

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

**SERVICE
MANUAL**



Models

Indoor unit

Outdoor unit

AUY12LBAB

AOY12LMAKL

AUY14LBAB

AOY14LMAKL

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SPECIFICATIONS

| TYPE | COOL & HEAT | |
|------------------|-------------|------------|
| INDOOR UNIT | AUY12LBAB | AUY14LBAB |
| OUTDOOR UNIT | AOY12LMAKL | AOY14LMAKL |
| 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 ³ /hr | 550 m ³ /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)

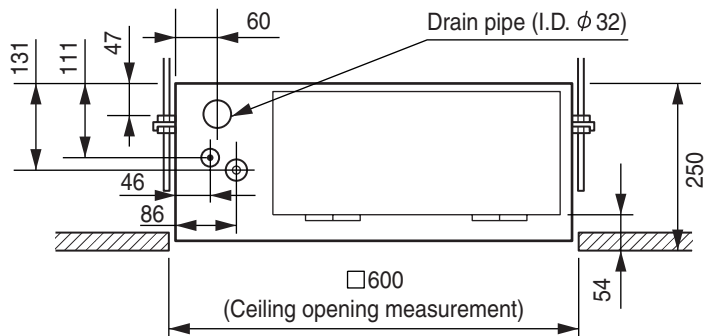
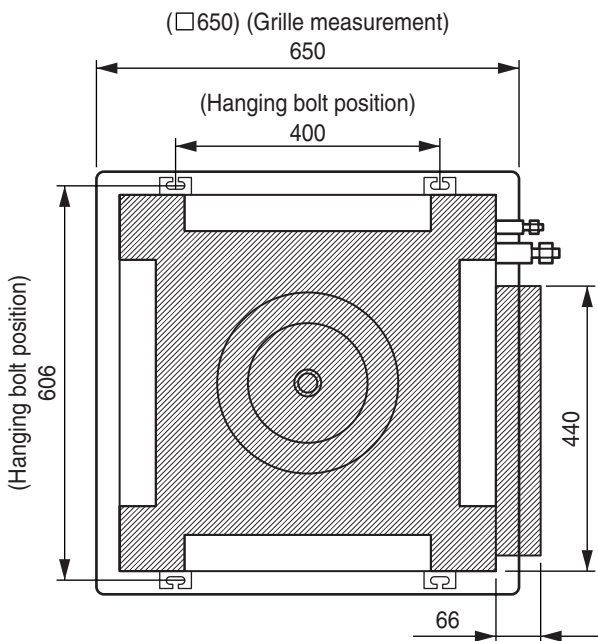
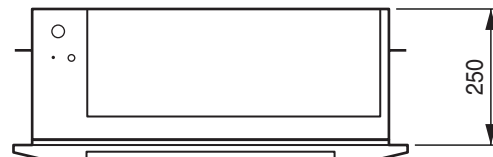
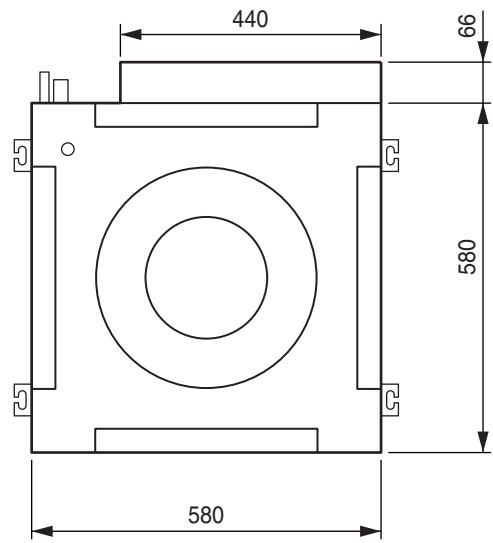
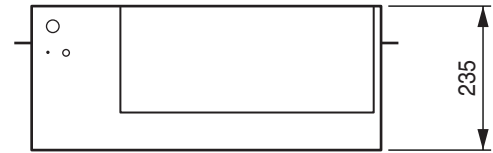
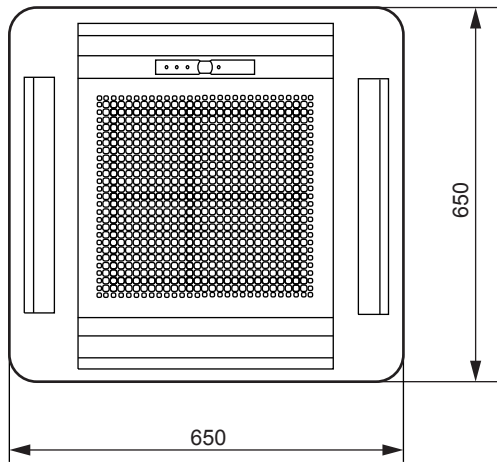
| | | | |
|---------------------|-------------|------|---------|
| FULL CHARGE | Pipe Length | 10 m | 1,250 g |
| | | 15 m | 1,350 g |
| | | 20 m | 1,450 g |
| | | 25 m | 1,550 g |
| ADDITIONAL CHARGE | | | 20 g/m |
| MAXIMUM PIPE HEIGHT | | | 15 m |
| MAXIMUM PIPE LENGTH | | | 25 m |

OUTLINE AND DIMENSIONS

INDOOR UNIT

(unit : mm)

Models :
 AUY12LBAB
 AUY14LBAB



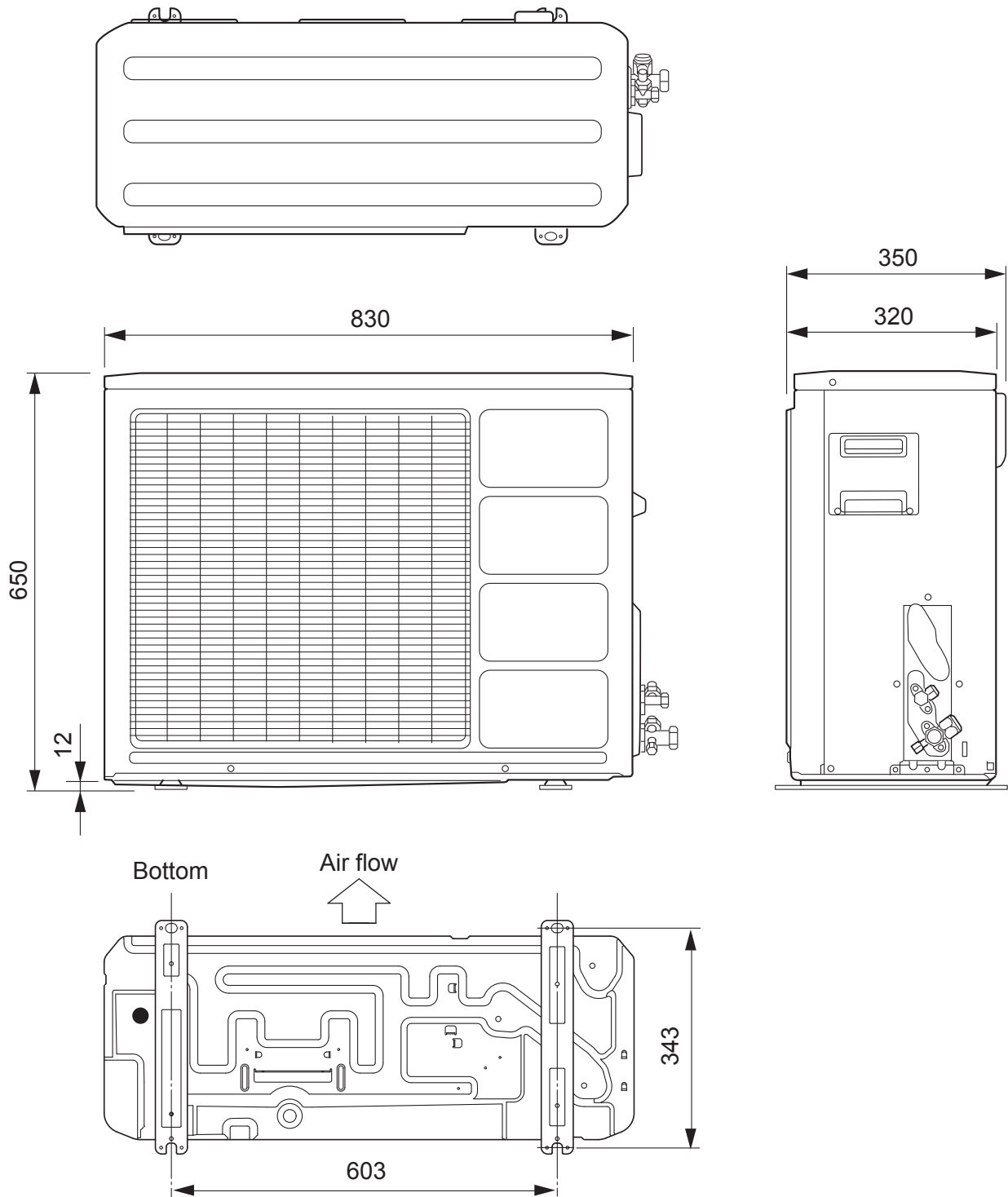
OUTDOOR UNIT

(Unit : mm)

Models :

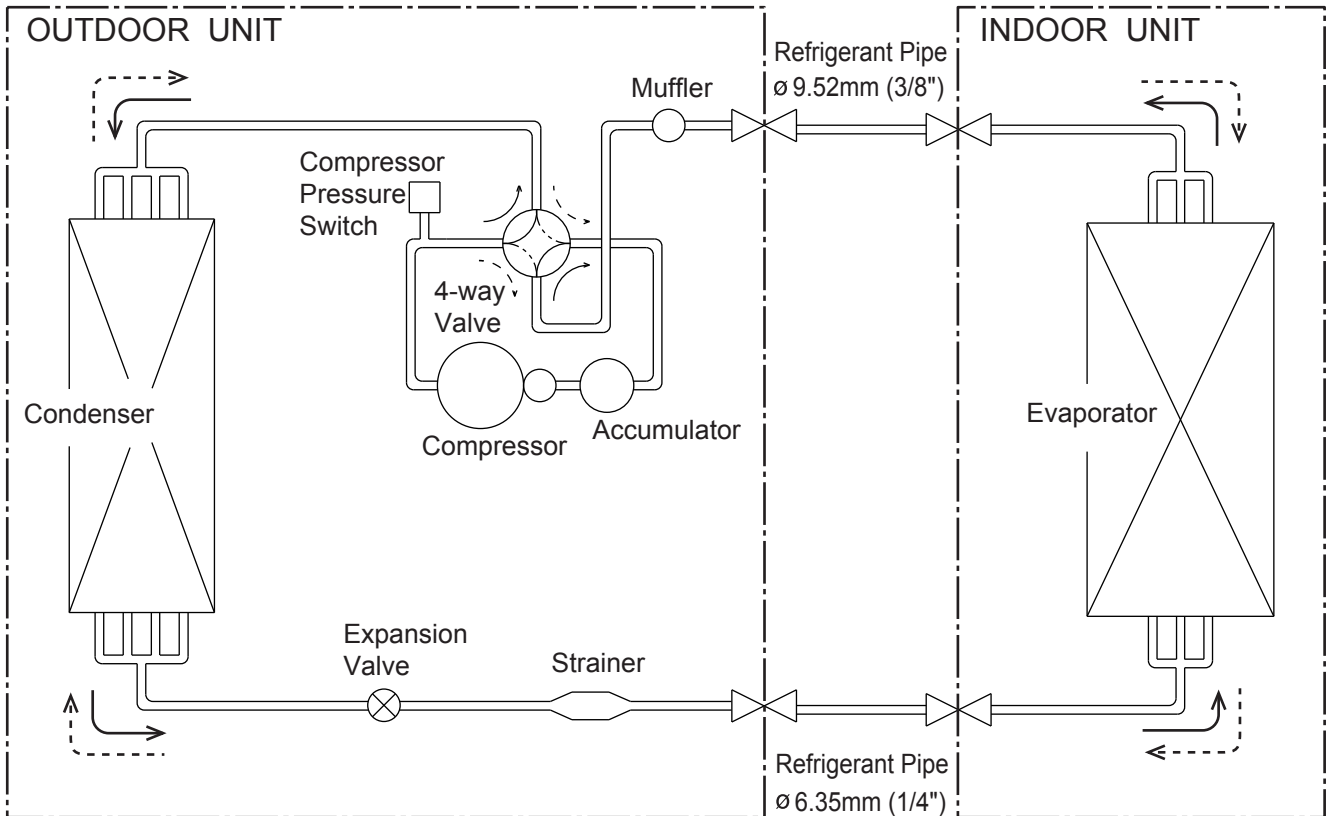
AOY12LMAKL

AOY14LMAKL

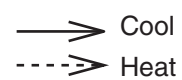
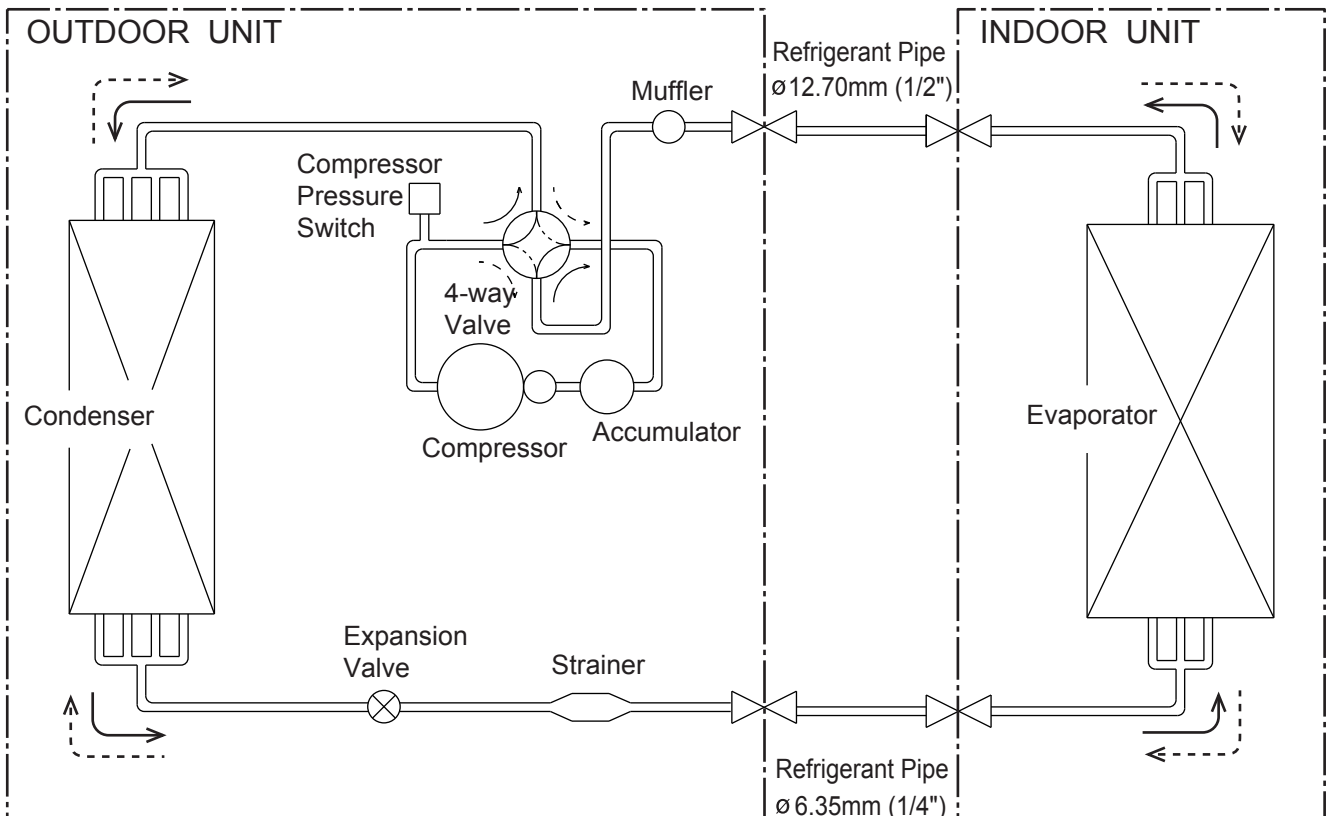


REFRIGERANT SYSTEM DIAGRAM

Models : AUY12LBAB / AOY12LMAKL



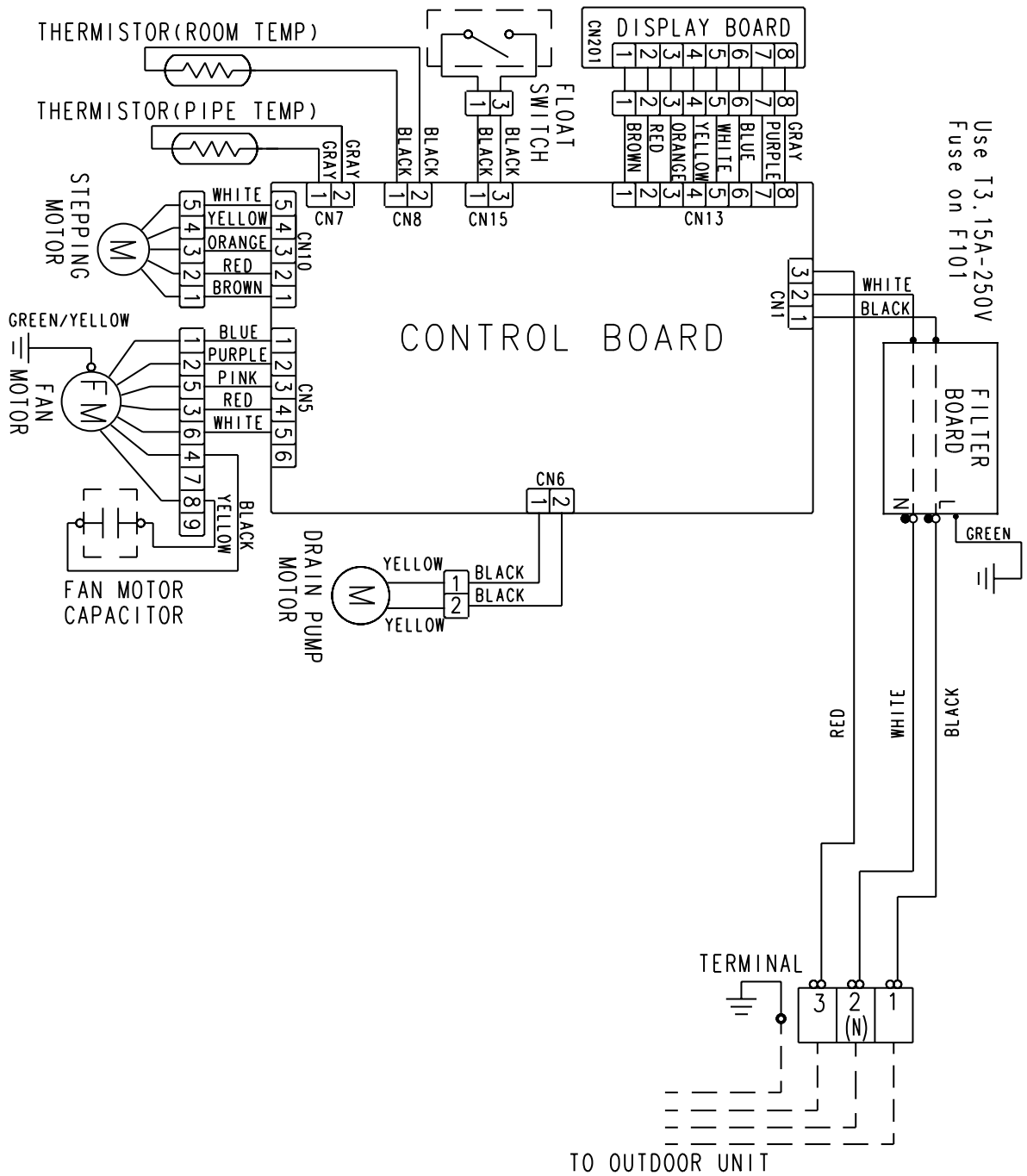
Models : AUY14LBAB / AOY14LMAKL



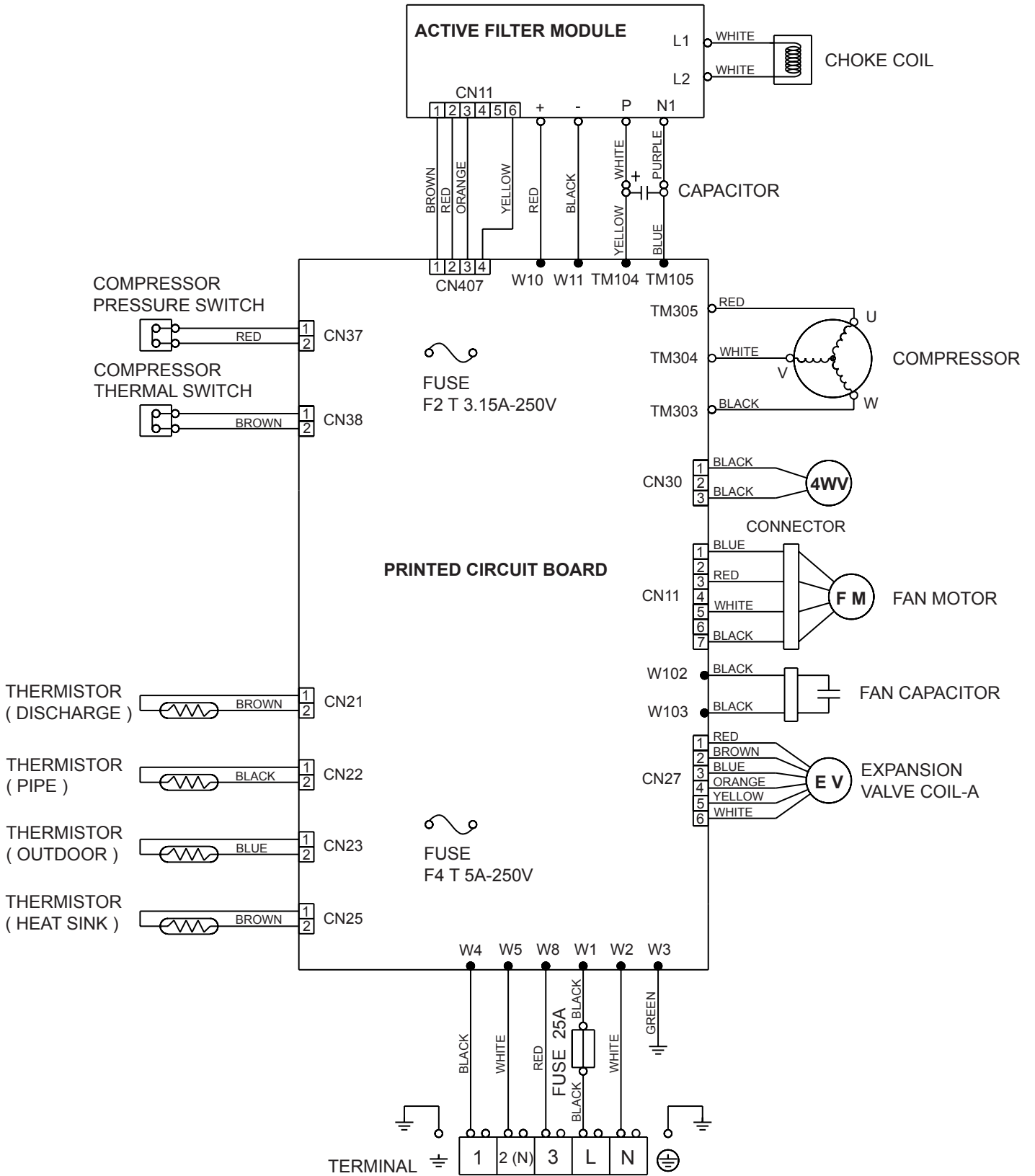
CIRCUIT DIAGRAM

INDOOR UNITS

Models :
 AUY12LBAB
 AUY14LBAB



Models :
 AOY12LMAKL
 AOY14LMAKL

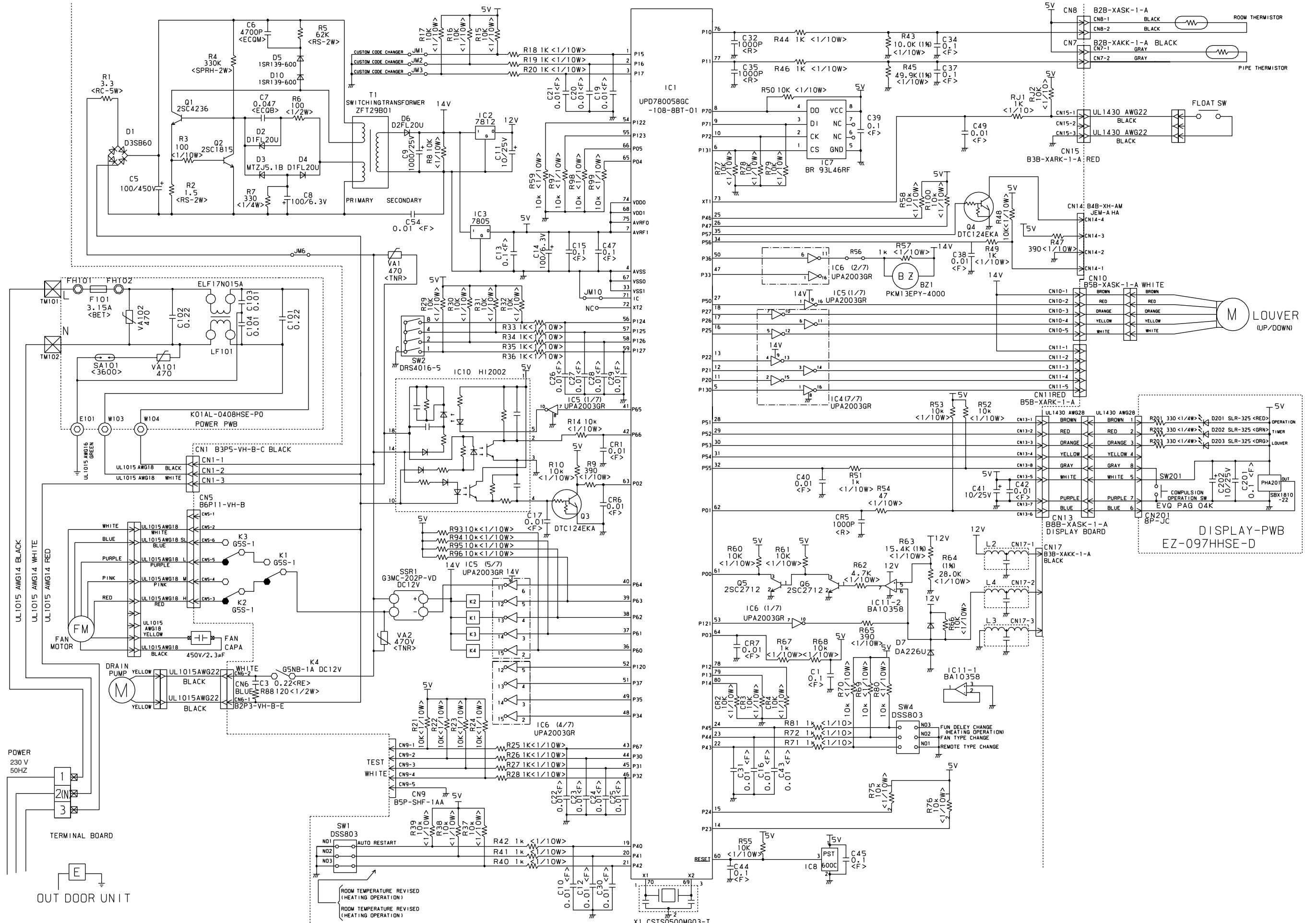


INDOOR PCB CIRCUIT DIAGRAM

CONTROLLER PCB ASSY (MAIN PCB)

AUY12LBAB : K01AL-040THSE-C1

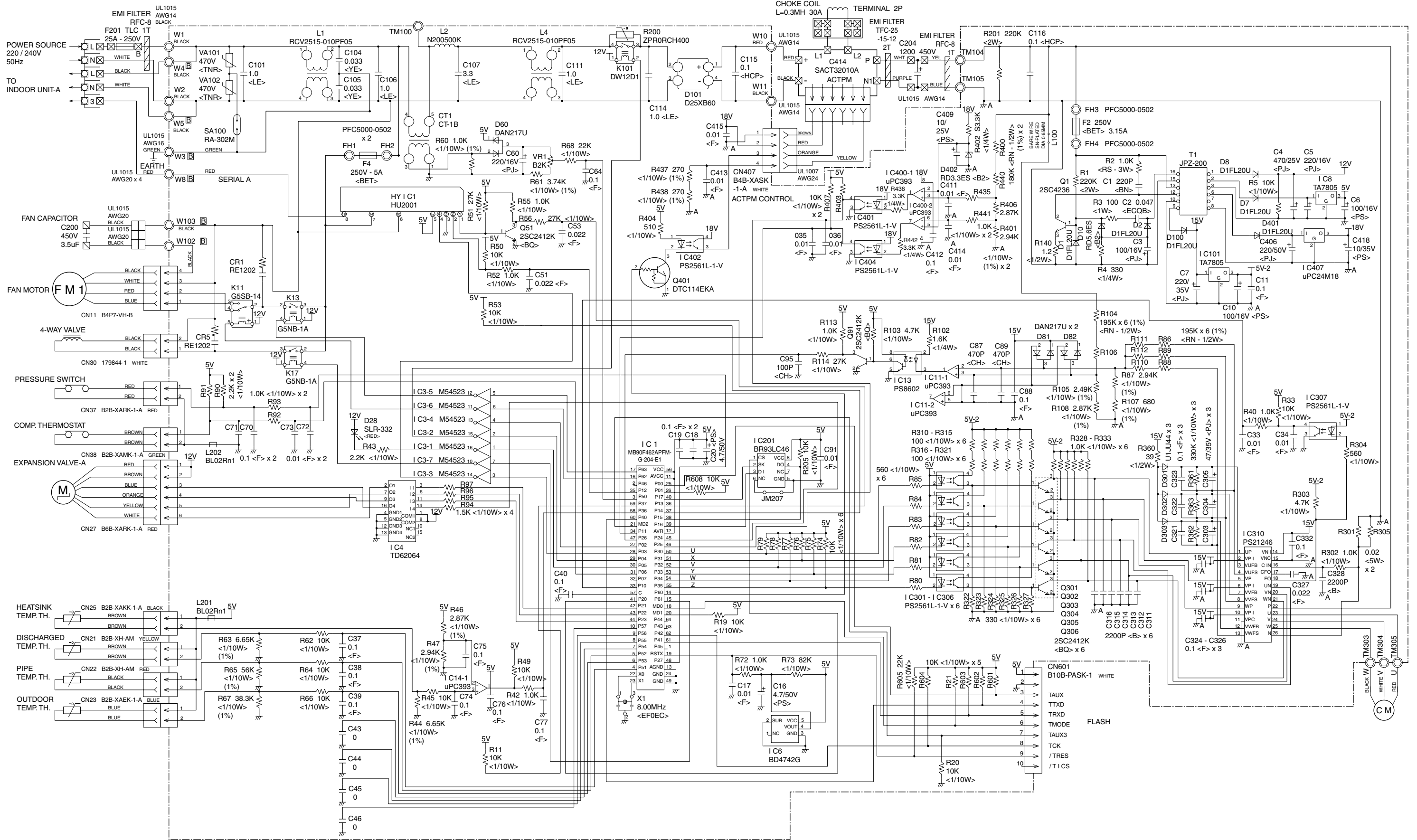
AUY14LBAB : K01AL-040WHSE-C1



OUTDOOR PCB CIRCUIT DIAGRAM

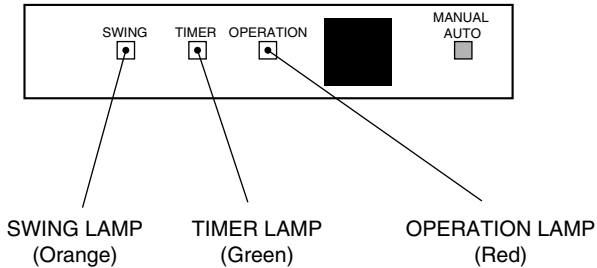
Models :
AOY12LMAKL
AOY14LMAKL

CONTROLLER PCB ASSEMBLY
AOY12LMAKL : K03AV-0501HUE-C1
AOY14LMAKL : 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.

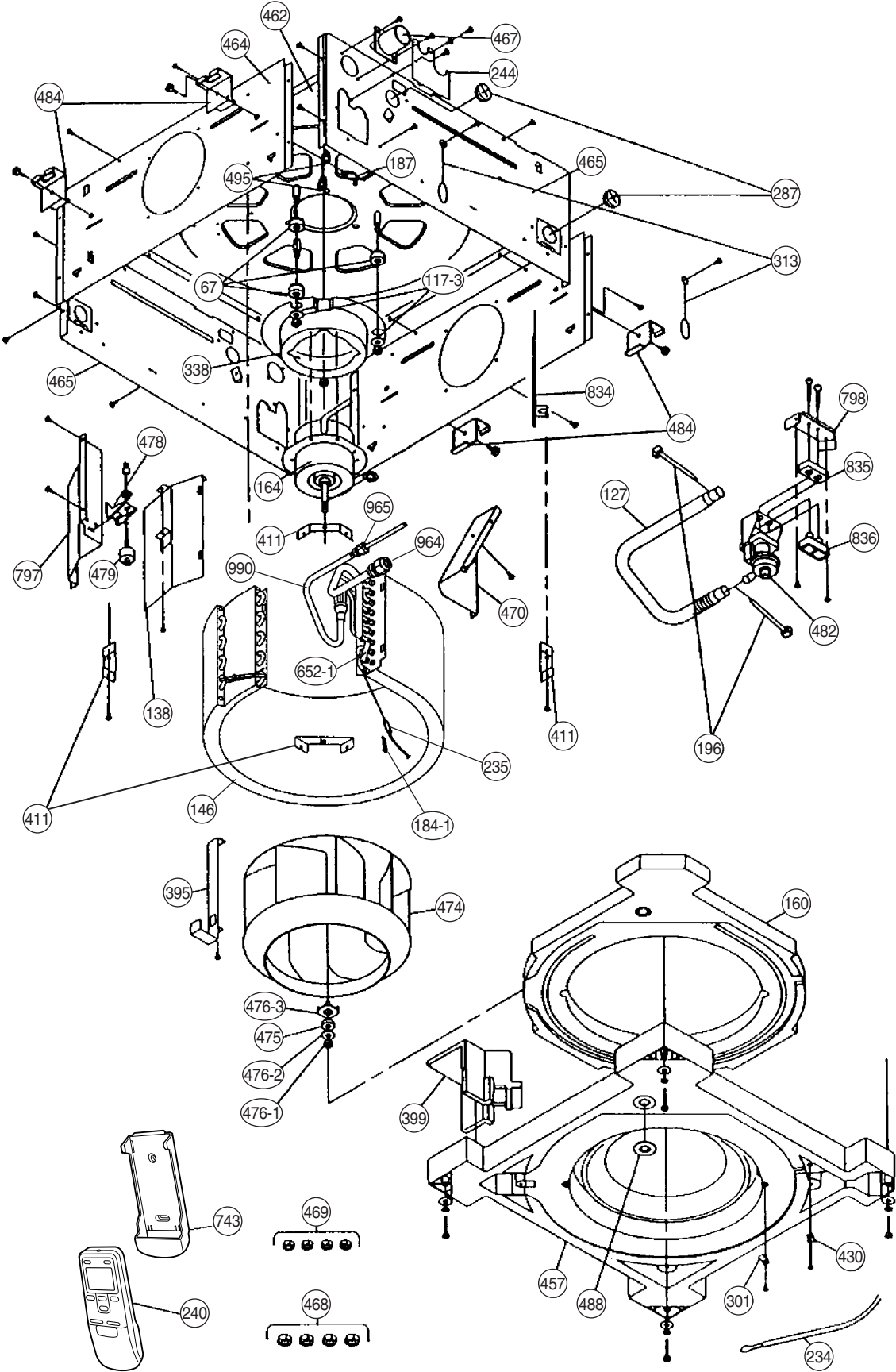
OUTDOOR UNIT

| 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 |

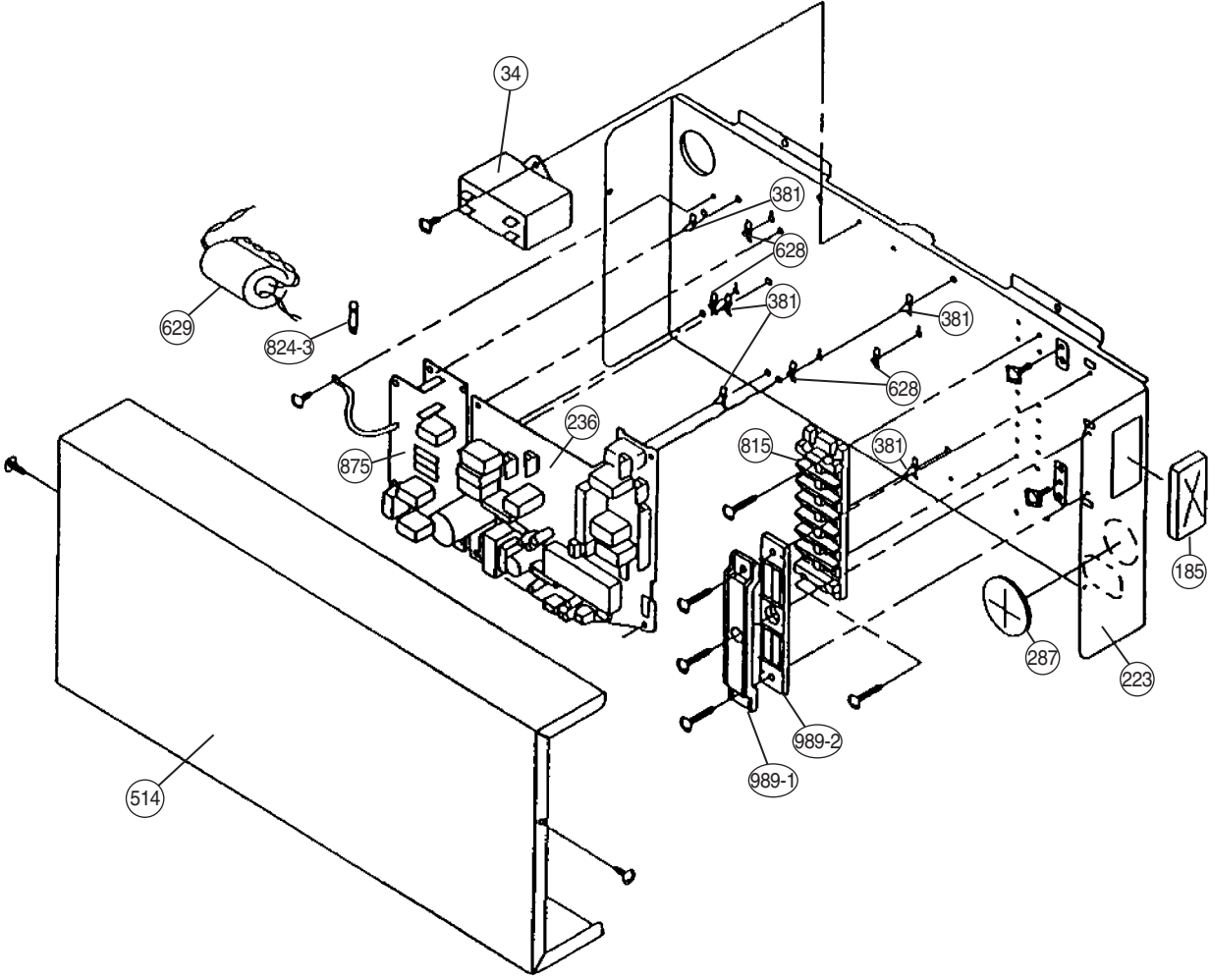
DISASSEMBLY ILLUSTRATION

INDOOR UNITS

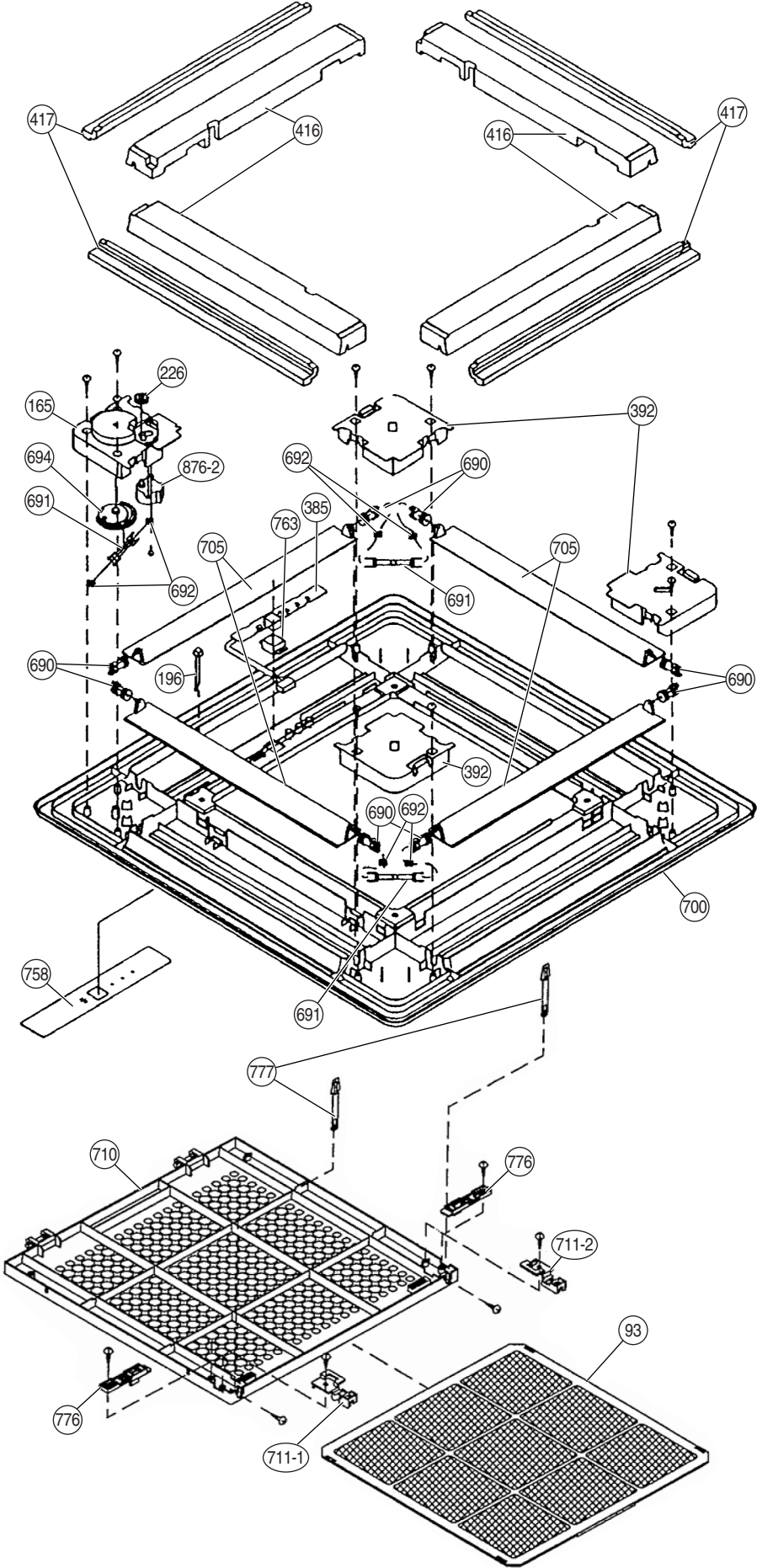
Models : AUY12LBAB, AUY14LBAB



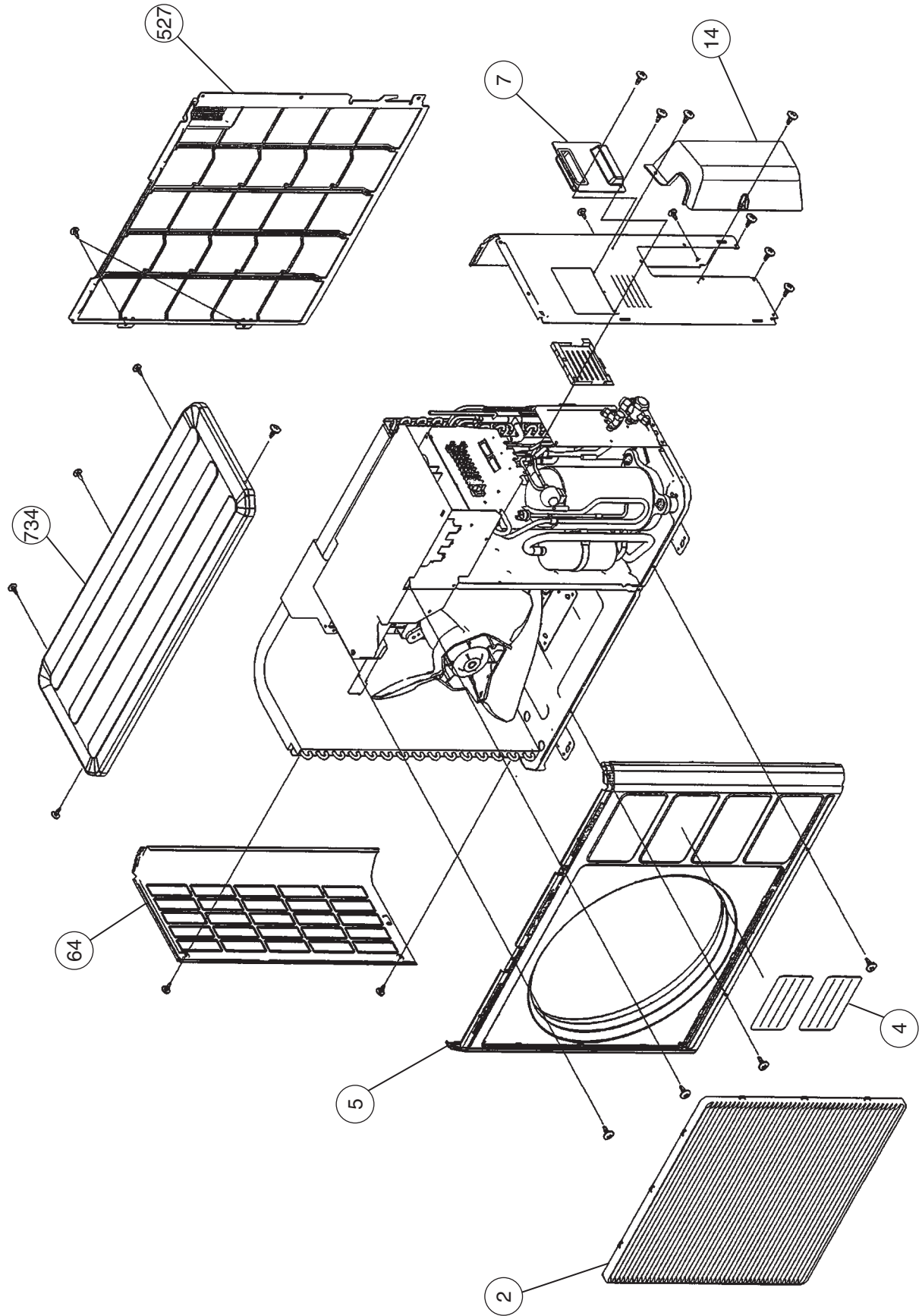
Models :
AUY12LBAB
AUY14LBAB



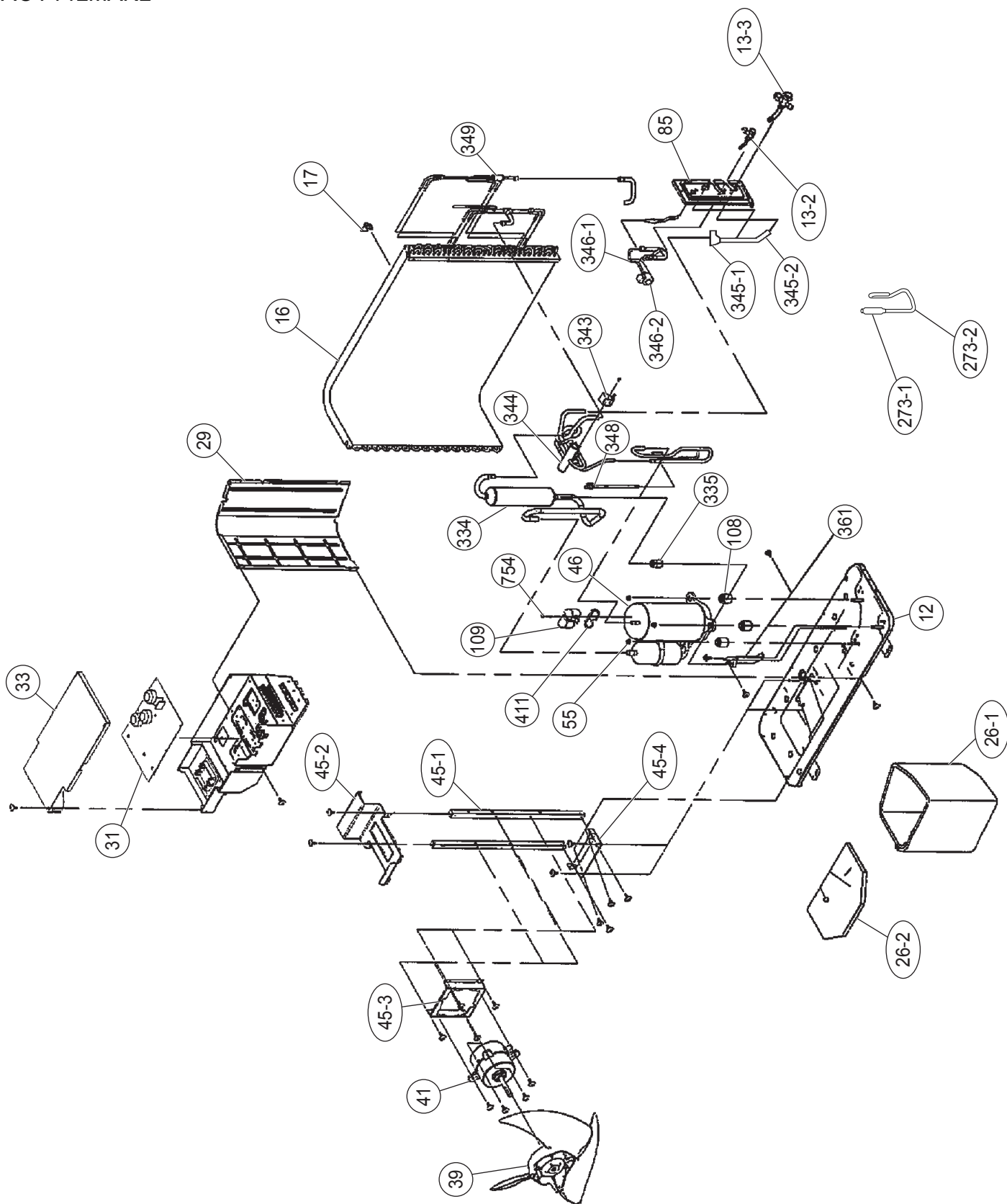
Model : UTG-UDYD-W



Models :
AOY12LMAKL
AOY14LMAKL



Models :
AOY12LMAKL
AOY14LMAKL



PARTS LIST

INDOOR UNIT

| Ref. No. | Description | Part No. | | Ord. Q'ty |
|----------|----------------------------|--------------|--------------|-----------|
| | | AUY12LBAB | AUY14LBAB | |
| 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

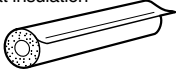


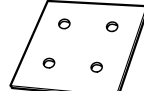
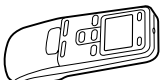

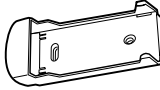

| Ref. No. | Description | Part No. | Ord. Q'ty |
|----------|----------------------|--------------|-----------|
| | | UTG-UDYD-W | |
| 93 | Filter | 9359632009 | |
| 165 | Motor Cover | 9359623014 | |
| 196 | Clamp SKB-150 | 313035356905 | |
| 226 | Motor Gear | 9359629009 | |
| 385 | Indicator PCB 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-A | 9360039019 | |
| 763 | Receiver Cover | 9359630005 | |
| 776 | Grille Stopper | 9359633013 | |
| 777 | Grille Hook | 9359761006 | |
| 876-2 | Step Motor | 9900362027 | |

OUTDOOR UNIT

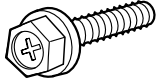


| Ref. No. | Description | Part No. | | Ord. Q'ty |
|----------|----------------------------------|--------------|--------------|-----------|
| | | AOY12LMAKL | AOY14LMAKL | |
| 2 | Fan Guard | 9371187013 | 9371187013 | |
| 4 | Emblem-Rear | 9351355005 | 9351255005 | |
| 5 | Front Panel | 9371924014 | 9371924014 | |
| 7 | Connector Cover (Cabinet) | 9366398004 | 9366398004 | |
| 12 | Base Assy | 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 Pressure Switch | 9900186012 | 9900186012 | |
| ---- | Compressor Thermal Switch | 9373263012 | 9373263012 | |
| ---- | Discharge Temperature Thermistor | 9704219039 | 9704219039 | |
| ---- | Heat Exchanger Thermistor | 9900374020 | 9900374020 | |
| ---- | Outdoor Temperature Thermistor | 9900378011 | 9900378011 | |
| ---- | Heat Sink Thermistor | 9900195014 | 9900195014 | |

STANDARD ACCESSORIES

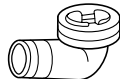

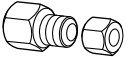
INDOOR UNIT ACCESSORIES

| 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 |

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