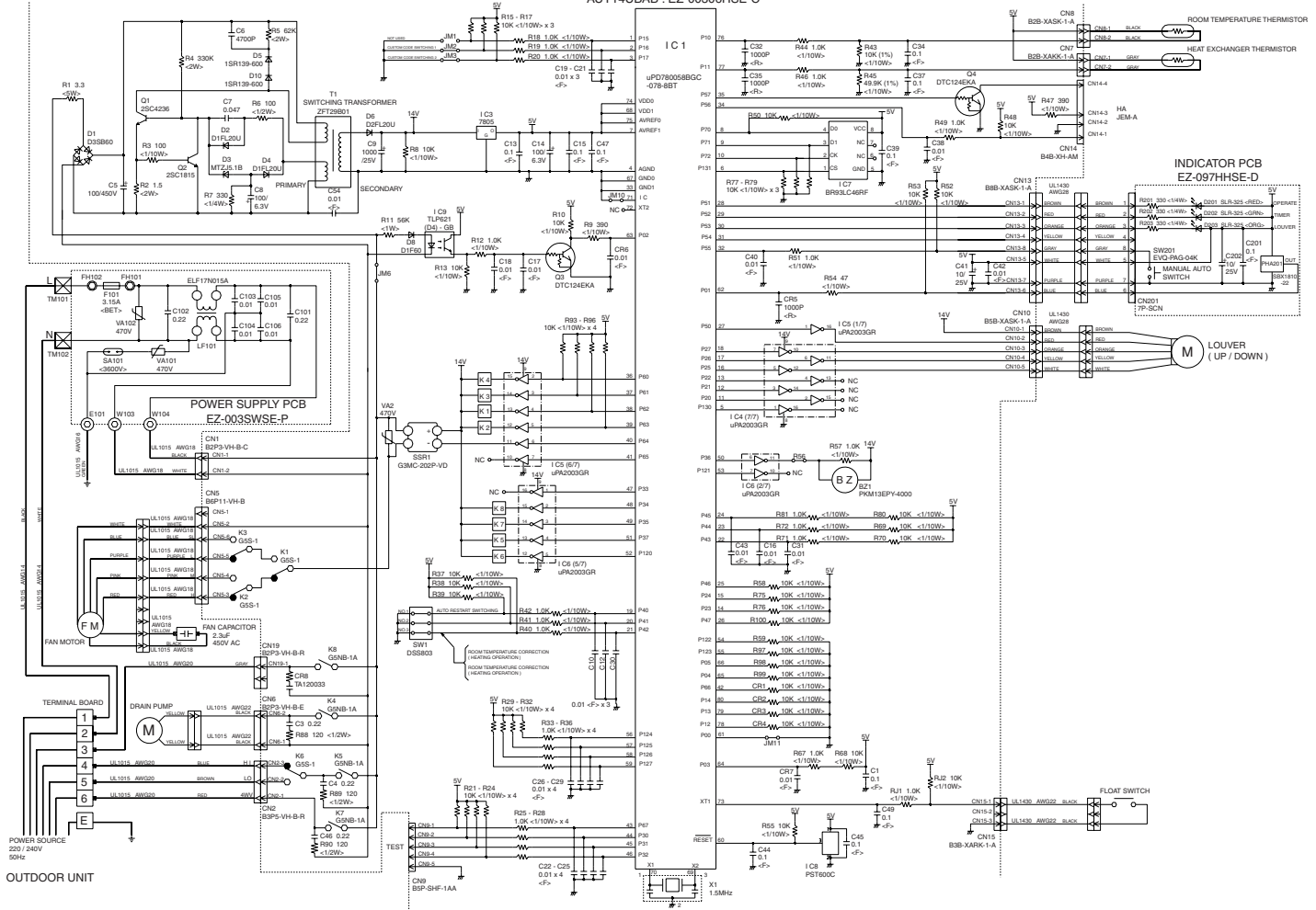
Models : AU12FBAB
AU14FBAB

CONTROLLER PCB ASSEMBLY (MAIN PCB) EZ-003SWSE-C



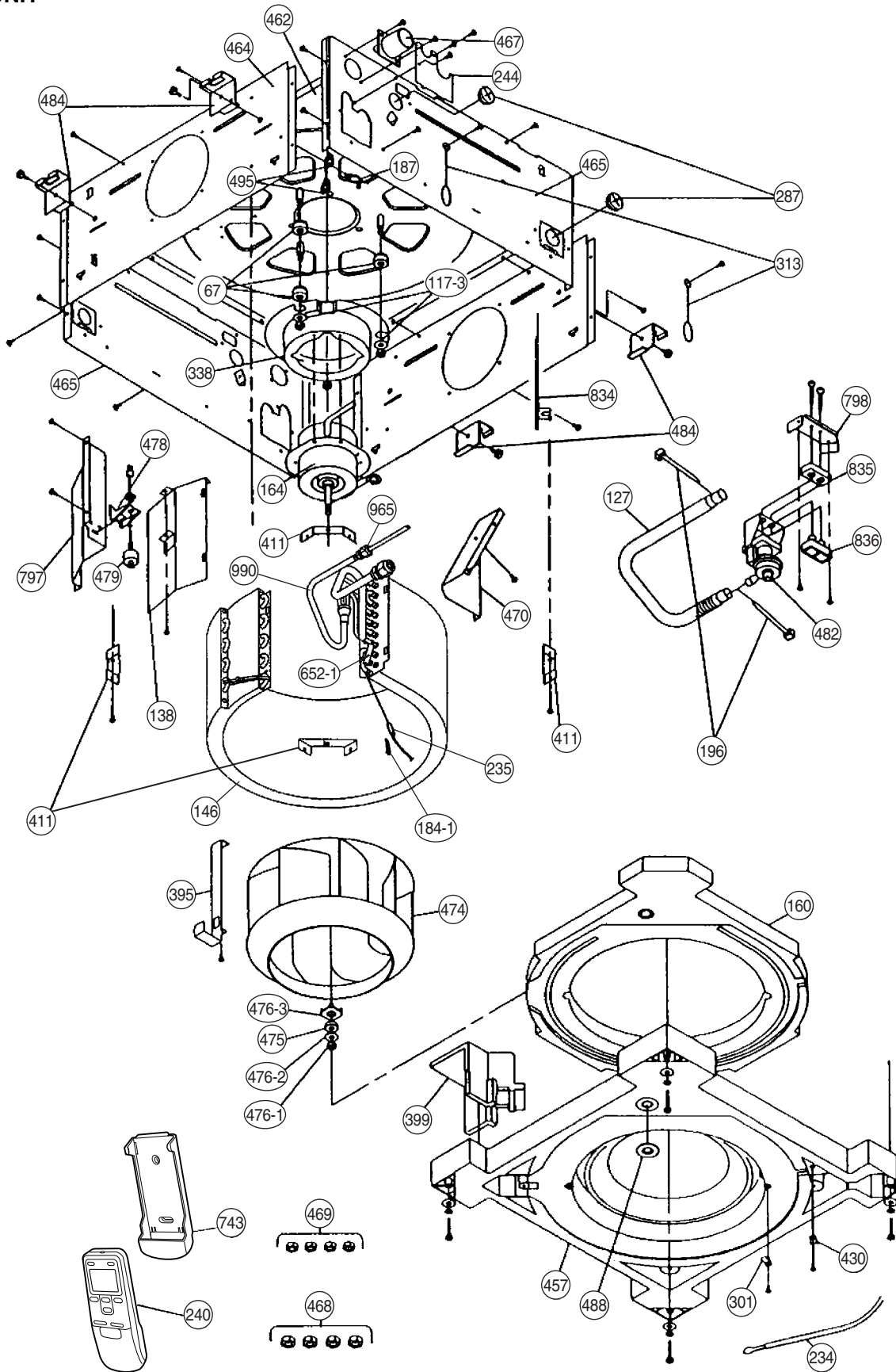
Models : AUY12UBAB
AUY14UBAB

CONTROLLER PCB ASSEMBLY (MAIN PCB)
AUY12UBAB : EZ-00327HSE-C
AUY14UBAB : EZ-00306HSE-C

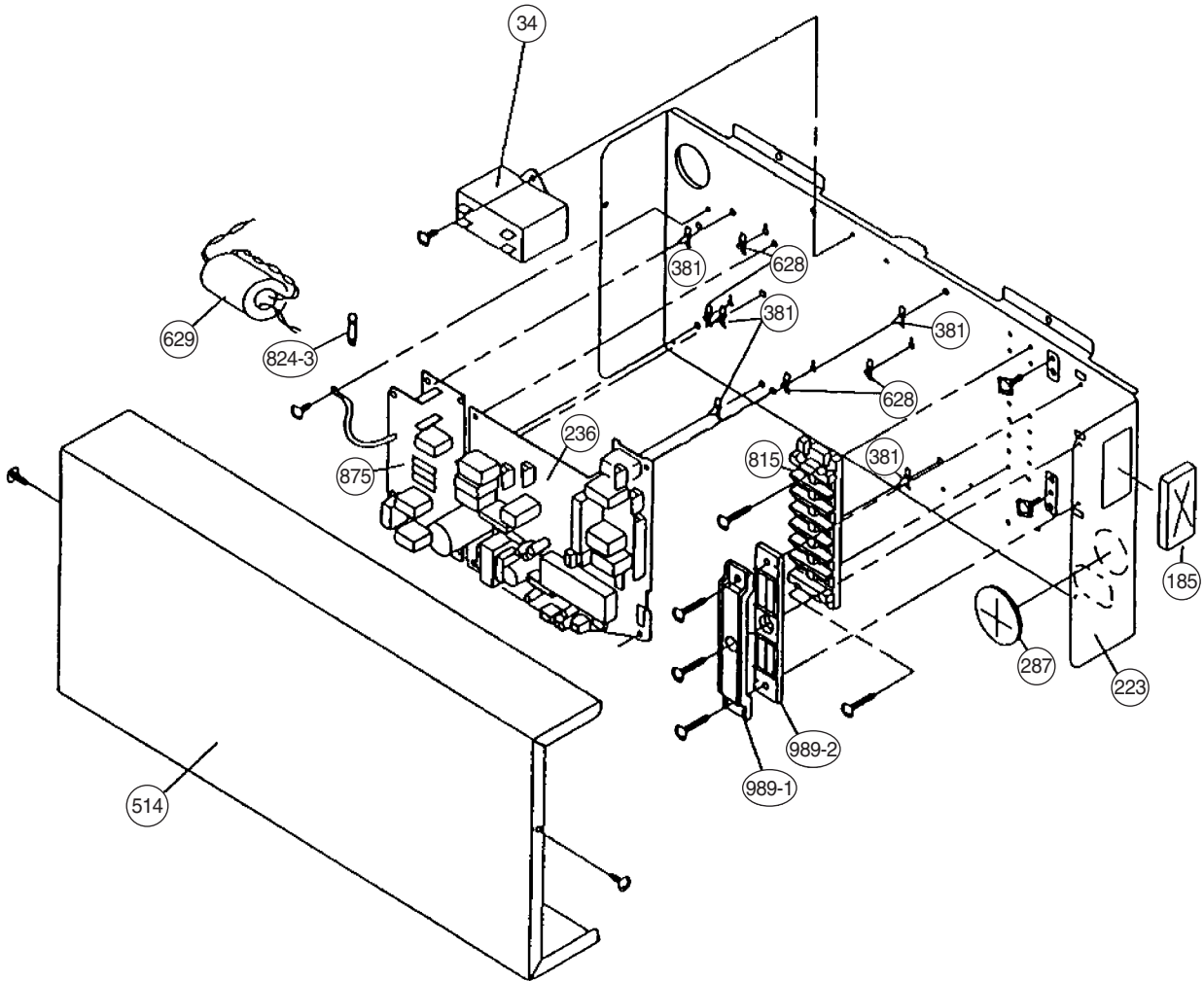


DISASSEMBLY ILLUSTRATION

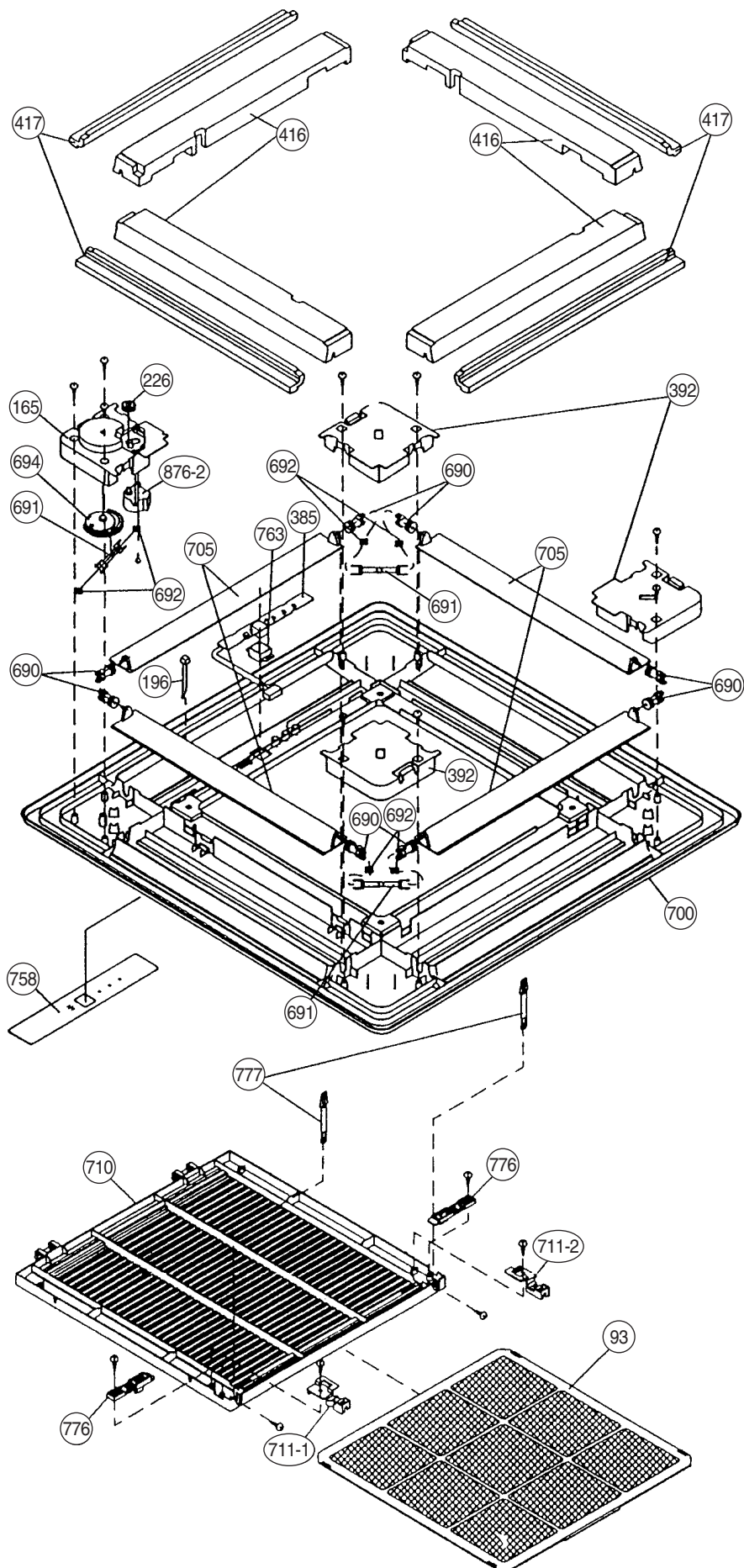
INDOOR UNIT



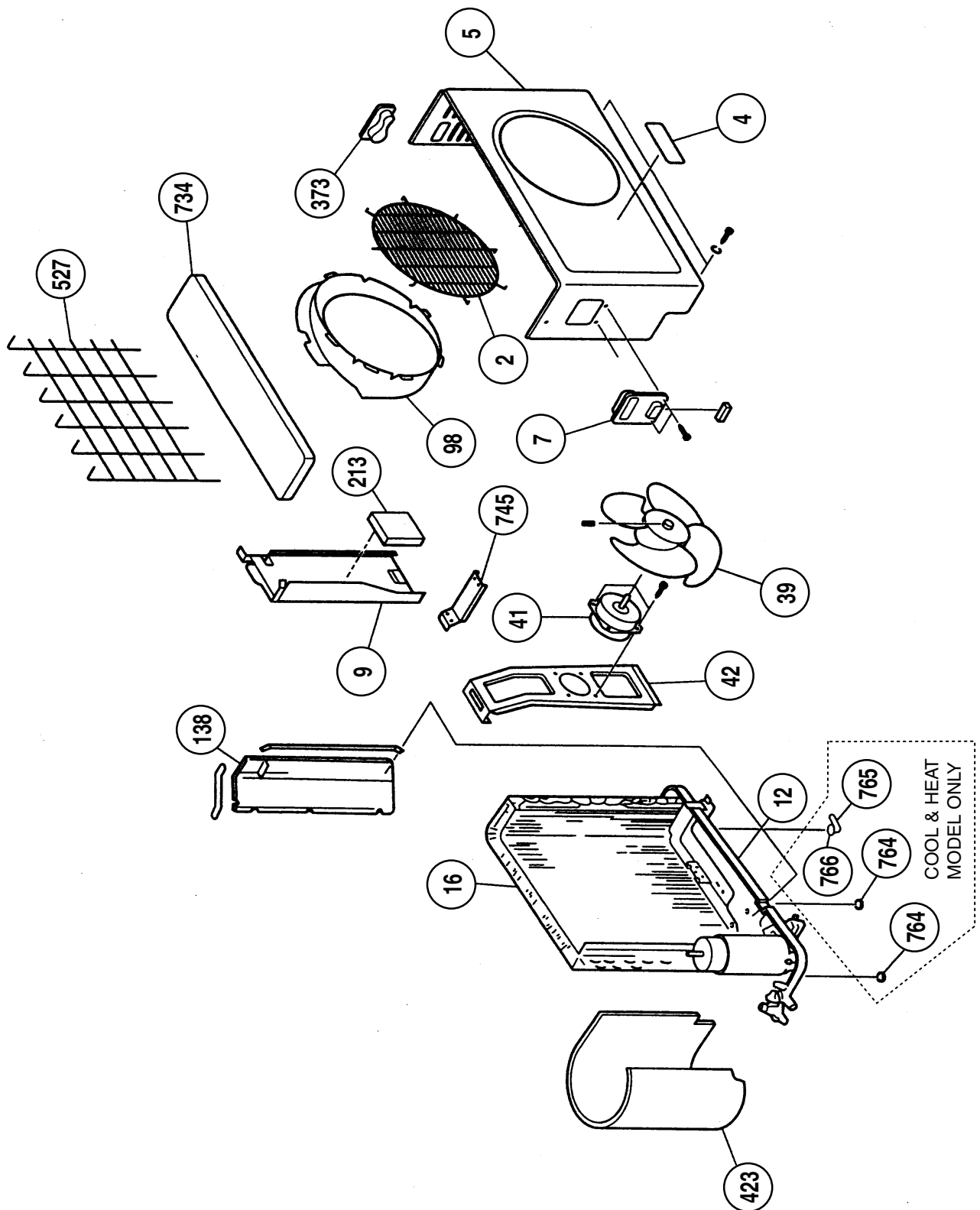
INDOOR UNIT



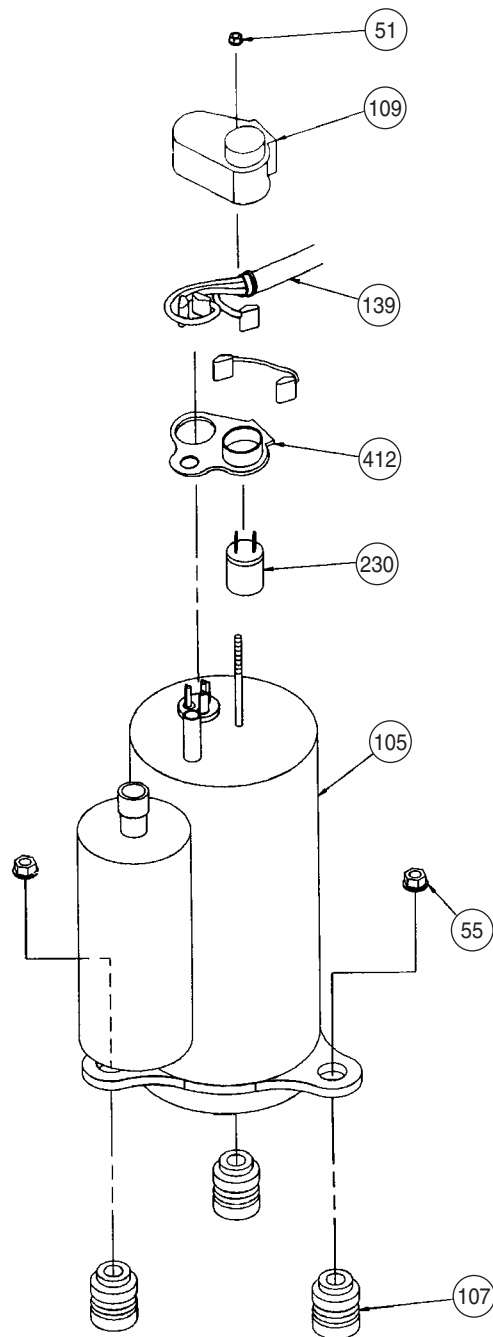
Model : UTG-UDYD-W



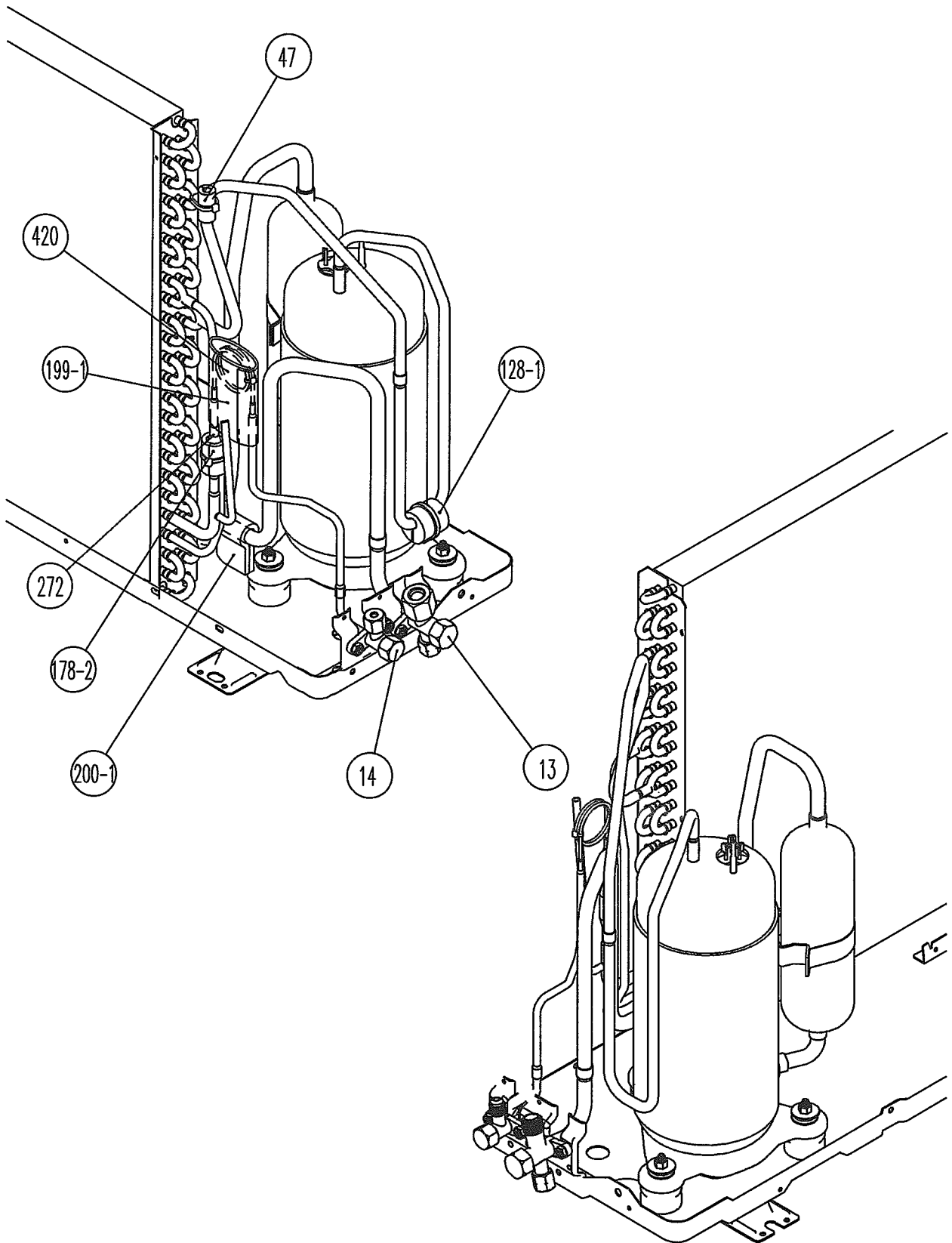
OUTDOOR UNIT



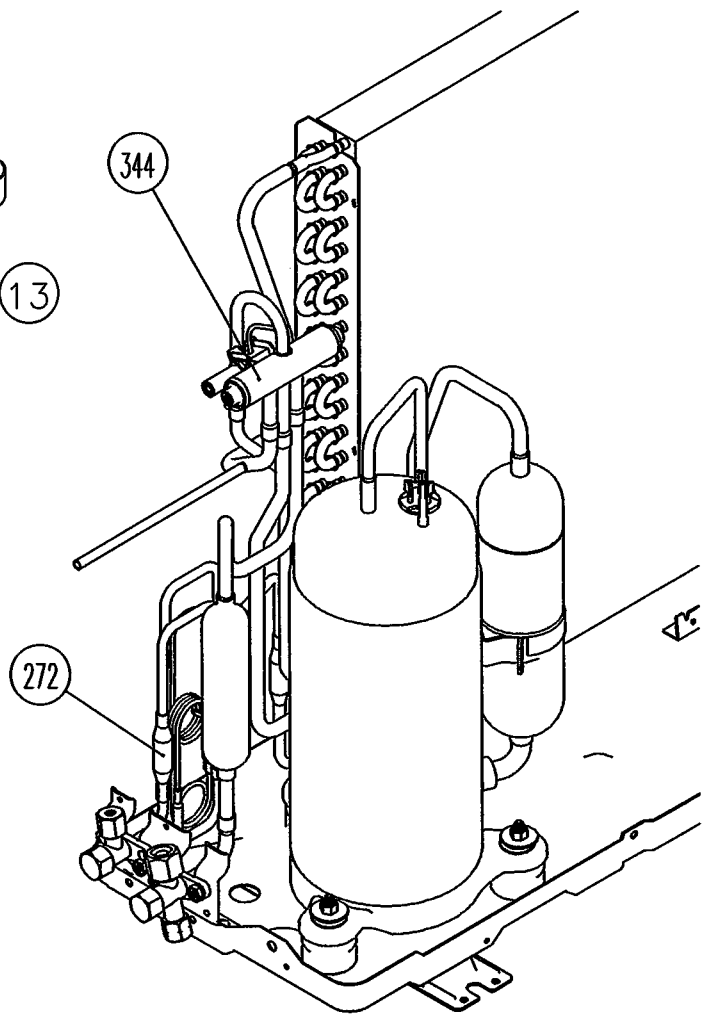
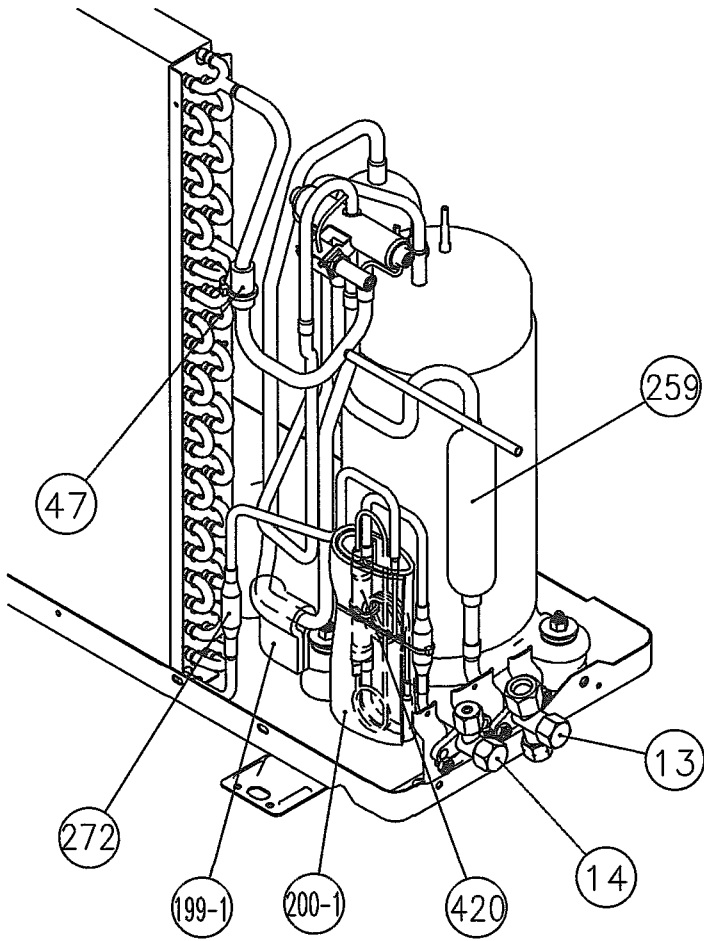
Models : AOY12FSAJ
AOY12USAJL
AOY14FSDJ
AOY14USDJL

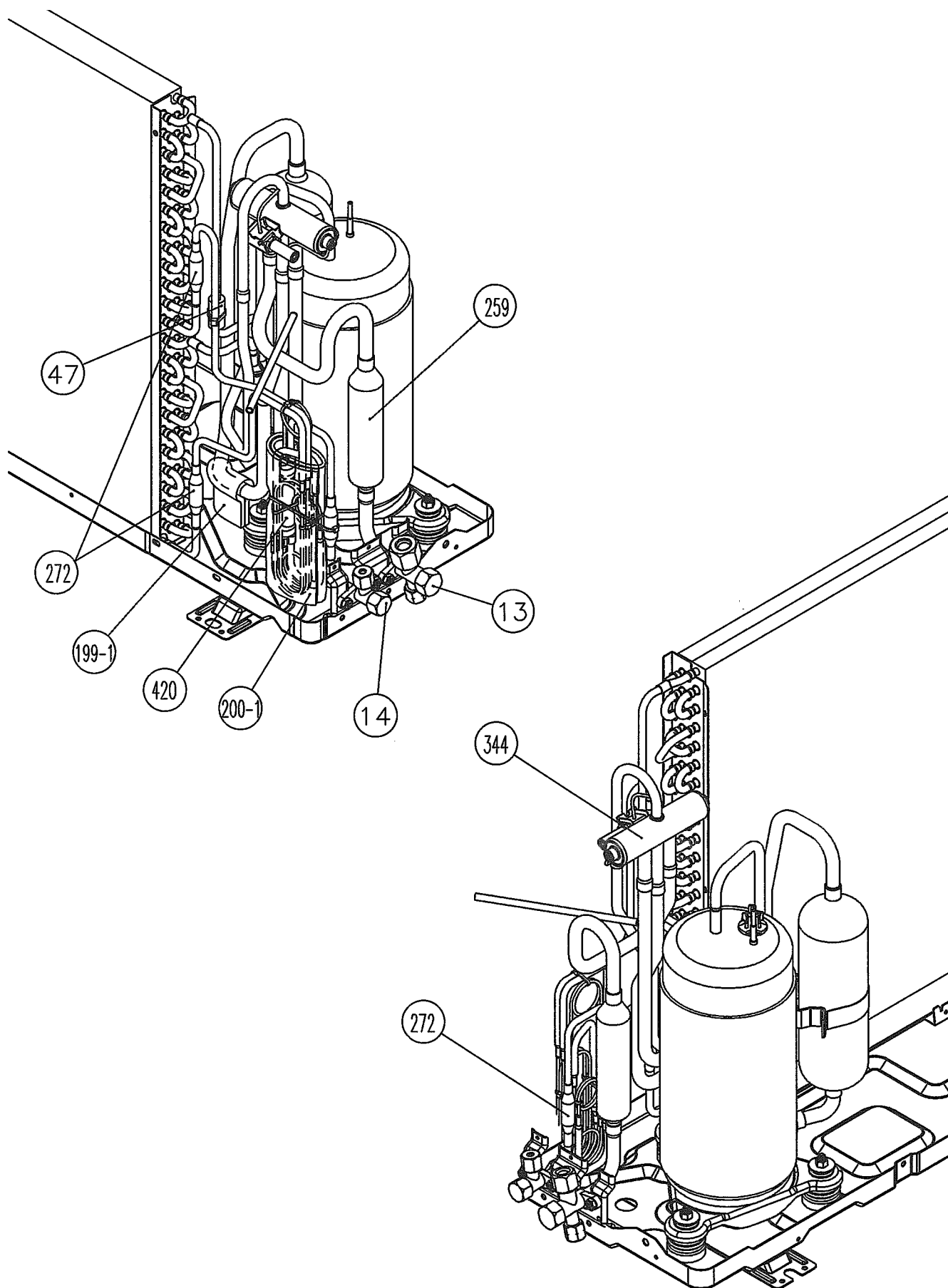


Models : AOY12FSAJ
AOY14FSDJ

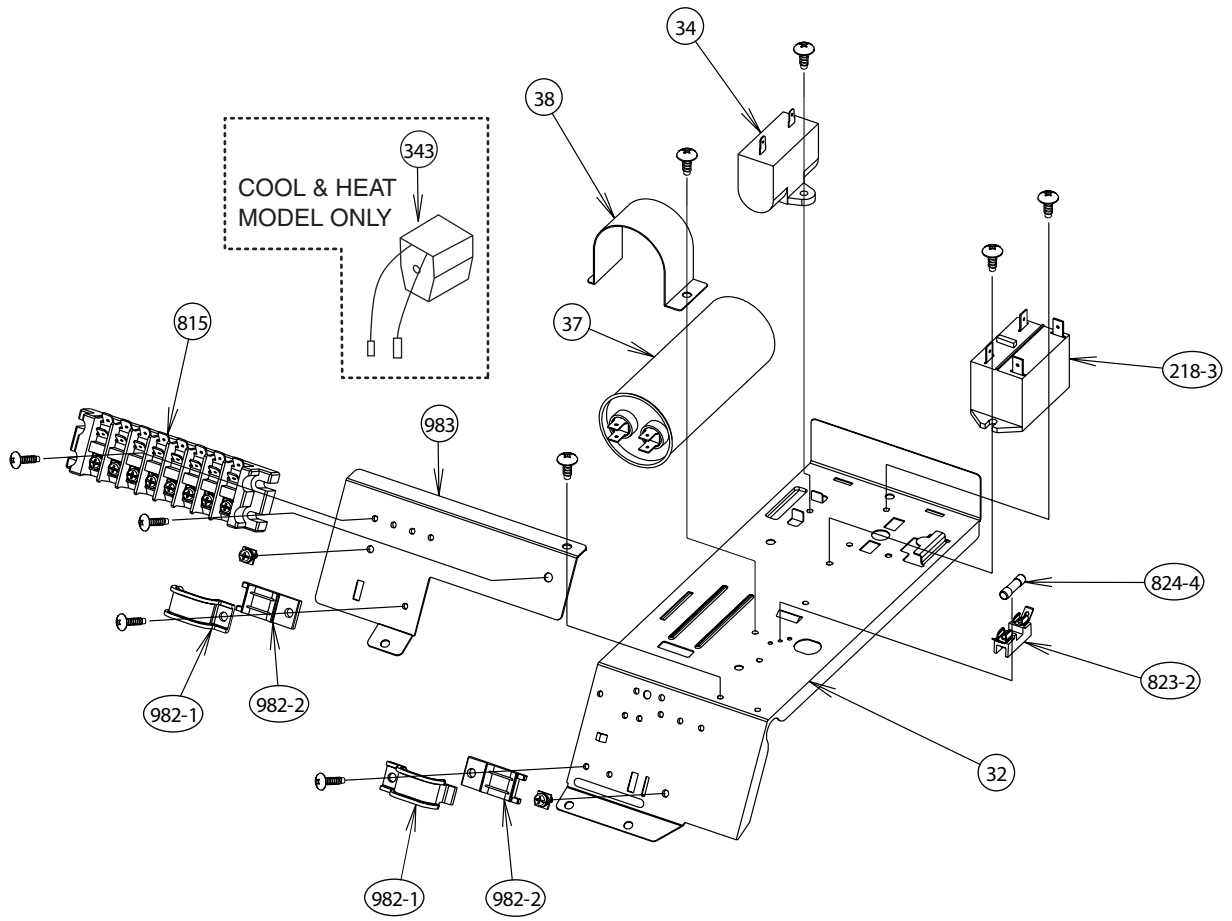


Model : AOY12USAJL





Models : AOY12FSAJ
AOY12USAJL
AOY14FSDJ
AOY14USDJL



PARTS LIST

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

INDOOR UNIT

Ref. No.	Description	Part No.				Ord. Q'ty
		AUY12FBAB	AUY12UBAB	AUY14FBAB	AUY14UBAB	
34	Capacitor (Fan Motor)	9704305046	9704305046	9704305046	9704305046	
67	Rubber	9361279001	9361279001	9361279001	9361279001	
117-3	Special Washer M6	313306391007	313306391007	313306391007	313306391007	
127	Drain Hose	9359659013	9359659013	9359659013	9359659013	
138	Separate Wall-A	9359647003	9359647003	9359647003	9359647003	
146	Evaporator Assy-IN	9373214014	9373214014	9373214014	9373214014	
160	Drain Pan	9359651000	9359651000	9359651000	9359651000	
164	Fan Motor Assy-IN	9601040019	9601040064	9601040019	9601040064	
184-1	Thermo. Spring-A	313728262708	313728262708	313728262708	313728262708	
185	Rubber Bushing	313005066051	313005066051	313005066051	313005066051	
187	Clamp No. 1219	313361271706	313361271706	313361271706	313361271706	
196	Clamp SKB-150	313035356905	313035356905	313035356905	313035356905	
223	Control Box	9359661016	9359661016	9359661016	9359661016	
234	Thermistor Assy-Room	9703299032	9703299032	9703299032	9703299032	
235	Thermistor Assy-Pipe	9703297014	9703297014	9703297014	9703297014	
236	Controller PCB Assy	9704557490	9704557568	9704557490	9704557506	
240	Remote Control Unit	9371190044	9371190037	9371190044	9371190037	
244	Pipe Cover	9359646006	9359646006	9359646006	9359646006	
287	Cap (Power)	9352173011	9352173011	9352173011	9352173011	
301	Clamp NK-2N	313985355201	313985355201	313985355201	313985355201	
313	Hooking Wire	9359983002	9359983002	9359983002	9359983002	
338	Motor Fixture	9359656005	9359656005	9359656005	9359656005	
381	Locking Spacer	313209391506	313209391506	313209391506	313209391506	
395	Supporter (Eva.)	9373179016	9373179016	9373179016	9373179016	
399	Air Duct	9359660002	9359660002	9359660002	9359660002	
411	Supporter-A	9359655008	9359655008	9359655008	9359655008	
430	Clamp NK-7N	313095365602	313095365602	313095365602	313095365602	
457	Drain Pan Support	9359652007	9359652007	9359652007	9359652007	
462	Top Cover Plate	9359642015	9359642015	9359642015	9359642015	
464	Body-A	9359643005	9359643005	9359643005	9359643005	
465	Body-B	9359645009	9359645009	9359645009	9359645009	
467	Drain Port	313005415658	313005415658	313005415658	313005415658	
468	Special Nut-A (Large)	313005446653	313005446653	313005446653	313005446653	
469	Special Nut-B (Small)	313005446759	313005446759	313005446759	313005446759	
470	Separate Wall-B	9359648000	9359648000	9359648000	9359648000	
474	Turbo Fan	9359658009	9359658009	9359658009	9359658009	
475	Turbo Fan Rubber	9366013006	9366013006	9366013006	9366013006	
476-1	Special Nut M8	313005360755	313005360755	313005360755	313005360755	
476-2	Special Washer	301801185049	301801185049	301801185049	301801185049	
476-3	Special Washer	9359954002	9359954002	9359954002	9359954002	
478	Sensor M. Bracket	9359654001	9359654001	9359654001	9359654001	
479	Float Switch	313005416154	313005416154	313005416154	313005416154	
482	Pump Unit	9359974000	9359974000	9359974000	9359974000	
484	Hanger Metal	9359644002	9359644002	9359644002	9359644002	
488	Drain Pan Plug	9359653004	9359653004	9359653004	9359653004	
495	Clamp No. 2U46	9352715006	9352715006	9352715006	9352715006	
514	Control Box Cover	9359662006	9359662006	9359662006	9359662006	
628	Locking Spacer-B	313005446558	313005446558	313005446558	313005446558	
629	EMI Filter	0400197119	0400197119	0400197119	0400197119	
652-1	Therm. Holder Pipe	313806262805	313806262805	313806262805	313806262805	
743	Remote Control Holder Case	9305642014	9305642014	9305642014	9305642014	
797	Separate Wall-C	9359649007	9359649007	9359649007	9359649007	
798	Pump Hook Bracket	9359650003	9359650003	9359650003	9359650003	
815	Terminal-7P	9358660102	9358660102	9358660102	9358660102	
824-3	Fuse	0600222512	0600222512	0600222512	0600222512	
834	Wire Cover	9359878001	9359878001	9359878001	9359878001	
835	Cushion-A (For Pump)	9352211003	9352211003	9352211003	9352211003	
836	Cushion-B (For Pump)	9356084016	9356084016	9356084016	9356084016	
875	Filter PCB Assy	9704561169	9704561169	9704561169	9704561169	
964	Flare Nut-1/2	----	----	9373267010	9373267010	
965	Flare Nut-B	9351062019	9351062019	9351062019	9351062019	
989-1	Cord Clamp-A	9359822011	9359822011	9359822011	9359822011	
989-2	Cord Clamp-B	9359823018	9359823018	9359823018	9359823018	
990	Distributor Assy	9373034049	9373034049	9373034049	9373034049	

GRILLE ASSY (UTG-UDYD-W)

Ref. No.	Description	Part No.	Ord. Q'ty	Ref. No.	Description	Part No.	Ord. Q'ty
93	Filter	9359632009		692	Joint Shaft	9359625001	
165	Motor Cover	9359623014		694	Cam Gear	9359628002	
196	Clamp SKB-150	313035356905		700	Panel	9359619017	
226	Motor Gear	9359629009		705	Louver	9359624011	
385	Indicator PCB Assy	9702224011		710	Intake Grille	9370126006	
392	Cover-A	9359622017		711-1	Filter Clamp-A	9359634003	
416	Insulation (Panel)-A	9359620006		711-2	Filter Clamp-B	9359635000	
417	Insulation (Panel)-B	9359621003		758	Decoration Plate-A	9360039026	
690	Joint-A	9359626008		763	Receiver Cover	9359630005	
691	Joint-B	9359627005		776	Grille Stopper	9359633013	
				777	Grille Hook	9359761006	
				876-2	Step Motor-V	9360307019	

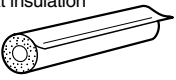


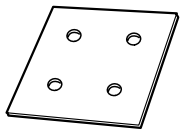
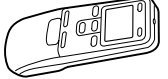

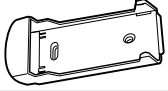

When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

OUTDOOR UNIT

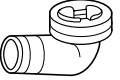

Ref. No.	Description	Part No.				Ord. Q' ty
		AOY12FSAJ	AOY12USAJL	AOY14FSDJ	AOY14USDJL	
2	Guard (Fan)	9304109006	9304109006	9304109006	9304109006	
4	Emblem-Rear	9351355005	9351355005	9351355005	9351355005	
5	Cabinet Painted	9302936017	9302936017	9302936017	9302936017	
7	Cover (Switch) Assy	9357970004	9357970004	9357970004	9357970004	
9	Panel (Cabinet Rear) Painted	9303744017	9303744017	9303744017	9303744017	
12	Base Assy, Painted	9310889114	9310889114	9310889114	9310889114	
13	3-Way Valve Assy	9372205020	9372205020	9372205105	9372205105	
14	2-Way Valve Assy	9372204030	9372204030	9372204030	9372204030	
16	Condenser Assy	9373131045	9373131038	9373131045	9373131014	
32	Control Box Metal-A	9355843003	9355843003	9355843003	9355843003	
34	Capacitor (Fan Motor)	9900270018	9900270018	9900270018	9900270018	
37	Running Capacitor	9900269036	9900269036	----	----	
37	Running Capacitor	----	----	9900269043	9900269043	
38	Clamp Metal (Capacitor)	313468061808	313468061808	313468061808	313468061808	
39	Propeller Fan	9351589011	9351589011	9351589011	9351589011	
41	Motor, Induction MFB-14VTT	9601113010	----	9601113010	----	
41	Motor, Induction MFB-14NTT	----	9601113096	----	9601113096	
42	Bracket (Motor)	313166243804	313166243804	313166243804	313166243804	
47	Rubber (Discha Pipe)	313194159807	313194159807	313194159807	313185159802	
51	Special Nut M5	313199233602	313199233602	313199233602	313199233602	
55	Special Nut M8	9355091008	9355091008	9355091008	9355091008	
98	Ring Fan	313166296109	313166296109	313166296109	313166296109	
105	Compressor Assy	9373010036	9373010036	9373010043	9373010043	
107	Rubber Seat (For Comp)-A	9351813017	9351813017	9351813017	9351813017	
109	Terminal Cover	9351920012	9351920012	9351920012	9351920012	
128-1	Rubber (Discharge Pipe)	313155086308	----	313155086308	----	
138	Separator Sub Assy	9303729014	9303729014	9303729014	9303729014	
139	Comp Wire Assy	9370945089	9370945089	9370945089	9370945089	
178-2	Capillary Holder Rubber	313394274808	----	313394274808	----	
199-1	BR Sheet	9363708080	9363708059	9363708035	9363708059	
200-1	BR Sheet-B	9351990022	9351990022	9351990022	9351990022	
213	S-INS. B	313584258005	313584258005	313584258005	313584258005	
218-3	Relay	9900074012	9900074012	9900074012	9900074012	
230	OCR Assy	9312899005	9312899005	9373129011	9373129011	
259	Muffler	----	9372369012	----	9372369029	
272	Strainer Assy	9366602019	9366602019	9366602019	9366602019	
343	Solenoid	----	9900165017	----	9900165017	
344	4-Way Valve	----	9900162016	----	9970036019	
373	Grip	313166178700	313166178700	313166178700	313166178700	
412	Cover Gasket	9351921019	9351921019	9351921019	9351921019	
420	Capillary Assy	9372197233	9372197158	9372197189	9372197110	
423	Noise Insulation-F	9350944019	9350944019	9350944019	9350944019	
527	Protective Net	9355444002	9355444002	9355444002	9355444002	
734	Panel (Top) Painted	9302937014	9302937014	9302937014	9302937014	
745	RFM (Motor)	313166036308	313166036308	313166036308	313166036308	
764	Drain Cap	----	313166024302	----	313166024302	
765	Drain Pipe (I-Type)	----	9301102000	----	9301102000	
766	Drain Packing	----	9301143003	----	9301143003	
815	Terminal-5P	9900203023	----	9900203023	----	
815	Terminal-8P	----	9900203047	----	9900203047	
823-2	Fuse Holder	0500063024	0500063024	0500063024	0500063024	
824-4	Fuse	0600222529	0600222529	0600222529	0600222529	
982-1	Clamp (Cord)	9356857009	9356857009	9356857009	9356857009	
982-2	Clamp (Cord)-B	9356858006	9356858006	9356858006	9356858006	
983	Terminal Holder	9373090014	9373090014	9373090014	9373090014	

STANDARD ACCESSORIES

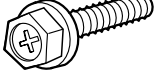



INDOOR UNIT ACCESSORIES

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	9371190044 (Cooling model)
		9371190037 (Cooling & Heating model)
Battery (penlight) 	For remote control unit	0600185534
Remote control unit holder 	For mounting the remote control unit	9305642014
Tapping screw ($\phi 3 \times 12$) 	For remote control unit holder installation	301141533125

OUTDOOR UNIT ACCESSORIES

Name and Shape	Application	Part No.
Drain Pipe 	For outdoor unit drain piping work [Heat & Cool (Reverse cycle) model only]	9303029015
Drain Cap 		313166024302

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
Spring Washer 	For mounting grille	301821150218
Blower cover insulation 	For discharged air	9360047007

