



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

**SERVICE  
MANUAL**



Models

Indoor unit	Outdoor unit
AUH12LBAB	AOH12LMAKL
AUH14LBAB	AOH14LMAKL

**CONTENTS**

SPECIFICATIONS .....	1
OUTLINE AND DIMENSIONS .....	2
REFRIGERANT SYSTEM DIAGRAM.....	4
CIRCUIT DIAGRAM .....	5
INDOOR PCB CIRCUIT DIAGRAM.....	7
OUTDOOR PCB CIRCUIT DIAGRAM....	8
ERROR CONTENTS .....	9
DISASSEMBLY ILLUSTRATION .....	10
PARTS LIST.....	15
STANDARD ACCESSORIES .....	17

# SPECIFICATIONS

TYPE	COOL & HEAT	
INDOOR UNIT	AUH12LBAB	AUH14LBAB
OUTDOOR UNIT	AOH12LMAKL	AOH14LMAKL
COOLING CAPACITY	3.50 kW	4.00 kW
HEATING CAPACITY	4.00 kW	4.50 kW

## ELECTRICAL DATA

POWER SOURCE		230 V 50 Hz	230 V 50 Hz
RUNNING CURRENT	COOLING	5.10 A	6.00 A
	HEATING	6.10 A	7.20 A
INPUT WATTS	COOLING	1.16 kW	1.36 kW
	HEATING	1.40 kW	1.65 kW
E.E.R.	COOLING	3.02 kW/kW	2.94 kW/kW
	HEATING	2.86 kW/kW	2.73 kW/kW
STARTING CURRENT		10 A	10 A
MOISTURE REMOVAL		1.3 l/hr	1.5 l/hr
AIR CIRCULATION -High		550 m <sup>3</sup> /hr	550 m <sup>3</sup> /hr

## COMPRESSOR

TYPE	Hermetic type, 4 poles, Inverter, twin Rotary
DISCRIMINATION	TNB220FPCM
POWER SOURCE	230 V 50 Hz
REFRIGERANT (R410A)	1,250 g

## FAN MOTOR

POWER SOURCE		230 V
INDOOR UNIT	Discrimination	MFA-14GTCT
	High-speed	730 r.p.m.
	Med-speed	670 r.p.m.
	Low-speed	590 r.p.m.
OUTDOOR UNIT	Discrimination	MFB-24JTAT
	High speed	780 r.p.m.
	Low speed	400 r.p.m.

## DIMENSIONS

INDOOR UNIT	H x W x D	235 x 580 x 580 +70 mm
OUTDOOR UNIT	H x W x D	650 x 830 x 320 mm
GRILLE	H x W x D	35 x 650 x 650 mm

## WEIGHT

INDOOR UNIT	Net / Gross	18 kg / 23 kg
OUTDOOR UNIT	Net / Gross	54 kg / 58 kg
GRILLE	Net / Gross	2.2 kg / 4.3 kg

## REFRIGERANT CHARGE (R410A)

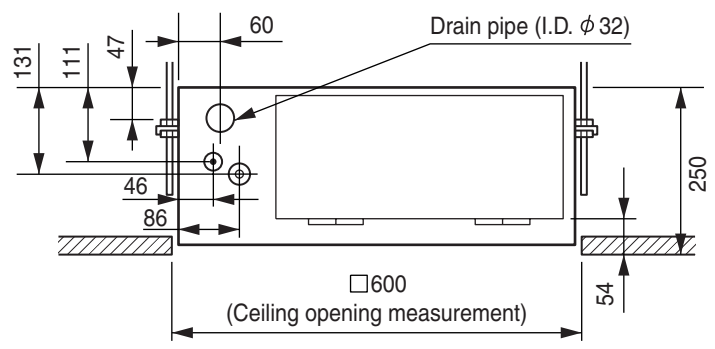
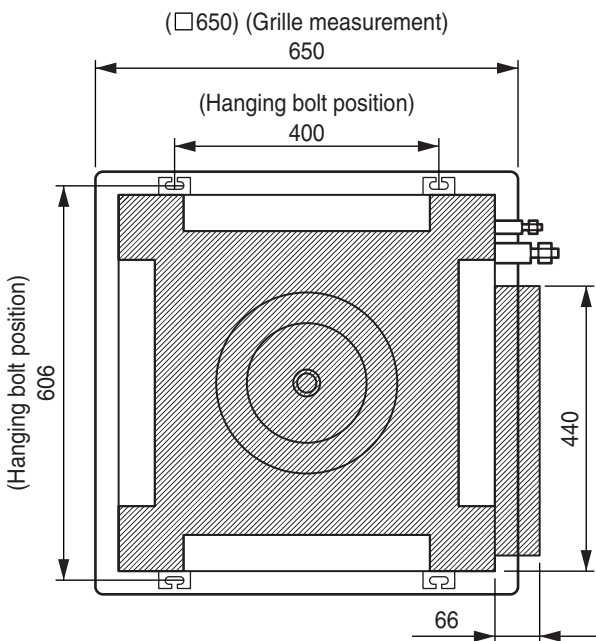
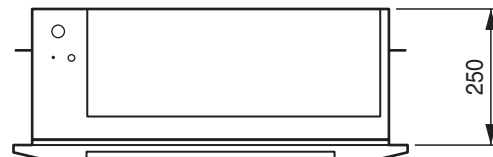
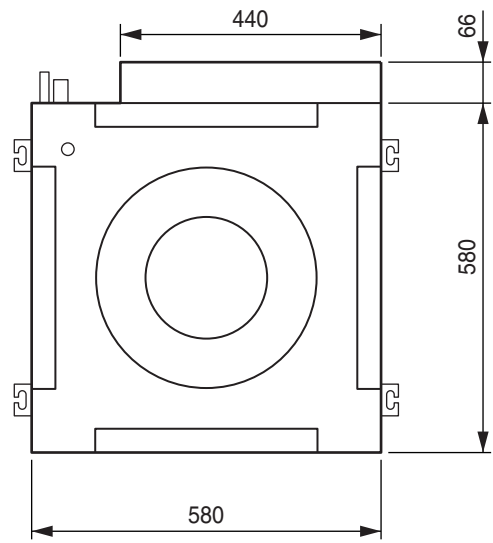
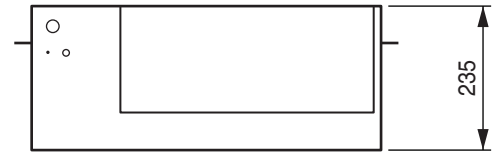
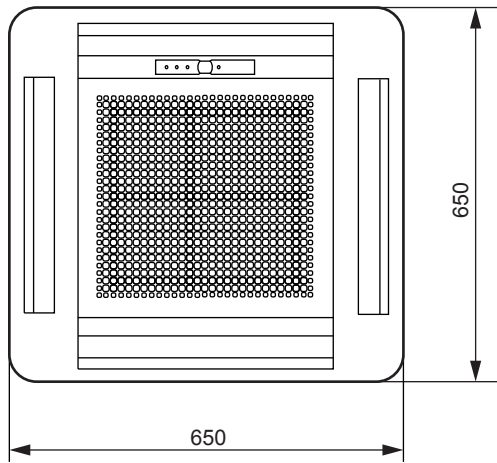
FULL CHARGE	Pipe Length	10 m	1,250 g
		15 m	1,350 g
		20 m	1,450 g
		25 m	1,550 g
ADDITIONAL CHARGE			20 g/m
MAXIMUM PIPE HEIGHT			15 m
MAXIMUM PIPE LENGTH			25 m

# OUTLINE AND DIMENSIONS

## INDOOR UNIT

(unit : mm)

Models :  
 AUH12LBAB  
 AUH14LBAB



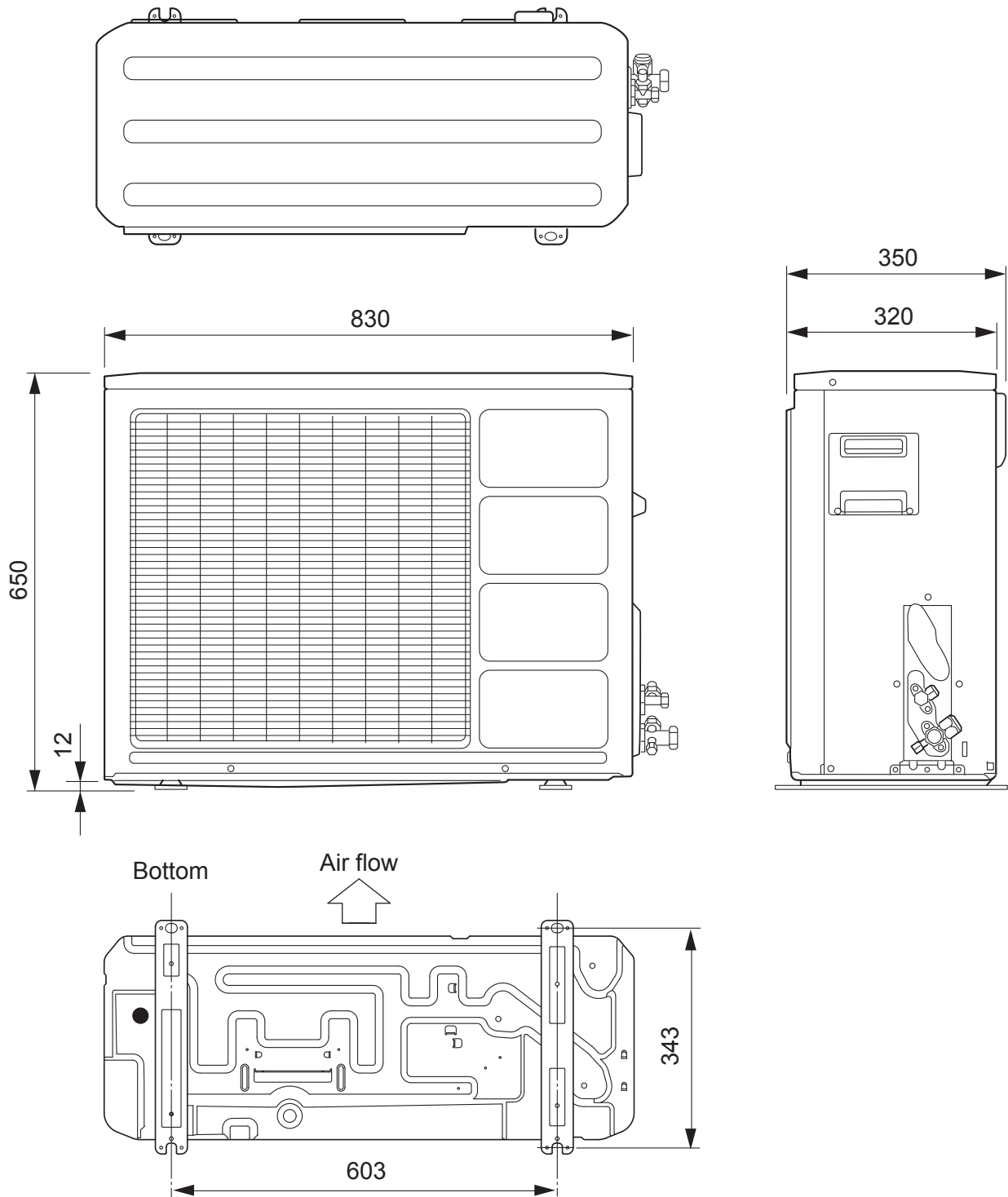
# OUTDOOR UNIT

(Unit : mm)

Models :

AOH12LMAKL

AOH14LMAKL

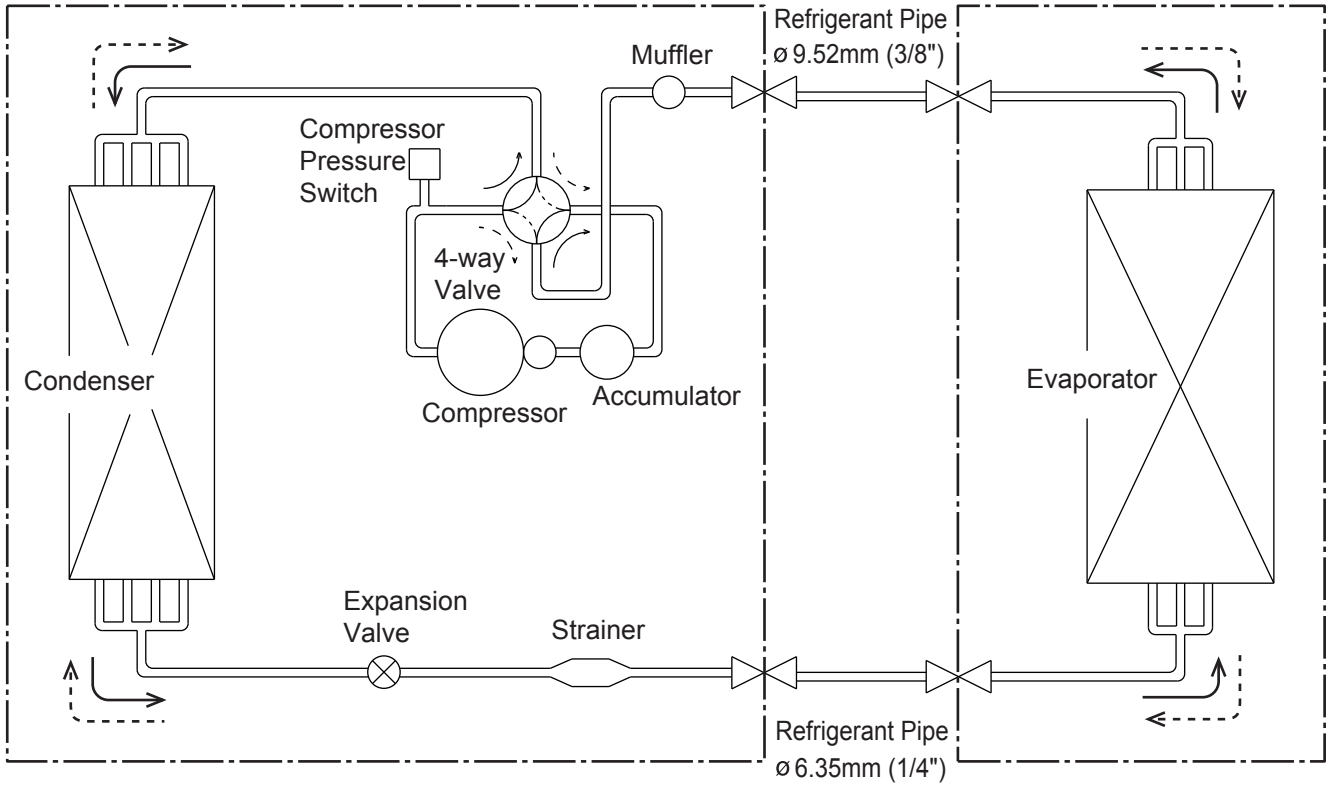


# REFRIGERANT SYSTEM DIAGRAM

Models : AUH12LBAB / AOH12LMAKL

OUTDOOR UNIT

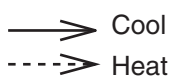
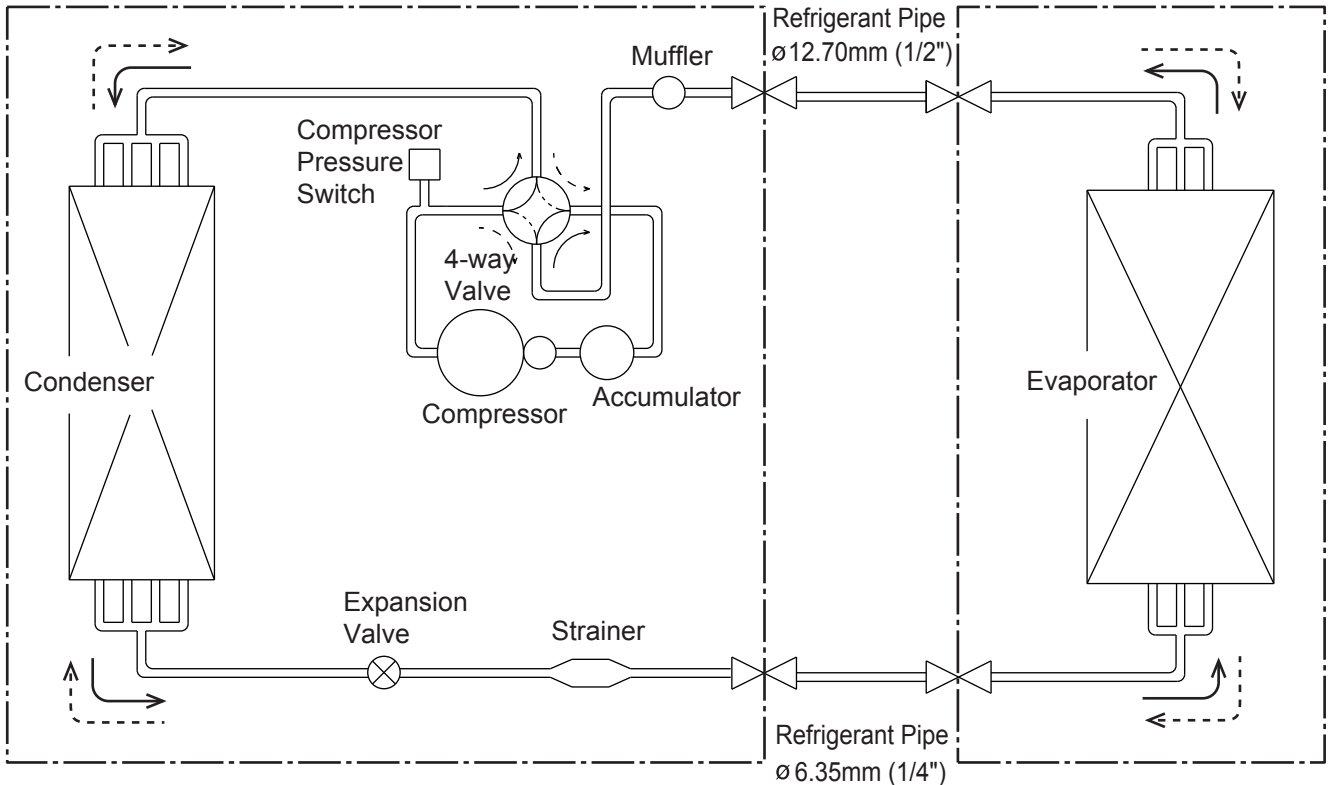
INDOOR UNIT



Models : AUH14LBAB / AOH14LMAKL

OUTDOOR UNIT

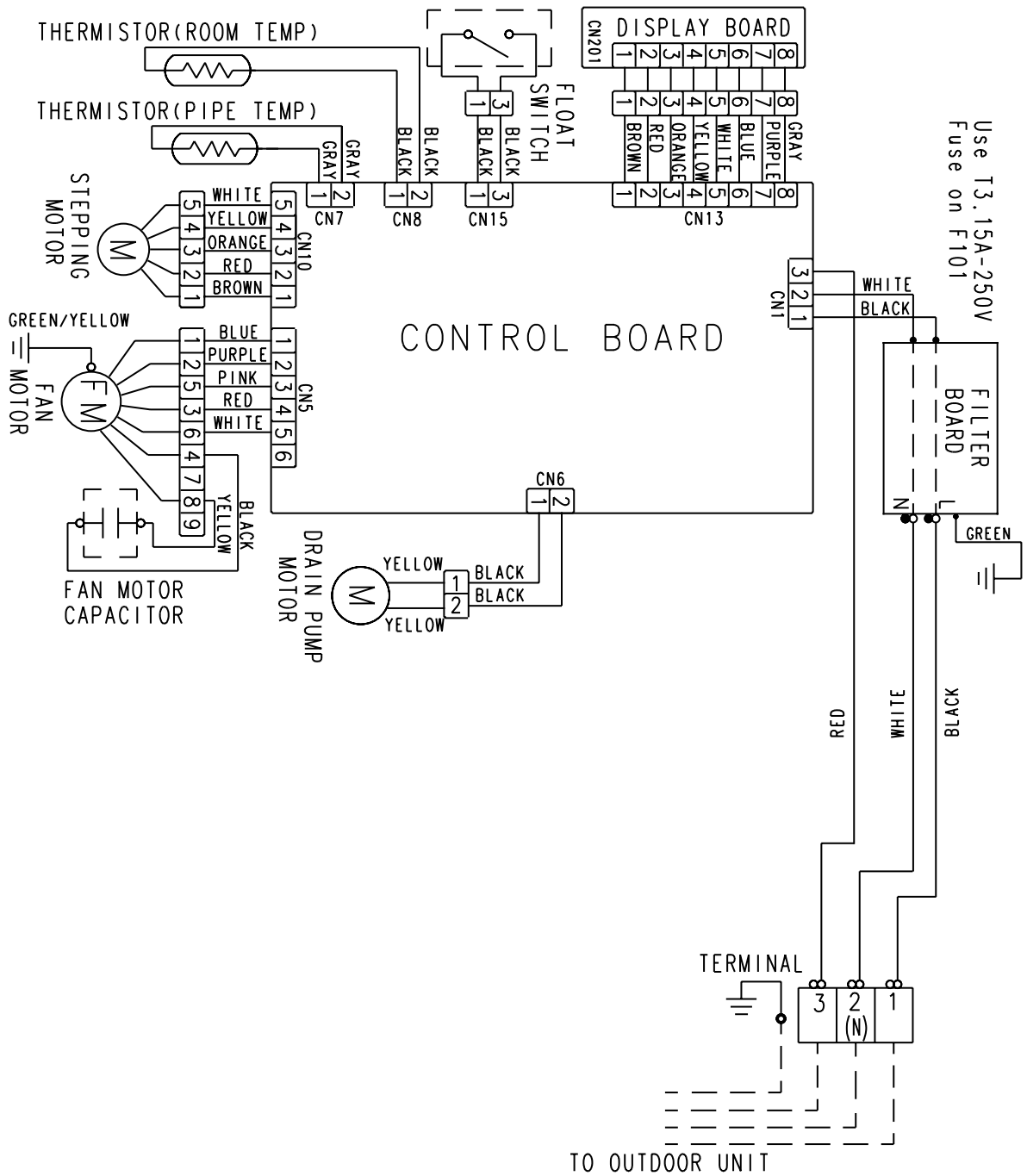
INDOOR UNIT



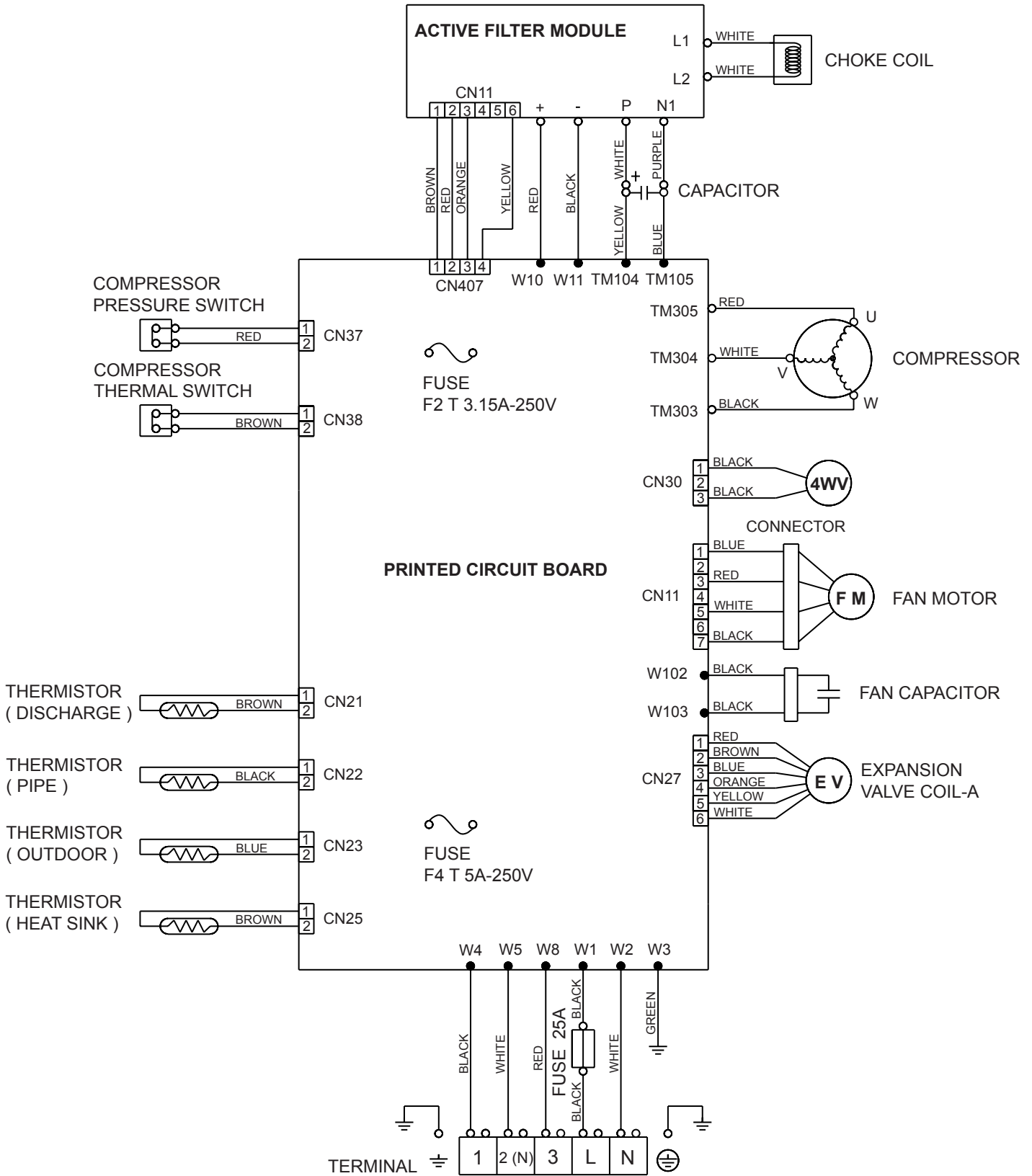
# CIRCUIT DIAGRAM

## INDOOR UNITS

Models :  
 AUH12LBAB  
 AUH14LBAB



Models :  
 AOH12LMAKL  
 AOH14LMAKL

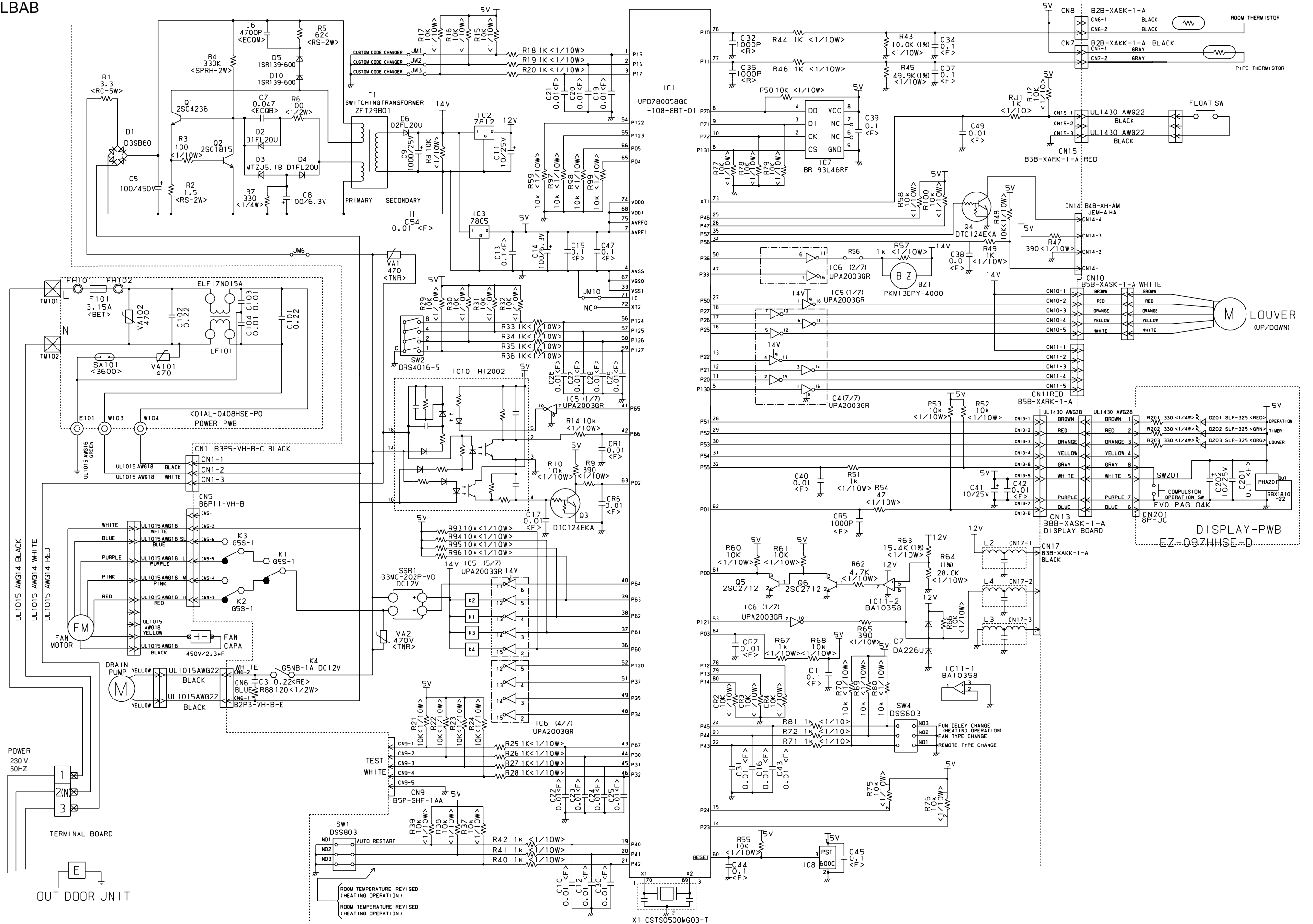


# INDOOR PCB CIRCUIT DIAGRAM

## CONTROLLER PCB ASSY ( MAIN PCB )

Models :  
 AUH12LBAB  
 AUH14LBAB

AUH12LBAB : K01AL-040THSE-C1  
 AUH14LBAB : K01AL-040WHSE-C1

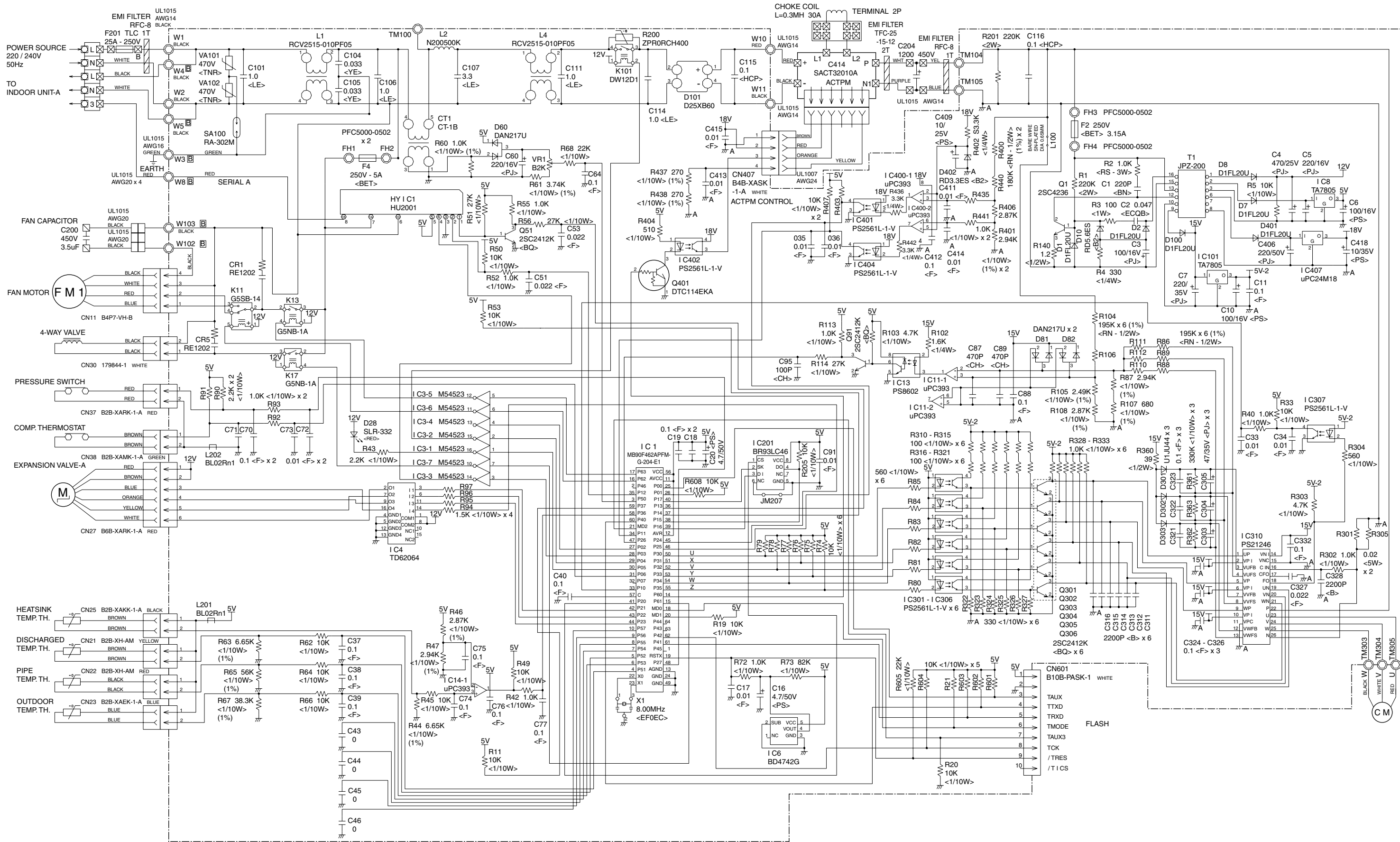




# OUTDOOR PCB CIRCUIT DIAGRAM

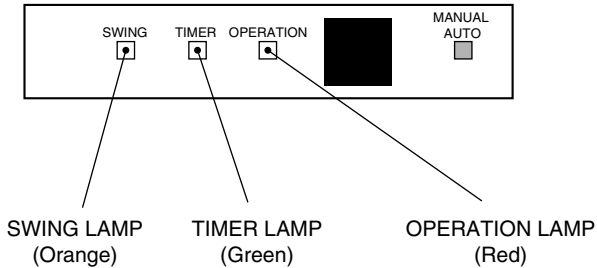
Models :  
 AOH12LMAKL  
 AOH14LMAKL

CONTROLLER PCB ASSEMBLY  
 AOH12LMAKL : K03AV-0501HUE-C1  
 AOH14LMAKL : K03AV-0502HUE-C1



# 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.

## 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 temperature sensor error

## 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.
- For the operation method, refer to the operating manual and perform operation check.

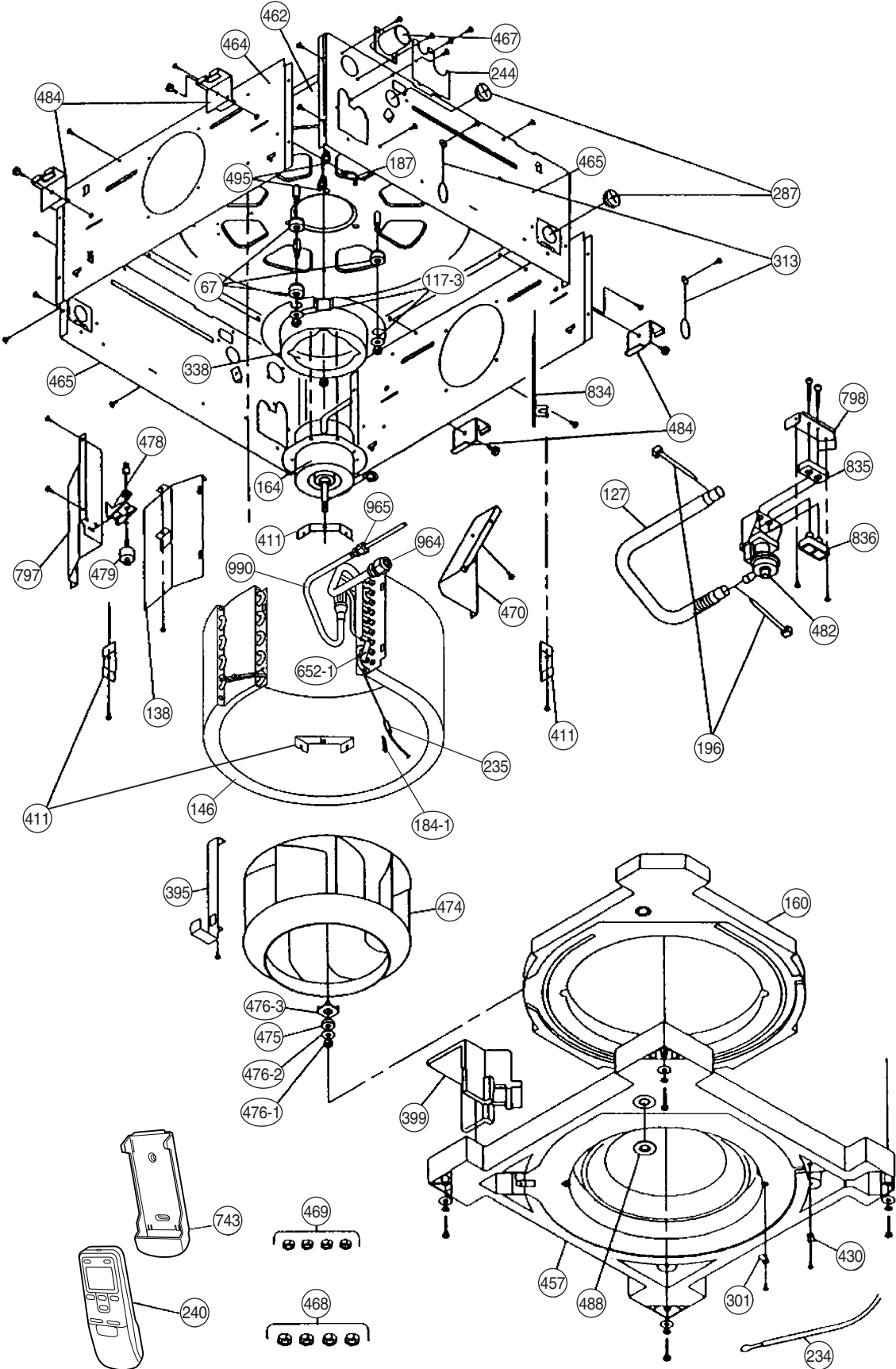
## OUTDOOR UNIT

Error contents	LED (RED)
Serial signal error	1 time blink
Discharge pipe thermistor error	2 times blink
Heat exchanger thermistor error	3 times blink
Outdoor temperature thermistor error	4 times blink
Compressor thermistor error	7 times blink
Pressure switch error	8 times blink
Current trip error	10 times blink
CT error	11 times blink
Compressor position detection error	12 times blink
Compressor starting error	13 times blink
Timer error	14 times blink

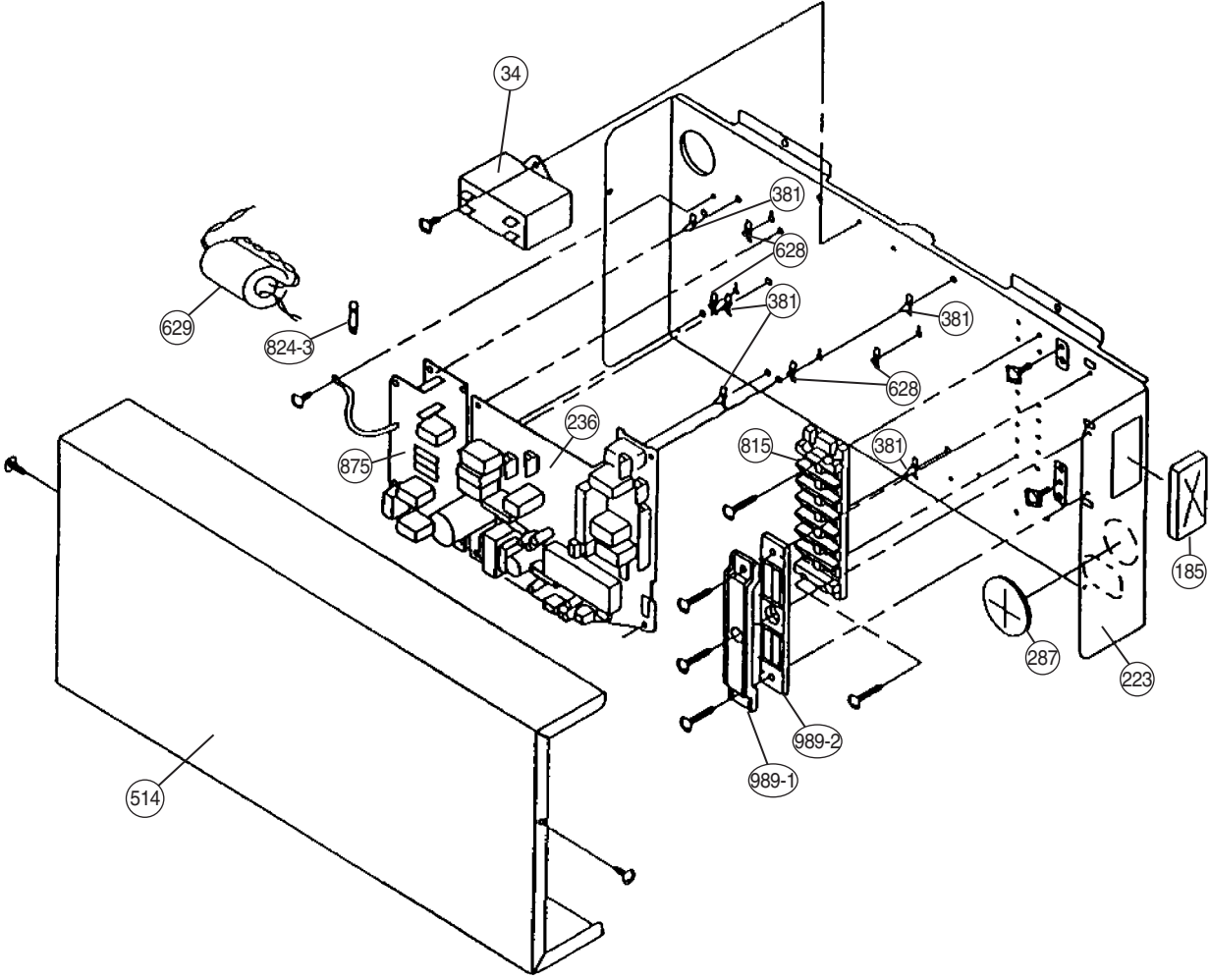
# DISASSEMBLY ILLUSTRATION

## INDOOR UNITS

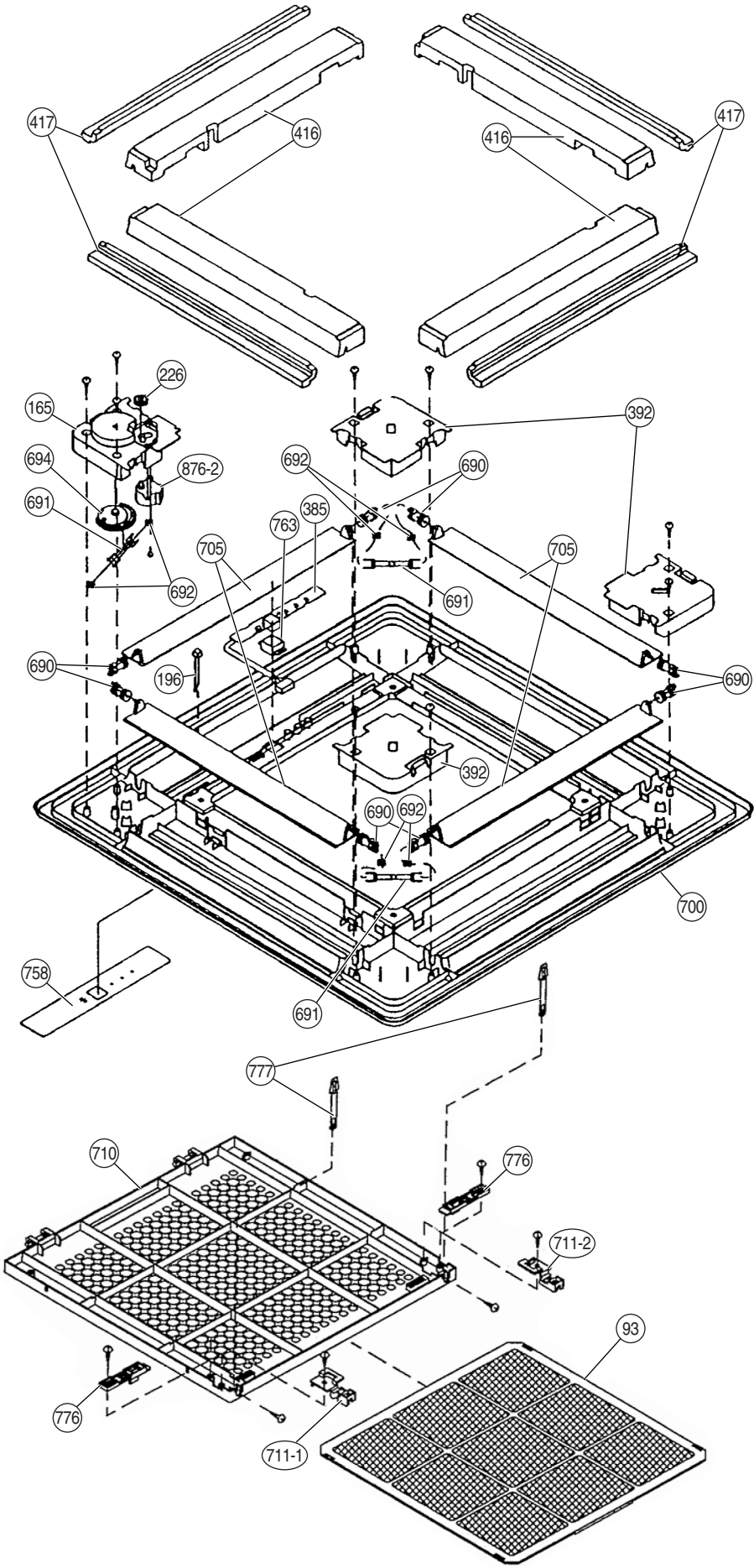
Models : AUH12LBAB, AUH14LBAB



Models :  
AUH12LBAB  
AUH14LBAB

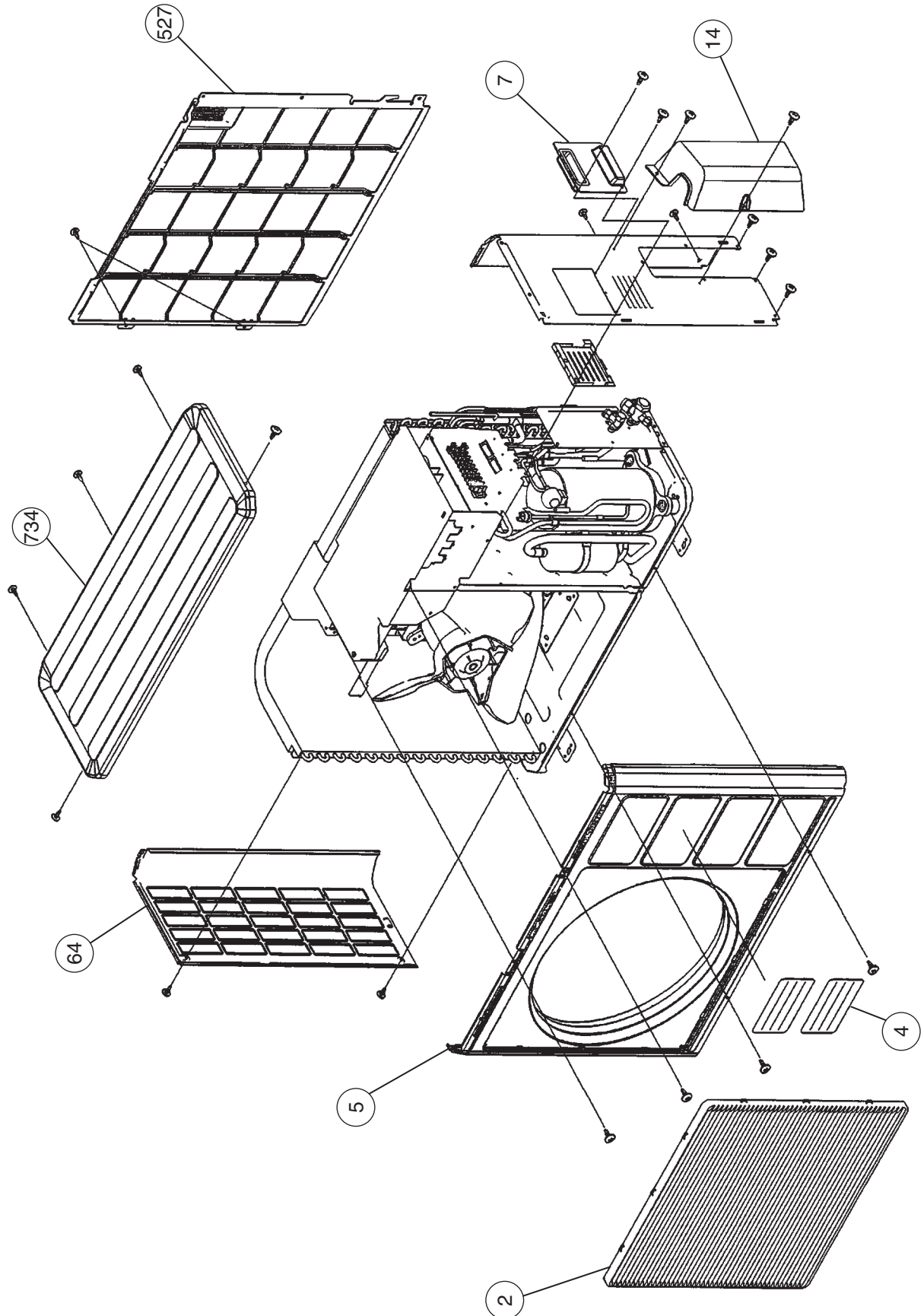


Model : UTG-UDGD-W

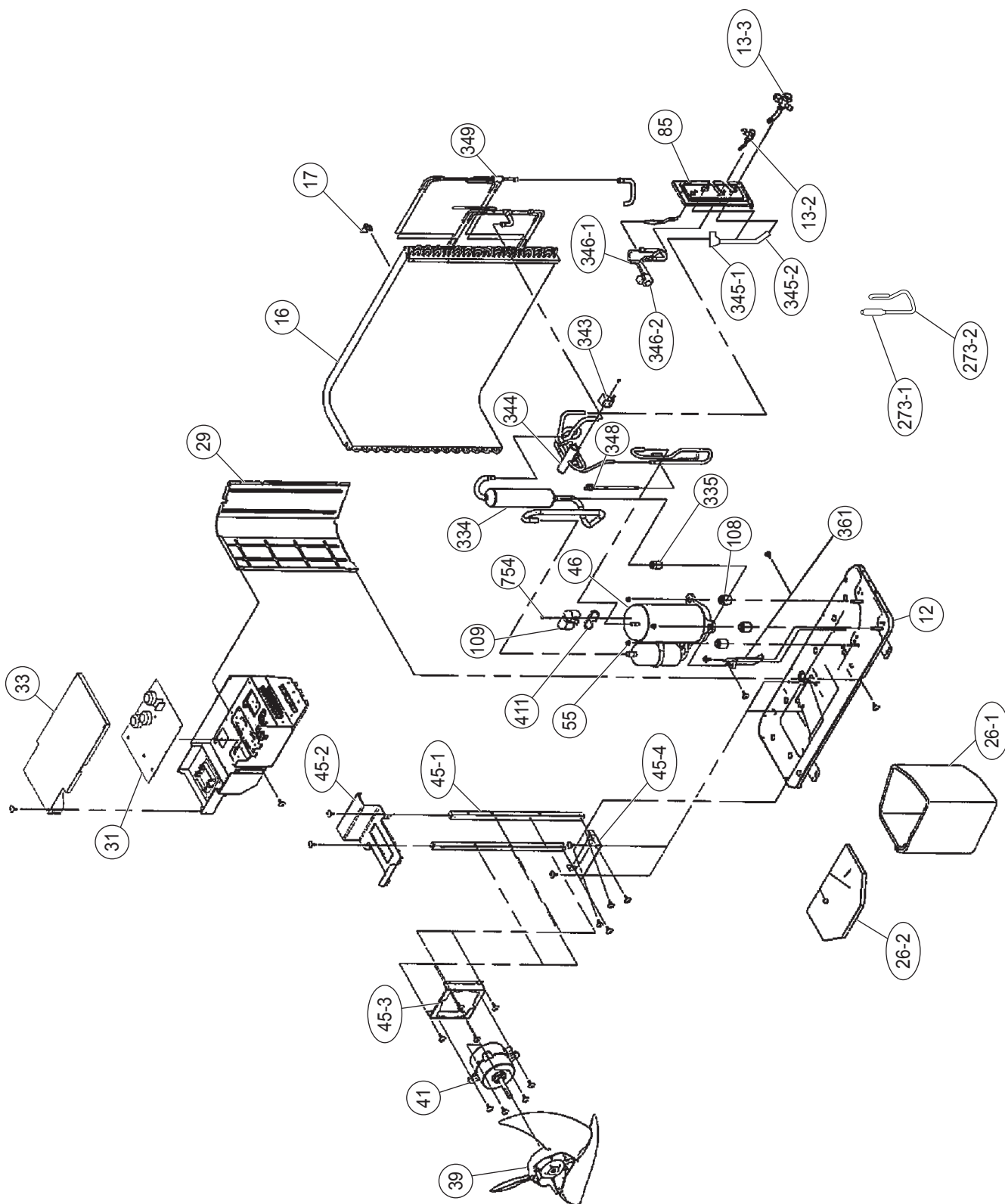




Models :  
AOH12LMAKL  
AOH14LMAKL



Models :  
AOH12LMAKL  
AOH14LMAKL



# PARTS LIST

## INDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		AUH12LBAB	AUH14LBAB	
34	Capacitor (Fan Motor)	9900284015	9900284015	
67	Rubber	9361279001	9361279001	
117-3	Special Washer M6	0700132247	0700132247	
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	0700005534	0700005534	
476-2	Special Washer	0700132223	0700132223	
476-3	Special Washer	9359954002	9359954002	
478	Sensor M. Bracket	9359654001	9359654001	
479	Float Switch	9900361013	9900361013	
482	Pump Unit	9900360016	9900360016	
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	

## GRILLE ASSY

Ref. No.	Description	Part No.	Ord. Q'ty
		UTG-UDGD-W	
93	Filter	9359632009	
165	Motor Cover	9359623014	
196	Clamp SKB-150	313035356905	
226	Motor Gear	9359629009	
385	Indicator PCB Assy	9702224011	
392	Cover-A	9359622017	
416	Insulation (Panel)-A	9359620006	
417	Insulation (Panel)-B	9359621003	
690	Joint-A	9359626008	
691	Joint-B	9359627005	
692	Joint Shaft	9359625001	
694	Cam Gear	9359628002	
700	Panel	9359619017	
705	Louver	9374951017	
710	Intake Grille	9370126006	
711-1	Filter Clamp-A	9359634003	
711-2	Filter Clamp-B	9359635000	
758	Decoration Plate	9360039026	
763	Receiver Cover	9359630005	
776	Grille Stopper	9359633013	
777	Grille Hook	9359761006	
876-2	Step Motor	9900362027	



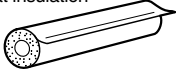


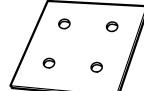
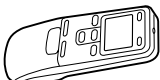

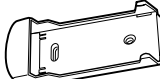

# OUTDOOR UNIT

Ref. No.	Description	Part No.		Ord. Q'ty
		AOH12LMAKL	AOH14LMAKL	
2	Fan Guard	9371187013	9371187013	
4	Emblem-Rear	9372171011	9372171011	
5	Front Panel, Painted	9371924014	9371924014	
7	Connector Cover (Cabinet)	9366398004	9366398004	
12	Base Assy, Painted	9371920078	9371920078	
13-2	2-Way Valve	9372204054	9372204054	
13-3	3-Way Valve	9372205051	9372205051	
14	Valve Cover	9372796016	9372796016	
15	Condenser Sub Assy	9372313183	9372313183	
16	Condenser Assy	9372181096	9372181096	
17	Thermistor Holder Pipe	313714262805	313714262805	
26-1	Compressor Cover-A	9373730019	9373730019	
26-2	Compressor Cover-B	9373730026	9373730026	
29	Separate Wall	9372795019	9372795019	
31	Controller PCB Assy	9705285064	9705285071	
33	Control Cover	9372792018	9372792018	
39	Propeller Fan Assy	9366378013	9366378013	
41	Fan Motor Assy-IN	9601671046	9601671046	
45-1	Motor Bracket	9371929019	9371929019	
45-2	Motor Bracket-Top	9371931012	9371931012	
45-3	Motor Bracket-Center	9371930015	9371930015	
45-4	Motor Bracket-Bottom	9371932019	9371932019	
46	Compressor Assy	9373262015	9373262015	
55	Special Nut M8	9355091008	9355091008	
64	Side Panel-L, Painted	9371926018	9371926018	
85	Valve Plate, Painted	9371928012	9371928012	
108	Rubber Seat (For Comp. )	9358080009	9358080009	
109	Terminal Cover (For Comp. )	9373264019	9373264019	
273-1	Strainer Assy	9372524015	9372524015	
273-2	Joint Pipe (2-Way)-A	9373729549	9373729549	
334	Accumulator	9368391003	9368391003	
335	Accumulator Holder Rubber	9354022010	9354022010	
343	Solenoid	9900165079	9900165079	
344	4-Way Valve	9900163013	9900163013	
345-1	Muffler	9372369029	9372369029	
345-2	Joint Pipe (3-Way)	9373729556	9373729556	
346-1	Expansion Valve Assy	9373729518	9373729518	
346-2	Coil (Expansion Valve)	9900057022	9900057022	
348	Pressure Switch Assy	9373729044	9373729044	
349	Capillary Assy	9373729433	9373729433	
361	Accumulator Support Assy	9372252017	9372252017	
411	Gasket	9373266013	9373266013	
527	Protective Net	9371934013	9371934013	
734	Top Plate	9371925011	9371925011	
754	Rubber Washer	9358078006	9358078006	
----	ACTPM	9703457012	9703457012	
----	Capacitor, Elec.	9705387010	9705387010	
----	Fuse	0600086039	0600086039	
----	Fuse Holder	0501454012	0501454012	
----	Capacitor, Plastic	9900270049	9900270049	
----	Terminal-5P	9900203023	9900203023	
----	Terminal-2P	9701971015	9701971015	
----	Hex. Bolt Socket	0700145148	0700145148	
----	Clip (Cable)	9352715006	9352715006	
----	BR Sheet	9363708042	9363708042	
----	Relay	9900117016	9900117016	
----	Compressor Presure Switch	9900186012	9900186012	
----	Compressor Thermal Switch	9373263012	9373263012	
----	Discharge Temperature Thermistor	9704219039	9704219039	
----	Heat Exchanger Thermistor	9900374020	9900374020	
----	Outdoor TemperatureThermistor	9900378011	9900378011	
----	Heat Sink Thermistor	9900195014	9900195014	

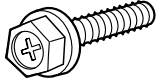


When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

# STANDARD ACCESSORIES

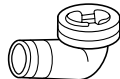

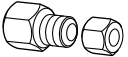
## INDOOR UNIT ACCESSORIES

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 (φ 3 x 12) 	For remote control unit holder installation	0700019098

## GRILLE ASSY ACCESSORIES

Name and Shape	Application	Part No.
Bolt 	For opening the refrigerant valve on the outdoor unit	0700139116
Washer 	For mounting grille	0700132216
Blower cover insulation 	For discharged air	9360047007

## OUTDOOR UNIT ACCESSORIES

Name and Shape	Application	Part No.
Drain pipe 	For outdoor unit drain piping work [Heat & Cool model (Reverse cycle) only]	9303029015
Drain cap 		313166024302
Adapter D (1/2" → 3/8") 12.7mm → 9.52mm 	For use when connecting model 12,000 BTU/h	9370244007

0603G3056