

HIGH POWER MULTI
AIR CONDITIONER
WALL MOUNTED TYPE

SERVICE MANUAL

| Indoor unit | Outdoor unit |
|-------------|--------------|
| ASY9UMACW | AOY19USAM2 |
| ASY9UMACW | AOY19UGBB2 |



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SPECIFICATIONS

| | | | | |
|------------------|---------------------------|---------------|------------|---------------|
| TYPE | COOL & HEAT, 2 ROOM MULTI | | | |
| OUTDOOR UNIT | AOY19USAM2 | | AOY19UGBB2 | |
| INDOOR UNIT | ASY9UMACW | ASY9UMACW x 2 | ASY9UMACW | ASY9UMACW x 2 |
| COOLING CAPACITY | 2.70 kW | 5.40 kW | 2.70 kW | 5.40 kW |
| HEATING CAPACITY | 3.30 kW | 6.60 kW | 3.25 kW | 6.50 kW |

ELECTRICAL DATA

| | | | | | |
|----------------------|-------------|------------|---------------|-----------|---------------|
| POWER SOURCE | 230 V 50 Hz | | | | |
| RUNNING CURRENT | COOLING | 4.6 A | 8.7 A | 4.6 A | 8.7 A |
| | HEATING | 5.1 A | 9.1 A | 5.1 A | 9.1 A |
| INPUT WATTS | COOLING | 1.01 kW | 1.92 kW | 1.01 kW | 1.92 kW |
| | HEATING | 1.14 kW | 2.03 kW | 1.14 kW | 2.02 kW |
| E.E.R. | COOLING | 2.67 kW/kW | 2.81 kW/kW | 2.67 | 2.81 |
| | HEATING | 2.89 kW/kW | 3.21 | 2.85 | 3.22 |
| MOISTURE REMOVAL | | 1.2 L/hr | 2.4 L/hr | 1.2 L/hr | 2.4 L/hr |
| AIR CIRCULATION-High | | 470 m3/hr | 470 m3/hr x 2 | 470 m3/hr | 470 m3/hr x 2 |

COMPRESSOR

| | | | |
|----------------|--------------------------------------------------------------------------------------------|------------|--|
| TYPE | Hermetic type, Permanent split condenser, 2 pole, Single phase, Induction motor, Rotary | | |
| POWER SOURCE | 230V - 50Hz | | |
| DISCRIMINATION | 802 141 65B | GK 120 PAB | |
| REFRIGERANT | R410A | 900 g x 2 | |

FAN MOTOR

| | | | |
|--------------|------------|--------------|--|
| POWER SOURCE | 230 V | | |
| INDOOR UNIT | HIGH-SPEED | 1,200 r.p.m. | |
| | MED-SPEED | 1,100 r.p.m. | |
| | LOW-SPEED | 1,000 r.p.m. | |
| | QUIET | 940 r.p.m. | |
| OUTDOOR UNIT | 720 r.p.m. | | |

DIMENSIONS

| | | |
|--------------|-----------|--------------------|
| INDOOR UNIT | H x W x D | 257 x 808 x 187 mm |
| OUTDOOR UNIT | H x W x D | 700 x 900 x 350 mm |

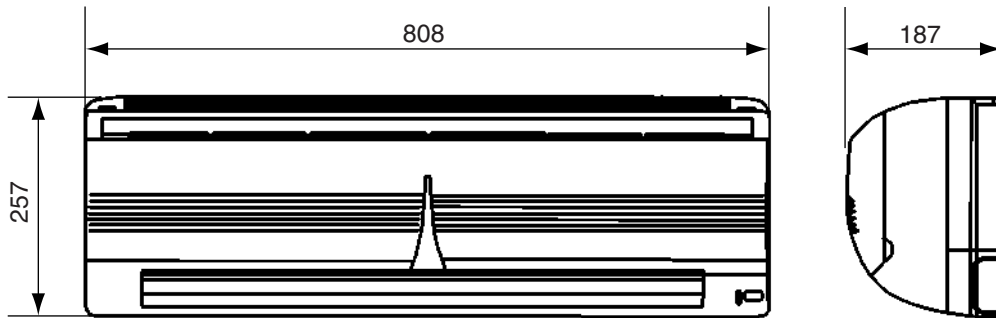
WEIGHT

| | | | |
|--------------|-------------|---------------|---------------|
| INDOOR UNIT | Gross / Net | 10 kg / 8 kg | |
| OUTDOOR UNIT | Gross / Net | 74 kg / 68 kg | 76 kg / 70 kg |

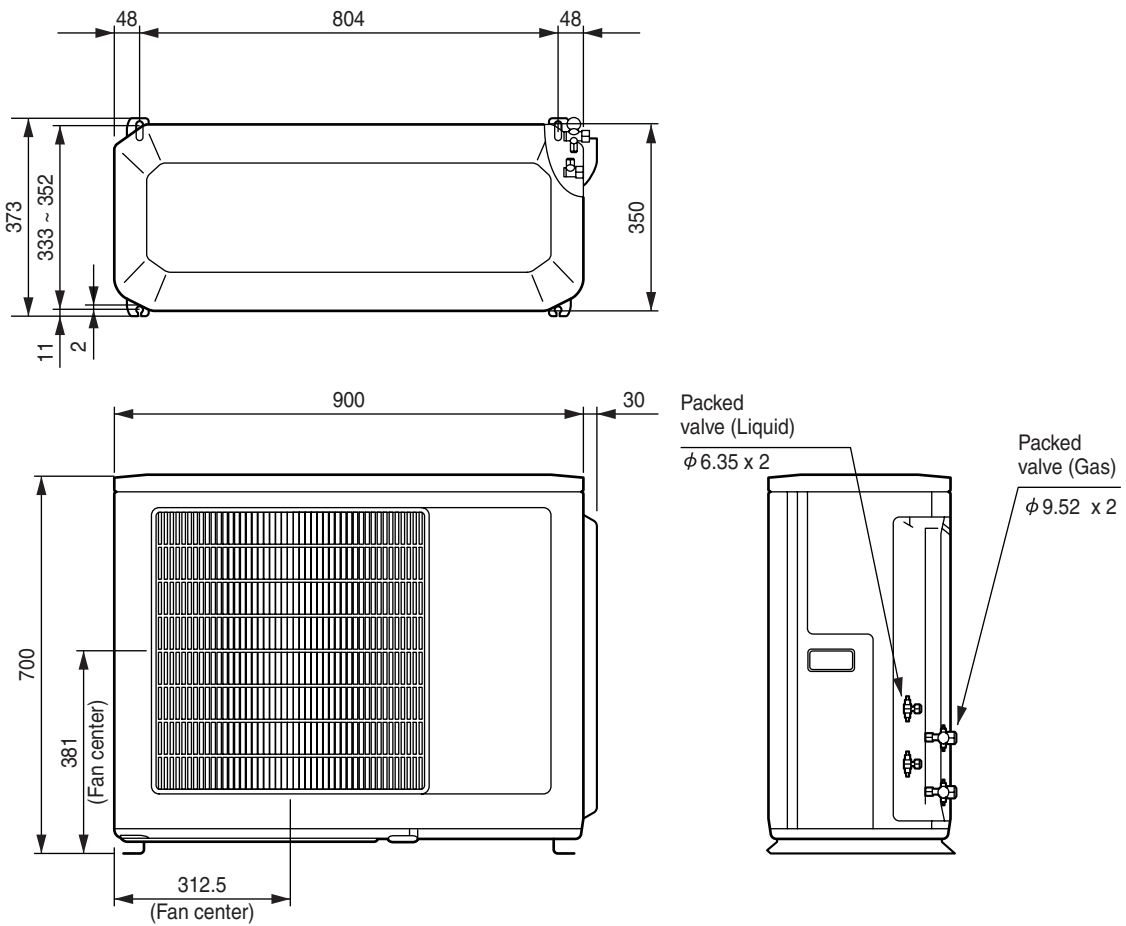
OUTLINE AND DIMENSIONS

(Unit : mm)

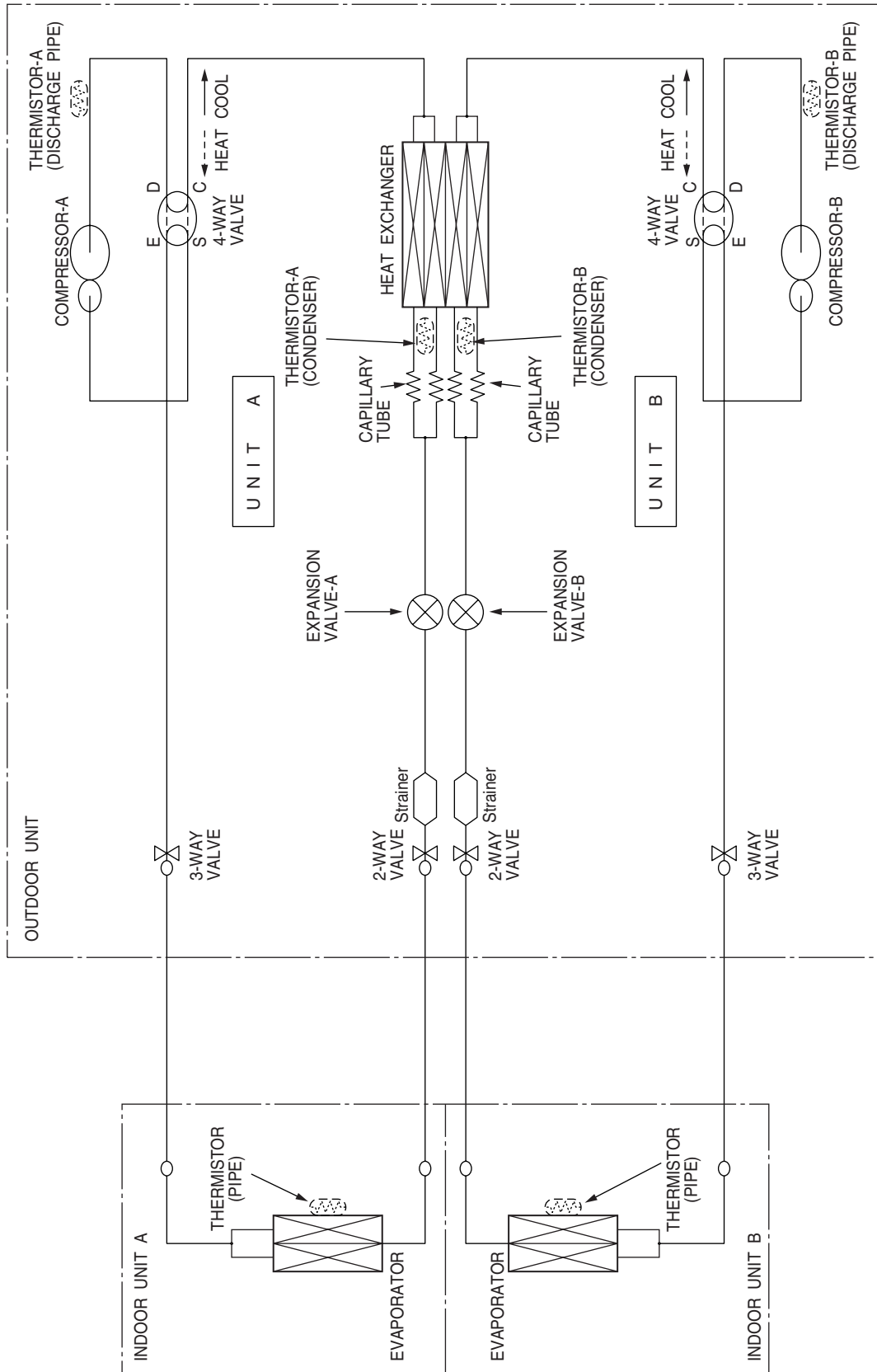
INDOOR UNIT



OUTDOOR UNIT



REFRIGERANT SYSTEM DIAGRAM



ERROR DISPLAY

INDOOR UNIT

○ : Fast flashing ● : Slow flashing

Operation lamp : Red lamp

Timer lamp : Green lamp

| Large division indication | | | Small division indication | | |
|----------------------------------|----------------|-------------|-----------------------------------|----------------|-------------|
| Error contents | LED indication | | Error contents | LED indication | |
| thermistor error | Red lamp | ● (2 times) | thermistor error (room temp.) | Red lamp | ○ |
| | Green lamp | ○ | | Green lamp | ● (2 times) |
| control unit error (indoor unit) | Red lamp | ● (4 times) | thermistor error (heat exchanger) | Red lamp | ○ |
| | Green lamp | ○ | | Green lamp | ● (3 times) |
| serial error | Red lamp | ● (5 times) | MANUAL AUTO button error | Red lamp | ○ |
| | Green lamp | ○ | | Green lamp | ● (2 times) |
| fan motor error (indoor unit) | Red lamp | ● (6 times) | power source Hz decision error | Red lamp | ○ |
| | Green lamp | ○ | | Green lamp | ● (4 times) |
| lock error | Red lamp | ○ | serial reverse transmission error | Red lamp | ○ |
| | Green lamp | ● (2 times) | | Green lamp | ● (2 times) |
| r.p.m error | Red lamp | ○ | serial order transmission error | Red lamp | ○ |
| | Green lamp | ● (3 times) | | Green lamp | ● (3 times) |
| lock error | Red lamp | ○ | lock error | Red lamp | ○ |
| | Green lamp | ● (2 times) | | Green lamp | ● (2 times) |
| r.p.m error | Red lamp | ○ | r.p.m error | Red lamp | ○ |
| | Green lamp | ● (3 times) | | Green lamp | ● (3 times) |

When an error occurs, "Large division indication" is indicated first.

Secondly, "Small division indication" is indicated by pushing "Test" button of remote controller.

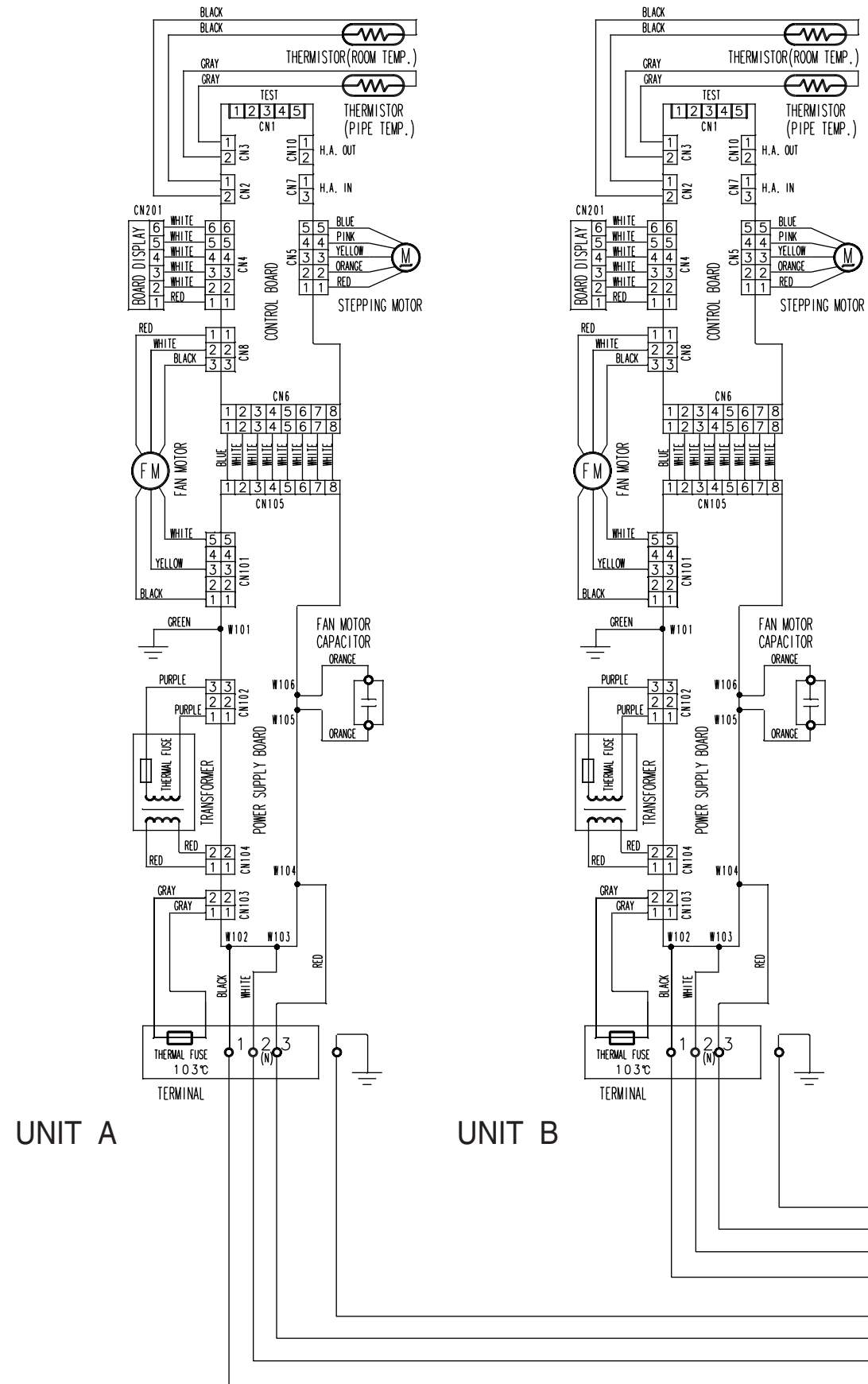
OUTDOOR UNIT

○ : Fast flashing ● : Slow flashing

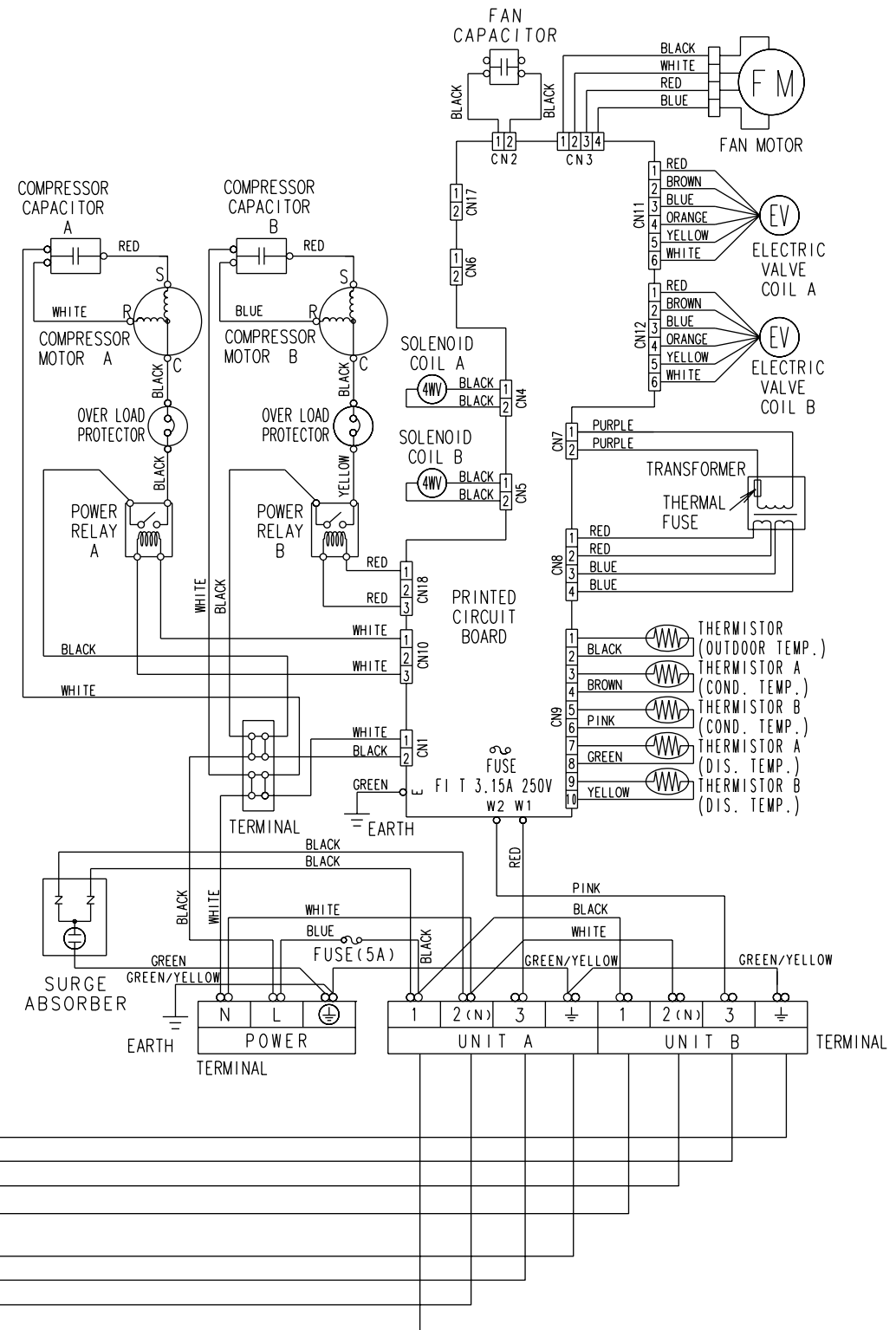
| LED indication | | Contents | |
|----------------|-------------------------|---------------------------------------------|-------------------------|
| D8 | ○ | Signal reception (from indoor unit A) error | Model information error |
| | ● | — | |
| D15 | ○ | Signal reception (from indoor unit B) error | 0.1s ON/OFF |
| | ● | — | |
| D10 | ● (2 times) | Thermistor (discharge pipe) A error | (All LED blink) |
| | ● (3 times) | Thermistor (discharge pipe) B error | |
| | ● (4 times) | Thermistor (heat exchanger) A error | |
| | ● (5 times) | Thermistor (heat exchanger) B error | |
| | ● (6 times) | Thermistor (outdoor temp.) error | |
| D17 | | — | |
| D9 | ● (2 times) | UNIT A : Heating overload protection | |
| | ● (3 times) | UNIT A : Cooling deicing | |
| | ● (4 times) | — | |
| | ● (5 times) | UNIT A : Discharge temp. protection | |
| | 3s ON / 1s OFF repeated | UNIT A : Heating defrost operation | |
| D16 | ● (2 times) | UNIT B : Heating overload protection | |
| | ● (3 times) | UNIT B : Cooling deicing | |
| | ● (4 times) | — | |
| | ● (5 times) | UNIT B : Discharge temp. protection | |
| | 3s ON / 1s OFF repeated | UNIT B : Heating defrost operation | |

CIRCUIT DIAGRAM

INDOOR UNIT



OUTDOOR UNIT

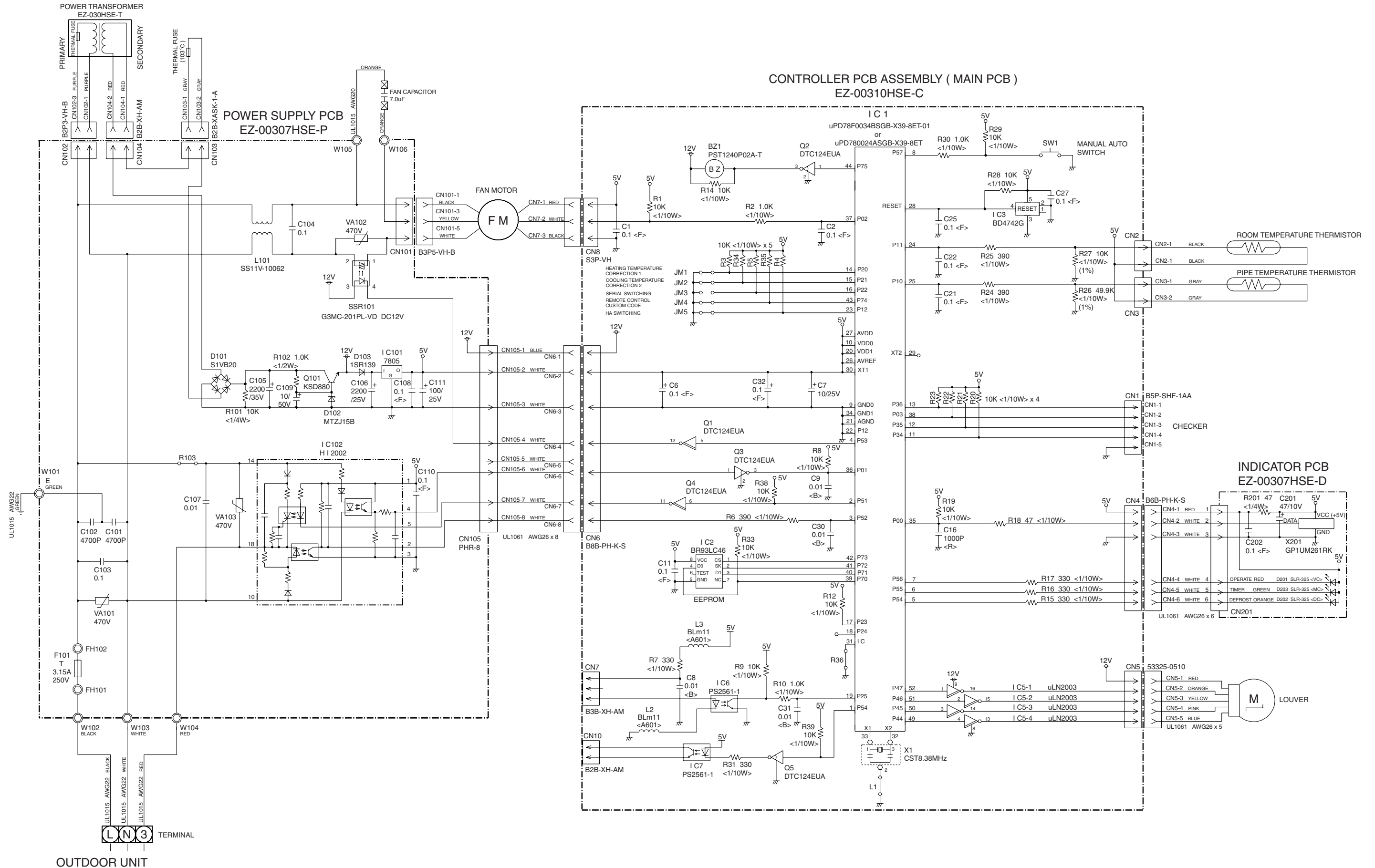


INDOOR PCB CIRCUIT DIAGRAM

Model : ASY9UMACW

Jumper wire configurations

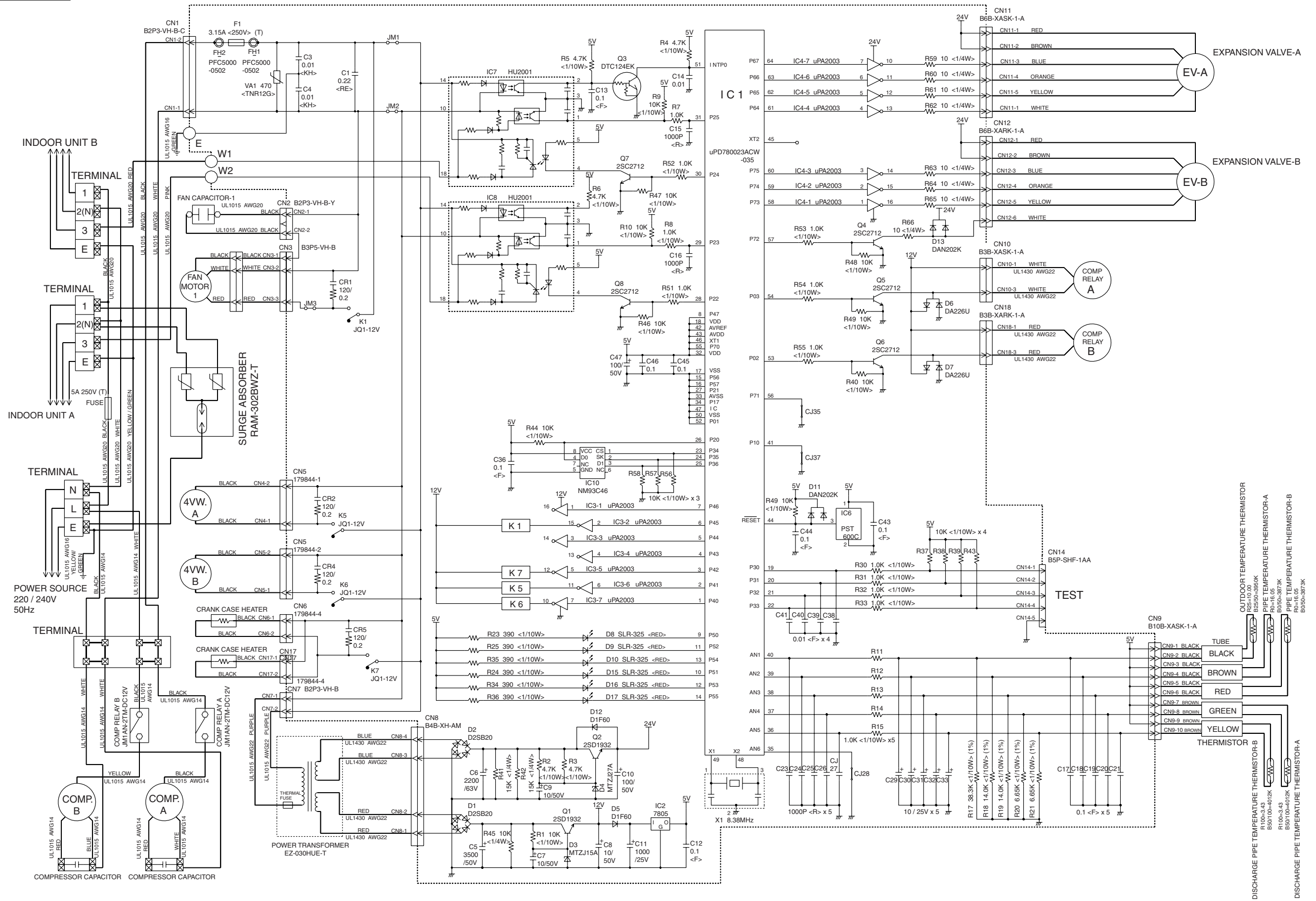
| Switch | Function | ON /Linked | OFF /Open |
|--------|----------------------------|------------|-----------|
| JM1 | Heating compensation | +4 | 0 |
| JM2 | Cooling (Dry) compensation | 0 | -2 |
| JM4 | Custom code | A | B |



OUTDOOR PRINTED CIRCUIT BOARD CIRCUIT DIAGRAM

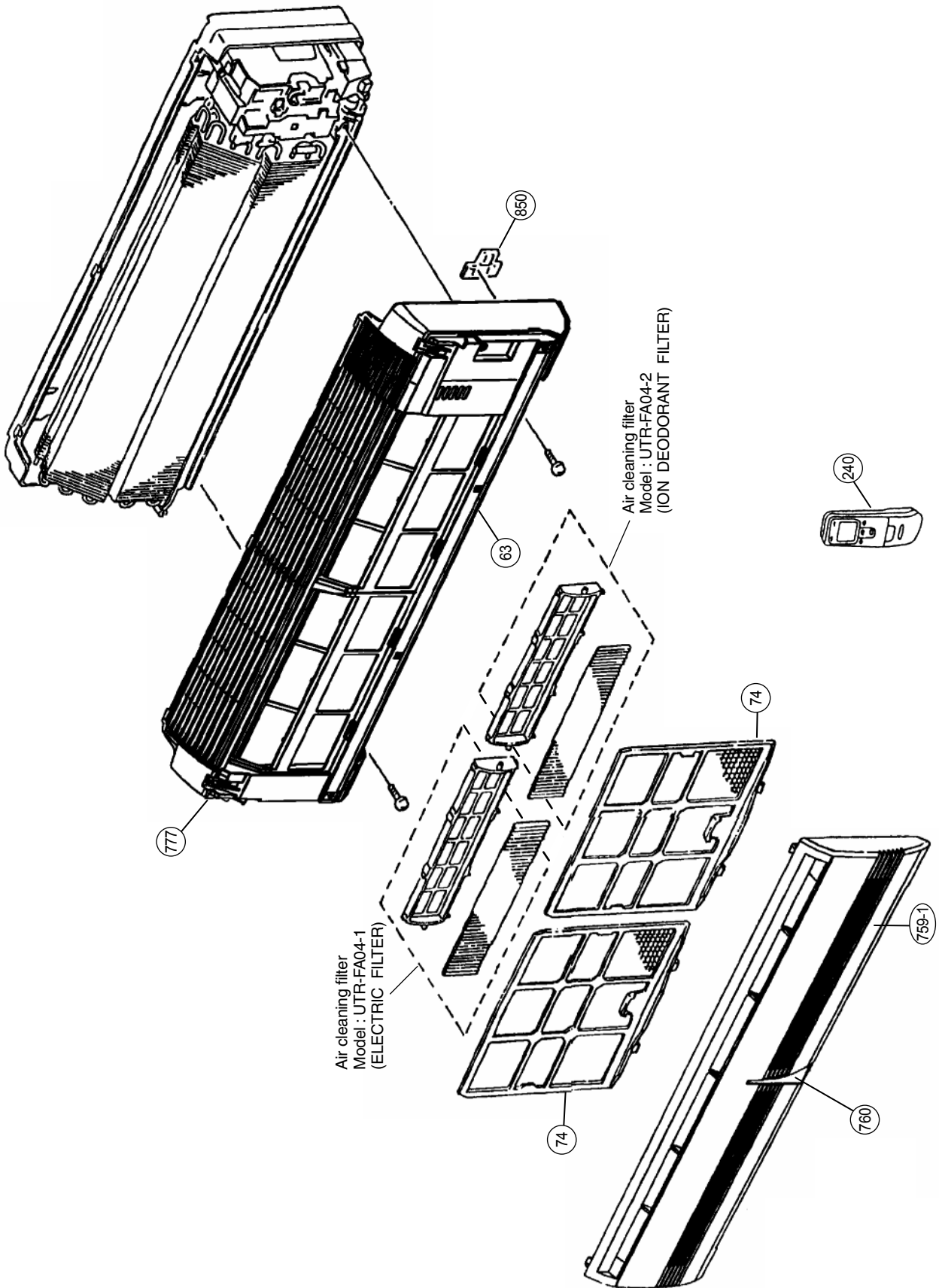
Models: AOY19USAM2
AOY19UGBB2

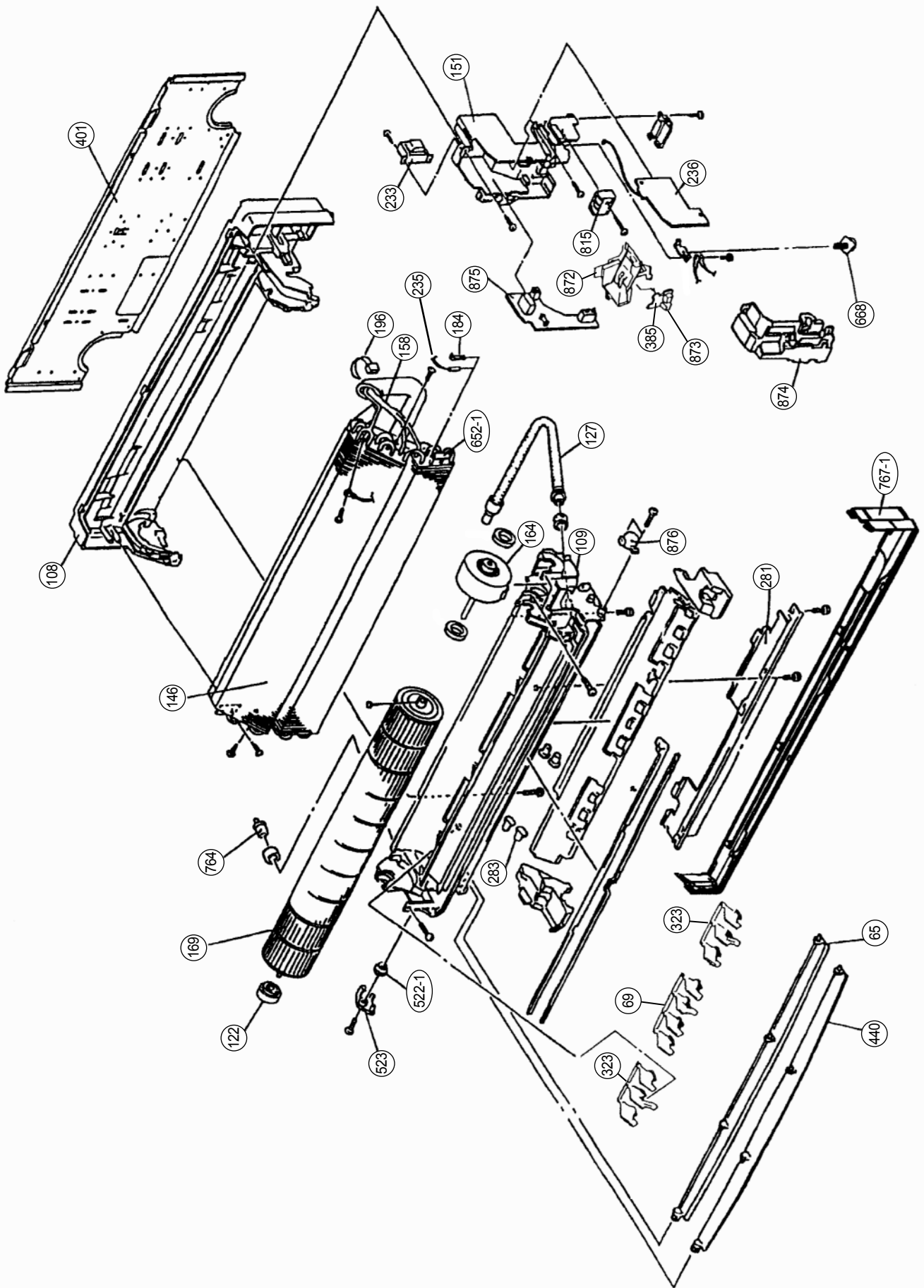
CONTROLLER PCB ASSEMBLY (MAIN PCB)
EZ-003KHUE-C



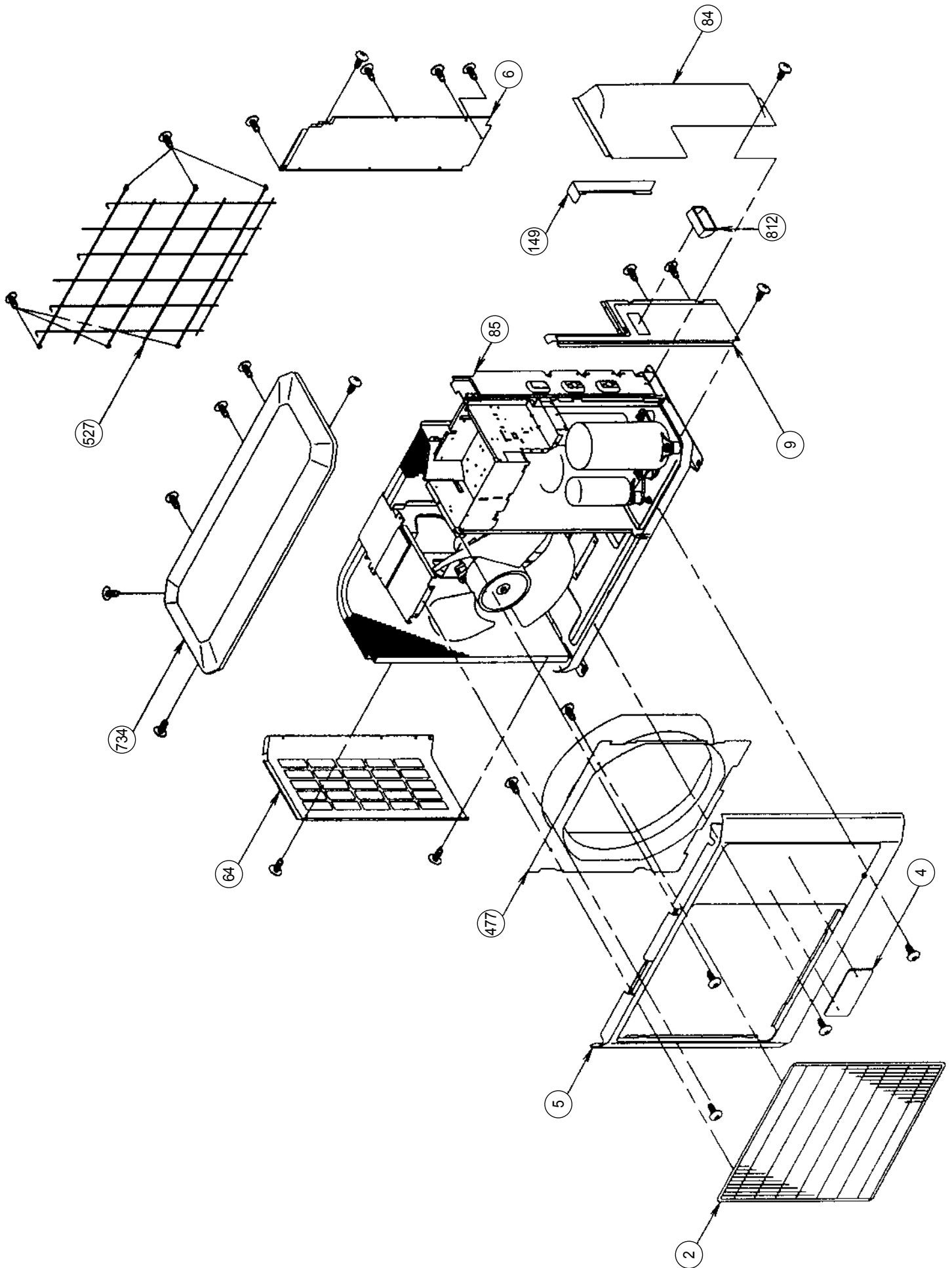
DISASSEMBLY ILLUSTRATION

Model : ASY9UMACW

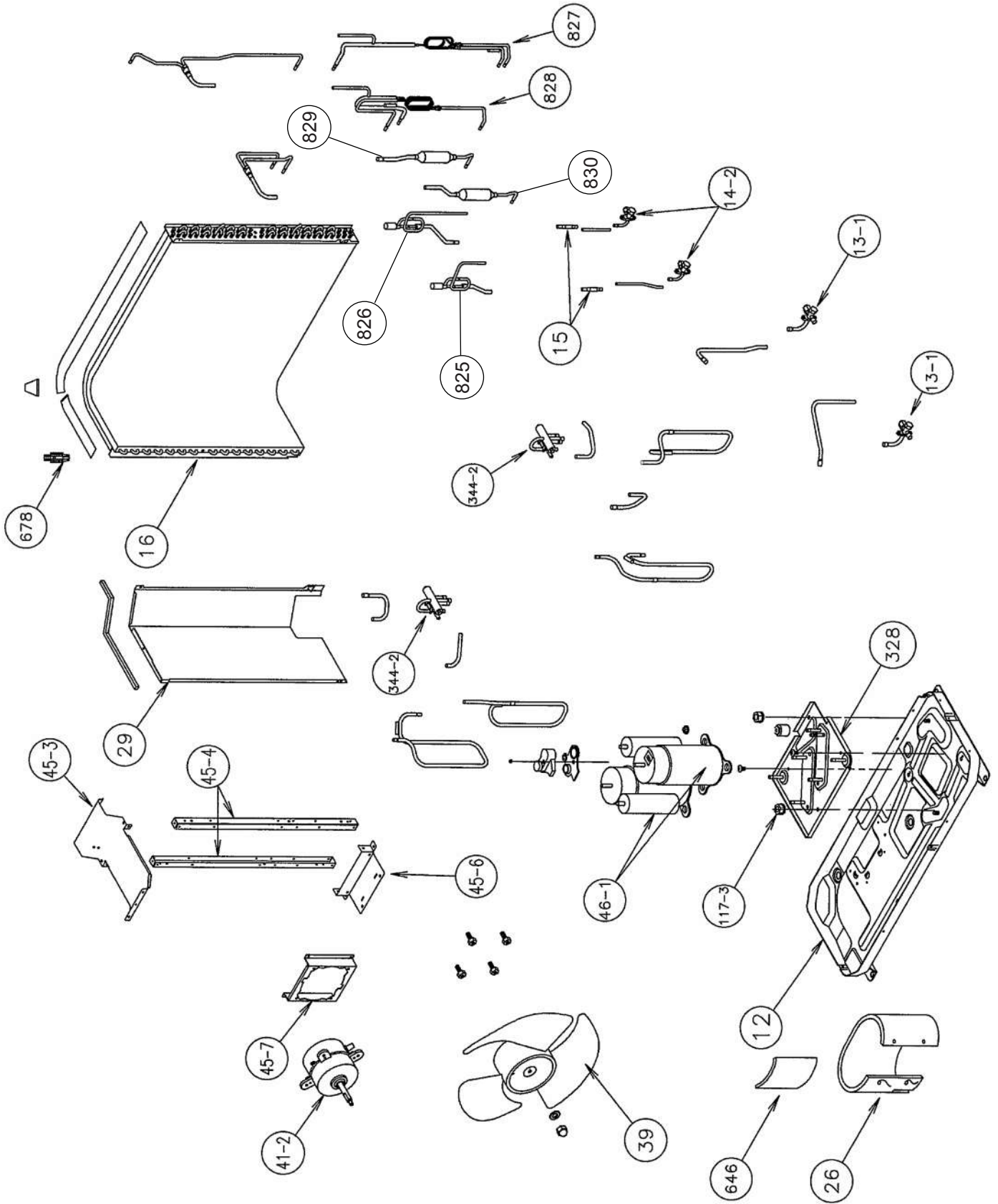




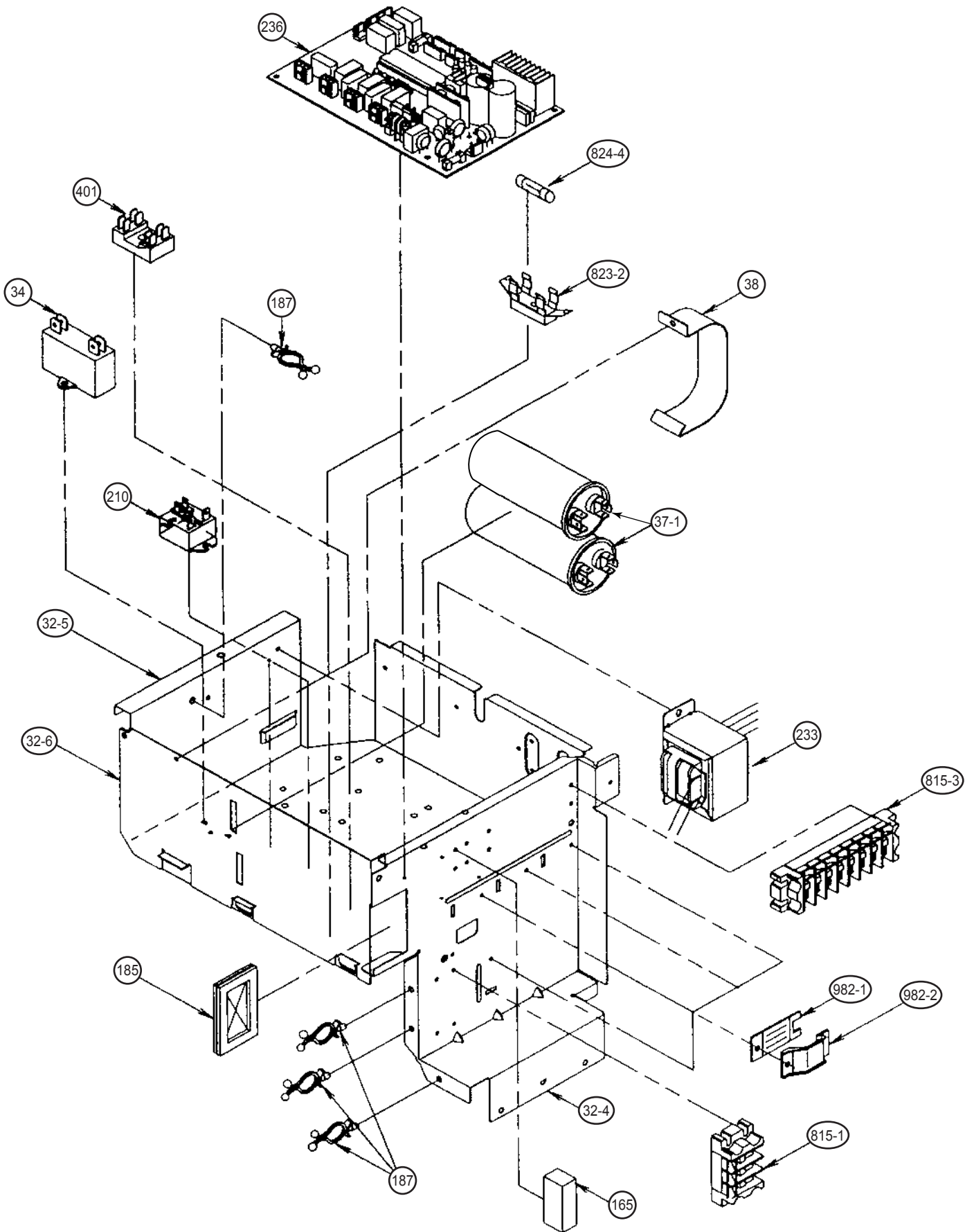
Models : AOY19USAM2
AOY19UGBB2



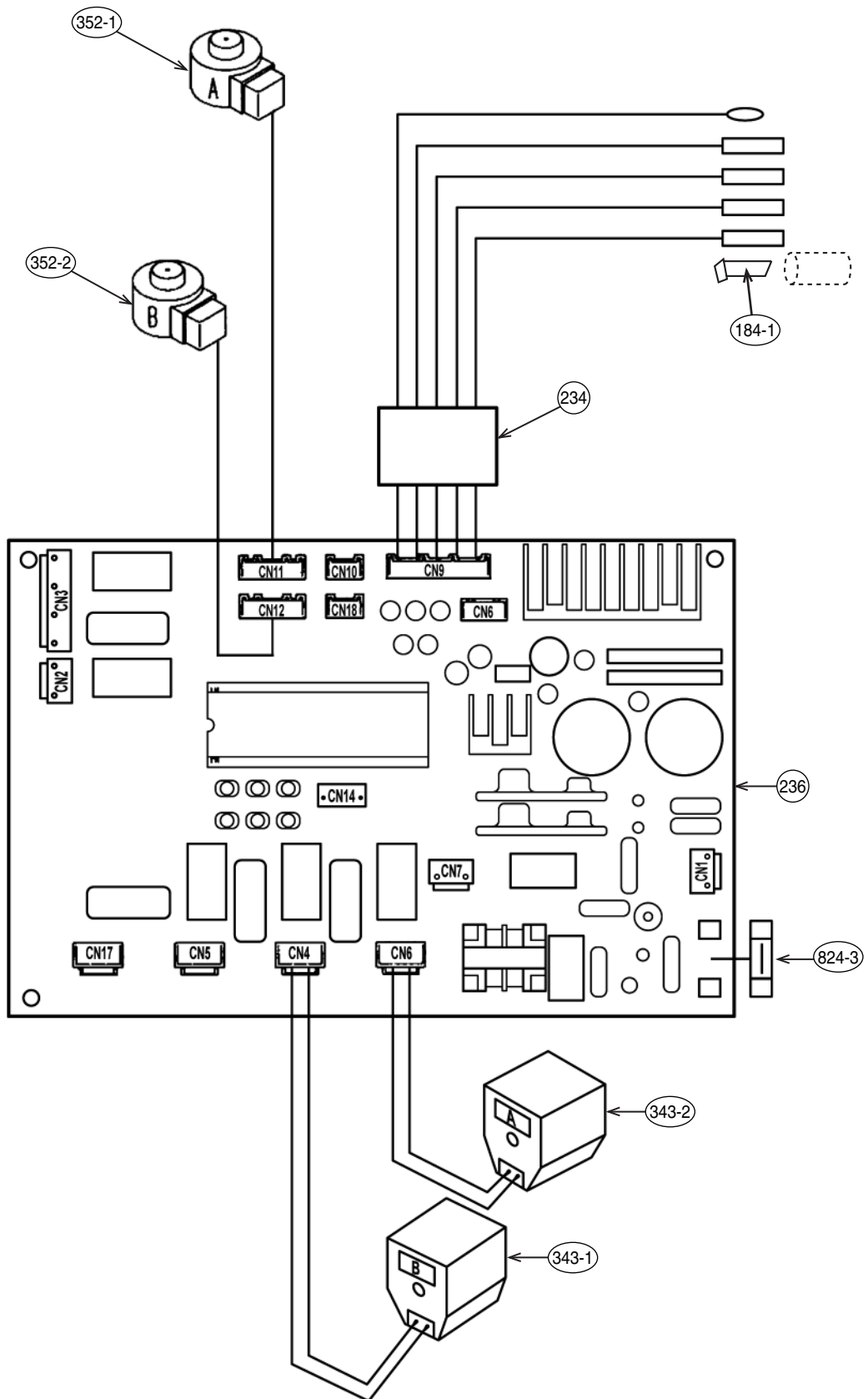
OUTDOOR UNIT



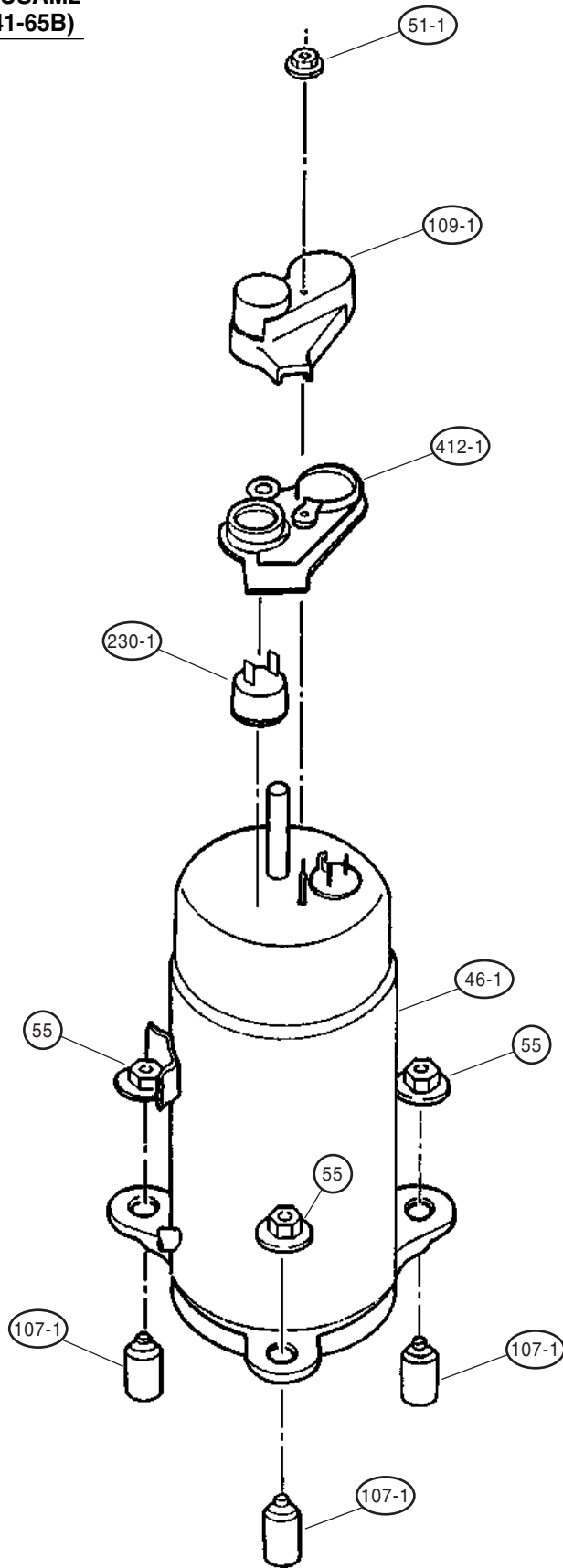
Models : AOY19USAM2
AOY19UGBB2



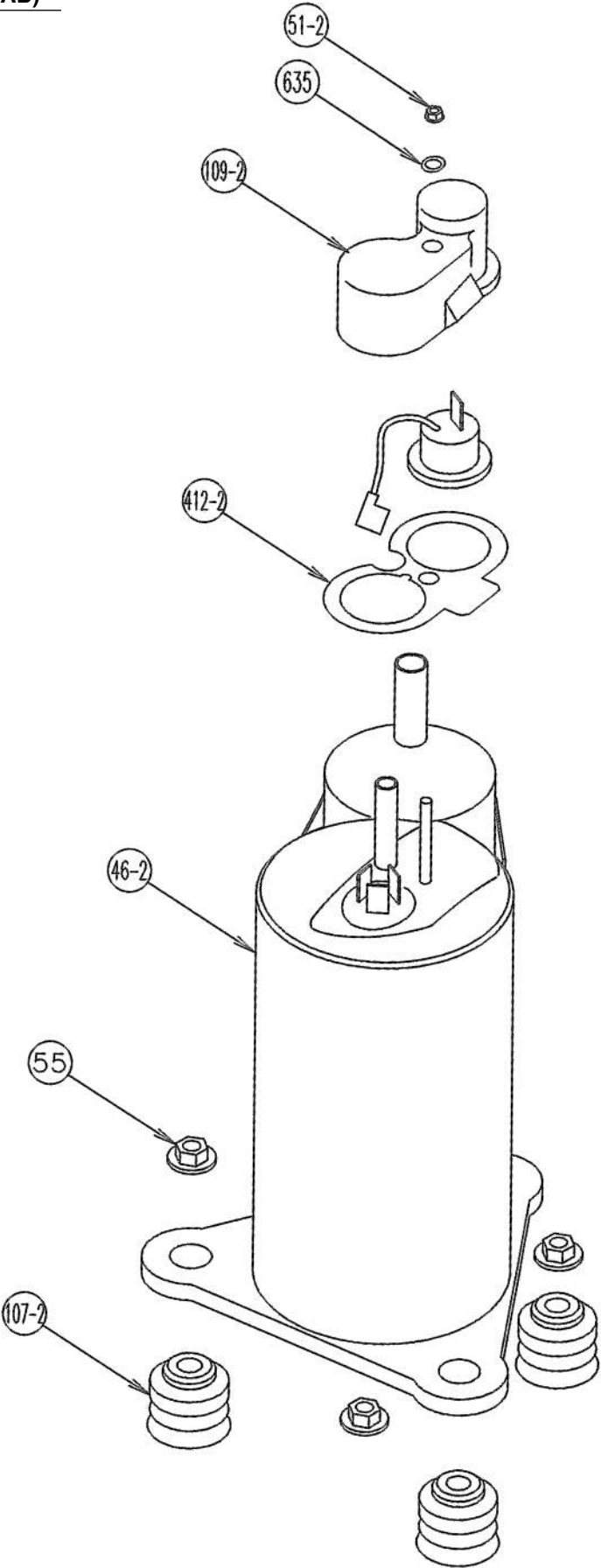
Models : AOY19USAM2
AOY19UGBB2



Model : AOY19USAM2
(802-141-65B)



Model : AOY19UGBB2
(GK120PAB)



PARTS LIST

INDOOR UNIT

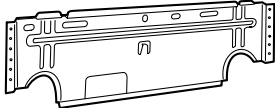
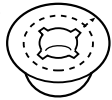
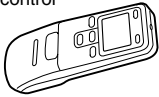

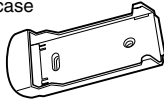
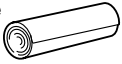


| Ref. No. | Description | Part No. | Ord. Q'ty |
|----------|------------------------|--------------|-----------|
| | | ASY9UMACW | |
| 63 | Front Panel Assy | 9312417032 | |
| 65 | Flow Control Panel-Z | 9306058043 | |
| 69 | Louver-A | 9306055028 | |
| 74 | Filter | 9305444014 | |
| 108 | Base | 9309755062 | |
| 109 | Casing Assy | 9312173020 | |
| 122 | Shaft Holder-B | 9303066010 | |
| 127 | Drain Hose Assy | 9305550029 | |
| 146 | Evaporator Assy | 9373044017 | |
| 151 | Control Box | 9330007017 | |
| 158 | Connecting Pipe Assy | 9306416010 | |
| 164 | Fan Motor Assy-IN | 9601844013 | |
| 169 | Cross-Flow Fan Assy | 9307836015 | |
| 184 | Thermistor Spring | 313728262708 | |
| 196 | Clamp SKB-150 | 313035356905 | |
| 233 | Power Transformer | 9900028015 | |
| 235 | Thermistor Assy-Pipe | 9702039059 | |
| 236 | Controller PCB Assy | 9705289055 | |
| 240 | Remote Control Unit | 9371190211 | |
| 281 | Clamp Metal(Pipe) | 9306063009 | |
| 283 | Bushing-A | 9303529010 | |
| 323 | Louver-B | 9306056025 | |
| 385 | Indicator PCB Assy | 9705296015 | |
| 401 | Wall Hook Bracket | 9304358008 | |
| 440 | Flow Control Panel-U | 9306057046 | |
| 522-1 | Gear-A | 9306062002 | |
| 523 | Gear Bracket | 9306407001 | |
| 652-1 | Thermistor Holder Pipe | 313714262805 | |
| 668 | Screw w/Washer | 313681304205 | |
| 759-1 | Intake Grille-F | 9330001015 | |
| 760 | Face Panel A | 9330005044 | |
| 764 | Drain Cap Assy | 9304150008 | |
| 767-1 | Bottom Cover | 9330004016 | |
| 777 | Clamper(Grille) | 9306755010 | |
| 815 | Terminal | 9900040055 | |
| 850 | Window (Receiver) | 9330003019 | |
| 872 | Indicator Case | 9330009011 | |
| 873 | Lamp Cover | 9330014015 | |
| 874 | Control Box Cover | 9330008014 | |
| 875 | Power Supply PCB Assy | 9705294011 | |
| 876 | Step Motor | 9900139018 | |

OUTDOOR UNIT

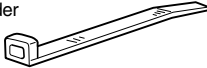


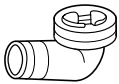

| Ref. | Description | Part No. | | Ref. | Description | Part No. | |
|-------|--------------------------------------|--------------|--------------|-------|-----------------------------|--------------|--------------|
| | | AOY19USAM2 | AOY19UGBB2 | | | AOY19USAM2 | AOY19UGBB2 |
| 2 | Fan Cover | 9371187013 | 9371187013 | 184-1 | Thermo. Spring-A | 313728262708 | 313728262708 |
| 4 | Emblem "FUJITSU" | 9371388014 | 9371388014 | 185 | Rubber Bushing | 313005066051 | 313005066051 |
| 5 | Cabinet A | 9359797043 | 9359797043 | 187 | Clamp No. 1219 | 313361271706 | 313361271706 |
| 6 | Cabinet C | 9359825029 | 9359825029 | 210 | Main Relay | 9356781007 | 9356781007 |
| 9 | Cabinet B | 9359824022 | 9359824022 | 230-1 | Ocr assy (MRA99134-9201) | 9311143000 | ---- |
| 12 | Base Assy | 9359813019 | 9359813019 | 233 | Power Transformer | 9701156016 | 9701156016 |
| 13-1 | 3-Way Valve | 9372205044 | 9372205044 | 234 | Thermistor Assy | 9900123017 | 9900123017 |
| 14-2 | 2-Way Valve | 9372204054 | 9372204054 | 236 | Controller PCB Assy | 9702766030 | 9702766030 |
| 15 | Strainer Assy | 9366602019 | 9366602019 | 328 | Compressor Plate Assy | 9359830030 | 9359830030 |
| 16 | Condenser Assy | 9372662014 | 9372662014 | 343-1 | Solenoid Coil-A | 9900165055 | 9900165055 |
| 26 | Compressor Cover A | 9364595009 | 9364595009 | 343-2 | Solenoid Coil-B | 9900165062 | 9900165062 |
| 29 | Separate Wall | 9359805014 | 9359805014 | 344-2 | 4-Way Valve | 9900162016 | 9900162016 |
| 32-4 | Control Box Metal-D | 9361247000 | 9361247000 | 352-1 | Expansion Coil-A | 9970021015 | 9970021015 |
| 32-5 | Control Box Metal-E | 9361248007 | 9361248007 | 352-2 | Expansion Coil-B | 9970021022 | 9970021022 |
| 32-6 | Control Box Metal-F | 9361249004 | 9361249004 | 401 | Terminal-2P | 9701971015 | 9701971015 |
| 34 | Capacitor (Fan Motor) | 9703306051 | 9703306051 | 412 | Terminal Gasket (For Comp.) | 9351505011 | 9351505011 |
| 37-1 | Running Capacitor | 9704436139 | 9704436139 | 412-2 | Attachment (Cover Gasket) | ---- | 9362004008 |
| 38 | Clamp Metal (Capacitor) | 9352123009 | 9352123009 | 477 | Bellmouth | 9359809012 | 9359809012 |
| 39 | Propeller Fan | 9359837015 | 9359837015 | 527 | Protective Net | 9359845010 | 9359845010 |
| 41-2 | Fan Motor Induction-Out (MFB-30NTAT) | 9601754015 | 9601754015 | 635 | Attachment Washer (Gasket) | ---- | 9359428015 |
| 45-3 | Motor Bracket-A | 9369627002 | 9369627002 | 646 | Noise Insulation B | 9355788007 | 9355788007 |
| 45-4 | Motor Bracket-B | 9371439013 | 9371439013 | 678 | Bracket (Thermistor) | 9367369010 | 9367369010 |
| 45-6 | Motor Bracket-D | 9369630002 | 9369630002 | 734 | Top Plate, Painted | 9359799023 | 9359799023 |
| 45-7 | Motor Bracket center da | 9373076018 | 9373076018 | 812 | Grip | 9352157004 | 9352157004 |
| 46-1 | Compressor Assy (802-141-65B) | 9373010029 | ---- | 815-1 | Terminal-3P | 9358660027 | 9358660027 |
| 46-2 | Compressor (GK-120-PAB) | ---- | 9373548027 | 815-3 | Terminal-8P | 9358660119 | 9358660119 |
| 51-1 | Special Nut (For Comp.) | 313199233602 | ---- | 823-2 | Fuse Holder | 0500063024 | 0500063024 |
| 51-2 | Attachment (Nut) | ---- | 9359430018 | 824-3 | Fuse (3.15A-250V) | 0600285234 | 0600285234 |
| 55 | Special Nut M8 (For Comp.) | 9355091008 | 9355091008 | 825 | Expansion Valve A Assy | 9360821065 | 9360821065 |
| 64 | Cabinet-Left | 9359840046 | 9359840046 | 826 | Expansion Valve B Assy | 9360822062 | 9360822062 |
| 84 | Valve Cover | 9359834014 | 9359834014 | 827 | Capillary-A Assy | 9360814128 | 9360814128 |
| 85 | Valve Plate Assy | 9361251021 | 9361251021 | 828 | Capillary-B Assy | 9360815132 | 9360815132 |
| 107-1 | Rubber Seat (For Comp.) | 9351507015 | ---- | 829 | Muffler A Sub Assy | 9373022015 | 9373022015 |
| 107-2 | Attachment (Rubber Seat-A) | ---- | 9359425014 | 830 | Muffler B Sub Assy | 9373023012 | 9373023012 |
| 109-1 | Terminal Cover (For Comp.) | 9302419008 | ---- | 982-1 | Cord Clamp | 9356857009 | 9356857009 |
| 109-2 | Terminal Cover (For Comp.) | ---- | 9363263008 | 982-2 | Cord Clamp-B | 9356858006 | 9356858006 |
| 117-3 | Hex. Nut | 301721180114 | 301721180114 | | | | |
| 149 | Water Seal Plate | 9359841029 | 9359841029 | | | | |
| 165 | Surge Absorber | 9702968014 | 9702968014 | | | | |

STANDARD ACCESSORIES

INDOOR UNIT ACCESSORIES

| Name and Shape | Q'ty | Part No. |
|----------------------------------------------------------------------------------------------------------------------------------|-------|------------------------|
| Wall hook bracket  | 1 | 9304358008 |
| Wall cap-B  | 1 | 313714296205 |
| Remote control unit  | 1 | 9307979057 (AR-DB5) |
| Battery (penlight)  | 1 set | 0600185534 |
| Remote control unit holder case  | 1 | 9305642014 |
| Cloth tape  | 1 | 9308117007 |
| Tapping screw (big) (ϕ 4 x 25)  | 8 | 0700076046 |
| Tapping screw (small) (ϕ 3 x 12)  | 2 | 0700019036 |

OUTDOOR UNIT ACCESSORIES

| Name and Shape | Q'ty | Part No. |
|-------------------------------------------------------------------------------------------------------|------|--------------|
| Binder  | 2 | 312300787605 |
| Putty  | 1 | 303020200114 |
| Hexagon wrench  | 1 | 9351228019 |
| Drain pipe  | 1 | 9303029015 |
| Drain cap  | 2 | 313166024302 |

0312G2420