

# SERVICE MANUAL



### Models

Indoor unit      Outdoor unit

RSM-12FA — ROM-24FA2

RCM-12FA — ROM-24FA2

RSM-12FA } ROM-24FA2

RCM-12FA }

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# SPECIFICATIONS

| TYPE                  | COOL      |              |           |              |
|-----------------------|-----------|--------------|-----------|--------------|
| INDOOR UNIT           | RSM-12FA  | RSM-12FA x 2 | RCM-12FA  | RCM-12FA x 2 |
| OUTDOOR UNIT          | ROM-24FA2 |              | ROM-24FA2 |              |
| COOLING CAPACITY (kW) | 3.50      | 7.00         | 3.50      | 7.00         |

## ELECTRICAL DATA

|                            |      |                     |      |                     |
|----------------------------|------|---------------------|------|---------------------|
| POWER SOURCE (V)           | 230  |                     |      |                     |
| FREQUENCY (Hz)             | 50   |                     |      |                     |
| RUNNING CURRENT (A)        | 5.9  | 11.5                | 5.9  | 11.5                |
| INPUT WATTS (kW)           | 1.34 | 2.58                | 1.34 | 2.58                |
| E.E.R. (kW/kW)             | 2.61 | 2.71                | 2.61 | 2.71                |
| MOISTURE REMOVAL (ℓ /hr)   | 1.3  | 2.6                 | 1.3  | 2.6                 |
| AIR CIRCULATION-Hi (m³/hr) | 520  | 3000 (Outdoor Unit) | 550  | 3000 (Outdoor Unit) |

## COMPRESSOR

|                       |                                                                                            |  |  |
|-----------------------|--------------------------------------------------------------------------------------------|--|--|
| TYPE                  | Hermetic type, Permanent split condenser,<br>2 pole, Single phase, Induction motor, Rotary |  |  |
| DISCRIMINATION        | 802 354 35B                                                                                |  |  |
| POWER SOURCE          | 230V - 50Hz                                                                                |  |  |
| REFRIGERANT R410A (g) | 800 x 2                                                                                    |  |  |

## FAN MOTOR

|                       |                    |       |      |
|-----------------------|--------------------|-------|------|
| POWER SOURCE (V)      | 230                |       |      |
| INDOOR UNIT           | HI-SPEED (r.p.m.)  | 1,310 | 760  |
|                       | MED-SPEED (r.p.m.) | 1,230 | 690  |
|                       | LO-SPEED (r.p.m.)  | 1,150 | 610  |
|                       | QUIET (r.p.m.)     | 1,080 | ---- |
| OUTDOOR UNIT (r.p.m.) | 730                |       |      |

## DIMENSIONS

|                             |                 |                      |
|-----------------------------|-----------------|----------------------|
| INDOOR UNIT H x W x D (mm)  | 257 x 808 x 187 | 235 x 580 x 580 + 70 |
| OUTDOOR UNIT H x W x D (mm) | 700 x 900 x 350 |                      |

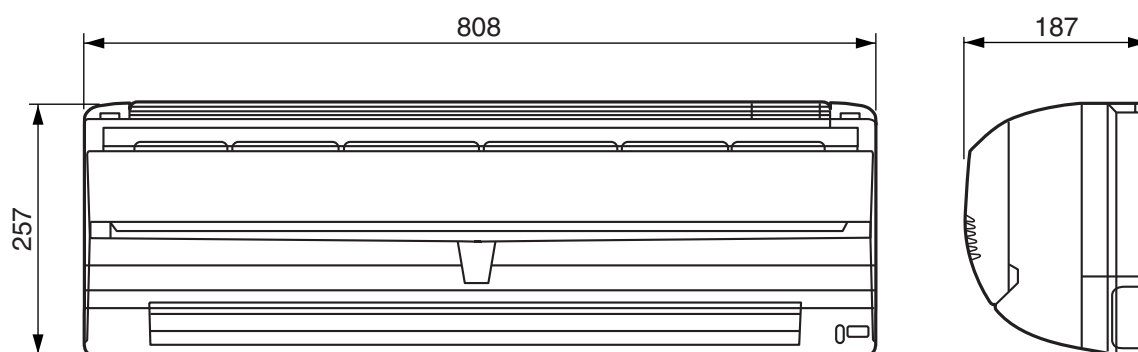
## WEIGHT

|                               |         |         |
|-------------------------------|---------|---------|
| INDOOR UNIT GROSS / NET (kg)  | 10 / 8  | 23 / 18 |
| OUTDOOR UNIT GROSS / NET (kg) | 76 / 69 |         |

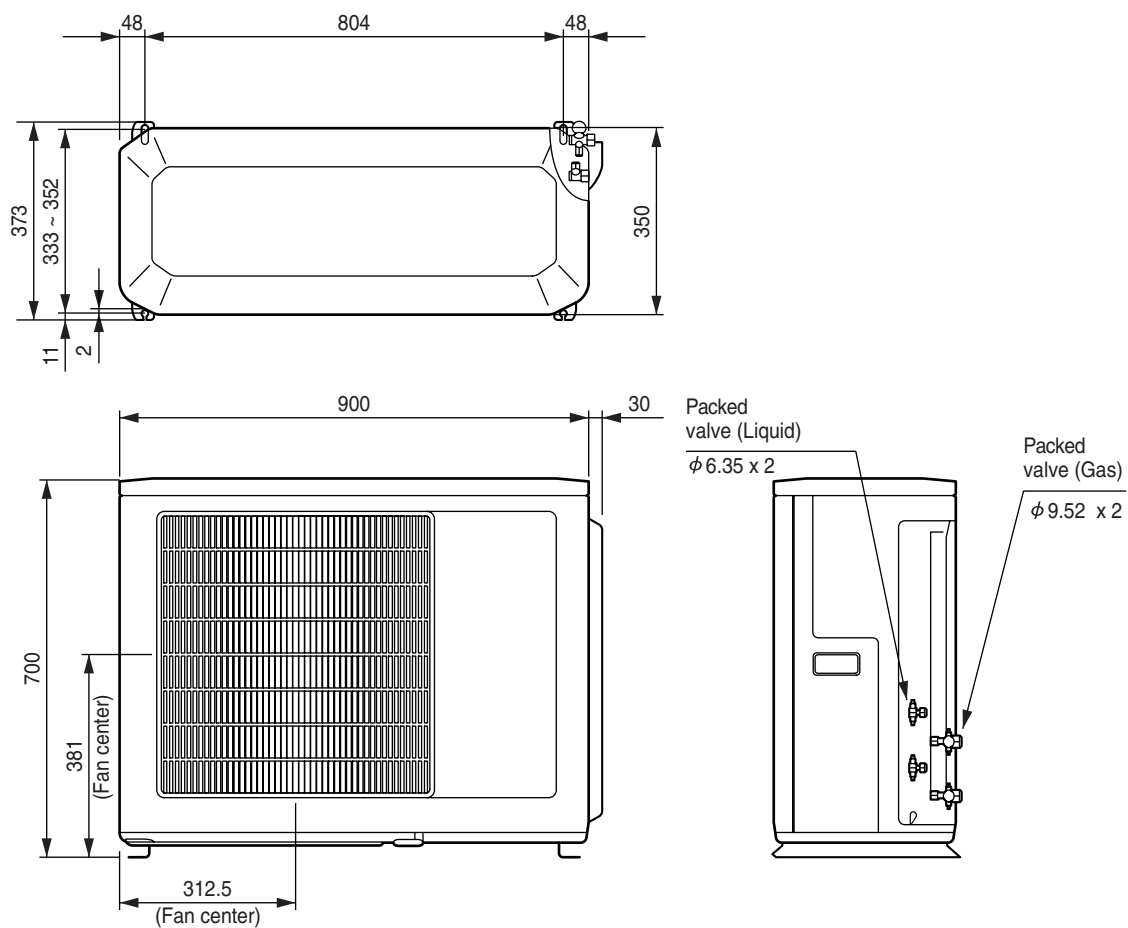
# OUTLINE AND DIMENSIONS

## INDOOR UNIT (Wall Mounted type)

(Unit : mm)

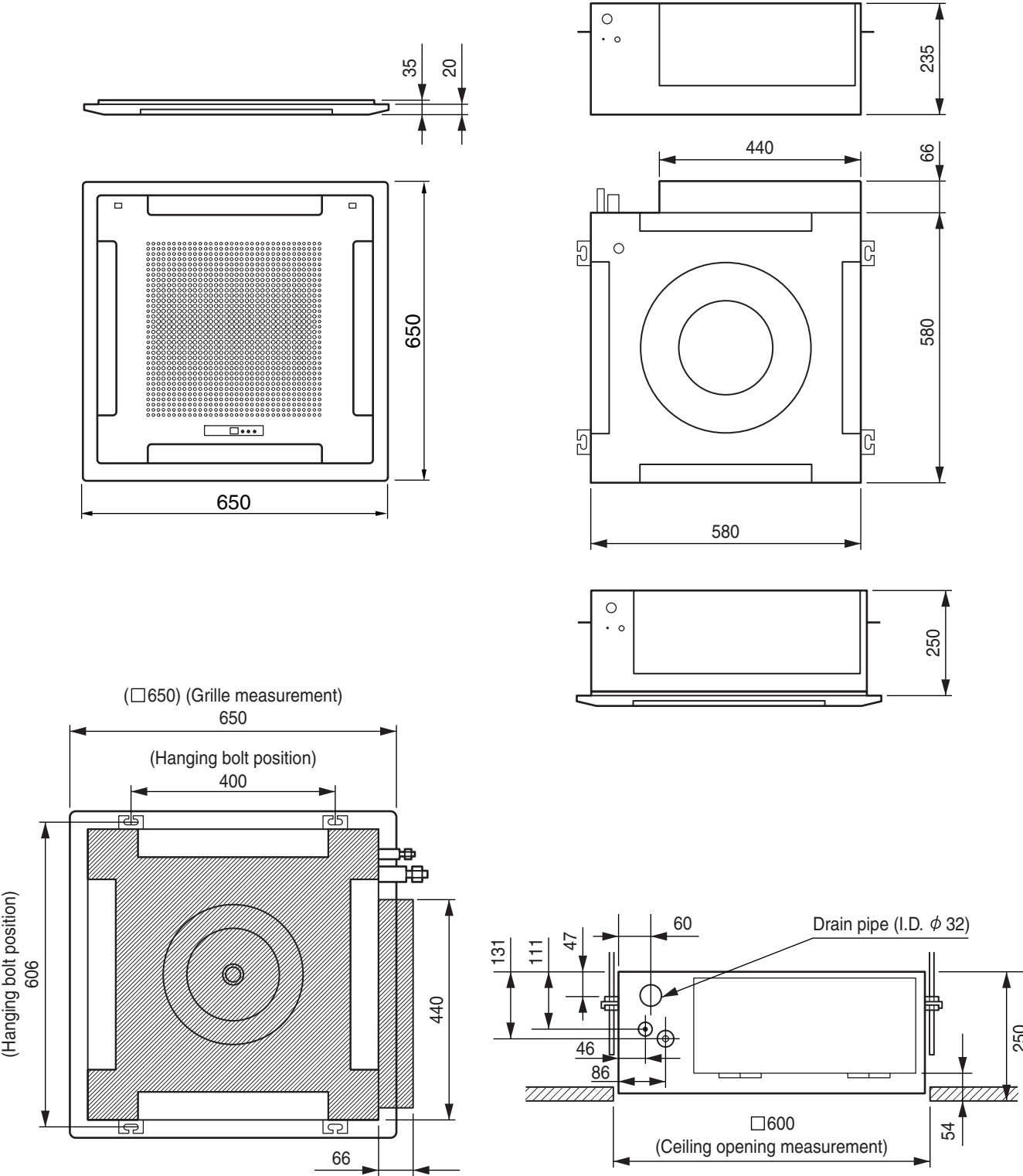


## OUTDOOR UNIT

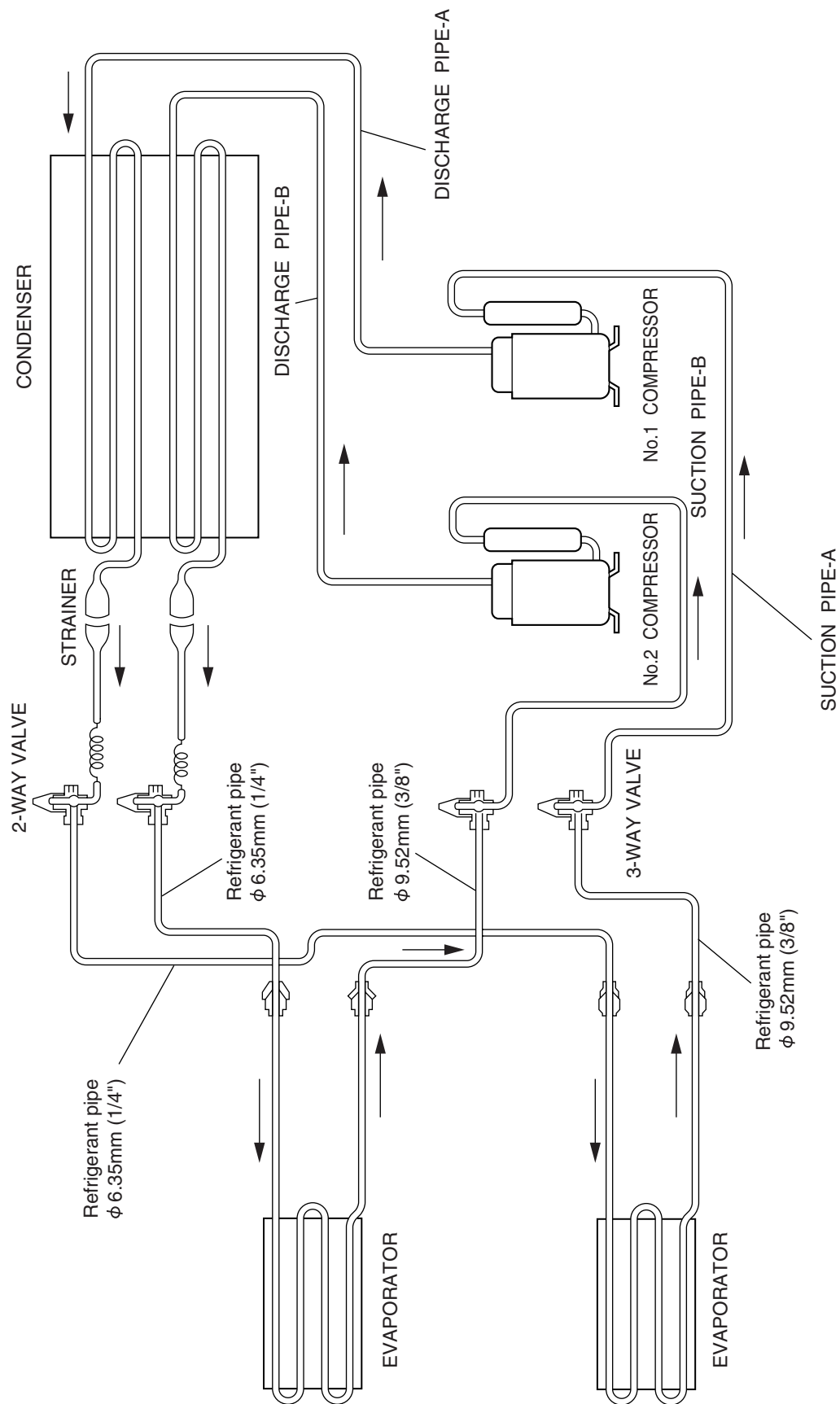


INDOOR UNIT ( Cassette type )

(unit : mm)



# REFRIGERANT SYSTEM DIAGRAM



# ERROR CONTENTS

## 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<br>Green lamp | ● (2 times)<br>○ | thermistor error (room temp.)     | Red lamp<br>Green lamp | ○<br>● (2 times) |
|                                      |                        |                  | thermistor error (heat exchanger) | Red lamp<br>Green lamp | ○<br>● (3 times) |
| control unit error<br>(indoor unit ) | Red lamp<br>Green lamp | ● (4 times)<br>○ | MANUAL AUTO button error          | Red lamp<br>Green lamp | ○<br>● (2 times) |
|                                      |                        |                  | power source Hz decision error    | Red lamp<br>Green lamp | ○<br>● (4 times) |
| fan motor error<br>(indoor unit)     | Red lamp<br>Green lamp | ● (6 times)<br>○ | lock error                        | Red lamp<br>Green lamp | ○<br>● (2 times) |
|                                      |                        |                  | r.p.m error                       | Red lamp<br>Green lamp | ○<br>● (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.

## INDOOR UNIT (CASSETTE TYPE)

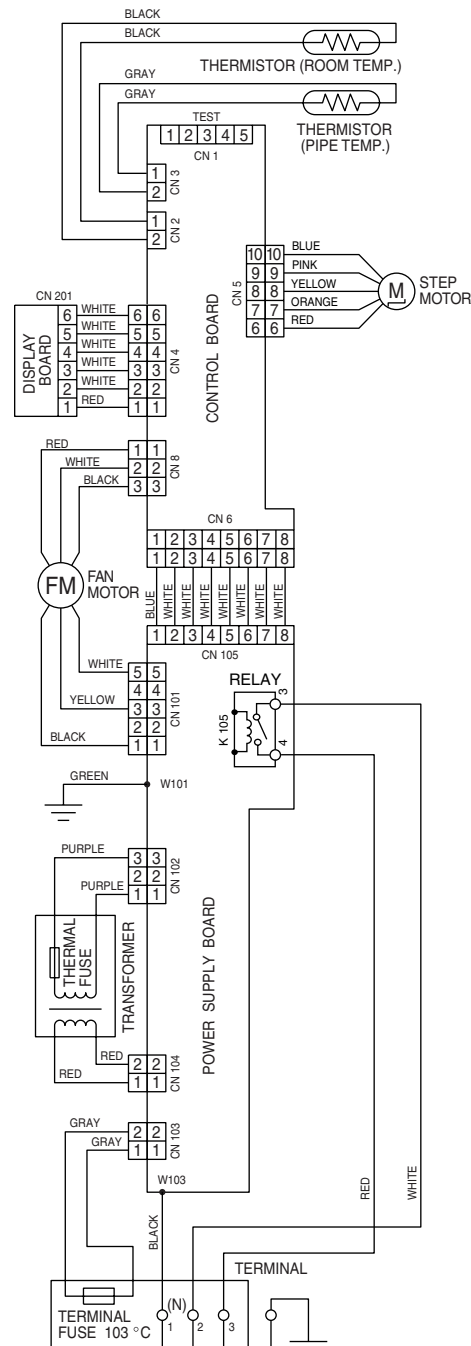
○ : Fast flashing      ● : Slow flashing

| Error display  |            |            | Error contents                                   |
|----------------|------------|------------|--------------------------------------------------|
| OPERATION lamp | TIMER lamp | SWING lamp |                                                  |
| ○              | ○          | Goes off   | Model information abnormal<br>(permanent type)   |
| ●<br>4 times   | ○          | Goes off   | Drain abnormal<br>(permanent type)               |
| ●<br>6 times   | ○          | Goes off   | Indoor fan abnormal                              |
| ●<br>2 times   | ○          | Goes off   | Room air temperature<br>thermistor open circuit  |
|                |            | ○          | Room air temperature<br>thermistor short circuit |
| ●<br>3 times   | ○          | Goes off   | Piping thermistor open circuit                   |
|                |            | ○          | Piping thermistor short circuit                  |

## CIRCUIT DIAGRAM

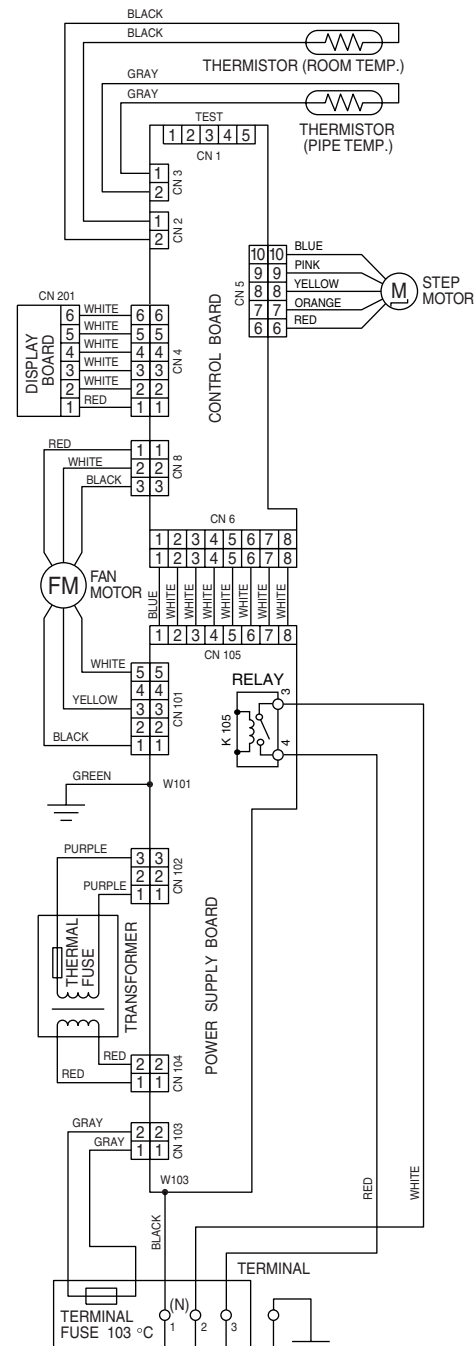
## INDOOR UNIT

### Wall Mounted type



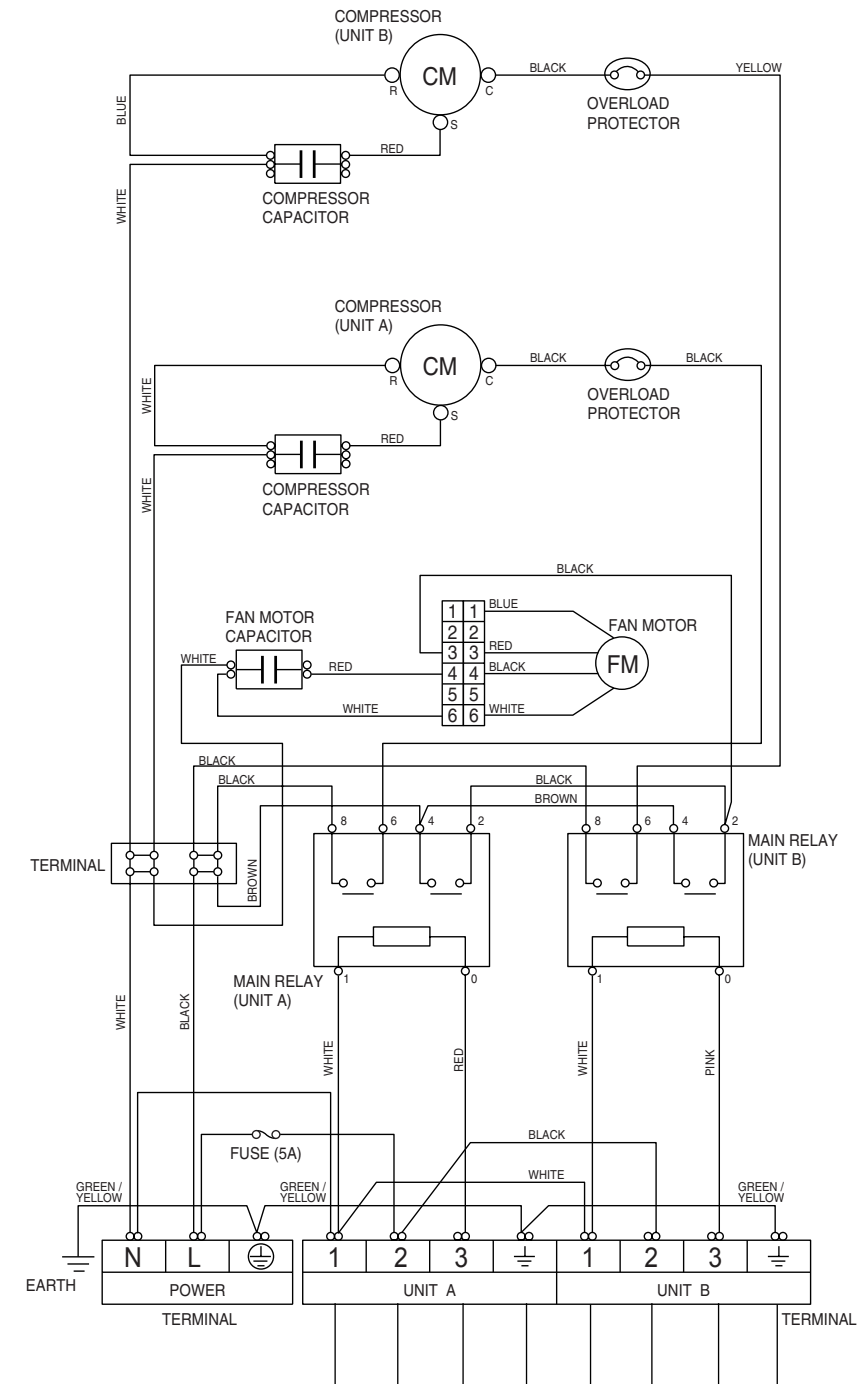
## UNIT A

### Wall Mounted type



## UNIT B

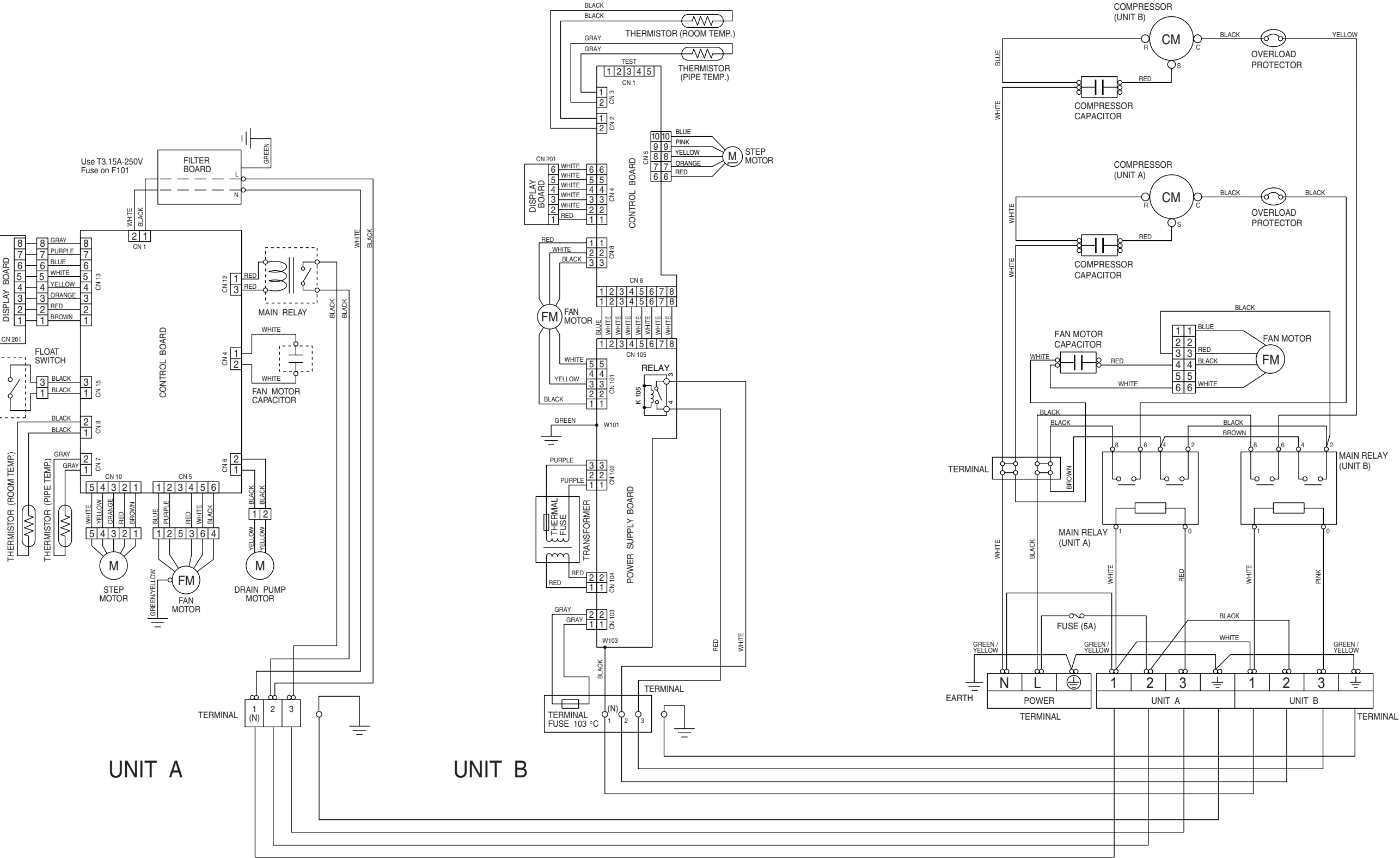
## OUTDOOR UNIT



Models : RSM-12FA  
RCM-12FA  
ROM-24FA2

INDOOR UNIT

OUTDOOR UNIT



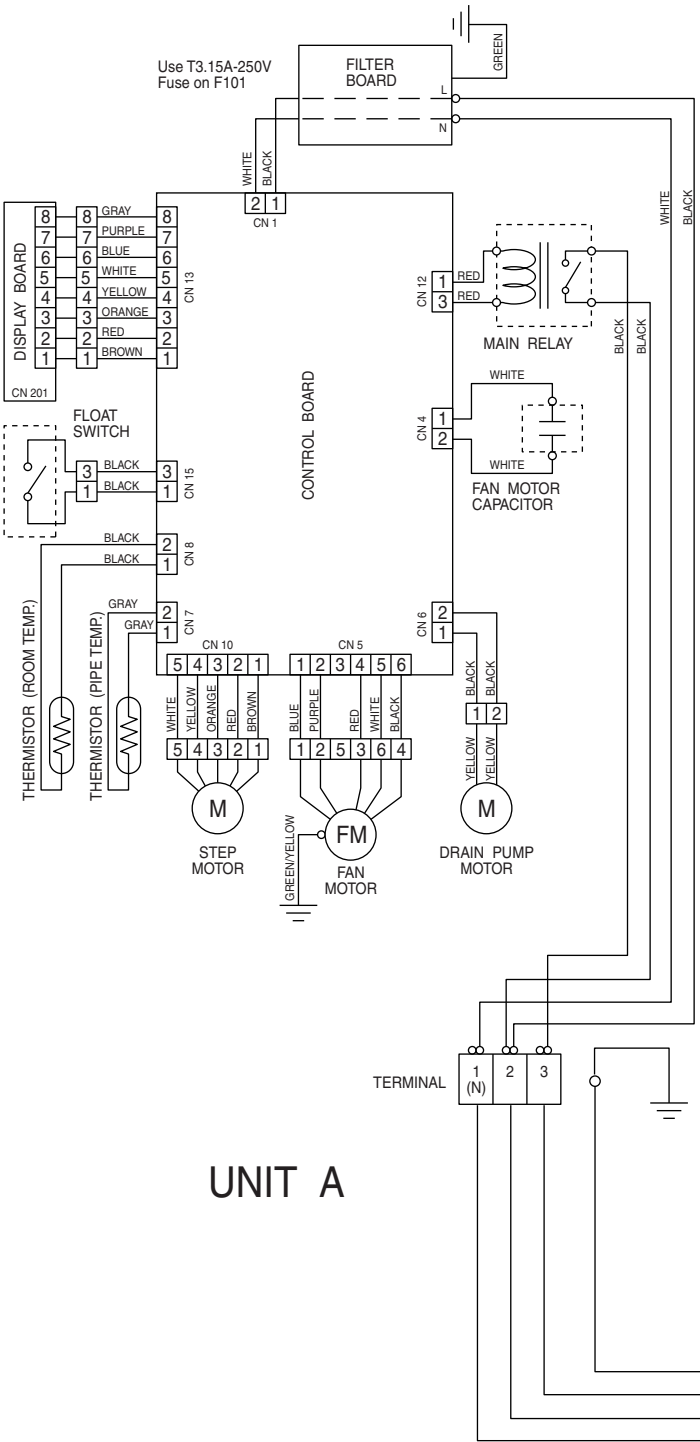


INDOOR UNIT

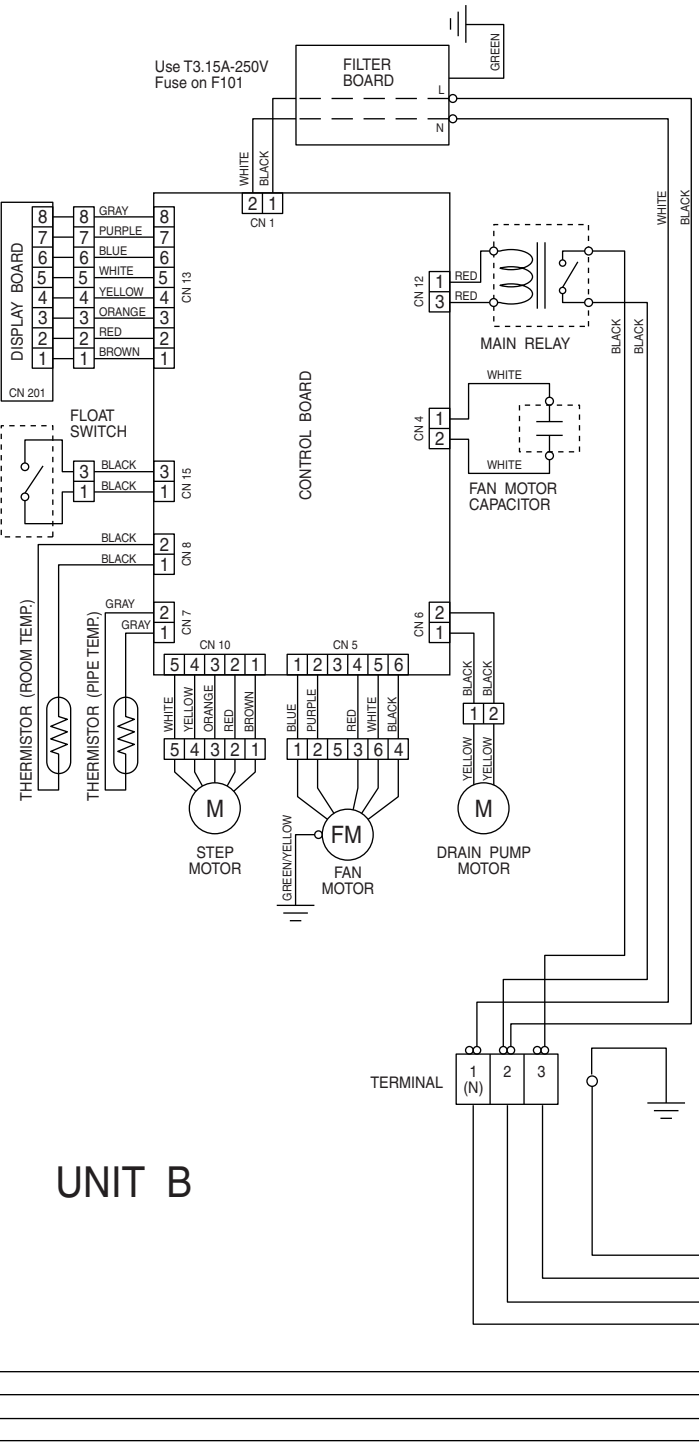
OUTDOOR UNIT

Cassette type

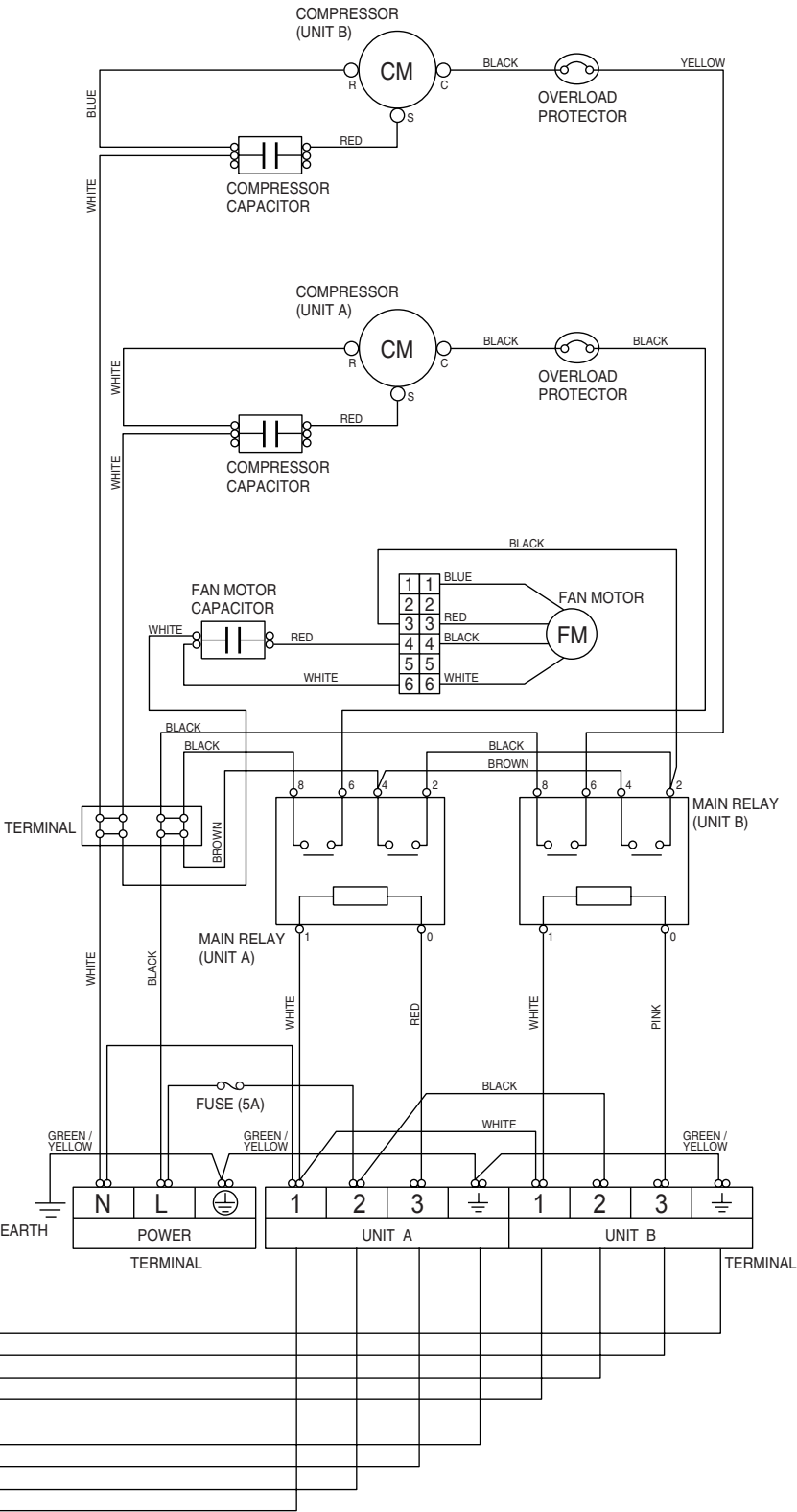
Cassette type



UNIT A

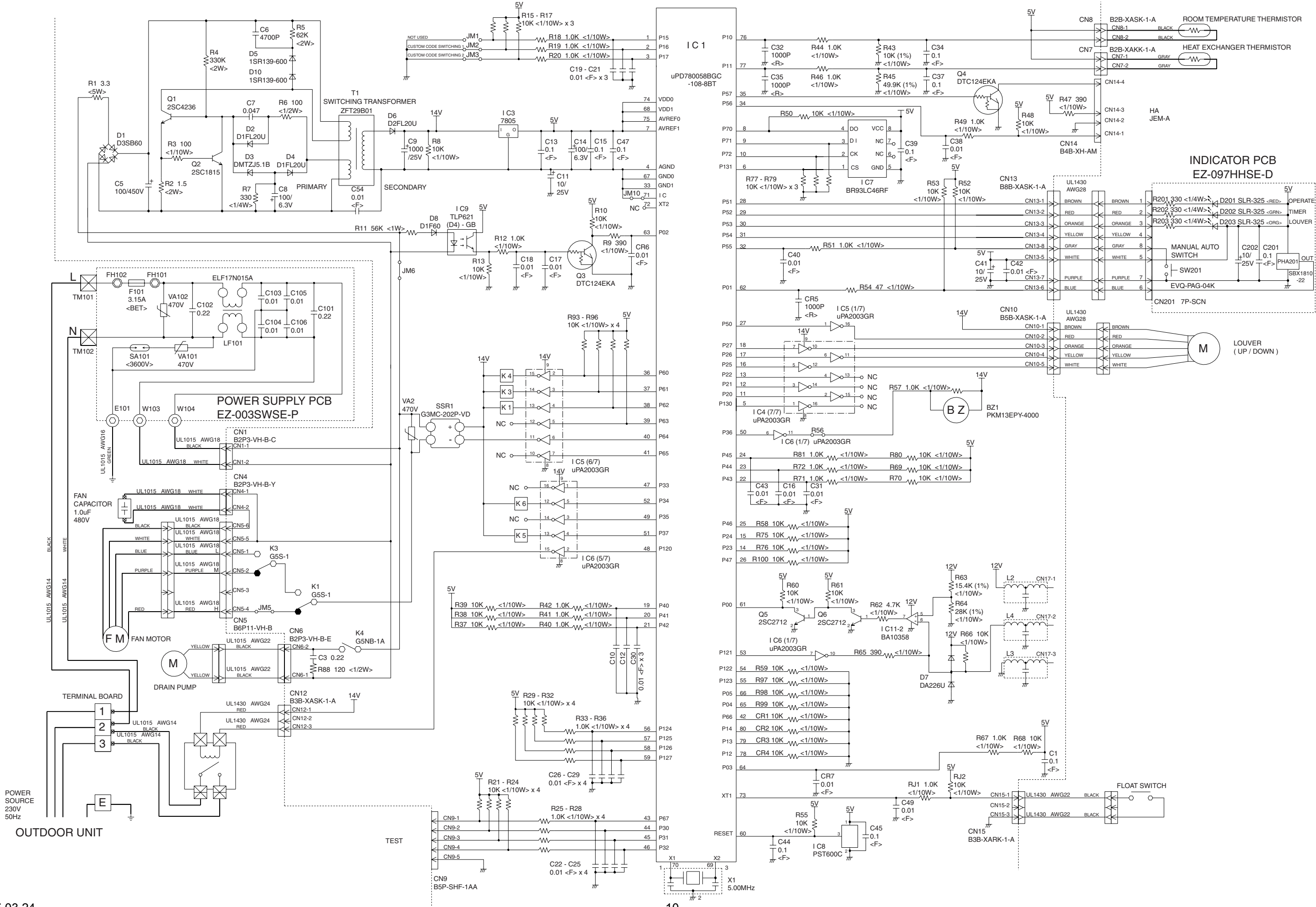


UNIT B



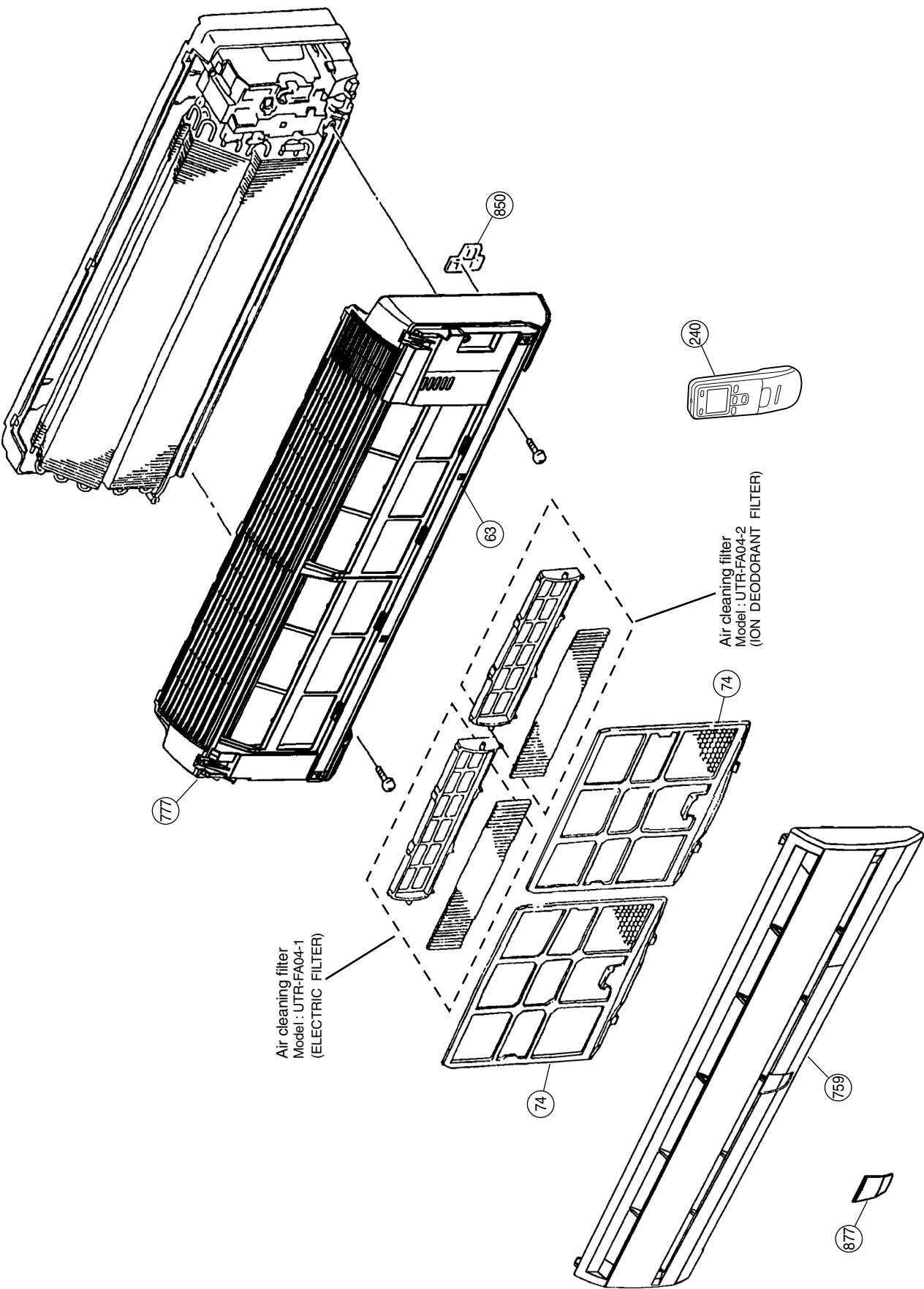
## Model : RSM-12FA

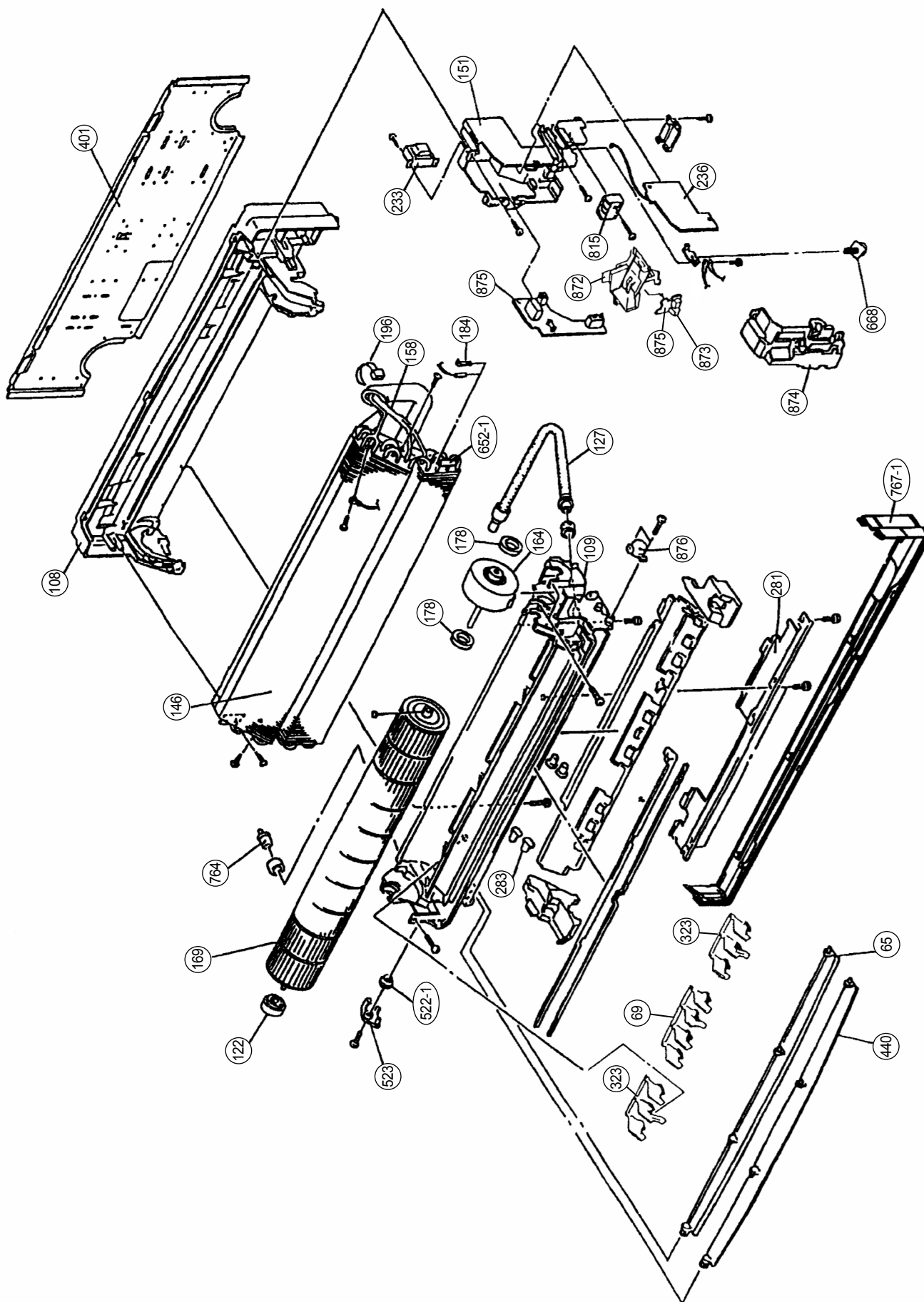
CONTROLLER PCB ASSEMBLY ( MAIN PCB )  
K01AL-040FWSE-C1



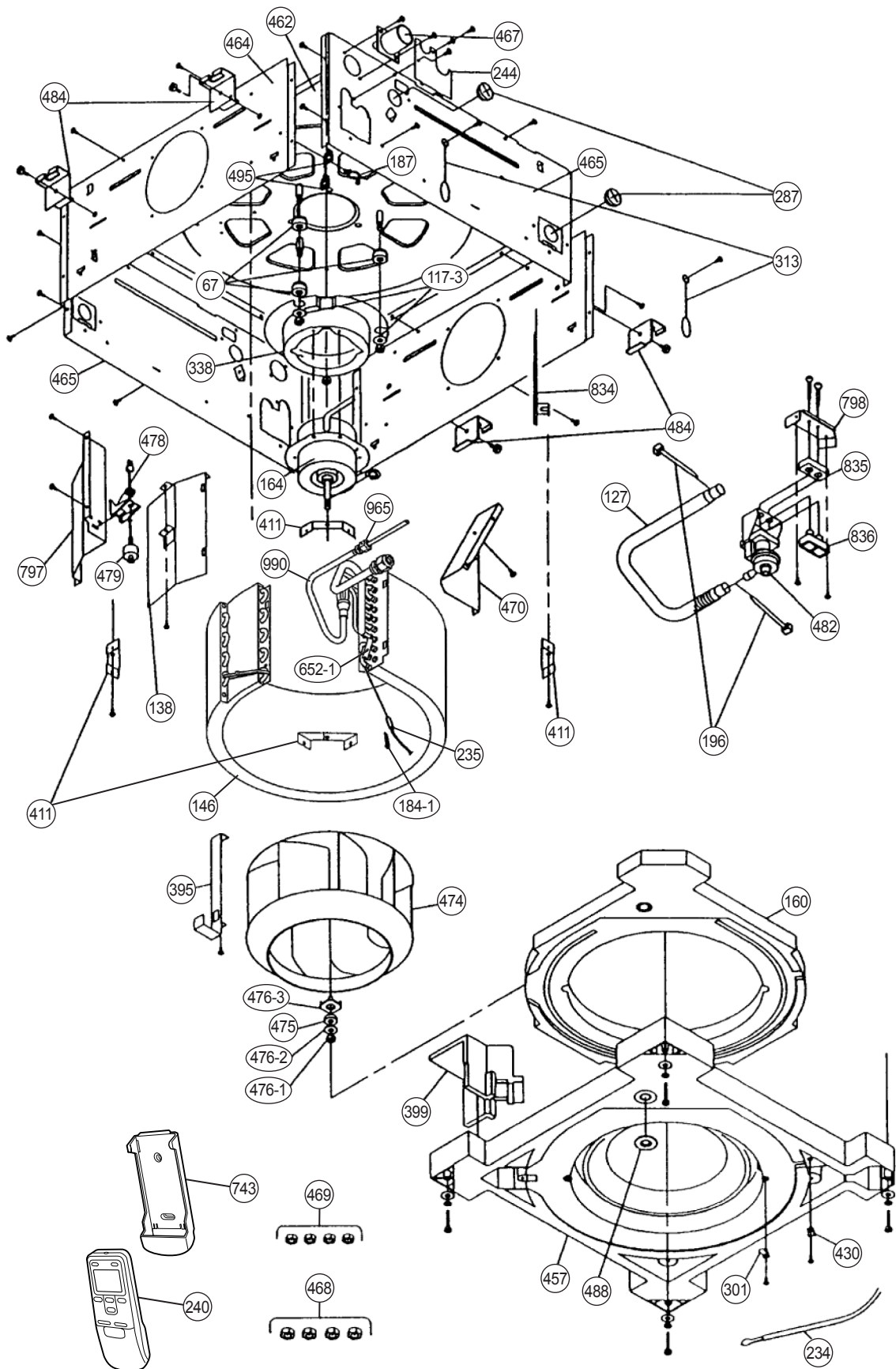
# DISASSEMBLY ILLUSTRATION

Model : RSM-12FA

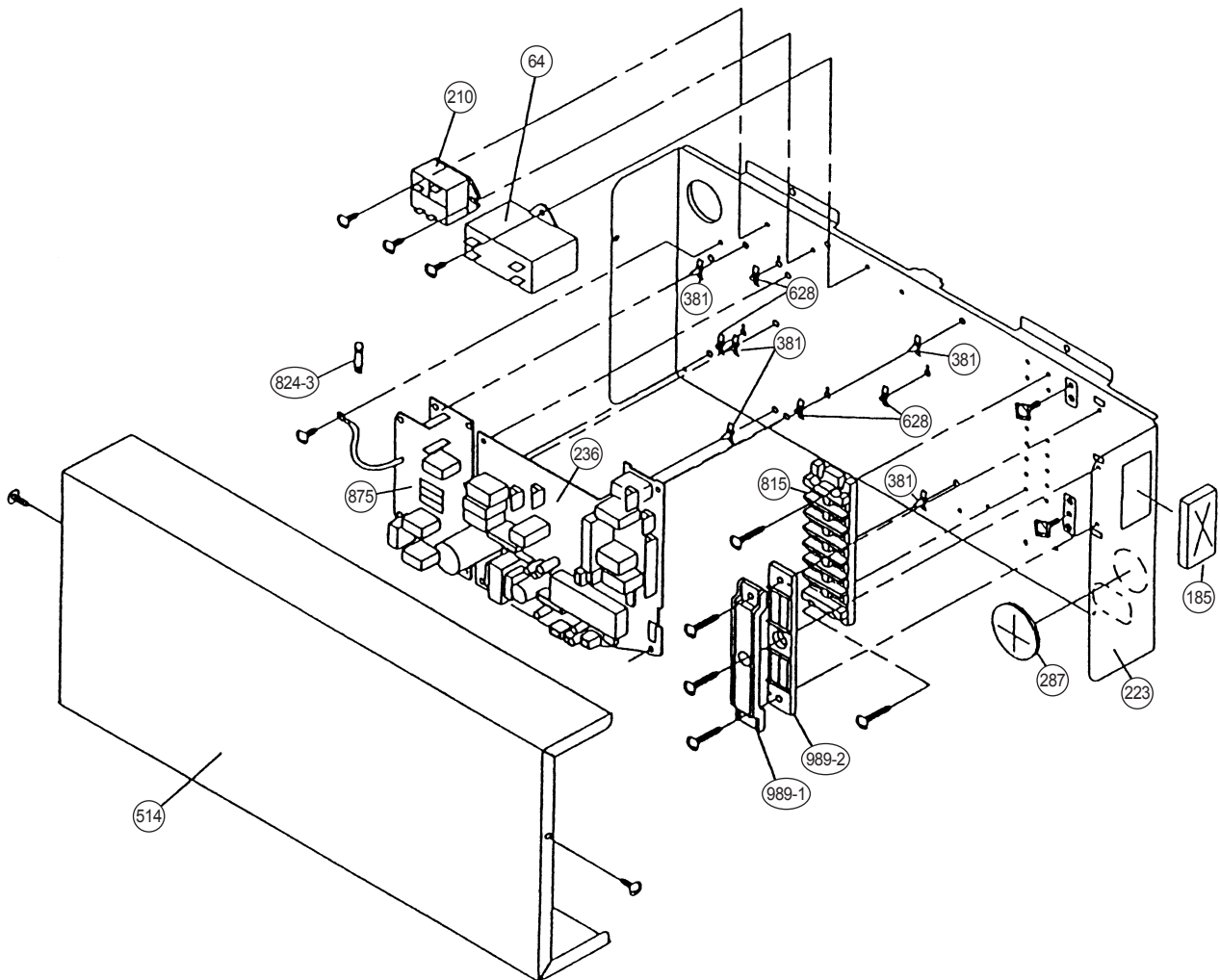




**Model : RCM-12FA**

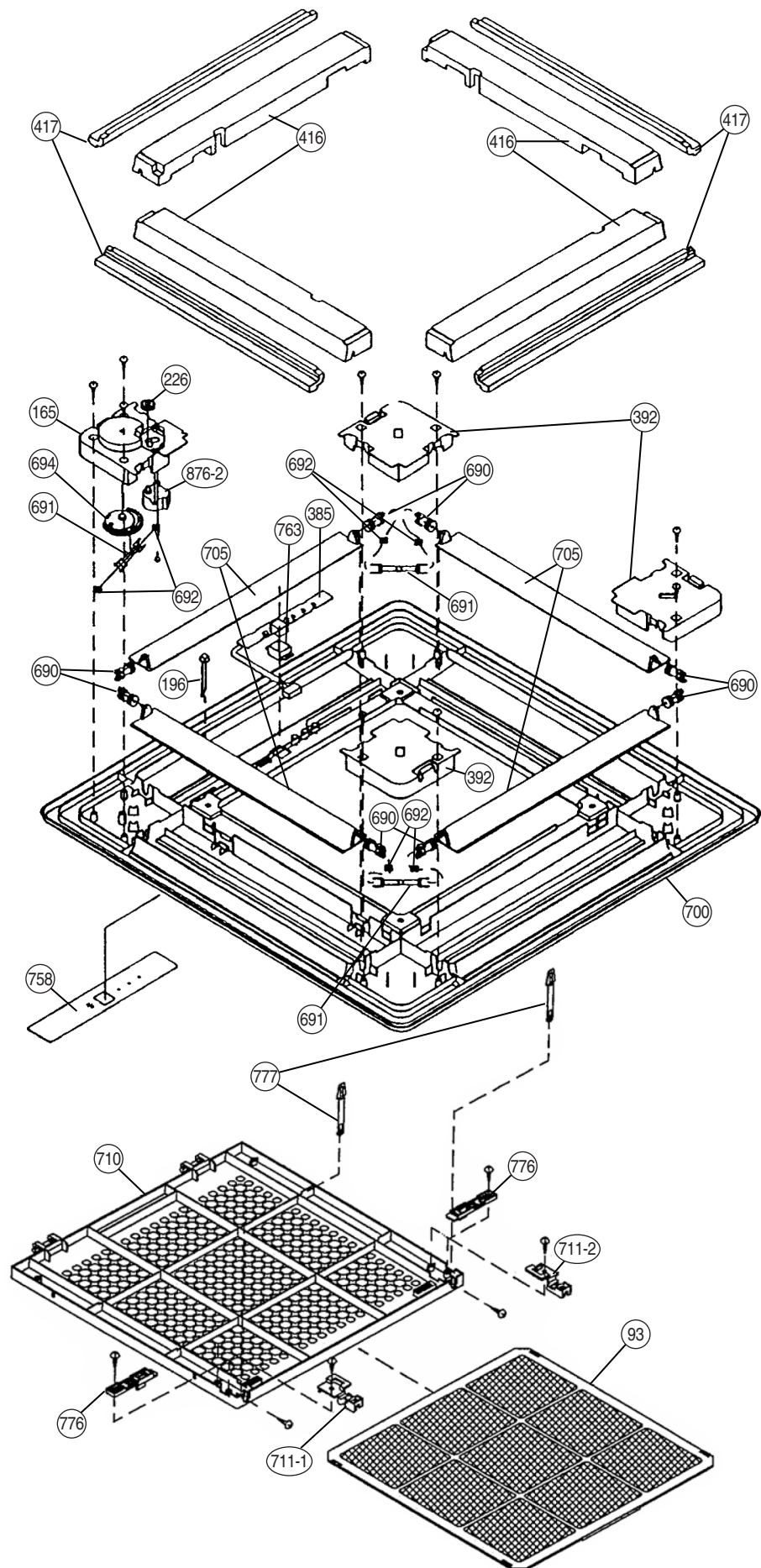


**Model : RCM-12FA**

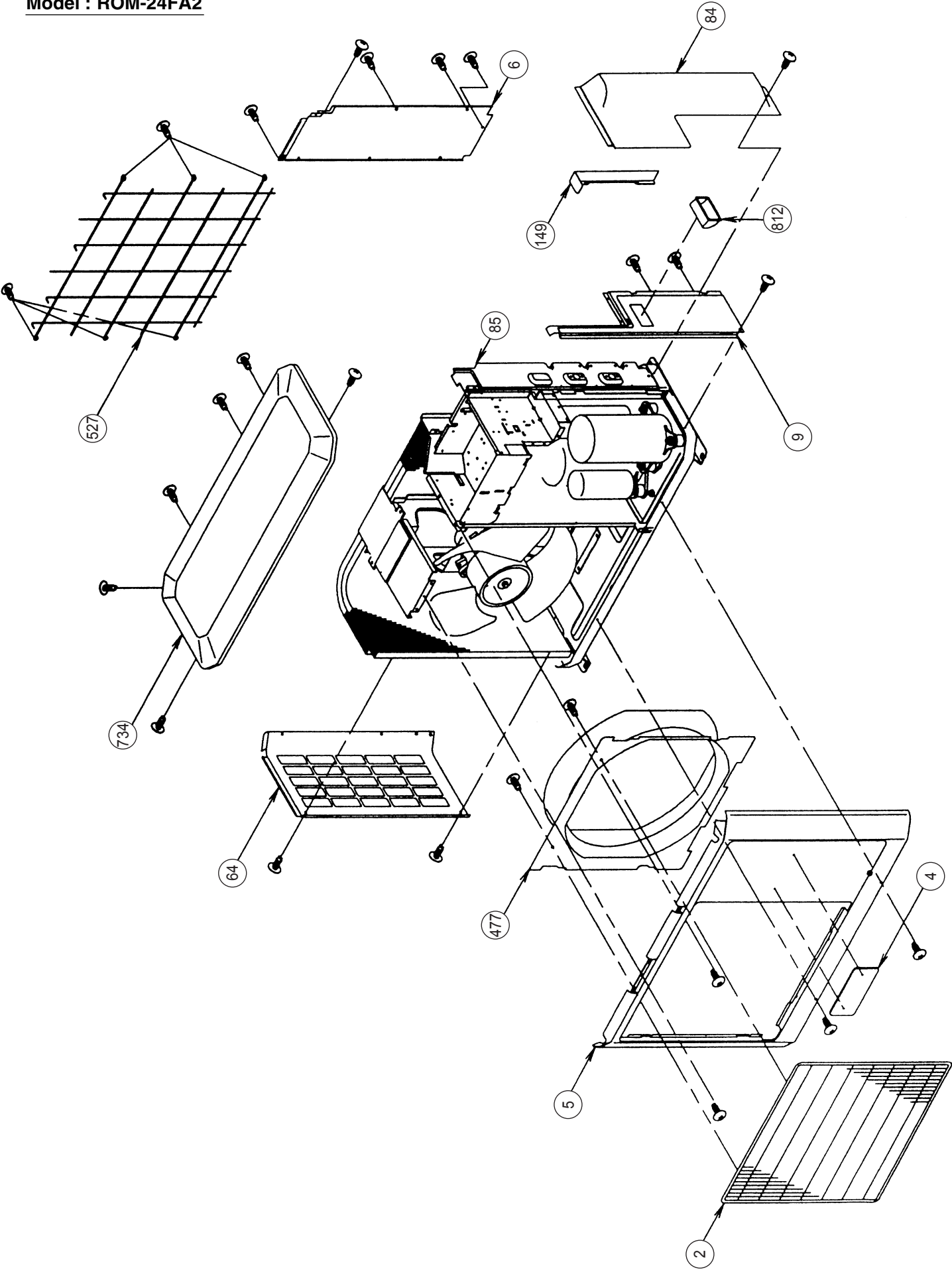


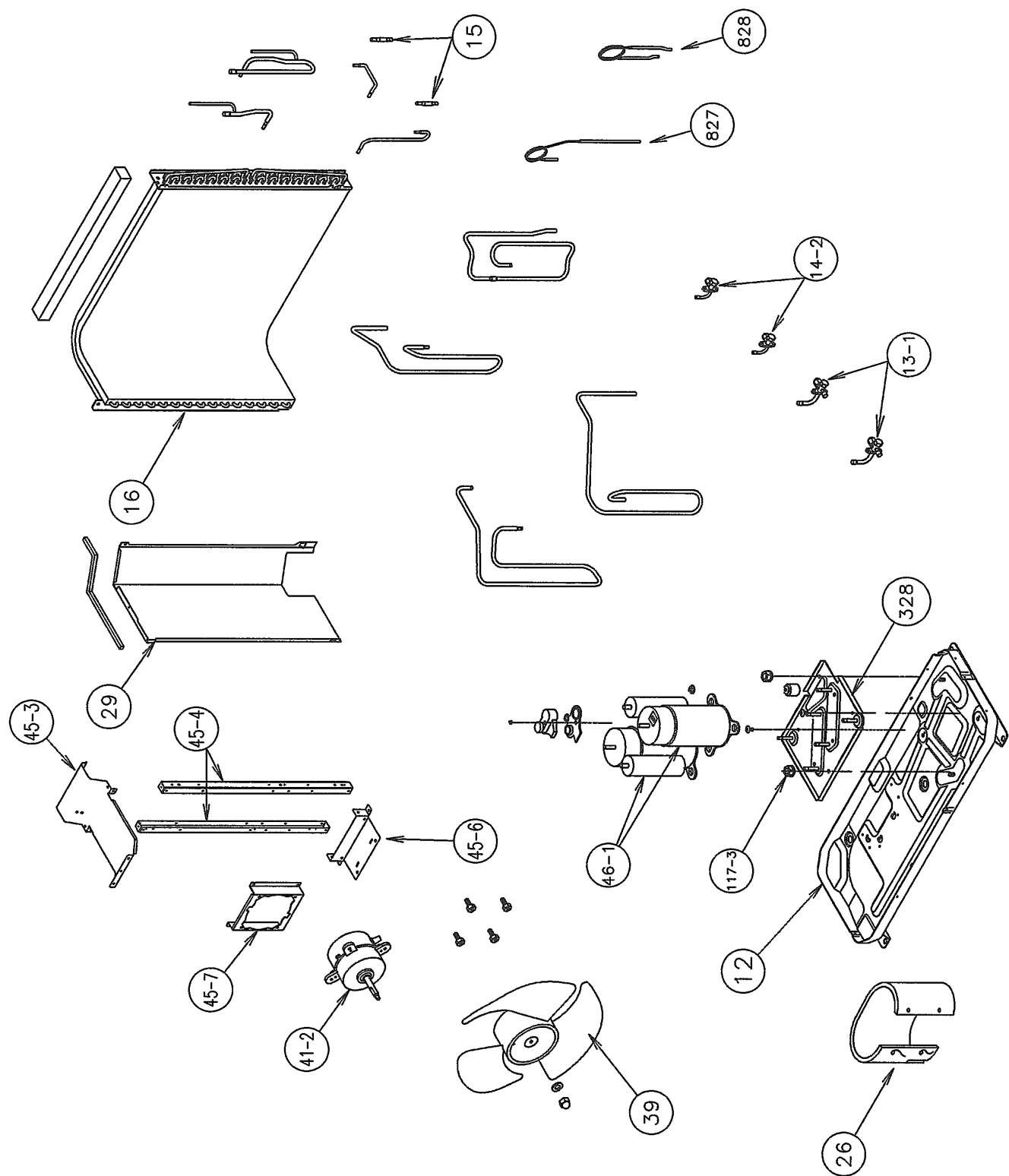


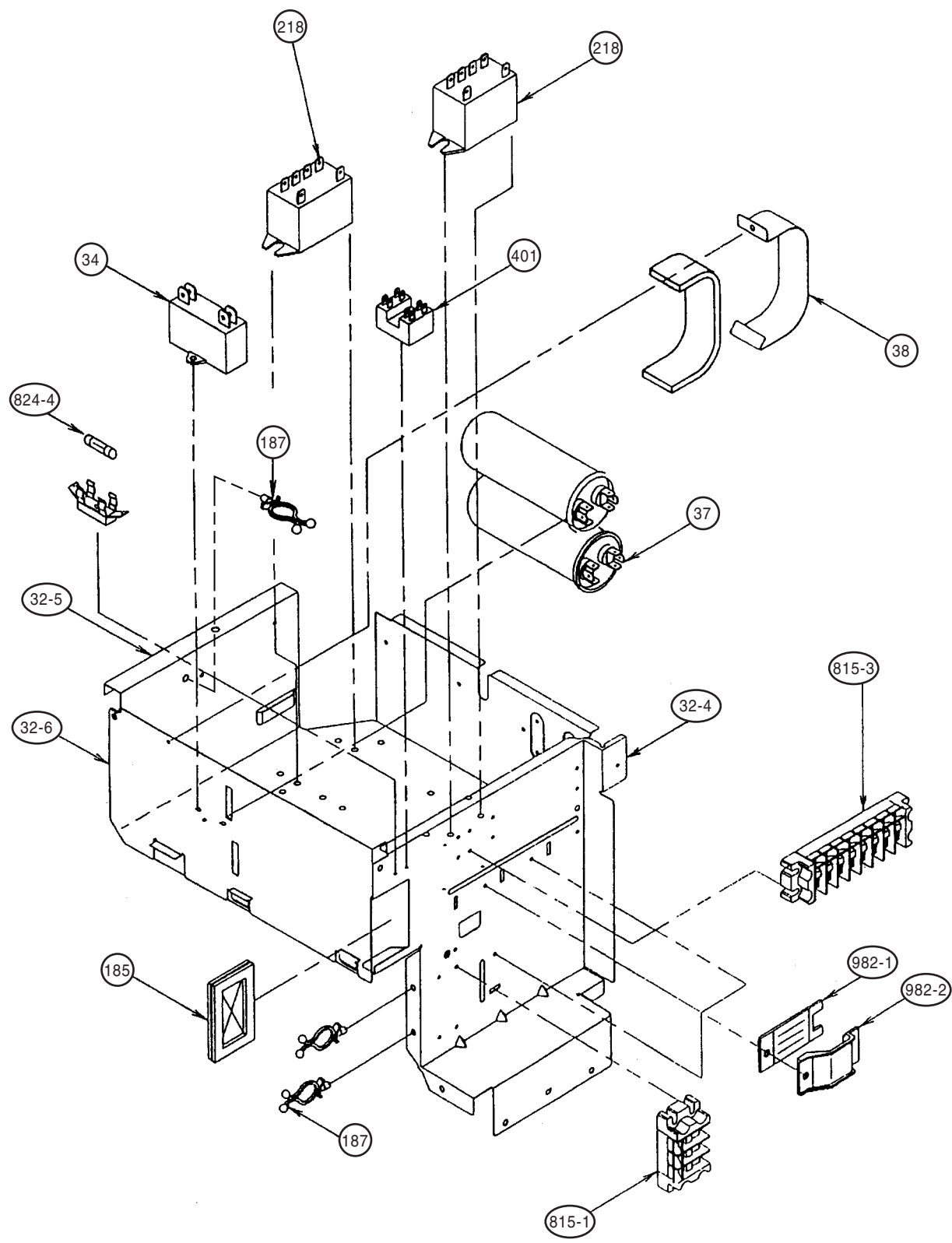
**Model : UTG-UDFB-W**



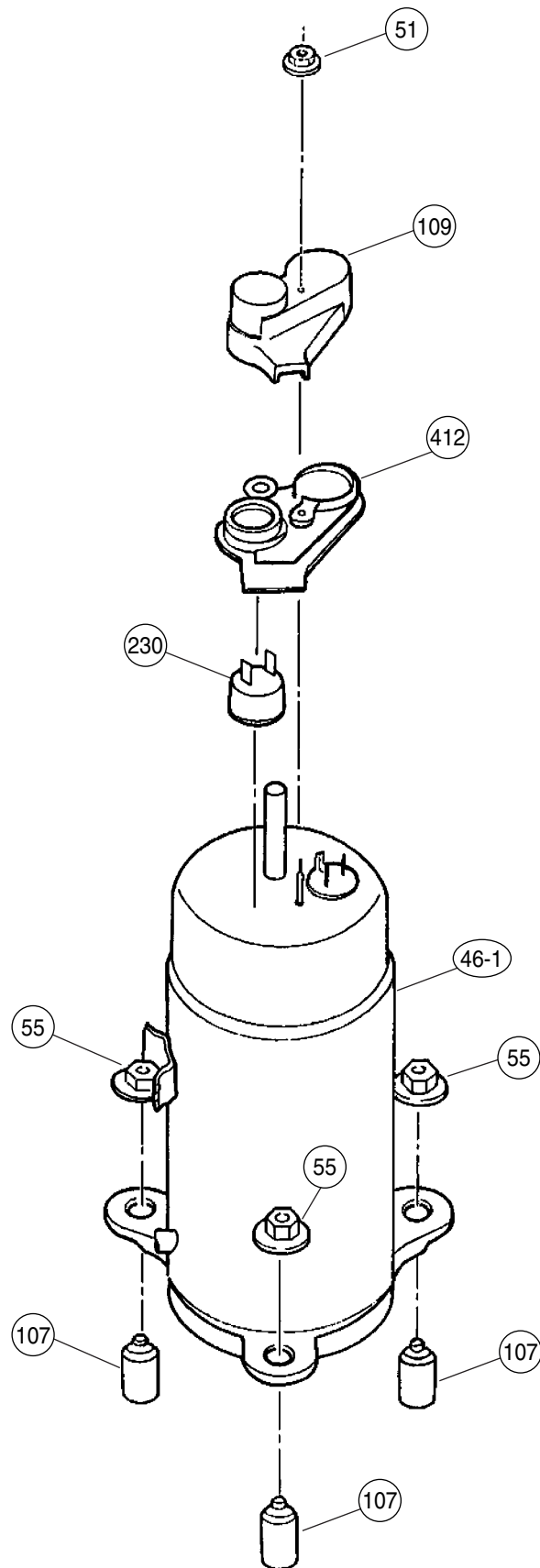








Model : ROM-24FA2



# PARTS LIST

## INDOOR UNIT (Wall Mounted type)

| Ref.<br>No. | Description                            | Part No.     | Ord.<br>Q'ty |
|-------------|----------------------------------------|--------------|--------------|
|             |                                        | RSM-12FA     |              |
| 63          | Front Panel Assy                       | 9312172122   |              |
| 65          | Flow Control Panel-Z                   | 9306058043   |              |
| 69          | Louver-A                               | 9306055028   |              |
| 74          | Filter                                 | 9305444014   |              |
| 108         | Base                                   | 9309755062   |              |
| 109         | Casing                                 | 9306052027   |              |
| 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                      | 9601171010   |              |
| 169         | Cross-Flow Fan Assy                    | 9307836015   |              |
| 178         | Motor Cushion-M                        | 9601302018   |              |
| 184         | Thermistor Spring                      | 313728262708 |              |
| 196         | Clamp SKB-150                          | 313035356905 |              |
| 233         | Power Transformer                      | 9900028015   |              |
| 236         | Controller PCB Assy<br>(EZ-00206WSE-C) | 9704865052   |              |
| 240         | Remote Control Unit                    | 9307113062   |              |
| 281         | BRACKET(PIPE)                          | 9330011014   |              |
| 283         | Bushing-A                              | 9303529010   |              |
| 323         | Louver-B                               | 9306056025   |              |
| 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                          | 9330002029   |              |
| 764         | Drain Cap Assy                         | 9304150008   |              |
| 767-1       | Bottom Cover                           | 9330004016   |              |
| 777         | CLAMPER(GRILL)                         | 9306755010   |              |
| 815         | Terminal                               | 9900040055   |              |
| 850         | Window (Receiver)                      | 9330003019   |              |
| 872         | Indicator Case                         | 9330009011   |              |
| 873         | Lamp Cover                             | 9330014015   |              |
| 874         | Control Box Cover                      | 9330008014   |              |
| 875         | PCB Assy (Power+Indicator)             | 9704871015   |              |
| 876         | Step Motor                             | 9900139018   |              |

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

**INDOOR UNIT (Cassette type)**

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

| Ref. No. | Description                            | Part No.     | Ord. Q'ty | Ref. No. | Description            | Part No.     | Ord. Q'ty |
|----------|----------------------------------------|--------------|-----------|----------|------------------------|--------------|-----------|
|          |                                        | RCM-12FA     |           |          |                        | RCM-12FA     |           |
| 64       | Capacitor (FanMotor)                   | 9704305046   |           | 462      | Top Cover Plate        | 9359642015   |           |
| 67       | Rubber (Vibration-proof)               | 9361279001   |           | 464      | Body-A                 | 9359643005   |           |
| 117-3    | Special Washer M6                      | 313306391007 |           | 465      | Body-B                 | 9359645009   |           |
| 127      | Drain Hose                             | 9359659013   |           | 467      | Drain Port             | 313005415658 |           |
| 138      | Special Wall-A                         | 9359647003   |           | 468      | Special Nut-A (Large)  | 313005446653 |           |
| 146      | Evaporator Assy                        | 9373214014   |           | 469      | Special Nut-B (Small)  | 313005446759 |           |
| 160      | Drain Pan                              | 9359651000   |           | 470      | Separate Wall-B        | 9359648000   |           |
| 164      | Fan Motor Assy-In                      | 9601040019   |           | 474      | Turbo Fan              | 9359658009   |           |
| 184-1    | Thermo. Spring-A                       | 313728262708 |           | 475      | Cushion(Turbo Fan)     | 9366013006   |           |
| 185      | Rubber Bushing                         | 313005066051 |           | 476-1    | Special Nut M8         | 313005360755 |           |
| 187      | Clamp No. 1219                         | 313361271706 |           | 476-2    | Special Washer         | 301801185049 |           |
| 196      | Clamp SKB-150                          | 313035356905 |           | 476-3    | Special Washer         | 9359954002   |           |
| 210      | Main Relay                             | 9356781007   |           | 478      | Sensor M. Bracket      | 9359654001   |           |
| 223      | Control Box                            | 9359661016   |           | 479      | Float Switch           | 313005416154 |           |
| 234      | Thermistor Assy-Room                   | 9703299032   |           | 482      | Pump Unit              | 9359974000   |           |
| 235      | Thermistor Assy-Pipe                   | 9703297014   |           | 484      | Hanger Metal           | 9359644002   |           |
| 236      | Control PCB Assy<br>(K01AL-040FWSE-C1) | 9704557841   |           | 488      | Drain Pan Plug         | 9359653004   |           |
| 240      | Remocon Assy                           | 9371190044   |           | 495      | Clamp No. 2U46         | 9352715006   |           |
| 244      | Pipe Cover                             | 9359646006   |           | 514      | Control Box Cover      | 9359662006   |           |
| 287      | Cap (Power)                            | 9352173011   |           | 628      | Locking Spacer-B       | 313005446558 |           |
| 301      | Clamp NK-2N                            | 313985355201 |           | 652-1    | Thermistor Holder Pipe | 313806262805 |           |
| 313      | Hooking Wire                           | 9359983002   |           | 743      | Remocon Holder         | 9305642014   |           |
| 338      | Motor Fixture                          | 9359656005   |           | 797      | Separate Wall-C        | 9359649007   |           |
| 381      | Locking Spacer                         | 313209391506 |           | 798      | Pump Hook Bracket      | 9359650003   |           |
| 395      | Eva Holder                             | 9373179016   |           | 815      | Terminal-3P            | 9900203016   |           |
| 399      | Air Duct                               | 9359660002   |           | 824-3    | Fuse                   | 0600222512   |           |
| 411      | Supporter-A                            | 9359655008   |           | 834      | Wire Cover             | 9359878001   |           |
| 430      | Clamp NK-7N                            | 313095365602 |           | 835      | Cushion-A (For Pump)   | 9352211003   |           |
| 457      | Drain Pan Support                      | 9359652007   |           | 836      | Cushion-B (For Pump)   | 9356084016   |           |
|          |                                        |              |           | 875      | Filter PCB Assy        | 9704561169   |           |
|          |                                        |              |           | 965      | Flare Nut-B            | 9351062019   |           |
|          |                                        |              |           | 989-1    | Cord Clamp-A           | 9359822011   |           |
|          |                                        |              |           | 989-2    | Cord Clamp-B           | 9359823018   |           |
|          |                                        |              |           | 990      | Distributor Assy       | 9373034049   |           |

**GRILLE ASSY (UTG-UDFB-W)**

| Ref. No. | Description          | Part No.     | Ord. Q'ty | Ref. No. | Description        | Part No.   | Ord. Q'ty |
|----------|----------------------|--------------|-----------|----------|--------------------|------------|-----------|
| 93       | Filter               | 9359632009   |           | 694      | Cam Gear           | 9359628002 |           |
| 165      | Motor Cover          | 9359623014   |           | 700      | Panel              | 9359619017 |           |
| 196      | Clamp SKB-150        | 313035356905 |           | 705      | Louver             | 9359624011 |           |
| 226      | Motor Gear           | 9359629009   |           | 710      | Intake Grille      | 9360543011 |           |
| 385      | Indicator PCB Assy   | 9702224011   |           | 711-1    | Filter Clamp-A     | 9359634003 |           |
| 392      | Cover-A              | 9359622017   |           | 711-2    | Filter Clamp-B     | 9359635000 |           |
| 416      | Insulation (Panel)-A | 9359620006   |           | 758      | Decoration Plate-A | 9360862013 |           |
| 417      | Insulation (Panel)-B | 9359621003   |           | 763      | Receiver Cover     | 9359630005 |           |
| 690      | Joint-A              | 9359626008   |           | 776      | Grille Stopper     | 9359633013 |           |
| 691      | Joint-B              | 9359627005   |           | 777      | Grille Hook        | 9359761006 |           |
| 692      | Joint Shaft          | 9359625001   |           | 876-2    | Step Motor         | 9360307019 |           |

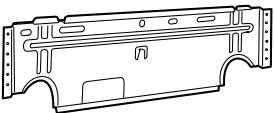
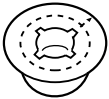
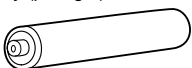
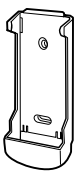
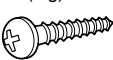
# OUTDOOR UNIT

| Ref.<br>No. | Description                            | Part No.     | Ord<br>Q'ty | Ref.<br>No. | Description                  | Part No.     | Ord<br>Q'ty |
|-------------|----------------------------------------|--------------|-------------|-------------|------------------------------|--------------|-------------|
|             |                                        | ROM-24FA2    |             |             |                              | ROM-24FA2    |             |
| 2           | Fan Cover                              | 9371187013   |             | 107         | Rubber Seat (For Comp. )     | 9351507015   |             |
| 4           | Emblem                                 | 9361328006   |             | 109         | Terminal Cover (For Comp. )  | 9302419008   |             |
| 5           | Cabinet-A, Painted                     | 9359797043   |             | 117-3       | Hex. Nut                     | 301721180114 |             |
| 6           | Cabinet-C, Painted                     | 9359825029   |             | 149         | Water Seal Plate             | 9359841029   |             |
| 9           | Cabinet-B, Painted                     | 9359824022   |             | 185         | Rubber Bushing               | 313005066051 |             |
| 12          | Base Assy, Painted                     | 9359813019   |             | 187         | Clamp No.1219                | 313361271706 |             |
| 13-1        | 3-Way Valve                            | 9372205044   |             | 218         | Relay                        | 9900239015   |             |
| 14-2        | 2-Way Valve                            | 9372204054   |             | 230         | Ocr assy (MRA99908-9201)     | 9312899005   |             |
| 15          | Strainer Assy                          | 9366602019   |             | 328         | Compressor Plate Assy        | 9359830016   |             |
| 16          | Condenser Assy                         | 9374627011   |             | 401         | Terminal-2P                  | 9701971015   |             |
| 26          | Compressor Cover A                     | 9364595009   |             | 412         | Terminal Gasket (For Comp. ) | 9351505011   |             |
| 29          | Separate Wall                          | 9359805014   |             | 477         | Bellmouth                    | 9359809012   |             |
| 32-4        | Control Box Metal-D                    | 9361247000   |             | 527         | Protective Net               | 9359845010   |             |
| 32-5        | Control Box Metal-E                    | 9361248007   |             | 734         | Top Plate, Painted           | 9359799023   |             |
| 32-6        | Control Box Metal-F                    | 9361249004   |             | 812         | Grip                         | 9352157004   |             |
| 34          | Capacitor (Fan Motor)                  | 9704305015   |             | 815-1       | Terminal-3P                  | 9358660027   |             |
| 37          | Running Capacitor                      | 9704436122   |             | 815-3       | Terminal-8P                  | 9358660119   |             |
| 38          | Clamp Metal (Capacitor)                | 9352123009   |             | 824-4       | Fuse (5A-250V)               | 0600285234   |             |
| 39          | Propeller Fan                          | 9359837015   |             | 827         | Capillary Tube-A Assy        | 9360814159   |             |
| 41-2        | Fan Motor Induction-Out<br>(MFB-30NTT) | 9601754022   |             | 828         | Capillary Tube-B Assy        | 9360815163   |             |
| 45-3        | Motor Bracket-A                        | 9369627002   |             | 982-1       | Cord Clamp                   | 9356857009   |             |
| 45-4        | Motor Bracket-B                        | 9371439013   |             | 982-2       | Cord Clamp-B                 | 9356858006   |             |
| 45-6        | Motor Bracket-D                        | 9369630002   |             |             |                              |              |             |
| 45-7        | Motor Bracket center da                | 9373076018   |             |             |                              |              |             |
| 46-1        | Compressor Assy (802-354-35B)          | 9373010036   |             |             |                              |              |             |
| 51          | Special Nut (For Comp. )               | 313199233602 |             |             |                              |              |             |
| 55          | Special Nut M8 (For Comp. )            | 9355091008   |             |             |                              |              |             |
| 64          | Cabinet-Left, Painted                  | 9359840046   |             |             |                              |              |             |
| 84          | Valve Cover                            | 9359834014   |             |             |                              |              |             |
| 85          | Valve Plate Assy, Painted              | 9361251021   |             |             |                              |              |             |

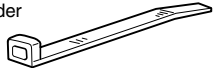
When you order parts, please make a photocopy of this page and fill the number of the parts in the "Order" column.

# STANDARD ACCESSORIES

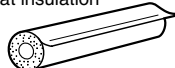
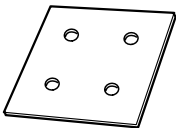
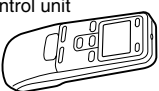
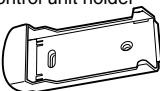
## INDOOR UNIT ACCESSORIES (RSM-12FA)

| Name and Shape                                                                                                            | Q'ty  | Part No.               |
|---------------------------------------------------------------------------------------------------------------------------|-------|------------------------|
| Wall hook bracket<br>                    | 1     | 9304358008             |
| Wall cap-B<br>                           | 1     | 313714296205           |
| Remote control unit<br>                  | 1     | 9307113062<br>(AR-DB6) |
| Battery (penlight)<br>                   | 1 set | 0600185534             |
| Remote control unit holder<br>          | 1     | 9305642014             |
| Cloth tape<br>                         | 1     | 9308117007             |
| Tapping screw (big)<br>(ø4 x 25)<br>   | 8     | 0700076046             |
| Tapping screw (small)<br>(ø3 x 12)<br> | 2     | 0700019036             |

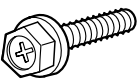
## OUTDOOR UNIT ACCESSORIES

| Name and Shape                                                                                        | Q'ty | Part No.     |
|-------------------------------------------------------------------------------------------------------|------|--------------|
| Binder<br>         | 2    | 312300787605 |
| Putty<br>          | 1    | 303020200114 |
| Hexagon wrench<br> | 1    | 9351228019   |

## INDOOR UNIT ACCESSORIES (RCM-12FA)

| Name and Shape                                                                                                       | Application                                 | Part No.                 |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------|
| Coupler heat insulation<br>        | For indoor side pipe joint                  | 9350716029<br>9352766015 |
| Special nut A<br>(large flange)<br> | For installing indoor unit                  | 313005446653             |
| Special nut B<br>(small flange)<br> | For installing indoor unit                  | 313005446759             |
| Template<br>                       | For ceiling hole cutting                    | 9360256003               |
| Remote control unit<br>            | Use for air conditioner operation           | 9371190044<br>(AR-JW4)   |
| Battery (penlight)<br>            | For remote control unit                     | 0600185534               |
| Remote control unit holder<br>   | For mounting the remote control unit        | 9305642014               |
| Tapping screw<br>(ø3 x 12)<br>    | For remote control unit holder installation | 301141533125             |

## GRILLE ASSY ACCESSORIES

| Name and Shape                                                                                                  | Application                                           | Part No.     |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|--------------|
| Bolt<br>                    | For opening the refrigerant valve on the outdoor unit | 0700139116   |
| Washer<br>                   | For mounting grille                                   | 301801155020 |
| Blower cover insulation<br> | For discharged air                                    | 9360047007   |



