



ROOM AIR CONDITIONER

AW0593L

AW0693L

AW0893L

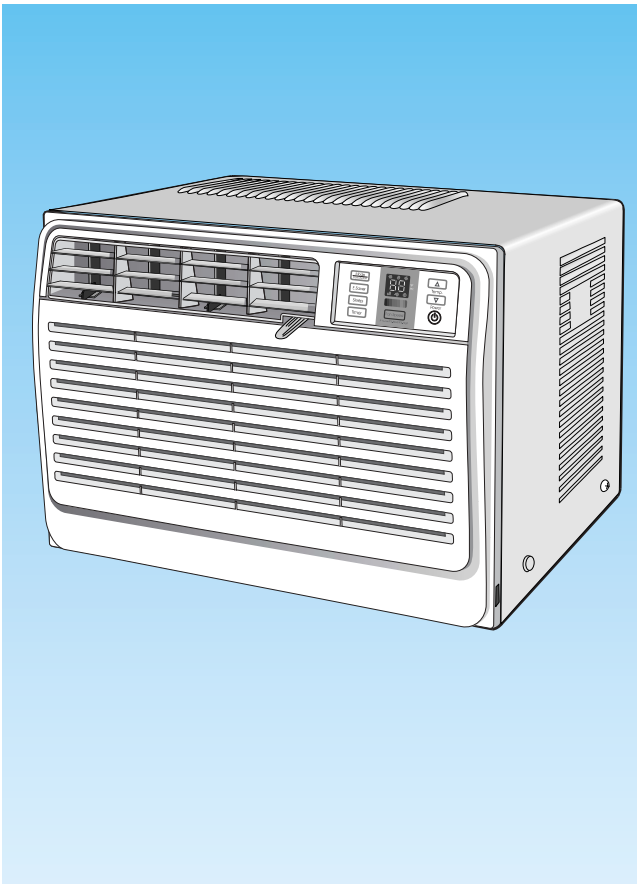
AW1093L

AW1293L

AW1893L

SERVICE *Manual*

AIR CONDITIONER



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SAM0004

1. Precautions

1. **Warning:** Prior to repair, disconnect the power cord from the circuit breaker.
2. **Use proper parts:** Use only exact replacement parts. (Also, we recommend replacing parts rather than repairing them.)
3. **Use the proper tools:** Use the proper tools and test equipment, and know how to use equipment may cause problems later-intermittent contact, for example.
4. **Power Cord:** Prior to repair, check the power cord and replace it if necessary.
5. **Avoid using an extension cord, and avoid tapping into a power cord.** This practice may result in malfunction or fire.
6. **After completing repairs and reassembly, check the insulation resistance.**
Procedure: Prior to applying power, measure the resistance between the power cord and the ground terminal. The resistance must be greater than 30 megaohms.
7. **Make sure that the grounds are adequate.**
8. **Make sure that the installation conditions are satisfactory.**
Relocate the unit if necessary.
9. **Keep children away from the unit while it is being repaired.**
10. **Be sure to clean the unit and its surrounding area.**

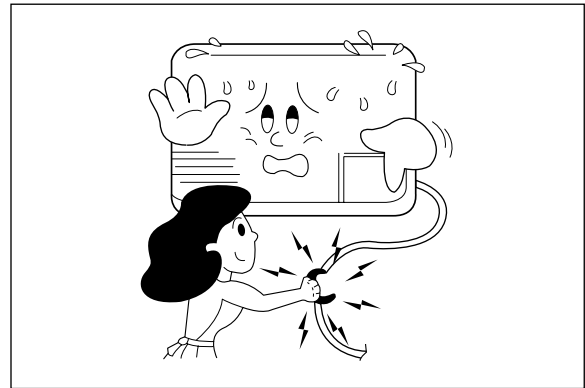


Fig. 1-1 Avoid Dangerous Contact

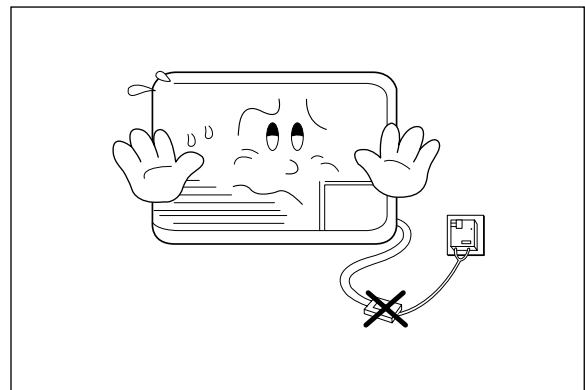


Fig. 1-2 No Tapping and No Extension Cords

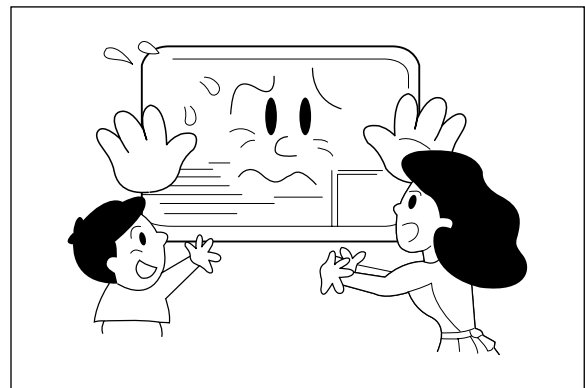


Fig. 1-3 No Kids Nearby!

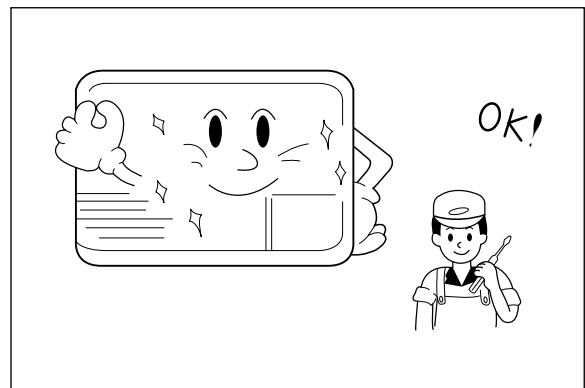


Fig. 1-4 Clean the Unit

2.Product Specifications

2-1 Table

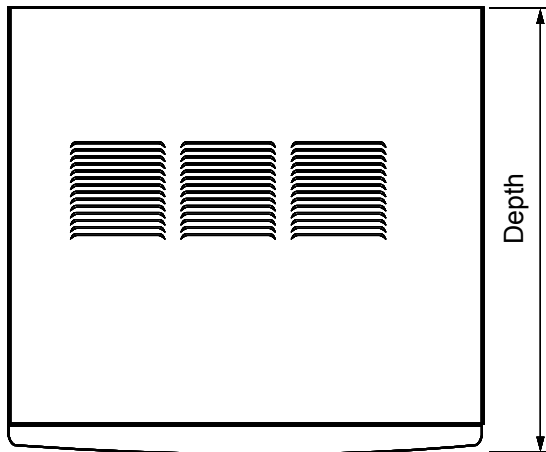
| Item | Unit of Measure | AW0593L | AW0693L | AW0893L | REAMRK |
|------------------------------------|-----------------|----------------|---------------|----------------|--------|
| Type | | WINDOW | | | |
| Dimension: (Width×Height×Depth) | mm | 424×310×326 | 500×355×461 | | |
| Voltage | Volt | 115 | | | |
| Phase | - | SINGLE | | | |
| Frequency | Hz | 60 | | | |
| Operation Current | A | 4.5 | 5.4 | 6.6 | |
| Power Consumption | W | 500 | 600 | 740 | |
| Refrigerant Type | FREON | R22 | | | |
| Refrigerant Change | g | 300 | 330 | 460 | |
| Capacity | BTU/h | 5400 | 6400 | 8000 | |
| EER | BTU/h.W | 10.8 | 10.7 | 10.8 | |
| Net Weight | Kg | 18.5 | 25.0 | 26.5 | |
| Condenser | Row | 2×15 | 2×16 | 2×16 | |
| Condenser Fan | Type | Propeller Fan | | | |
| Evaporator | Row | 2×10 | 2×11 | 2×11 | |
| Evaporator Fan | Type | Blower | | | |
| Fan Motor | MODEL | YSLA-30-6-0005 | YSLA40-6S-2 | YSLA40-6S-1 | |
| Compressor(Rotary) | MODEL | 39A050HSAKA | 39A062HSAEA | 44A076HUAEB | |
| Overload Protect | - | KA-122-LBDN61K | KA-122LLCN00B | MRA12083-12008 | |
| Compressor Capacitor | μ F/VAC | 35/270 | 40/370 | 45/370 | |
| Fan Motor Capacitor | μ F/VAC | 3.5/270 | 6/450 | 8/450 | |
| Fan Speed | RPM | 1060/1010/960 | 950/900/850 | 1030/980/920 | |
| Thermo Control | - | THERMISTOR | | | |

2-1 Table(CONT.)

| Item | Unit of Measure | AW1093L | AW1293L | AW1893L | REMARK |
|------------------------------------|-----------------|-----------------|-----------------|-----------------|--------|
| Type | | WINDOW | | | |
| Dimension: (Width×Height×Depth) | mm | 560×411×548 | | 620×425×640 | |
| Voltage | Volt | 115 | | 230/208 | |
| Phase | - | SINGLE | | | |
| Frequency | Hz | 60 | | | |
| Operation Current | A | 9.3 | 10.6 | 7.6/8.3 | |
| Power Consumption | W | 940 | 1170 | 1700/1800 | |
| Refrigerant Type | FREON | R22 | | | |
| Refrigerant Change | g | 500 | 590 | 820 | |
| Capacity | BTU/h | 10200 | 12600 | 18100/17800 | |
| EER | BTU/h.W | 10.8 | 10.8 | 10.7 | |
| Net Weight | Kg | 37.5 | 38.5 | 51 | |
| Condenser | Row | 3×17(L-Bending) | 3×17(L-Bending) | 3×19(L-Bending) | |
| Condenser Fan | Type | Propeller Fan | | | |
| Evaporator | Row | 2×12 | 2×10(φ9.52) | 3×11(φ9.52) | |
| Evaporator Fan | Type | Blower | | | |
| Fan Motor | MODEL | YGN60-6B-2 | YGN60-6B-1 | YSK160-6A-3 | |
| Compressor(Rotary) | MODEL | 44B098HX1EF | 44B117HX1EL | 48D172IU1EQ | |
| Overload Protect | - | MRA12132-12007 | MRA12053-12007 | MRA12133-12007 | |
| Compressor Capacitor | μ F/VAC | 45/370 | 50/370 | 35/450 | |
| Fan Motor Capacitor | μ F/VAC | 15/250 | 15/250 | 6/450 | |
| Fan Speed | RPM | 930/870/830 | 900/850/800 | 900/850/800 | |
| Thermo Control | - | THERMISTOR | | | |

2-2 Dimensions

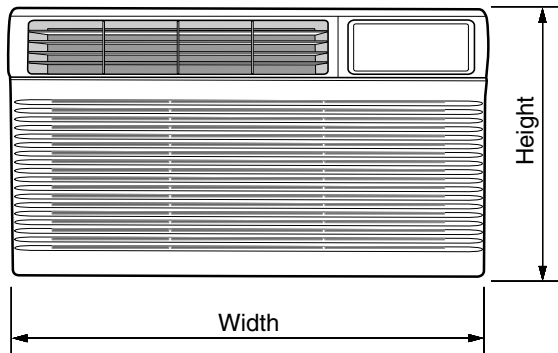
2-2-1 Main Unit



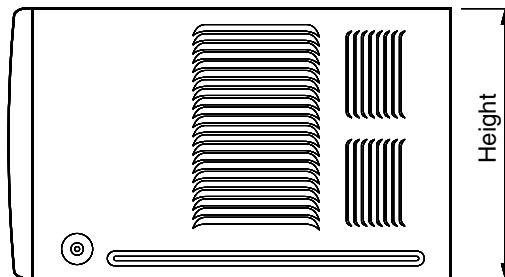
Front view

(Unit : mm)

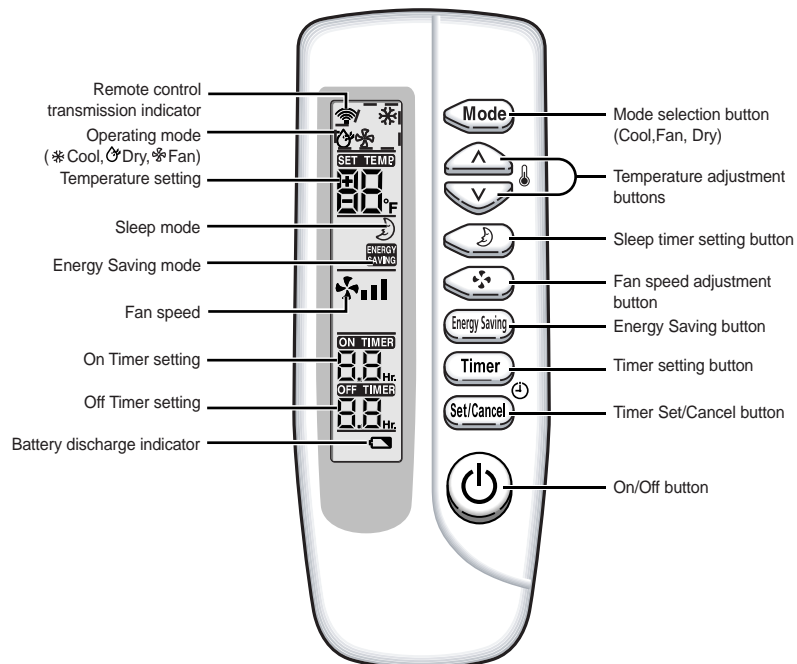
| Model Name | Width | Height | Depth |
|--------------------|-------|--------|-------|
| AW0593L | 424 | 310 | 326 |
| AW0693L AW0893L | 500 | 355 | 461 |
| AW1093L AW1293L | 560 | 411 | 548 |
| AW1893L | 620 | 425 | 640 |



Side view



2-2-2 Remote Control



3. Installation and Operating Instructions

3-1 Installation

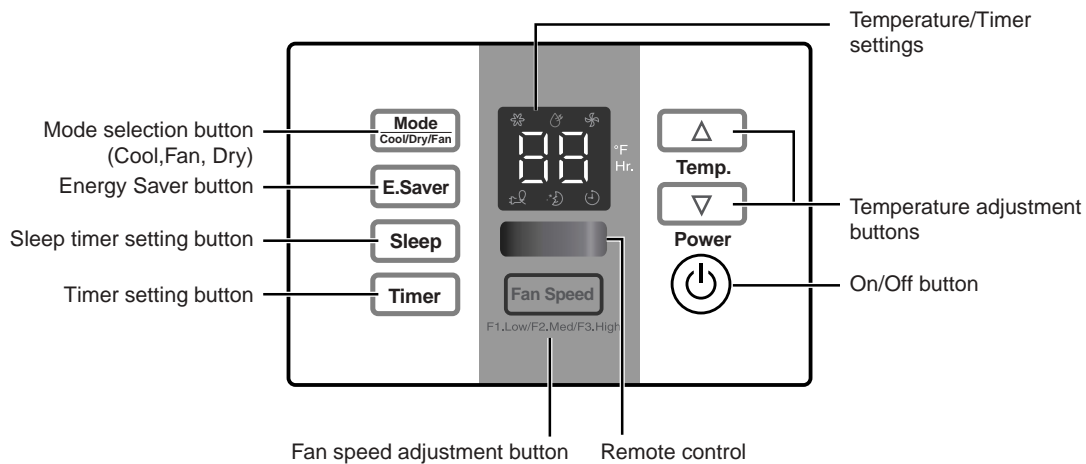
3-1-1 Selecting Area for Installation

1. Make sure that you install the unit in an area providing good ventilation. The air conditioner must not be blocked by any obstacle affecting the air flow near the air inlet and air outlet.
2. Make sure that you install the unit in an area that allow good air handling. The installation area must be able to endure vibration from the unit.
3. Make sure that you install the unit away from heat or vapor.
4. Make sure that you install the unit in an area which is cool and has adequate space.
5. Make sure that you install the unit in an area away from TVs, audio units, cordless phones, fluorescent lighting fixtures and other electrical appliances (obtain a clearance of at least one meter).
6. Make sure that you install the unit in an area which provides easy drainage for condensed water.
7. Make sure that you install the unit in an area not exposed to rain or direct sunlight. (Install a separate sunblind if exposed to direct sunlight.)
8. Make sure that you install the unit in an area allowing good air movement. Do not install it in a space that would cause noise amplification of noise.
9. Fix the unit firmly if mounted in a high place.

Caution:

Do not use the air conditioner in the following environments : greasy areas (including areas near machines), or marine areas. Contact your local dealer for advice.

3-2 Function Description



3-2-1 Cooling operation mode

The compressor is turned on and off according to the ambient temperature and set temperature.

- 1) Compressor on and off control
 - Compressor on and off control according to the ambient temperature
 - * The compressor is turned off when "ambient temperature = set temperature"
 - * The compressor is turned on when "ambient temperature = set temperature + 1°C"
- 2) Default value after power reset → set temperature = 24°C
Fan speed = High
- 3) Set temperature indicating (setting) range : 1°C interval from 18°C to 30°C.

3-2-2 Fan operation mode

- 1) If "Fan operation mode" signal is received from remote or panel.
 - the compressor is immediately turned off and only fan motor is operated at set blowing speed.
 - it changes such as "High → Med → Low → High" (if Fan speed is selected).
- 2) The initial Fan motor speed is set to "High".
- 3) The set temperature can not be indicated and set.

3-2-3 Energy saver operation mode

- * If the compressor turn off at the cooling operation, the fan motor turn off after operation during the fixation time only, and operation that energy saver by turn off the fixation time only, and operation that energy saver by turn off the motor continuously before the condition of the compressor on.
- * The fan motor is not operated at flow wind operation.
- * Energy saver operation specification at the cooling operation.
 - 1) Fan motor control in compressor on : operate with setting wind speed
 - 2) Fan motor control in compressor off : After compressor off, the fan motor is operated breeze for 2 minutes and then it turn off.
 - 3) After the fan motor off, the compressor and fan motor is operated normally when the compressor on.

3-2-4 Sleep operation mode

- 1) Enable to sleep operation only when cooling operation.
- 2) 7-SEG LED DISPLAY "8Hr"
And, automatically SET OFF after operated while 8 Hour
- 3) If sleep operation, setting Temperature rise 1°C after 1 Hour
- 4) ON TIMER operation, not operation, ENERGY SAVER operation, not sleep operation.

3-2-5 Dry operation mode

Same as Cool operation mode.

3-2-6 LED display indication in case of error detection

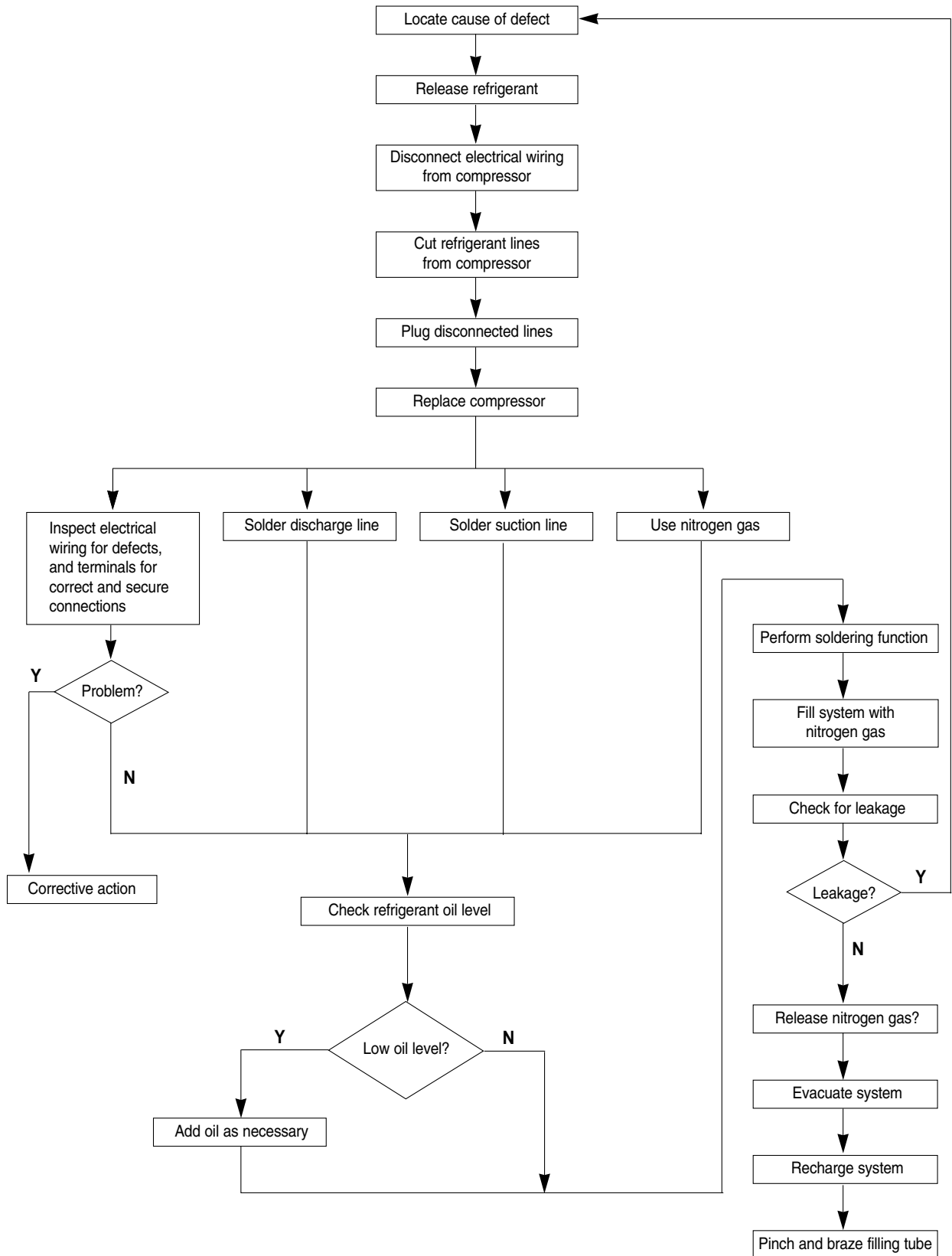
| | |
|------------------------------------|----------------------|
| ERROR OPERATION | 7-SEG LED DISPLAY |
| ROOM THERMISTOR (OPEN or SHORT) | E1 displayed |

- 1) Set operation in case of error occurrence.
 - Malfunction of each temperature sensor (open, short)
 - Error mode display, warning sound.
 - The operation status is off.

MEMO

4. Disassembly and Reassembly

4-1 Compressor Replacement Flow Chart



4-2 Checking the oil

Fill the transparent container with 10cc of oil, and then conduct the test.

4-2-1 Oil quality




| Condition of Refrigerant Cycle | Oil Condition | | Remarks |
|--------------------------------|---------------|-------------|------------------------|
| | Color | Odor | |
| Normal | Straw Yellow | No Odor | Return with the system |
| Over-heated | Brown Color | - | Change the oil |
| Compressor Damage | Dark Brown | Pungent oil | Change the oil |

4-2-2 Replacing and refilling the refrigerant oil



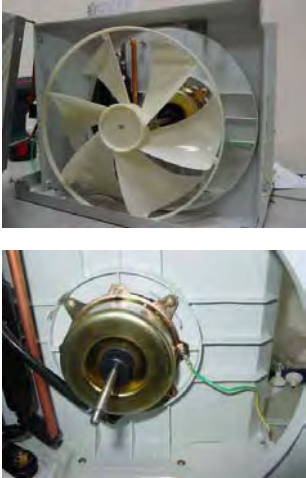
1. Change the compressor - DO NOT recharge the oil as the compressor itself is already charged.
2. Change the condenser add 50cc
3. Change the evaporator add 50cc
4. When the refrigerant is replaced add 30cc oil.
5. After vacuum is completed, the oil is filled through the high pressure side.
6. In the event of a refrigerant leak, generally it is not necessary to add oil.
(Unless the oil has leaked significantly.)

4-3.Disassembly and Reassembly Procedure(AW0593L)

Stop operating the air conditioner, and pull out the power cord before repair.




| No. | Part Name | Procedures | Remarks |
|-----|---------------|---|--|
| 1 | Ass'y Grille | 1.Pull the Grille air inlet and Guard air filter out. (Pull both sides of Grille air inlet forward carefully, then take out the filter.) 2.Remove the screw fixed on the panel front. 3.Hold the lower part of panel with two hands while pressing down on both sides of the lower part of the cabinet, pull it forward by about 30mm,and then lift it up carefully for removal. |  |
| 2 | Ass'y Cabinet | 1.Remove all screws on the both side of the cabinet . 2.Take the cabinet upward. |  |
| 3 | Ass'y Control | 1.Remove the earth screw fixed on the base. 2.Remove 3 screws fixed on the partition. 3.Remove the screw fixed for the power cord. 4.Un-connect the motor wire and comp lead wire, then take out the control box upward. |  <p>(The picture maybe have a little different from actual product)</p> |

Disassembly and Reassembly Procedure(AW0593L)



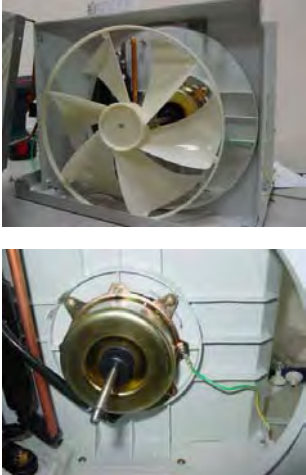
| No. | Part Name | Procedures | Remarks |
|-----|---|---|---|
| 4 | CASE EVAP UP & ASSY EVAP | <p>1.Take the case evap up forward carefully. (tear all the seal on it before)</p> <p>2.Pull the frame up upward.</p> |  |
| 5 | Blower | <p>1.Remove all screws on the evaporator.</p> <p>2.Pull the evaporator from frame low carefully.</p> <p>3.Remove the nut and remove the Blower.</p> |  |
| 6 | Case Cond & Fan Propeller & Motor Fan | <p>1.Remove 2 screws on the rear side of the base pan, and all screws fixed on case cond.</p> <p>2.Pull up the condenser from the base pan.</p> <p>3.Remove the nut and remove the Propeller fan.</p> <p>4.Remove the screw fixed on the partition and earth screw fixed on the base pan, then take out the motor backward.</p> |  |

Disassembly and Reassembly Procedure(AW0693L/AW0893L)




Stop operating the air conditioner, and pull out the power cord before repair.

| No. | Part Name | Procedures | Remarks |
|-----|---------------|---|--|
| 1 | Ass'y Grille | <p>1.Pull the Grille air inlet and Guard air filter out. (Pull both sides of Grille air inlet forward carefully, then take out the filter.)</p> <p>2.Remove the screw fixed on the panel front.</p> <p>3.Hold the lower part of panel with two hands while pressing down on both sides of the lower part of the cabinet, pull it forward by about 30mm,and then lift it up carefully for removal.</p> |  |
| 2 | Ass'y Cabinet | <p>1. Remove the screws on both sides of the cabinet to disconnect the cabinet and frame.</p> <p>2. Pull the handle on the front side of the bottom, and remove the unit from the cabinet.</p> |  |
| 3 | Ass'y Control | <p>1.Remove the earth screw fixed on the plate evaporator</p> <p>2.Remove 3 screws fixed on the partition and plate evaporator casing.</p> <p>3.Remove the screw fixed for the power cord.</p> <p>4.Un-connect the motor wire and comp lead wire, then take out the control box upward.</p> |  <p>(The picture maybe have a little different from actual product)</p> |




Disassembly and Reassembly Procedure(AW0693L/AW0893L)

| No. | Part Name | Procedures | Remarks |
|-----|---|--|---|
| 4 | CASE EVAP UP & ASSY EVAP | <p>1.Take the case evap up forward carefully.</p> <p>2.Remove 4 screws fixed on the plate evaporator casing and evaporator.</p> |  |
| 5 | Blower | <p>1.Lift up the evaporator carefully.</p> <p>2.Remove 2 screws on the plate evaporator casing and partition.</p> <p>3. Lift up the plate evaporator casing.</p> <p>4.Remove the nut and remove the Blower.</p> |  |
| 6 | Case Cond & Fan Propeller & Motor Fan | <p>1.Remove 2 screws on the base pan, and all screws fixed on case cond.</p> <p>2.Pull up the condenser from the base pan.</p> <p>3.Remove the nut and remove the Propeller fan.</p> <p>4.Remove the screw fixed on the partition and earth screw fixed on the base pan, then take out the motor backward.</p> |  |

Stop operating the air conditioner, and pull out the power cord before repair.

| No. | Part Name | Procedures | Remarks |
|-----|---------------|---|--|
| 1 | Ass'y Grille | <p>1.Pull the Grille air inlet and Guard air filter out. (Pull both sides of Grille air inlet forward carefully, then take out the filter.)</p> <p>2.Remove the screw fixed on the panel front.</p> <p>3.Hold the lower part of panel with two hands while pressing down on both sides of the lower part of the cabinet, pull it forward by about 30mm,and then lift it up carefully for removal.</p> |  |
| 2 | Ass'y Cabinet | <p>1. Remove the screws on both sides of the cabinet to disconnect the cabinet and frame.</p> <p>2. Pull the handle on the front side of the bottom, and remove the unit from the cabinet.</p> |  |
| 3 | Ass'y Control | <p>1.Remove the earth screw fixed on the plate evaporator</p> <p>2.Remove all screws fixed on the partition and plate evaporator casing.</p> <p>3.Remove the screw fixed for the power cord.</p> <p>4.Un-connect the motor wire and comp lead wire, then take out the control box upward.</p> |  <p>(The picture maybe have a little different from actual product)</p> |

Disassembly and Reassembly Procedure(AW1093L/AW1293L/AW1893L)

| No. | Part Name | Procedures | Remarks |
|-----|---|--|---|
| 4 | CASE EVAP UP & ASSY EVAP | <p>1.Take the case evap up forward carefully.</p> <p>2.Remove 4 screws fixed on the plate evaporator casing and evaporator.</p> |  |
| 5 | Blower | <p>1.Lift up the evaporator carefully.</p> <p>2.Remove 2 screws on the plate evaporator casing and partition.</p> <p>3. Lift up the plate evaporator casing.</p> <p>4.Remove the nut and remove the Blower.</p> |  |
| 6 | Case Cond & Fan Propeller & Motor Fan& Mount motor | <p>1.Remove 2 screws on the base pan, and all screws fixed on case cond.</p> <p>2.Pull up the condenser from the base pan.</p> <p>3.Remove the nut and remove the Propeller fan.</p> <p>4.Remove 4 screws fixed on the plate reinf, then take out the case cond.</p> <p>5.Remove 4 screws fixed on the mount motor then take out the motor backward.</p> <p>6.Remove 4 screws fixed on the base and partition then remove the mount motor.</p> |  |

5. Troubleshooting

Check the basic checkpoints first to determine whether it is machine trouble or a problem in the operation method. When it is not related to the basic checkpoints, perform checking in accordance with the procedures of troubleshooting by symptom.

5-1 Basic Checkpoints for Troubleshooting

- 1) Is the voltage of the power source appropriate ?
 - (1) It should be within the rating voltage $\pm 10\%$ range.
 - (2) The air conditioner may not operate properly when the voltage is out of this range.
- 2) Is the connection with the fan motor, compressor wire, and starting condenser appropriately made ?
- 3) The symptoms listed in the table below are not indicative of machine trouble.

| Symptom | Cause and check |
|--|---|
| No operation | <ul style="list-style-type: none"> • Check whether there is power failure or the power plug is pulled out. • Check whether the unit is stopped as a result of completion of the sleep time. • Pull out the power plug for ten seconds, and then insert it again. |
| Air flows, but no cooling | <ul style="list-style-type: none"> • Check whether the Air filter is clogged with dust or is dirty. • Check whether the desired temperature is too high. Set the desired temperature to a lower level than the current temperature. • Check whether it is in "FAN" mode. |
| The remote control does not operate | <ul style="list-style-type: none"> • Check whether battery is completely depleted. • Check whether the battery is properly inserted. • Check whether the receiving window of the remote control for the assembly main PCB is blinded. • Check whether the remote control is affected by jamming due to a neon sign. |
| No temperature setting | <ul style="list-style-type: none"> • Check whether the unit is in "FAN" mode. |

✧ Checking and Display of Fault Area

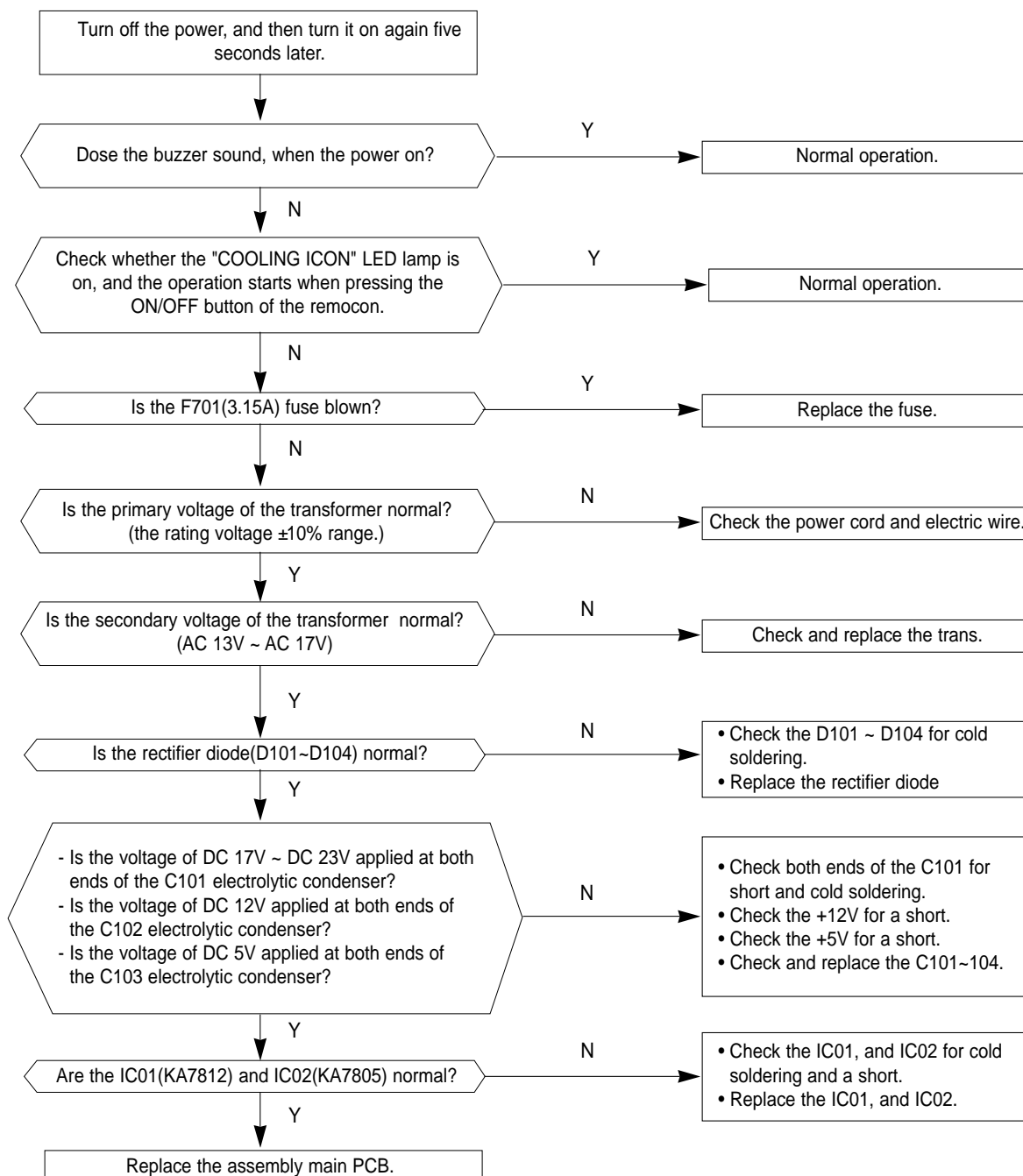
| ERROR OPERATION | ERROR OPERATION |
|---------------------------------|-----------------|
| ROOM THERMISTOR (OPEN OR SHORT) | E1 displayed |

5-2 Troubleshooting by Symptom

5-2-1 No power

1) Check points

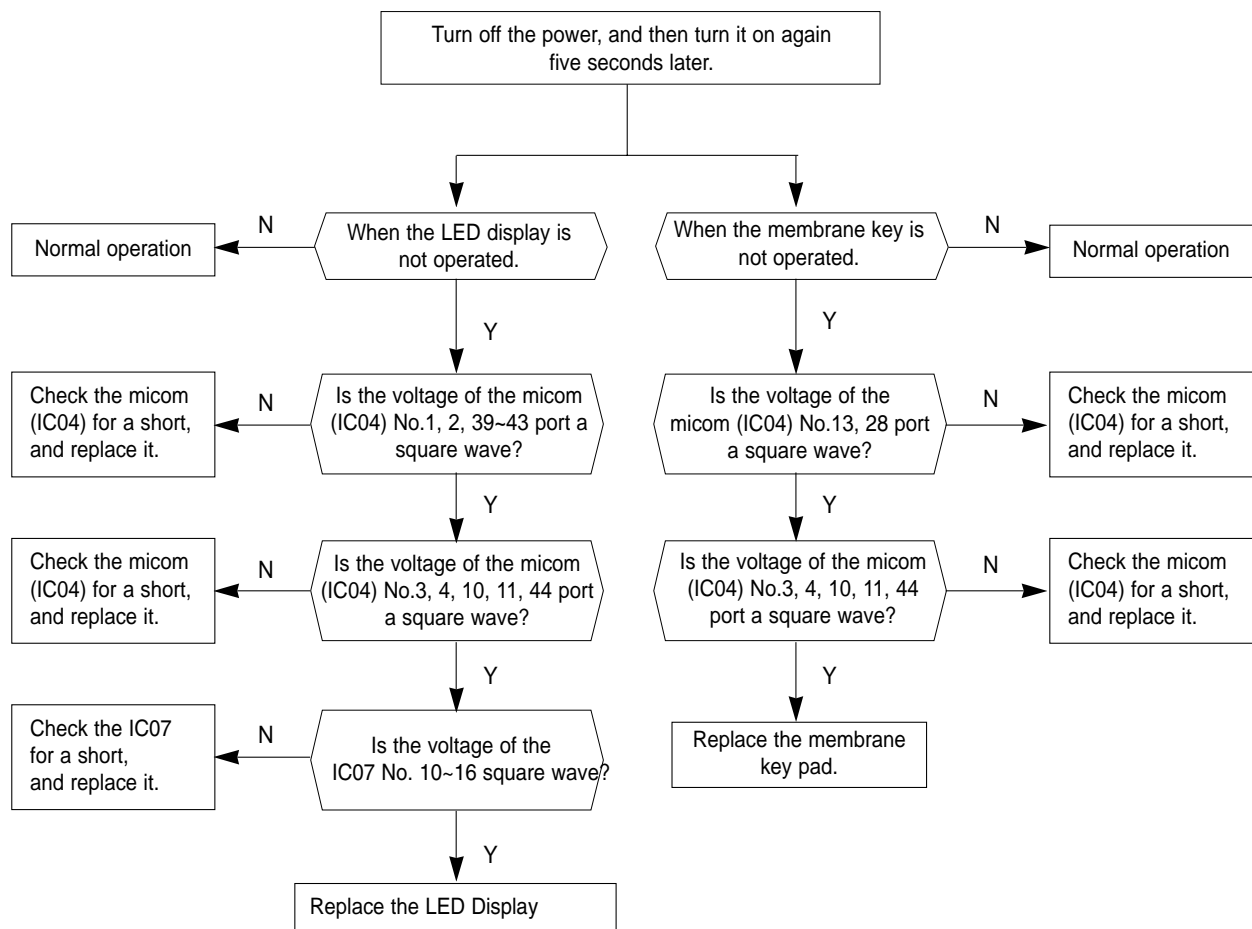
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN 71, RY 71)
- (3) Is the output voltage of the IC01(KA 7812) normal ?(DC 11.5V ~ DC 12.5V)
- (4) Is the output voltage of the IC02(KA 7805) normal ?(DC 4.5V ~ DC 5.5V)



5-2-2 When the Membrane Key pad and Led Display

1) Check points

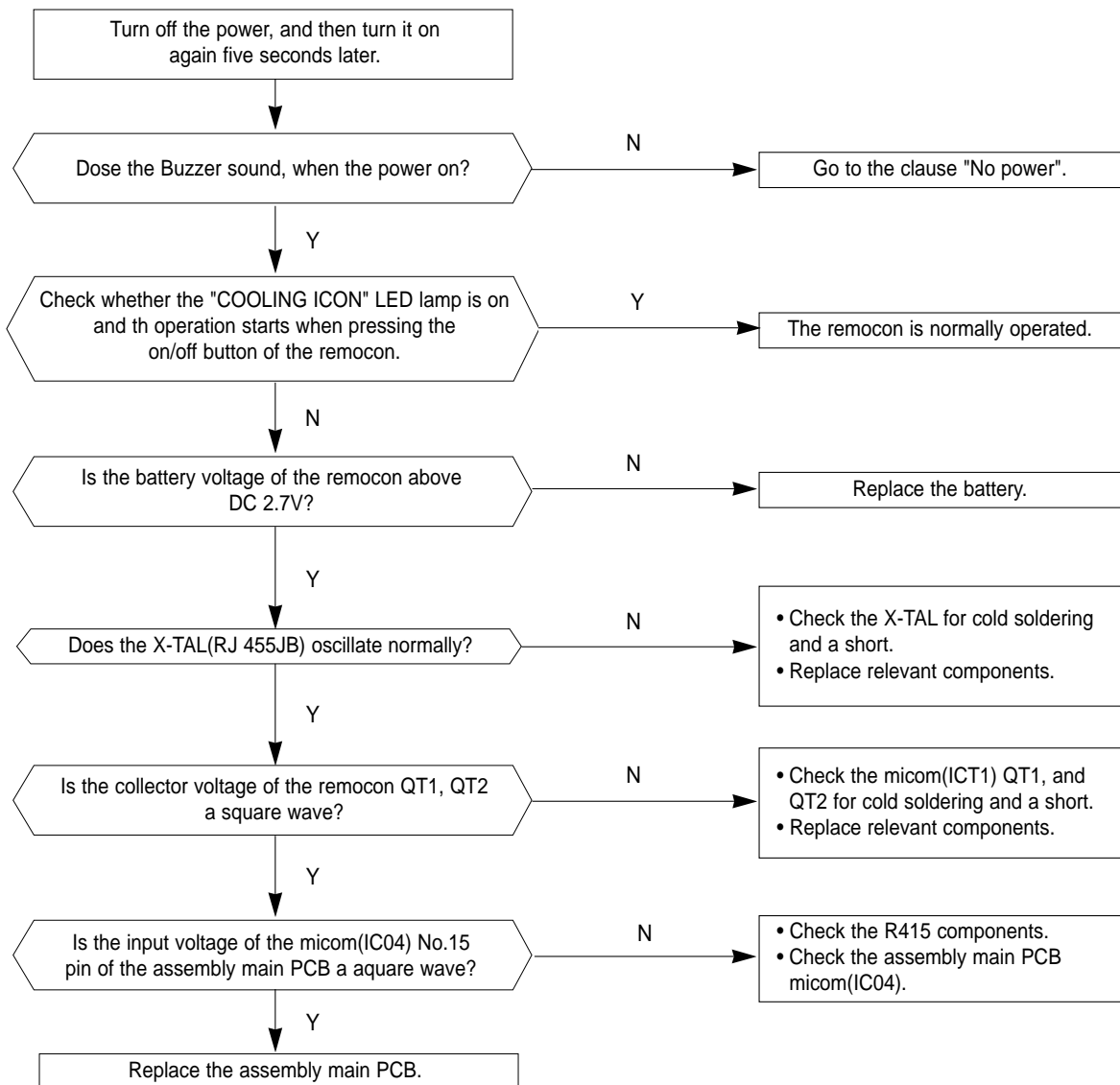
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN71, RY71)
- (3) Is the connection of the assembly main PCB, and MEMBRANE KEY PAD in good contact? (CN91)



5-2-3 When the remocon is not operated

1) Check points

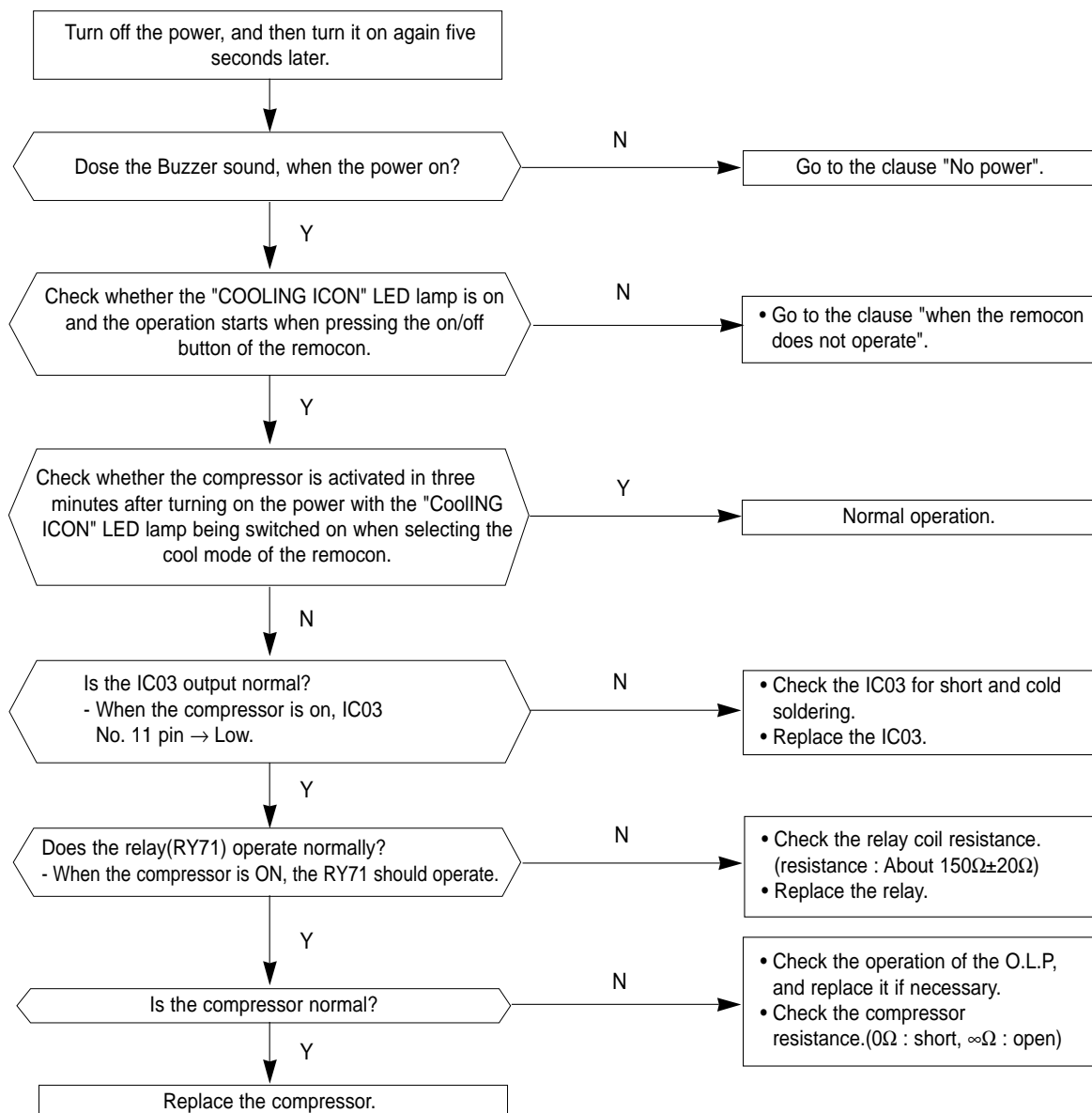
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ? (CN71, RY71)
- (3) Is the assembly main PCB in good contact with the MEMBRANE KEY PAD(CN91)
- (4) Is the battery voltage of the remocon above DC 2.7V?



5-2-4 When the compressor is not operated

1) Check points

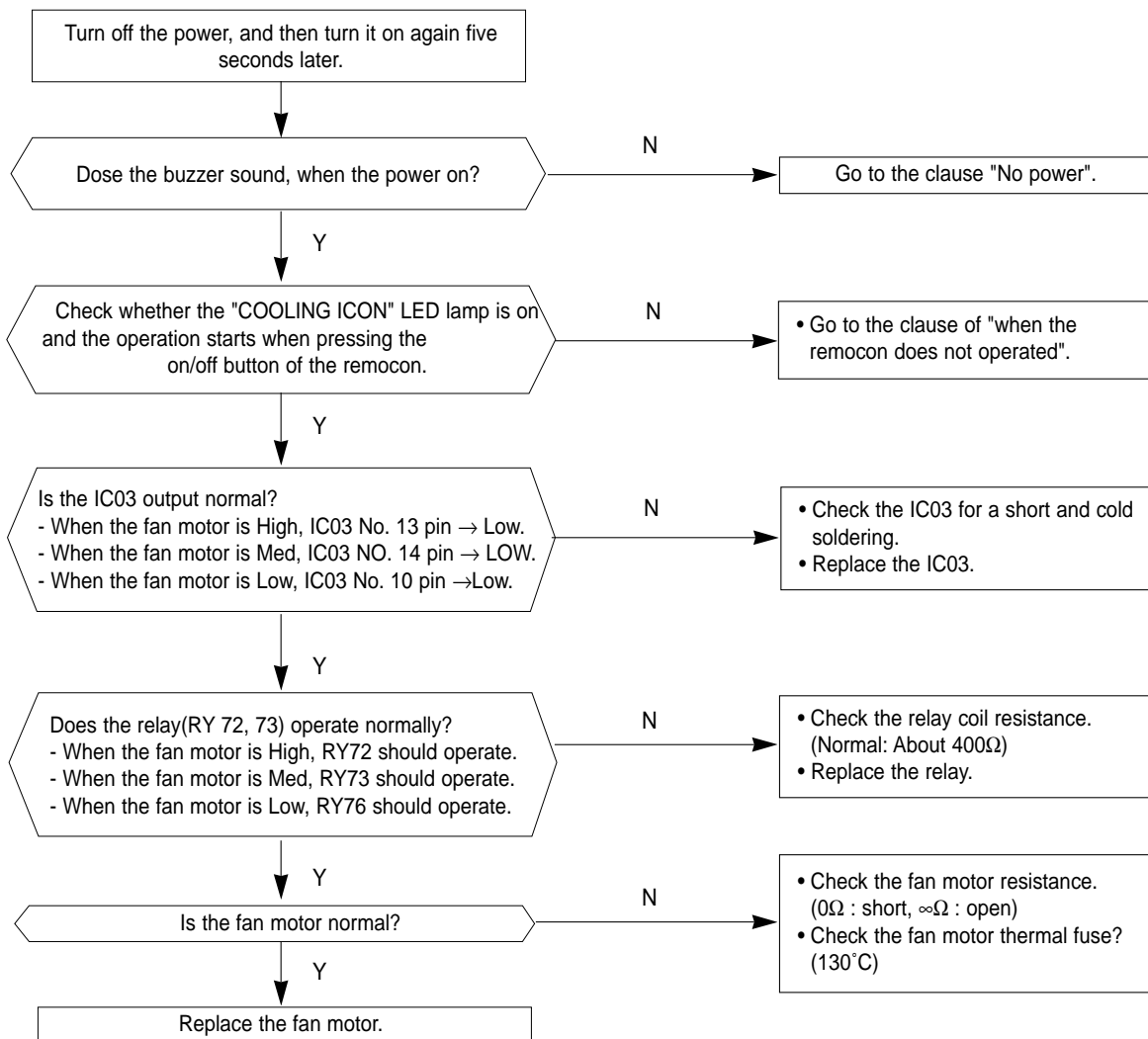
- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the desired temperature lower than the indoor temperature in the "COOL" mode?
(Compressor stopped)
- (3) Is the starting condenser in good contact?
- (4) Is the electric wire in good contact ? (CN71, RY71)
- (5) Is the output voltage of the IC01(KA7812) and IC02(KA7805) normal ?



5-2-5 When the fan motor does not operated

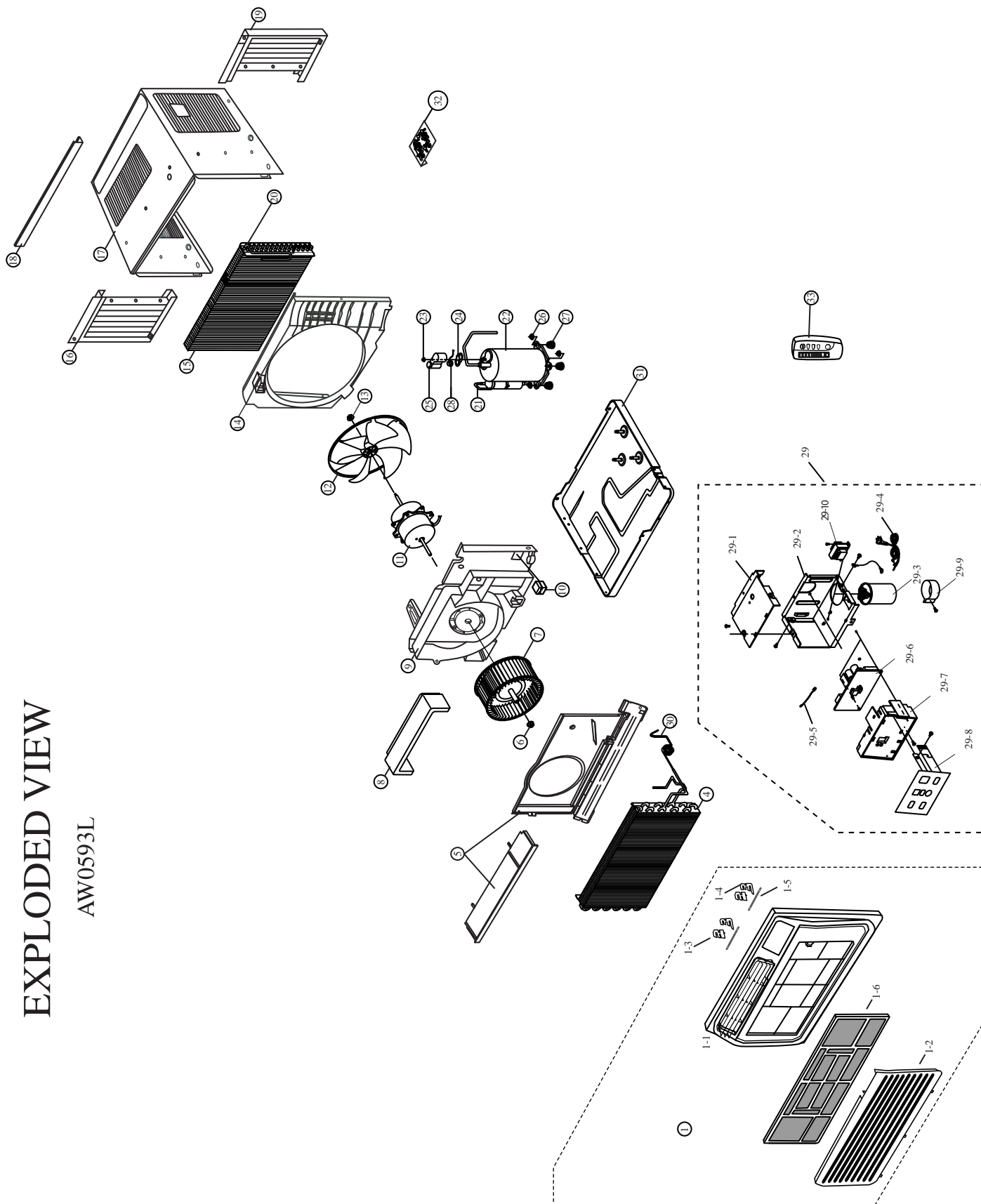
1) Check points

- (1) Is the voltage of the power source normal ? (the rating voltage $\pm 10\%$ range.)
- (2) Is the electric wire in good contact ?(CN71, RY71)
- (3) Is the starting condenser(FAN MOTOR) in good contact?
- (4) Is the fan motor connector in good contact?(CN73)
- (5) Is the output voltage of the IC01(KA7812) and IC02(KA7805) normal ?



6. Exploded View and Parts List

6-1 Main unit



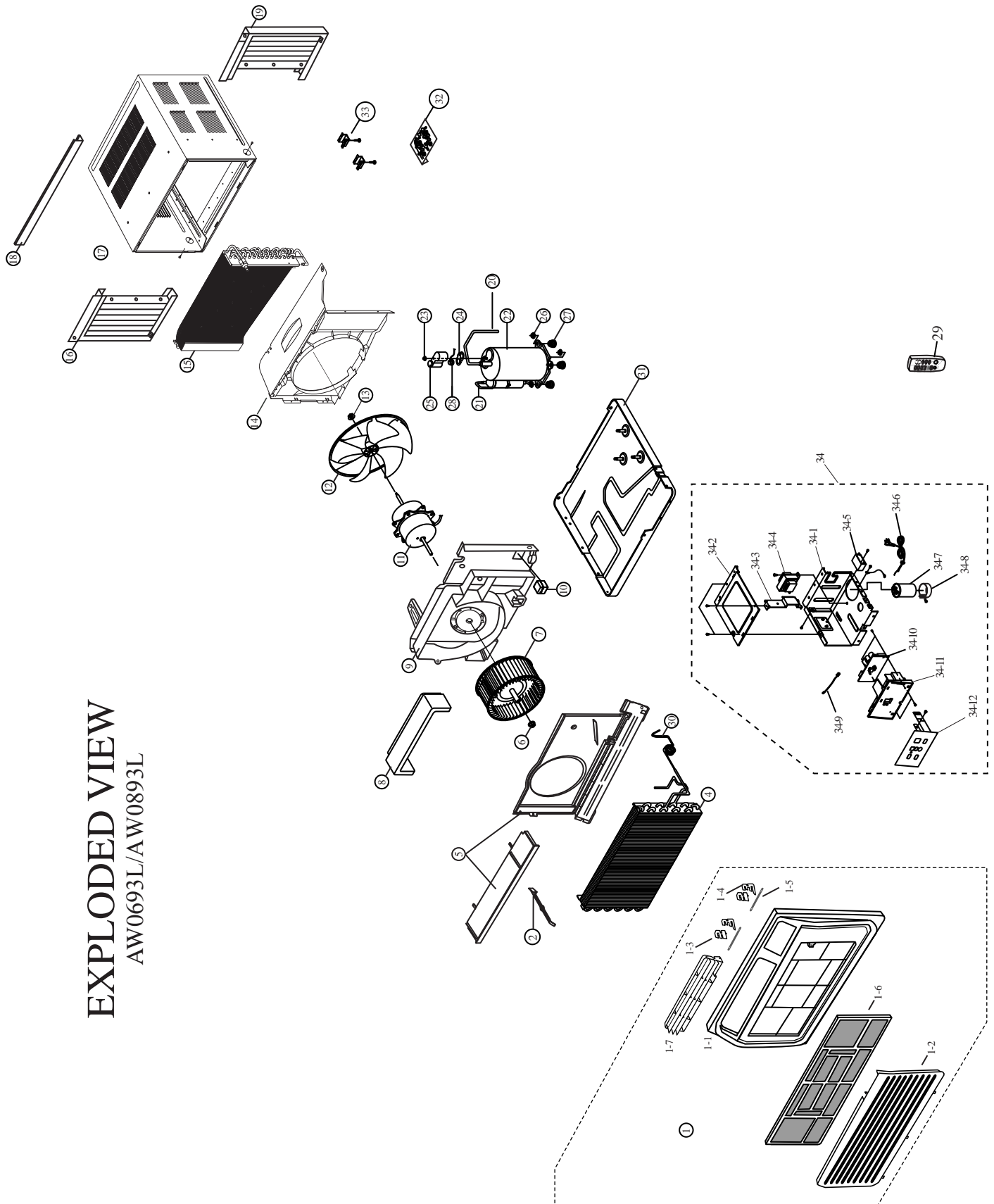
Exploded View and Parts List

■Part List

| No | Description | Code No. | Specification | Q'TY | |
|-------|------------------------|-------------|----------------------|---------|--------|
| | | | | AW0593L | REMARK |
| 1 | ASSY PANEL FRONT | DB92-00516A | SEA | 1 | |
| 1-1 | PANEL FRONT | DB64-00902A | SEA-2004 | 1 | |
| 1-2 | GRILLE AIR INLET | DB64-00903A | SEA | 1 | |
| 1-3 | BLADE V-S | DB66-00663A | HIPS,T2.0,-,- | 2 | |
| 1-4 | BLADE V-L | DB66-00546A | HIPS,T2.0,-,- | 2 | |
| 1-5 | LINK BLADE | DB66-00368A | PP,L82,T1.3,-,- | 2 | |
| 1-6 | GUARD AIR FILTER | DB63-00806A | HIPS,T2.5,-,- | 1 | |
| 2 | CASE CONTROL UP | DB61-00933A | Y-PJT,SGCC-M,T0.7 | 1 | |
| 4 | EVAPORATOR | DB96-01972A | FP1.3,T3,2*10,W | 1 | |
| 5 | ASSY-PLATE EVAP CASING | DB90-00898A | Y-PJT,ASSY | 1 | |
| 6 | NUT-FRANGE | DB60-30004A | 2C M6 SM20C NTR | 1 | |
| 7 | BLOWER | DB67-00099A | ABS,-,OK_TOP-P/J | 1 | |
| 8 | ASSY-EVAP CASE UP | DB90-00944A | Y-PJT,ASSY | 1 | |
| 9 | ASSY PARTITION | DB94-00438A | Y-PJT,ASSY | 1 | |
| 10 | INSULATION-TUBE | DB72-50178A | T30,W36,L34,NBR | 1 | |
| 11 | MOTOR | DB31-00035K | YGN50-6K,Y-TOP(5K) | 1 | |
| 12 | FAN-PROPELLER | DB67-00014A | ABS,290,6 BLADE | 1 | |
| 13 | NUT-FRANGE | DB60-30020A | M6,LEFT | 1 | |
| 14 | CASE COND | DB61-00932A | PP,T2,W378,L308 | 1 | |
| 15 | ASSY-COND | DB96-02044A | 2R×15S,FP1.5 | 1 | |
| 16 | ASSY SHUTTER-LF | DB92-00336A | PVC,SC-94445R | 1 | |
| 17 | ASSY CABINET | DB90-01289B | Y-PJT, TOP | 1 | |
| 18 | SHUTTER-ANGLE UP | DB64-00518A | SECC-P,T1,W8 | 1 | |
| 19 | ASSY SHUTTER-RH | DB92-00337A | PVC,SC-94445R | 1 | |
| 20 | TUBE DISCHARGE | DB62-01349A | C1220T-0 | 1 | |
| 21 | TUBE SUCTION | DB62-01314A | C1220T-0 | 1 | |
| 22 | COMPRESSOR | 39A050HSAKA | 115V 60Hz 1Ph | 1 | |
| 23 | NUT-TERMINAL COVER | DB60-30001A | M5,-,SM20C | 1 | |
| 24 | GASKET | DB63-00765A | EPDM,T0.8 | 1 | |
| 25 | COVER-TERMINAL | DB63-00762A | GE,-,NORYL,-,SEI-701 | 1 | |
| 26 | NUT WASHER | DB60-30028A | M8,ZPC | 3 | |
| 27 | GROMMET-ISOLATOR | DB63-00764A | EPDM,-,BLK,OK-PJT | 3 | |
| 28 | O.L.P | DB35-00022C | 39A050HSAKA | 1 | |
| 29 | ASSY CONTROL BOX | DB93-02550A | 5K ELEC | 1 | |
| 29-1 | CASE CONTROL LOW | DB61-00934A | Y-PJT,SGCC-M,T0.7, | 1 | |
| 29-2 | CASE CONTROL UP | DB61-00933A | Y-PJT,SGCC-M,T0.7,W | 1 | |
| 29-3 | C-OIL(COMP&FAN) | 2501-001290 | 3.5/35UF | 1 | |
| 29-4 | POWER CORD | DB39-00958A | Y-TOP,ELEC.,UL,P | 1 | |
| 29-5 | TRANSFORMER | DB26-00006G | AC115V,50/60HZ | 1 | |
| 29-6 | ASSY MAIN PCB | DB93-02480B | Y-P/J,SSEC | 1 | |
| 29-7 | PANEL CONTROL | DB64-00904A | ABS,T2.0, | 1 | |
| 29-8 | SWITCH MEMBRANE | DB34-00030A | PE,-,-,40~350 | 1 | |
| 29-9 | CLIP CAPACITOR | DB65-00031A | SGCC-M,T0.45 | 1 | |
| 29-10 | THERMISTOR | DB32-10051D | 10K/25,-,3425K | 1 | |
| 30 | TUBE CAPILLARY | DB62-02153A | 1.2×900mm | 1 | |
| 31 | ASSY BASE | DB90-00897A | MSWR10,M8,L10 | 1 | |
| 32 | ASSY-SCREW | DB97-90014K | OK-P/J | 1 | |
| 33 | ASSY REMOCON | DB93-01364X | OK-PJT,ARC-735 | 1 | |

6. Exploded View and Parts List

6-3 Main unit



EXPLODED VIEW
AW0693L/AW0893L

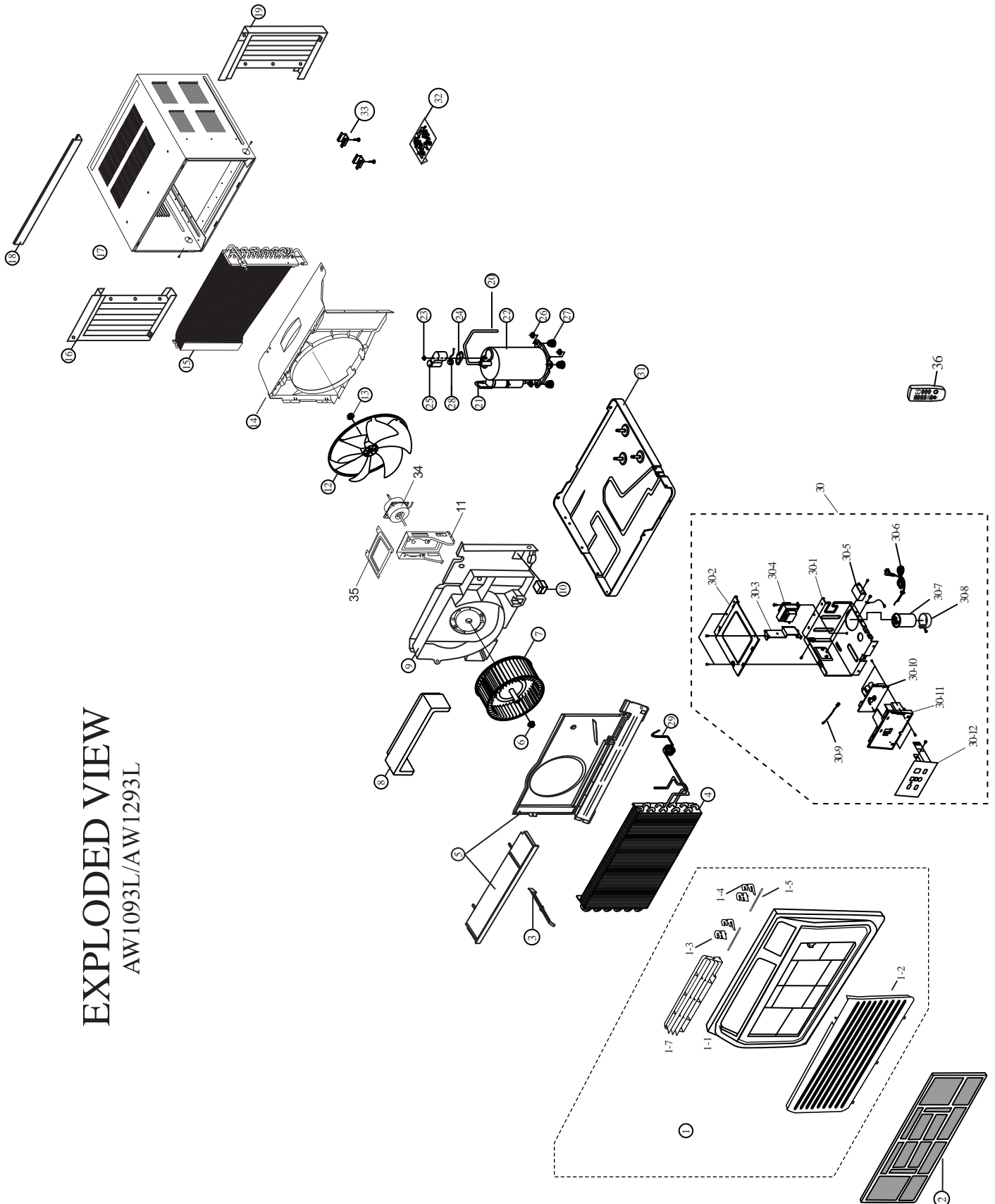
Exploded View and Parts List

■Part List

| No | Description | Code No. | Specification | Q/TY | | |
|-------|------------------------|-------------|----------------------|---------|---------|--------|
| | | | | AW0693L | AW0893L | REAMRK |
| 1 | ASSY PANEL FRONT | DB92-00515B | ASSY,SEA | 1 | 1 | |
| 1-1 | PANEL FRONT | DB64-00916A | H1-P/J,HIPS,T2.0 | 1 | 1 | |
| 1-2 | GRILLE AIR INLET | DB64-00917A | H1-P/J,HIPS,T2.0 | 1 | 1 | |
| 1-3 | BLADE V-S | DB66-00556A | H1-P/J,PP,T2.0 | 1 | 1 | |
| 1-4 | BLADE V-L | DB66-00555A | H1-P/J,PP,T2.0 | 2 | 2 | |
| 1-5 | LINK BLADE | DB66-00558A | H1-PJT,PP,L106.5 | 2 | 2 | |
| 1-6 | GUARD AIR FILTER | DB63-00810A | H1-P/J,HIPS,T2.5 | 1 | 1 | |
| 1-7 | FRAME BLADE | DB61-01530A | H1-P/J,SEA,HIPS | 1 | 1 | |
| 2 | LEVER DAMPER | DB66-00557A | H1-P/J,ABS | 1 | 1 | |
| 4 | EVAPORATOR | DB96-02987A | R2*11*FP1.2SLIT | 1 | 1 | |
| 5 | ASSY-PLATE EVAP CASING | DB90-01257A | H1-P/J,ASSY | 1 | 1 | |
| 6 | NUT-FRANGE | DB60-30004A | 2C M6 SM20C NTR | 1 | 1 | |
| 7 | BLOWER | DB67-50078A | ABS,-,N-P/J | - | 1 | |
| | | DB67-00099A | ABS,-,OK_TOP-P/J | 1 | - | |
| 8 | ASSY-EVAP CASE UP | DB90-01266A | H1-PJT | 1 | 1 | |
| 9 | ASSY PARTITION | DB94-00416A | H1-P/J | 1 | 1 | |
| 10 | INSULATION-TUBE | DB73-00177A | NBR-FOAM | 1 | 1 | |
| 11 | MOTOR | DB31-00215A | YSK40-6S-1,H1-PJT | - | 1 | |
| | | DB31-00215B | YSK40-6S-2,H1-PJT | 1 | - | |
| 12 | FAN-PROPELLER | DB67-50077A | ABS,290 | 1 | 1 | |
| 13 | NUT-FRANGE | DB60-30020A | M6,-,FEFZY,LF | 1 | 1 | |
| 14 | CASE COND | DB61-01532A | H1-P/J,PP,T2.0,W448 | 1 | 1 | |
| 15 | ASSY-COND | DB96-02986A | 7.0-2*16,1.3 | 1 | 1 | |
| 16 | ASSY SHUTTER-LF | DB92-00113C | H1-P/J,ASSY | 1 | 1 | |
| 17 | ASSY CABINET | DB90-01256A | H1-PJT | 1 | 1 | |
| 18 | SHUTTER-ANGLE UP | DB64-00048H | H1-P/J,HIPS,T3.0 | 1 | 1 | |
| 19 | ASSY SHUTTER-RH | DB92-00112C | H1-P/J,ASSY | 1 | 1 | |
| 20 | TUBE DISCHARGE | DB62-02269A | C1220T-0,T0.7,OD7 | - | 1 | |
| | | DB62-02527A | C1220T-0,T0.7,OD7 | 1 | - | |
| 21 | TUBE SUCTION | DB62-02270A | C1220T-0,T0.7,OD9.52 | - | 1 | |
| | | DB62-02528A | C1220T-0,T0.7,OD9.52 | 1 | - | |
| 22 | COMPRESSOR | 44A076HUAEB | 1PH,115V/60Hz | - | 1 | |
| | | 39A062HSAEA | 1PH,115V/60Hz | 1 | - | |
| 23 | NUT-TERMINAL COVER | DB60-30001A | M5,-,SM20C | 1 | 1 | |
| 24 | GASKET | DB63-00765A | EPDM,0.8,-,-,65-70, | 1 | 1 | |
| 25 | COVER-TERMINAL | DB63-00762A | GE NORYL | 1 | 1 | |
| 26 | NUT WASHER | DB60-30028A | HEX 2C M8 ZPC | 3 | 3 | |
| 27 | GROMMET-ISOLATOR | DB63-00763A | 44A,NR35 | - | 3 | |
| | | DB63-00764A | 39,NR35 | 3 | - | |
| 28 | O.L.P | DB35-00022B | 39A062HSAEA | 1 | - | |
| | | DB35-00024A | 39A062HSAEA | - | 1 | |
| 29 | ASSY REMOCON | DB93-01364X | OK-PJT,ARC-735 | 1 | 1 | |
| 34 | ASSY CONTROL CASE | DB93-02487A | AW0893L | - | 1 | |
| | | DB93-02487B | AW0693L | 1 | - | |
| 34-1 | CASE CONTROL LOW | DB61-01535A | H1-P/J,SGCC-M,T0 | 1 | 1 | |
| 34-2 | CASE CONTROL UP | DB61-01536A | H1-P/J,SGCC-M,T0 | 1 | 1 | |
| 34-3 | BRK CONTROL | DB61-01533A | H1-P/J,SGCC-M,T1.0, | 1 | 1 | |
| 34-4 | TRANSFORMER | DB26-00006J | -,AC115V,50/60HZ,DC | 1 | 1 | |
| 34-5 | C-OIL(FAN MOTOR) | 2301-001448 | 8000nF,+10-5%,440V | - | 1 | |
| | | 2301-001449 | 6000nF,+10-5%,440V | 1 | - | |
| 34-6 | POWER CORD | DB39-00343D | 125V,13A,-,- | 1 | 1 | |
| 34-7 | C-OIL(COMPRESSOR) | 2501-001230 | 45uF,400V,BK | - | 1 | |
| | | 2501-001229 | 40uF,400V,BK | 1 | - | |
| 34-8 | CLIP-CAPACITOR | DB65-00031A | SGCC-M,T0.45 | 1 | 1 | |
| 34-9 | THERMISTOR | DB32-10051E | 10K/25,-,3435K, | 1 | 1 | |
| 34-10 | ASSY MAIN PCB | DB93-02478C | H,SEA | 1 | 1 | |
| 34-11 | PANEL CONTROL | DB64-00918A | H1-P/J,ABS,T2.0,W90 | 1 | 1 | |
| 34-12 | SWITCH MEMBRANE | DB34-00031A | PE,SEA | 1 | 1 | |
| 30 | TUBE CAPILLARY | DB62-02280A | 1.3x800mm | 1 | 1 | |
| 31 | ASSY BASE | DB90-01255A | H1-P/J | - | 1 | |
| | | DB90-01255B | AW0693L | 1 | - | |
| 32 | ASSY-SCREW | DB97-30156C | SPS/GEA, | 1 | 1 | |
| 33 | BRACKET INSTALL | DB61-30219F | GE,SPS-P/J,SGCC-A | 2 | 2 | |

6. Exploded View and Parts List

6-5 Main unit



EXPLODED VIEW
AW1093L/AW1293L

Exploded View and Parts List

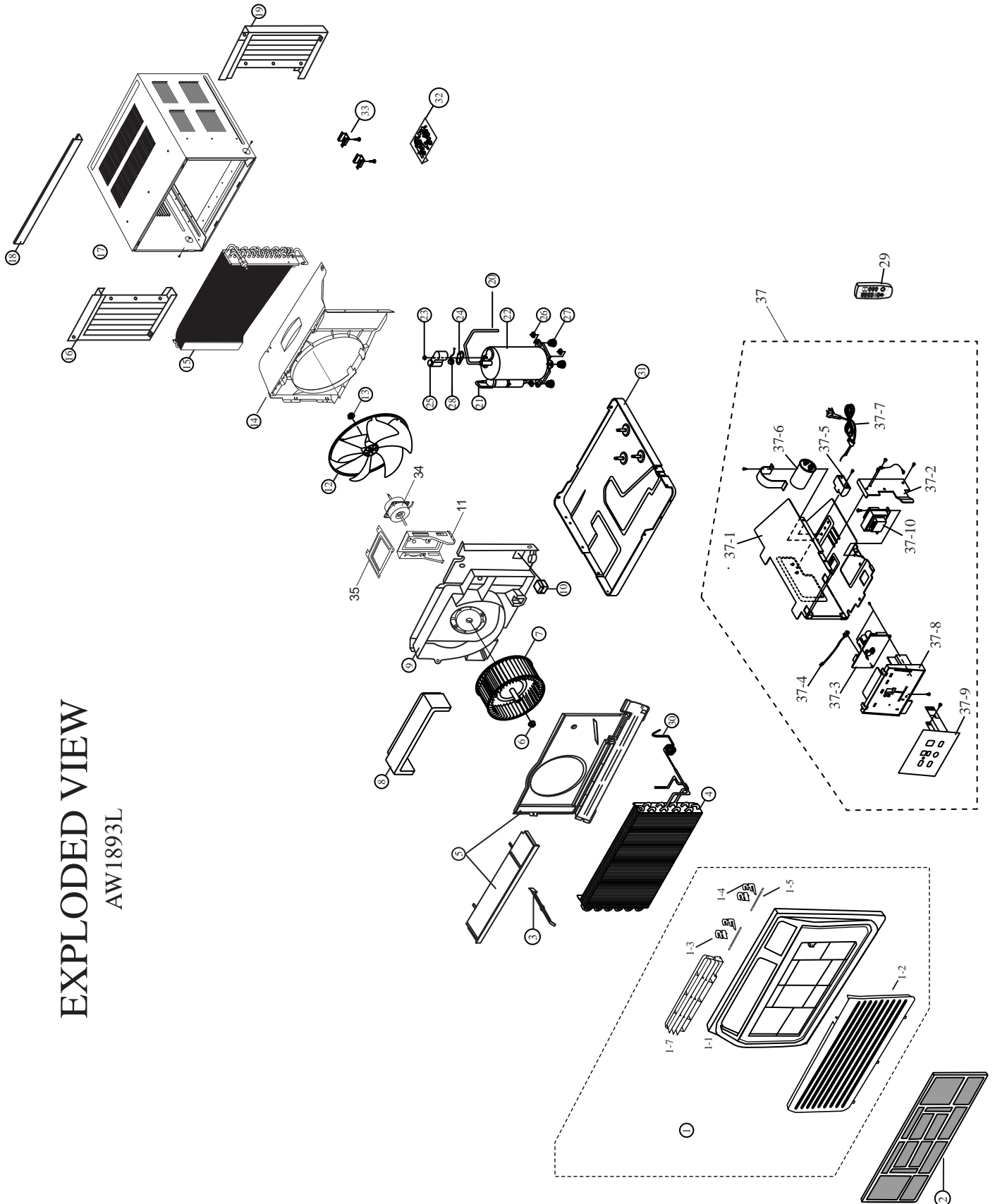
■Part List

| No | Description | Code No. | Specification | Q'TY | | |
|-------|------------------------|-------------|-------------------------|---------|---------|--------|
| | | | | AW1093L | AW1293L | REMARK |
| 1 | ASSY PANEL FRONT | DB92-00553C | ASSY,SEA | 1 | 1 | |
| 1-1 | PANEL FRONT | DB64-00924A | H2-P/J,HIPS,T2.0,W393,L | 1 | 1 | |
| 1-2 | GRILLE AIR INLET | DB64-00925A | H2-P/J,HIPS,T2.5 | 1 | 1 | |
| 1-3 | BLADE V-S | DB66-00561A | H2-P/J,PP,T2.0 | 2 | 2 | |
| 1-4 | BLADE V-L | DB66-00560A | H2-P/J,PP,T2.0,-,-,- | 2 | 2 | |
| 1-5 | LINK BLADE | DB66-00562A | H2-PJT, TOP, PP, L106 | 2 | 2 | |
| 1-7 | FRAME BLADE | DB61-01538A | H2-P/J, TOP, SEA, HIPS | 1 | 1 | |
| 2 | GUARD AIR FILTER | DB63-00813A | H2-P/J,HIPS,T2.5 | 1 | 1 | |
| 3 | LEVER DAMPER | DB66-00559A | H2-P/J,HIPS | 1 | 1 | |
| 4 | EVAPORATOR | DB96-02926A | OD7*2R*12*FP1.5*470 | 1 | - | |
| | | DB96-02939A | OD9.52*2*10*FP1.3*4 | - | 1 | |
| 5 | ASSY-PLATE EVAP CASING | DB90-01286A | H2-P/J,ASSY | 1 | 1 | |
| 6 | NUT-FRANGE | DB60-30004A | M6 SM20C NTR | 1 | 1 | |
| 7 | BLOWER | DB67-50073A | ABS,200 | - | 1 | |
| | | DB67-50078A | ABS,_180 | 1 | - | |
| 8 | ASSY-EVAP CASE UP | DB90-01342A | H2-P/J,- | 1 | 1 | |
| 9 | ASSY PARTITION | DB97-02047A | PP,T2.5 | 1 | 1 | |
| 10 | INSULATION-TUBE | DB73-00178A | H2-PJT,FOAM-PE | 1 | 1 | |
| 11 | MOUNT MOTOR ASSY | DB90-01420A | H2-PJT TOP | 1 | 1 | |
| 12 | FAN-PROPELLER | DB67-00139A | ABS+G.F20%,D352 | 1 | 1 | |
| 13 | NUT-FRANGE | DB60-30020A | M6,-,FEFZY,LF | 1 | 1 | |
| 14 | CASE COND | DB61-01537A | H2-P/J,PP,T2.5 | 1 | 1 | |
| 15 | ASSY-COND | DB96-02940A | 3R*OD7*17*FP1.5*SLIT | 1 | - | |
| | | DB96-02940B | 3R*OD7*17*FP1.4*LOVER | - | 1 | |
| 16 | ASSY SHUTTER-LF | DB92-00111A | J-P/J,ASSY | 1 | 1 | |
| 17 | ASSY CABINET | DB90-01284A | H2-PJT,- | 1 | 1 | |
| 18 | SHUTTER-ANGLE UP | DB64-00048J | -,HIPS,T3.0,-,-,SC | 1 | 1 | |
| 19 | ASSY SHUTTER-RH | DB92-00110A | J-P/J,ASSY | 1 | 1 | |
| 20 | TUBE DISCHARGE | DB62-02287A | H2-P/J,C1220T-0,TO.7 | 1 | 1 | |
| 21 | TUBE SUCTION | DB62-02213A | H2-P/J,C1220T-0 | 1 | 1 | |
| 22 | COMPRESSOR | 44B098HX1EF | 1Ph,115V/60Hz | 1 | - | |
| | | 44B117HX1EL | 1Ph,115V/60Hz | - | 1 | |
| 23 | NUT-TERMINAL COVER | DB60-30001A | M5,-,SM20C,- | 1 | 1 | |
| 24 | GASKET | DB63-20003A | EPDM,T0.8 | 1 | 1 | |
| 25 | COVER-TERMINAL | DB63-10026A | GE,-,NORYL,-,SEI-701 | 1 | 1 | |
| 26 | NUT WASHER | DB60-30028A | HEX 2C M8 ZPC | 3 | 3 | |
| 27 | GROMMET-ISOLATOR | DB73-00070A | NR35 | 3 | 3 | |
| 28 | O.L.P | DB35-00011D | 44B098HX1EF | 1 | - | |
| | | DB35-00011M | 44B117HX1EL | - | 1 | |
| 30 | ASSY CONTROL BOX | DB93-02520A | AW1093L | 1 | - | |
| | | DB93-02520B | AW1293L | - | 1 | |
| 30-1 | CASE CONTROL LOW | DB61-00669B | H2-PJT TOP,SGCC-M, | 1 | 1 | |
| 30-2 | CASE CONTROL UP | DB61-00670A | 8K TOP,SGCC-M,TO.7, | 1 | 1 | |
| 30-3 | BRK CONTROL | DB61-00676A | TOP,N-PROJECT,SGCC- | 1 | 1 | |
| 30-4 | TRANSFORMER | DB26-00006J | -,AC115V,50/60HZ,DC | 1 | 1 | |
| 30-5 | C-OIL(FAN MOTOR) | 2301-001452 | 15000nF,+10-5%,250V, | 1 | 1 | |
| 30-6 | POWER CORD | DB39-00343E | -,,-,125V,13A,AWG | 1 | 1 | |
| 30-7 | C-OIL(COMPRESSOR) | 2501-001230 | 45uF,400V,BK | 1 | - | |
| | | 2501-001231 | 50uF,400V,BK | - | 1 | |
| 30-8 | CLIP-CAPACITOR | DB65-00031A | SGCC-M,T0.45,-,-,OK- | 1 | 1 | |
| 30-9 | THERMISTOR | DB32-10051E | -,10K/25,-,3435K,-,-,- | 1 | 1 | |
| 30-10 | ASSY MAIN PCB | DB93-02478C | H,SEA | 1 | 1 | |
| 30-11 | PANEL CONTROL | DB64-00929A | H2-P/J,ABS,-,W79.8, | 1 | 1 | |
| 30-12 | SWITCH MEMBRANE | DB34-00032A | -,,-,PE,-,-,40~350 | 1 | 1 | |
| 29 | TUBE CAPILLARY | DB96-03453A | 2-ID1.2*900 | - | 1 | |
| | | DB62-02367B | 2-ID1.2*1000 | 1 | - | |
| 31 | ASSY BASE | DB90-01285B | H2-P/J,44 FRAME | 1 | 1 | |
| 32 | ASSY-SCREW | DB97-30156C | -,,-,-,-,-,SPS/GEA, | 1 | 1 | |
| 33 | BRACKET INSTALL | DB61-30219F | GE,SPS-P/J,SGCC-A | 2 | 2 | |
| 34 | MOTOR FAN | DB31-00211A | YGN60-6B-1 | - | 1 | |
| | | DB31-00211B | YGN60-6B-2 | 1 | - | |
| 35 | PLATE REINF | DB70-00367A | H2-P/J,SGCC-M | 1 | 1 | |
| 36 | REMOCON ASSY | DB93-01364X | OK-PJT,ARC-735 | 1 | 1 | |

6. Exploded View and Parts List

6-7 Main unit

EXPLODED VIEW
AW1893L



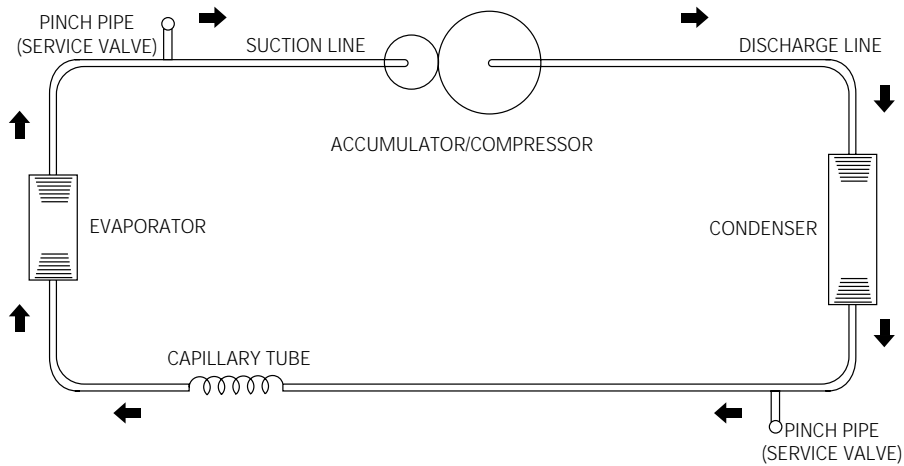
Exploded View and Parts List

■Part List

| No | Description | Code No. | Specification | Q'TY | |
|-------|------------------------|-------------|--------------------------|---------|--------|
| | | | | AW1893L | REMARK |
| 1 | ASSY PANEL FRONT | DB92-00519A | SEA,ASSY | 1 | |
| 1-1 | PANEL FRONT | DB64-00912A | H3-P/J,TOP,SEA,HIPS | 1 | |
| 1-2 | GRILLE AIR INLET | DB64-00913A | H3-P/J,TOP,SEA | 1 | |
| 1-3 | BLADE V-S | DB66-00551A | H3-P/JT,HIPS,T2.5, | 1 | |
| 1-4 | BLADE V-L | DB66-00550A | H3-P/JT,HIPS,T2.5 | 2 | |
| 1-5 | LINK BLADE | DB66-00552A | H3-P/JT,TOP,PP,T1.3, | 2 | |
| 1-7 | FRAME BLADE | DB61-01524A | H3-P/J,TOP,SEA,HIPS | 1 | |
| 2 | GUARD AIR FILTER | DB63-00807A | H3-P/JT,SEA,TOP | 1 | |
| 3 | LEVER DAMPER | DB66-00553A | H3-P/J,TOP,SEA,ABS | 1 | |
| 4 | EVAPORATOR | DB96-02969A | OD9.52*R3*11HOLE | 1 | |
| 5 | ASSY-PLATE EVAP CASING | DB90-01288A | H3-P/J,ASSY | 1 | |
| 6 | NUT-FRANGE | 6021-001056 | HEX-PLANGE,M8XP1 | 1 | |
| 7 | BLOWER | DB67-00096A | ABS+G/F20%,M-P/J | 1 | |
| 8 | CASE EVAP UP | DB61-01528A | H3-P/J,TOP,25F0AM-PS | 1 | |
| 9 | ASSY PARTITION | DB97-02027A | PP,T2.5,-,-,BLK,-,- | 1 | |
| 10 | INSULATION-TUBE | DB73-00173A | H3-P/JT,TOP,NRB | 1 | |
| 11 | MOUNT MOTOR | DB61-01496A | H3-P/J,SGCC-M | 1 | |
| 12 | FAN-PROPELLER | DB67-00047B | ABS,OD390,-,-,M-P/J | 1 | |
| 13 | NUT-FRANGE | DB60-30028A | HEX 2C M8 ZPC | 3 | |
| 14 | CASE COND | DB61-01495A | H3-P/J,PP,T2.5 | 1 | |
| 15 | ASSY-COND | DB96-02954B | H3-P/J,- | 1 | |
| 16 | ASSY SHUTTER-LF | DB92-00109A | M-P/J,ASS'Y | 1 | |
| 17 | ASSY CABINET | DB90-01217B | AW1803B/XAA,H3-P/JT | 1 | |
| 18 | SHUTTER-ANGLE UP | DB64-01020A | -,HIPS,T3.0,W41,L6 | 1 | |
| 19 | ASSY SHUTTER-RH | DB92-00108A | M-P/J,ASS'Y | 1 | |
| 20 | TUBE DISCHARGE | DB62-02593A | H3-P/J,C1220T-0,TO.7 | 1 | |
| 21 | TUBE SUCTION | DB62-02234A | H3-P/J,C1220T-0,TO.8 | 1 | |
| 22 | COMPRESSOR | 48D172IU1EQ | 1PH,208-230V/60Hz | 1 | |
| 23 | NUT-TERMINAL COVER | DB60-30001A | M5,-,SM20C | 1 | |
| 24 | GASKET | DB63-20003A | EPDM,T0.8 | 1 | |
| 25 | COVER-TERMINAL | DB63-10026A | GE,-,NORYL | 1 | |
| 26 | NUT WASHER | DB60-30028A | HEX 2C M8 ZPC | 3 | |
| 27 | GROMMET-ISOLATOR | DB73-00067A | EPDM | 3 | |
| 28 | O.L.P | DB35-00011K | 48D172IU1EQ | 1 | |
| 37 | ASSY CONTROL BOX | DB93-02510A | AW1803B/XAA | 1 | |
| 37-1 | CASE CONTROL | DB61-01527A | H3-P/J,TOP,SGCC-M,T0.7 | 1 | |
| 37-2 | BRACKET-CONTROL | DB61-01526A | H3-P/J,TOP,SGCC-M,T | 1 | |
| 37-3 | ASSY MAIN PCB | DB93-02478C | H,SEA | 1 | |
| 37-4 | THERMISTOR | DB32-10051E | -,10K/25,-,3435K,-,-,-,- | 1 | |
| 37-5 | CAPACITOR(6mfd) | 2301-001449 | 6000nF,+10-5%,440V,B | 1 | |
| 37-6 | CAPACITOR(35mfd) | 2501-001237 | 35uF,450V | 1 | |
| 37-7 | POWER-CORD | DB39-00344B | 250V,13A,AWG | 1 | |
| 37-8 | PANEL-CONTROL | DB64-00911A | H3-P/J,TOP,SEA,ELEC | 1 | |
| 37-9 | MEMBRANE PAD | DB34-00033A | -,,-,PE,-,-,40~350 | 1 | |
| 37-10 | TRANSFORMER | DB26-00006K | AC230V,50/60HZ,DC | 1 | |
| 30 | TUBE CAPILLARY | DB96-03422A | 3-ID1.2*900 | 1 | |
| 31 | ASSY BASE | DB90-01215B | H3-P/JT | 1 | |
| 32 | ASSY-SCREW | DB97-90014U | M-P/J,(XAX) | 1 | |
| 33 | BRACKET INSTALL | DB61-30219F | GE,SPS-P/J,SGCC-A,T | 2 | |
| 34 | MOTOR FAN | DB31-00214C | YSK160-6A-3,18K-C TOP | 1 | |
| 35 | PLATE REINF | DB70-00342A | H3-P/J,SGCC-M,-,T0.8 | 1 | |
| 29 | REMOCON ASSY | DB93-01364X | SEA | 1 | |

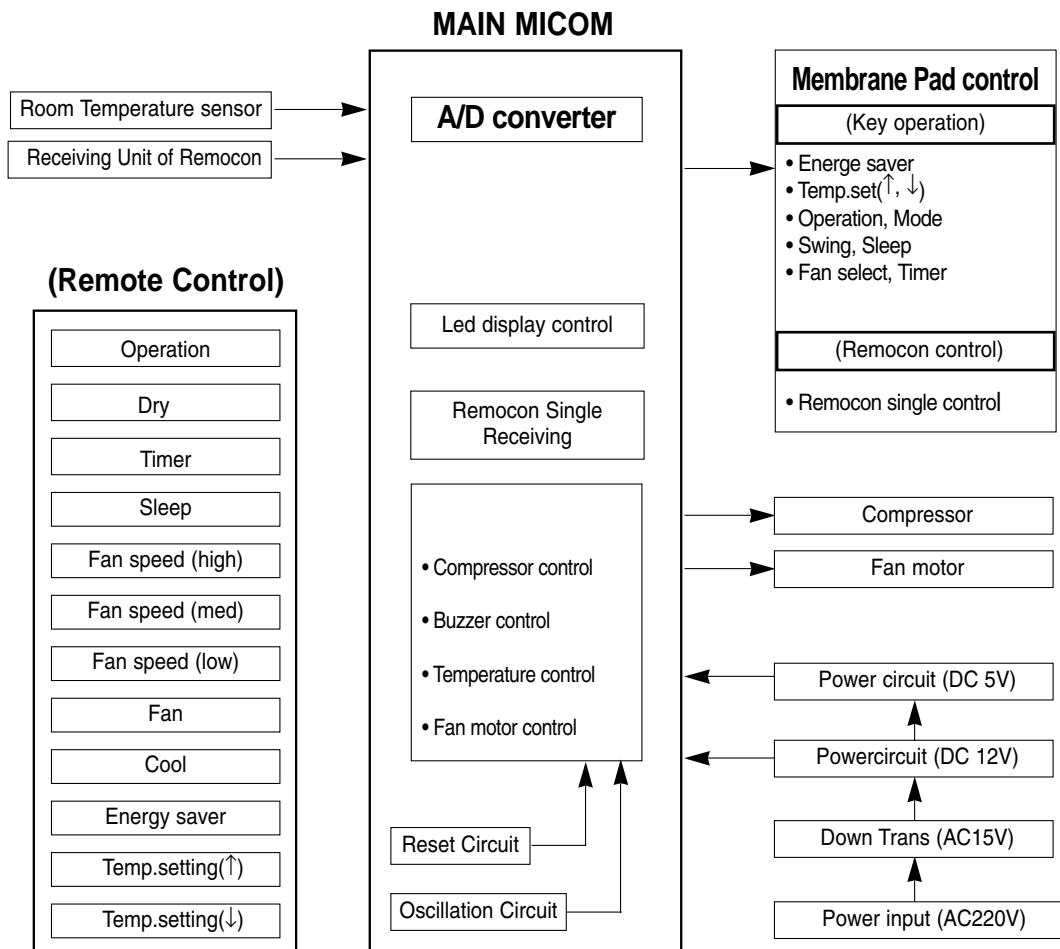
7. Block Diagram

7-1 Refrigerating Cycle Block Diagram



7-2 Basic Structure

7-2-1 Micom Control Diagram



7-2-2 Micom pin assignment

| KS88C4716 | | | | | |
|------------------|----|-------|------|----|-----------------|
| SEG-DATA(c) | 1 | P0.1 | P4.4 | 44 | GRID5 |
| SEG-DATA(b) | 2 | P0.0 | P0.2 | 43 | SEG-DATA(d) |
| GRID4 | 3 | P4.3 | P0.3 | 42 | SEG-DATA(e) |
| GRID3 | 4 | P4.2 | P0.4 | 41 | SEG-DATA(f) |
| Vcc | 5 | VDD | P0.5 | 40 | SEG-DATA(g) |
| Vss | 6 | VSS | P0.6 | 39 | SEG-DATA(h) |
| 10MHz RESONATOR | 7 | Xout | P0.7 | 38 | SEG-DATA(a) |
| 10MHz RESONATOR | 8 | Xin | P1.0 | 37 | EEPROM CLK |
| TEST | 9 | TEST | P1.1 | 36 | EEPROM IN |
| GRID2 | 10 | P4.1 | P1.2 | 35 | EEPROM OUT |
| GRDI1 | 11 | P4.0 | P1.3 | 34 | BUZZER |
| RESET IC OUTPUT | 12 | RESET | P1.4 | 33 | OPTION |
| KEY-IN1 | 13 | P2.0 | P1.5 | 32 | JIG OUTPUT |
| KEY-IN2 | 14 | P2.1 | P3.7 | 31 | OPTION |
| REMOCON | 15 | P2.2 | P3.6 | 30 | SENSOR THERMIS- |
| EEPROM CS | 16 | P2.3 | P3.5 | 29 | TOR(103AT) |
| LOW FAN | 17 | P2.4 | P3.4 | 28 | OPTION |
| COMPERSOR | 18 | P2.5 | P3.3 | 27 | OPTION |
| MIDDLE FAN | 19 | P2.6 | P3.2 | 26 | OPTION |
| HIGH FAN | 20 | P2.7 | P3.1 | 25 | OPTION |
| 4-WAY VALVE | 21 | P4.5 | P3.0 | 24 | SAVE OPTION |
| Vcc | 22 | AVref | AVss | 23 | SWING MOTOR |
| | | | | | GND |

PART LIST

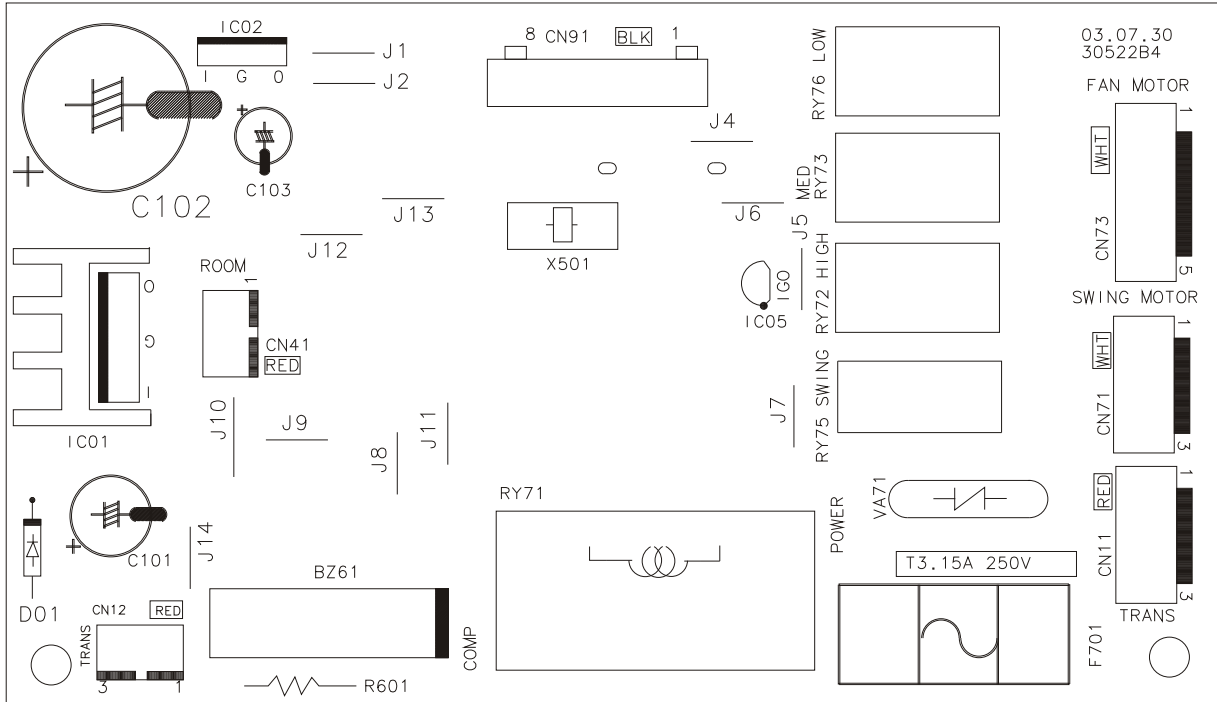
ASSY MAIN PCB: DB93-02480B

| NO. | DESCRIPTION | SPEC | REMARK | Q'TY | INSTALL |
|-----|-----------------------|---------------------|------------------------------------|------|---------|
| 1 | IC | ULN2003AD | IC03,IC07 | 2 | SMT |
| 2 | DIODE-BRIDGE(CHIP) | DF06S | BD01 | 1 | SMT |
| 3 | DIODE-SWITCHING(CHIP) | LL4148 | D901-----D905 | 5 | SMT |
| 4 | DIODE | UF4002 100V/1A | D01 | 1 | MI |
| 5 | TRI-DIODE-CHIP | 2SC2412K | Q01 | 1 | SMT |
| 6 | REGULATOR | KA7805 | IC02 | 1 | MI |
| 7 | REGULATOR | KA7812 | IC01 | 1 | MI |
| 8 | C-AL | CD110X,10V,100uF | C103 | 1 | AI |
| 9 | C-AL | CD110X,35V,1000uF | C101 | 1 | MI |
| 10 | C-AL | CD110X,25V,2200uF | C102 | 1 | MI |
| 11 | C-CHIP | 101K,2012,50V | C407 | 1 | SMT |
| 12 | C-CHIP | 102K,2012,50V | C408,C409,C902 | 3 | SMT |
| 13 | C-CHIP | 104Z,2012,50V | C105,C106,C01,C02,C403,C404,C410 | 7 | SMT |
| 14 | C-CHIP | 223Z,2012,50V | C901,C501,C502,C001 | 4 | SMT |
| 15 | R-CHIP | 6.8K,2012,1%,1/8W | R403 | 1 | SMT |
| 16 | R-CHIP | 1K,2012,5%,1/10W | ,R201,R202 | 2 | SMT |
| 17 | R-CHIP | 10K,2012,5%,1/10W | R03,R501,R412,R901,R301 | 5 | SMT |
| 18 | R-CHIP | 10K,2012,1%,1/10W | R414 | 1 | SMT |
| 19 | R-CHIP | 330,2012,5%,1/10W | R902,R415,R406 | 3 | SMT |
| 20 | R-CHIP | 2.2K,1/10W,5%,2012 | R01 | 1 | SMT |
| 21 | R-CHIP | 3.3K,1/10W,5%,2012 | R02 | 1 | SMT |
| 22 | R-CHIP | 4.7K,1/10W,5%, 2012 | OPTION2 | 1 | SMT |
| 23 | R-CHIP | 28.7K,1%,1/10W,2012 | OPTION1 | 1 | SMT |
| 24 | R-CHIP | 120,5%,1/4W,1206 | R903,R904,R905,R906,R907,R908,R909 | 7 | SMT |
| 25 | R-CARBON | 620,1/2W(SMALL),5% | R601 | 1 | AI |
| 26 | BUZZER | SP-D2220APP | BZ61 | 1 | MI |
| 27 | CERAMIC RESONATOR | 10MHz | X501 | 1 | MI |
| 28 | HEAT SINK | L15 W15 H25 | | 1 | MI |
| 29 | CONNECTOR | SMW250-02(RED) | CN41 | 1 | MI |
| 30 | CONNECTOR | SMW250-03(RED) | CN12 | 1 | MI |
| 31 | CONNECTOR | FCZ254-08S(BLK) | CN91 | 1 | MI |
| 32 | CONNECTOR | VH-4A(WHT) | CN11 | 1 | MI |
| 33 | CONNECTOR | VH-5A(WHT) | CN73 | 1 | MI |
| 34 | FUSE | 250V,T3.15A | F701 | 1 | MI |
| 35 | RELAY-POWER | DU1PU,16A,250V | RY71 | 1 | MI |
| 36 | RELAY-POWER | F3AA012E | RY72,RY73,RY76 | 3 | MI |
| 37 | SCREW TAPPING | PH3 L8 | | 1 | MI |
| 38 | JUMP WIRE | PH0.6,L7.5mm | J1, J2,J4--J8,J11--J15 | 12 | AI |
| 39 | JUMP WIRE | PH0.6,L10mm | J9 | 1 | AI |
| 40 | JUMP WIRE | PH0.6,L12.5mm | J10 | 1 | AI |
| 41 | PCB-MAIN | 5KFR-1,63*113*1.6MM | 30522A4 | 1 | |
| 42 | IC | KA75330Z | IC05 | 1 | AI |
| 43 | CHIP-MCU | KS88C4716 | IC04 | 1 | SMT |
| 44 | LED DISPLAY | CSE-42202G | LED01 | 1 | MI |
| 45 | REMOCON | FRP-4021H10 | RM41 | 1 | MI |
| 46 | FUSE HOLDER | HF-004/J | F701 | 2 | MI |

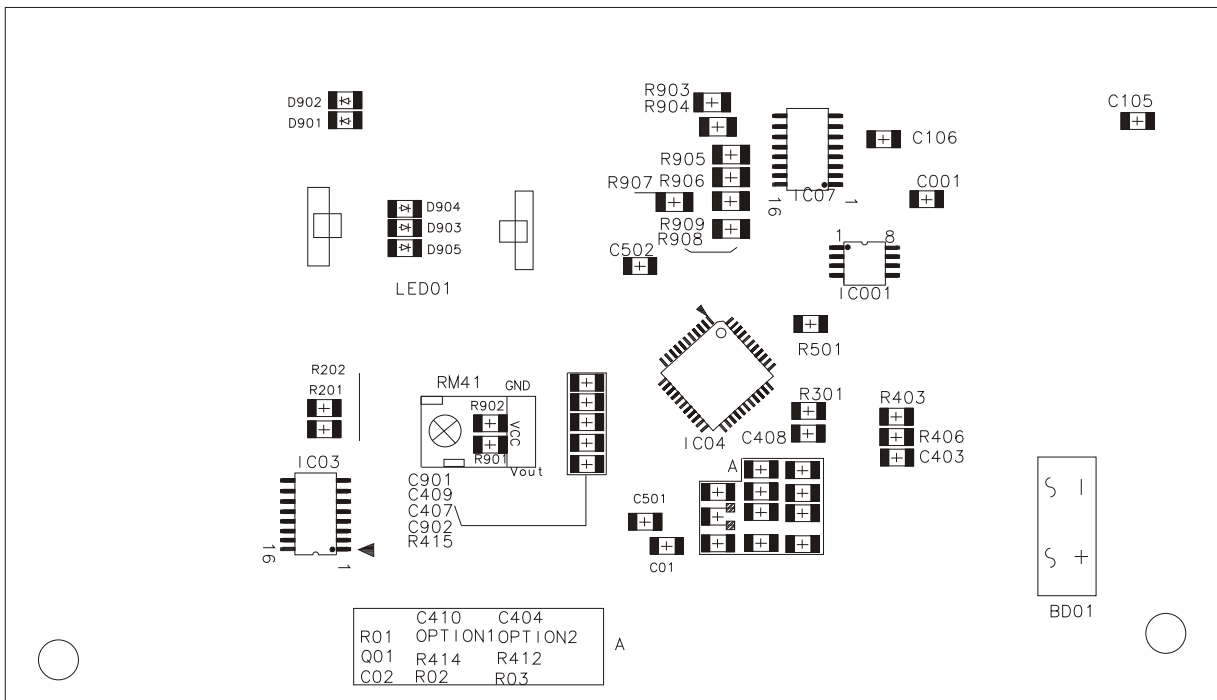
8. PCB Diagram

ASSY MAIN PCB:DB93-02478

FRONT SIDE



BACK SIDE

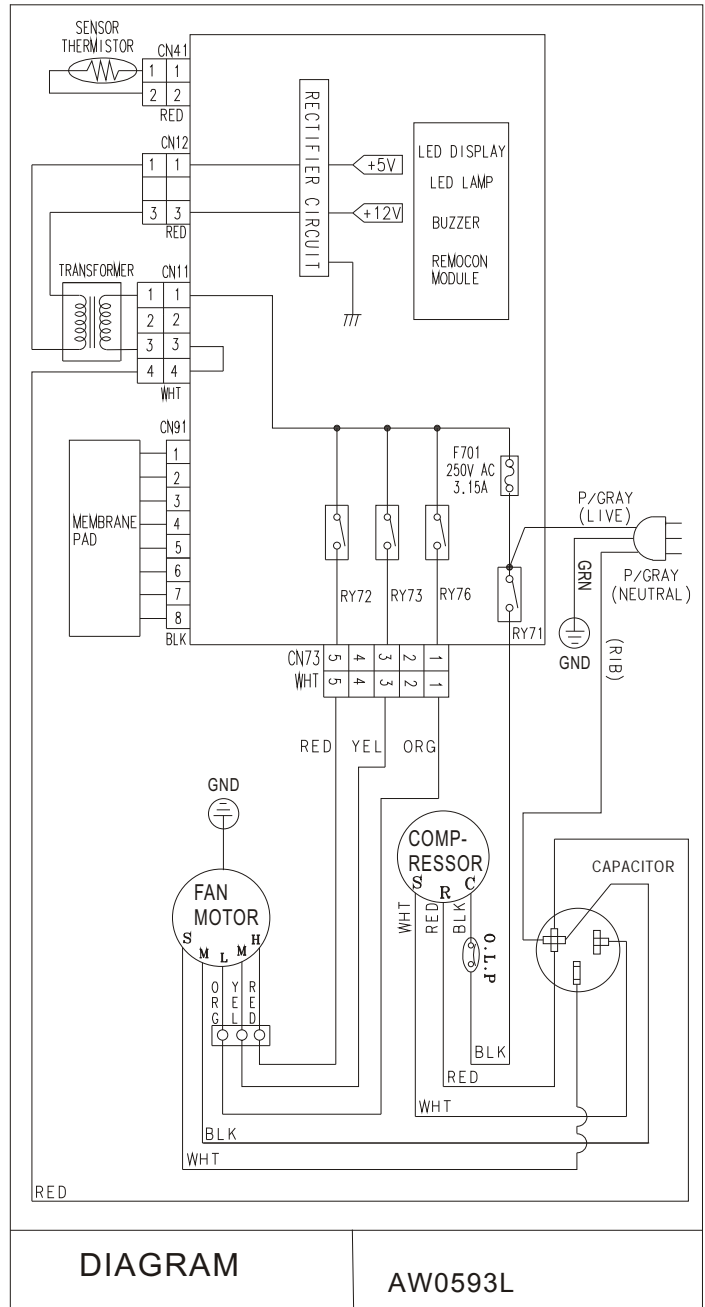


PART LIST

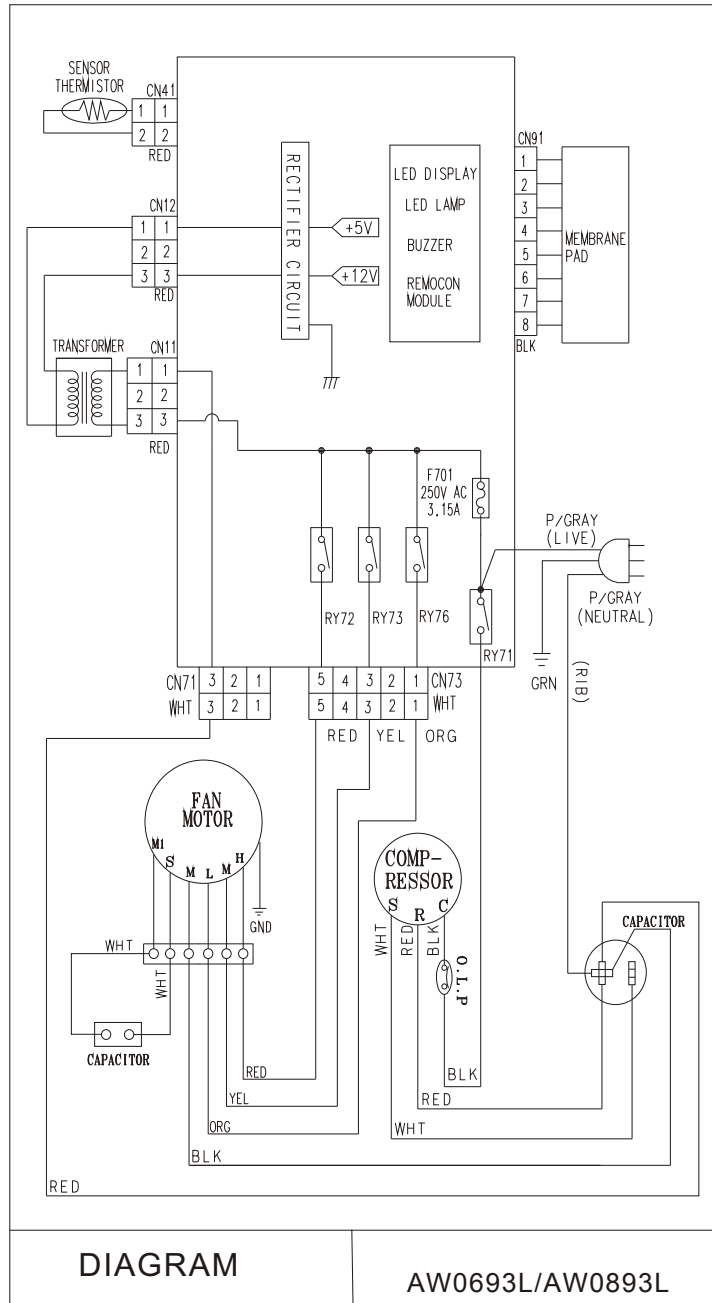
ASSY MAIN PCB: DB93-02478C

| NO. | DESCRIPTION | SPEC | REMARK | QTY | INSTALL |
|-----|-----------------------|---------------------|------------------------------------|-----|---------|
| 1 | IC | ULN2003AD | IC03,IC07 | 2 | SMT |
| 2 | DIODE-BRIDGE(CHIP) | DF06S | BD01 | 1 | SMT |
| 3 | DIODE-SWITCHING(CHIP) | LL4148 | D901-----D905 | 5 | SMT |
| 4 | DIODE | UF4002 100V/1A | D01 | 1 | MI |
| 5 | TRI-DIODE-CHIP | 2SC2412K | Q01 | 1 | SMT |
| 6 | REGULATOR | KA7805 | IC02 | 1 | MI |
| 7 | REGULATOR | KA7812 | IC01 | 1 | MI |
| 8 | C-AL | CD110X,10V,100uF | C103 | 1 | AI |
| 9 | C-AL | CD110X,35V,1000uF | C101 | 1 | MI |
| 10 | C-AL | CD110X,25V,2200uF | C102 | 1 | MI |
| 11 | C-CHIP | 101K,2012,50V | C407 | 1 | SMT |
| 12 | C-CHIP | 102K,2012,50V | C408,C409,C902 | 3 | SMT |
| 13 | C-CHIP | 104Z,2012,50V | C105,C106,C01,C02,C403,C404,C410 | 7 | SMT |
| 14 | C-CHIP | 223Z,2012,50V | C901,C501,C502,C001 | 4 | SMT |
| 15 | R-CHIP | 6.8K,2012,1%,1/8W | R403 | 1 | SMT |
| 16 | R-CHIP | 1K,2012,5%,1/10W | R201,R202 | 2 | SMT |
| 17 | R-CHIP | 10K,2012,5%,1/10W | R03,R501,R412,R901,R301, | 5 | SMT |
| 18 | R-CHIP | 10K,2012,1%,1/10W | R414 | 1 | SMT |
| 19 | R-CHIP | 330,2012,5%,1/10W | R902,R415,R406 | 3 | SMT |
| 20 | R-CHIP | 2.2K,1/10W,5%,2012 | R01 | 1 | SMT |
| 21 | R-CHIP | 3.3K,1/10W,5%,2012 | R02 | 1 | SMT |
| 22 | R-CHIP | 4.7K,1/10W,5%,2012 | OPTION2 | 1 | SMT |
| 23 | R-CHIP | 28.7K,1%,1/10W,2012 | OPTION1 | 1 | SMT |
| 24 | R-CHIP | 120,5%,1/4W,1206 | R903,R904,R905,R906,R907,R908,R909 | 7 | SMT |
| 25 | R-CARBON | 620,1/2W(SMALL),5% | R601 | 1 | AI |
| 26 | BUZZER | SP-D2220APP | BZ61 | 1 | MI |
| 27 | CERAMIC RESONATOR | 10MHz | X501 | 1 | MI |
| 28 | HEAT SINK | L15 W15 H25 | | 1 | MI |
| 29 | CONNECTOR | SMW250-02(RED) | CN41 | 1 | MI |
| 30 | CONNECTOR | SMW250-03(RED) | CN12 | 1 | MI |
| 31 | CONNECTOR | FCZ254-08S(BLK) | CN91 | 1 | MI |
| 32 | CONNECTOR | VH-3A(RED) | CN11 | 1 | MI |
| 33 | CONNECTOR | VH-5A(WHT) | CN73 | 1 | MI |
| 34 | FUSE | 250V,T3.15A | F701 | 1 | MI |
| 35 | RELAY-POWER | DI1U 12VDC | RY71 | 1 | MI |
| 36 | RELAY-POWER | OJ-SS-112DM (5A) | RY72,RY73,RY76 | 3 | MI |
| 37 | SCREW TAPPING | PH3 L8 | | 1 | MI |
| 38 | JUMP WIRE | PH0.6,L7.5mm | J1, J2,J4--J9,J11--J14 | 12 | AI |
| 39 | JUMP WIRE | PH0.6,L10mm | J10 | 1 | AI |
| 40 | PCB-MAIN | FR-1,63*113*1.6MM | 30522B4 | 1 | MI |
| 41 | IC | KA75330Z | IC05 | 1 | AI |
| 42 | CHIP-MCU | KS88C4716 | IC04 | 1 | SMT |
| 43 | LED DISPLAY | CSE-42202G | LED01 | 1 | MI |
| 44 | REMOCON | FRP-4021H10 | RM41 | 1 | MI |
| 45 | FUSE HOLDER | HF-004/J | F701 | 2 | MI |

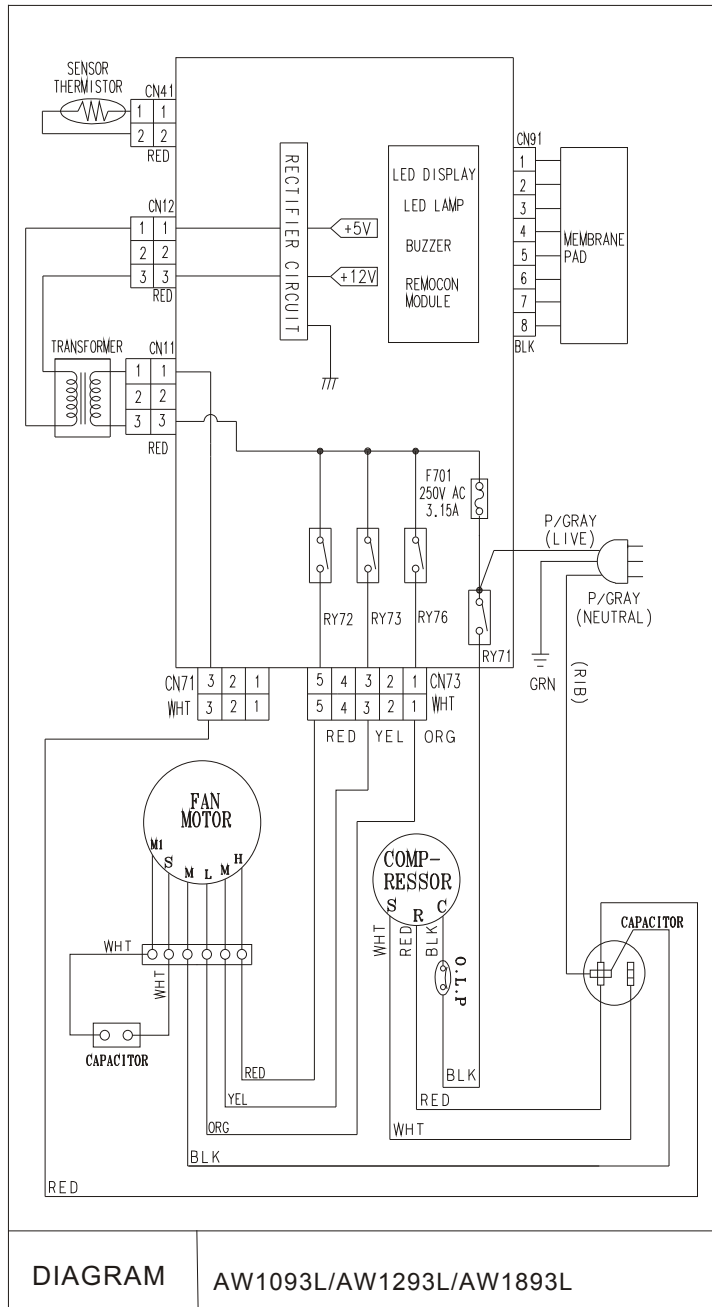
9. Wiring Diagram



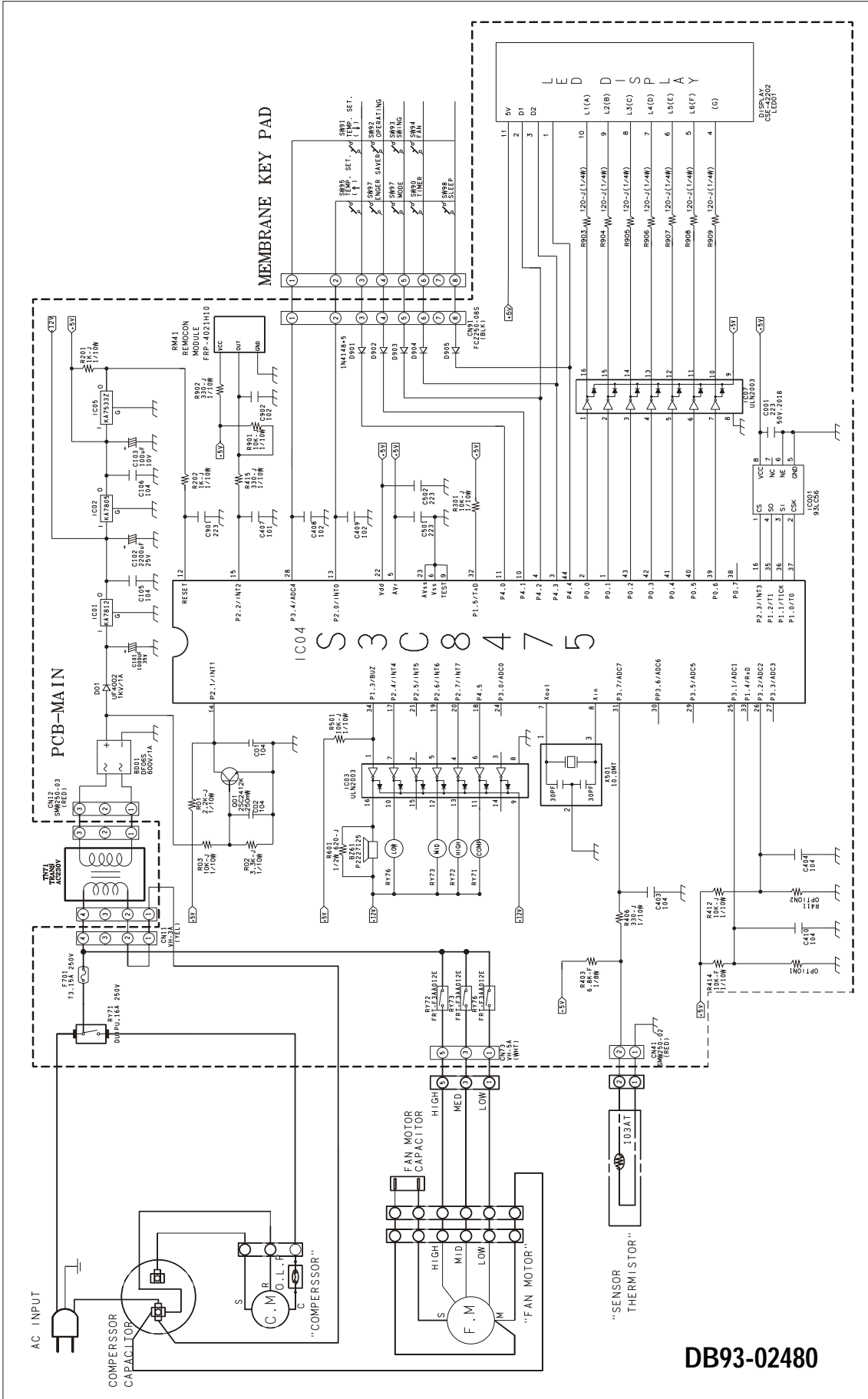
9. Wiring Diagram



9. Wiring Diagram

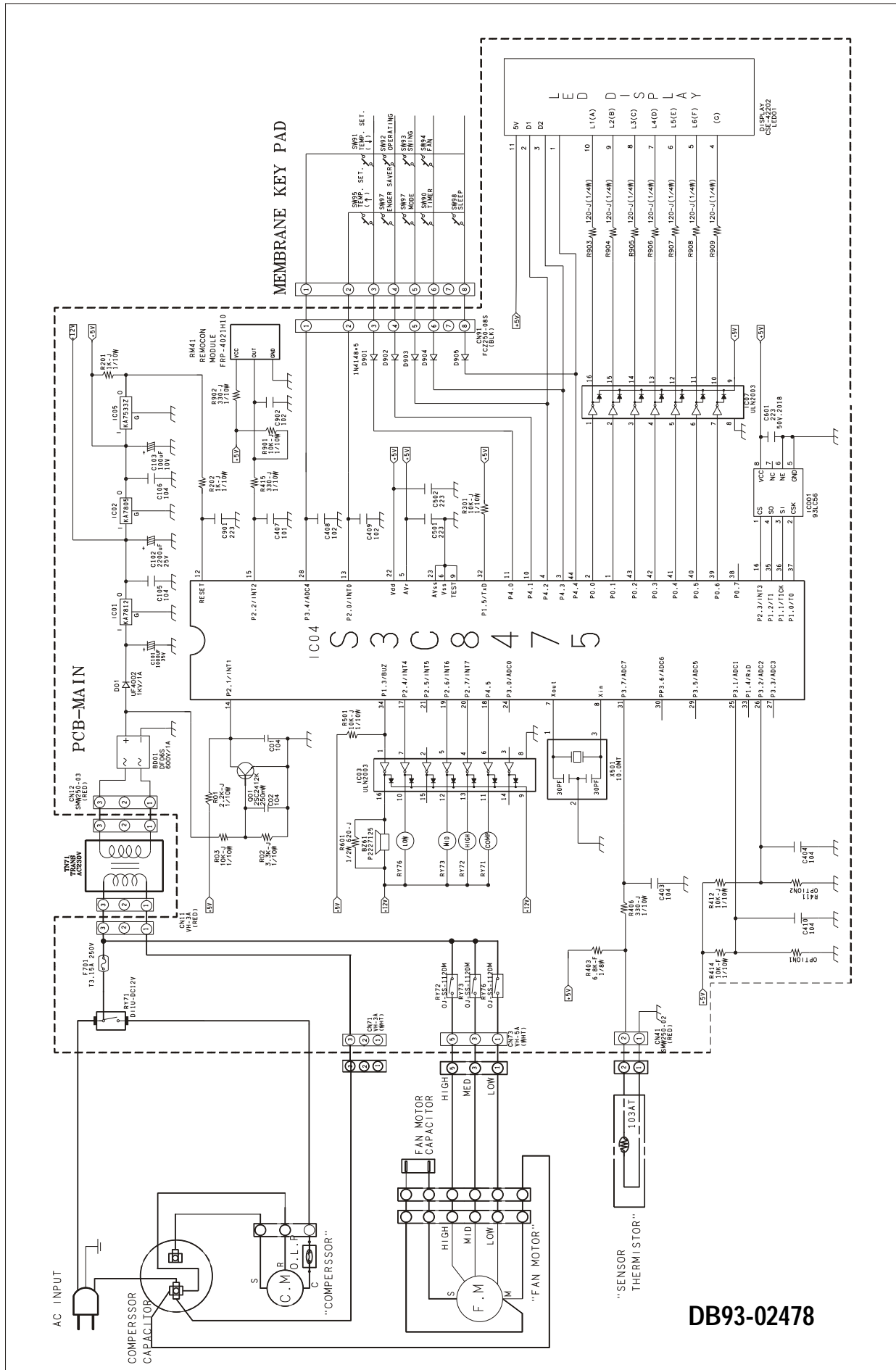


10. Schematic Diagrams



DB93-02480

10. Schematic Diagrams



DB93-02478

