

SPLIT TYPE  
ROOM AIR CONDITIONER  
WALL MOUNTED TYPE

# SERVICE MANUAL



|             |              |
|-------------|--------------|
| Indoor unit | Outdoor unit |
| ASYG09LTCB  | AOYG09LTCN   |

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# SPECIFICATIONS

## ELECTRICAL DATA

|                      |         |                       |
|----------------------|---------|-----------------------|
| TYPE                 |         | Cool & heat inverter  |
| INDOOR UNIT          |         | ASYG09LTCB            |
| OUTDOOR UNIT         |         | AOYG09LTCN            |
| COOLING CAPACITY     |         | 2.50 kW               |
| HEATING CAPACITY     |         | 3.20 kW               |
| POWER SOURCE         |         | 230 V                 |
| FREQUENCY            |         | 50 Hz                 |
| RUNNING CURRENT      | Cooling | 2.6 A                 |
|                      | Heating | 3.3 A                 |
| INPUT WATTS          | Cooling | 0.505 kW              |
|                      | Heating | 0.66 kW               |
| E.E.R.               | Cooling | 4.95 kW/kW            |
| COP                  | Heating | 4.85 kW/kW            |
| MOISTURE REMOVAL     |         | 1.3 L/h               |
| AIR CIRCULATION HIGH | Cooling | 800 m <sup>3</sup> /h |
|                      | Heating | 800 m <sup>3</sup> /h |
| MAXIMUM CURRENT      | Cooling | 6.5 A                 |
|                      | Heating | 10.0 A                |

## FAN MOTOR

|                      |              |              |
|----------------------|--------------|--------------|
| POWER SOURCE         |              | 230 V        |
| INDOOR UNIT Cooling  | High speed   | 1,300 r.p.m. |
|                      | Medium speed | 1,080 r.p.m. |
|                      | Low speed    | 960 r.p.m.   |
|                      | Quiet        | 650 r.p.m.   |
| INDOOR UNIT Heating  | High speed   | 1,300 r.p.m. |
|                      | Medium speed | 1,120 r.p.m. |
|                      | Low speed    | 960 r.p.m.   |
|                      | Quiet        | 650 r.p.m.   |
| OUTDOOR UNIT Cooling |              | 750 r.p.m.   |
| OUTDOOR UNIT Heating |              | 750 r.p.m.   |

## NOISE LEVEL

|                      |              |       |
|----------------------|--------------|-------|
| INDOOR UNIT Cooling  | High speed   | 42 dB |
|                      | Medium speed | 36 dB |
|                      | Low speed    | 32 dB |
|                      | Quiet        | 21 dB |
| INDOOR UNIT Heating  | High speed   | 42 dB |
|                      | Medium speed | 37 dB |
|                      | Low speed    | 32 dB |
|                      | Quiet        | 21 dB |
| OUTDOOR UNIT Cooling |              | 48 dB |
| OUTDOOR UNIT Heating |              | 49 dB |

## COMPRESSOR AND REFRIGERANT

|                        |                  |                                                           |
|------------------------|------------------|-----------------------------------------------------------|
| COMPRESSOR TYPE        |                  | Hermetic type, 4 pole, 3 phase, DC inverter motor, Rotary |
| DISCRIMINATION         |                  | DA89X1C-20FZ2                                             |
| WEIGHT (with oil)      |                  | 9.2 kg                                                    |
| PRECHARGED REFRIGERANT |                  | 1,050 g                                                   |
| REFRIGERANT TYPE       |                  | R410A                                                     |
| FULL CHARGE            | Pipe length 15 m | 1,050 g                                                   |
|                        | 20 m             | 1,150 g                                                   |
| ADDITIONAL CHARGE      |                  | 20 g/m                                                    |
| MAXIMUM PIPING HEIGHT  |                  | 15m                                                       |

## DIMENSIONS

|              |           |                    |
|--------------|-----------|--------------------|
| INDOOR UNIT  | H x W x D | 282 x 870 x 185 mm |
| OUTDOOR UNIT | H x W x D | 540 x 790 x 290 mm |

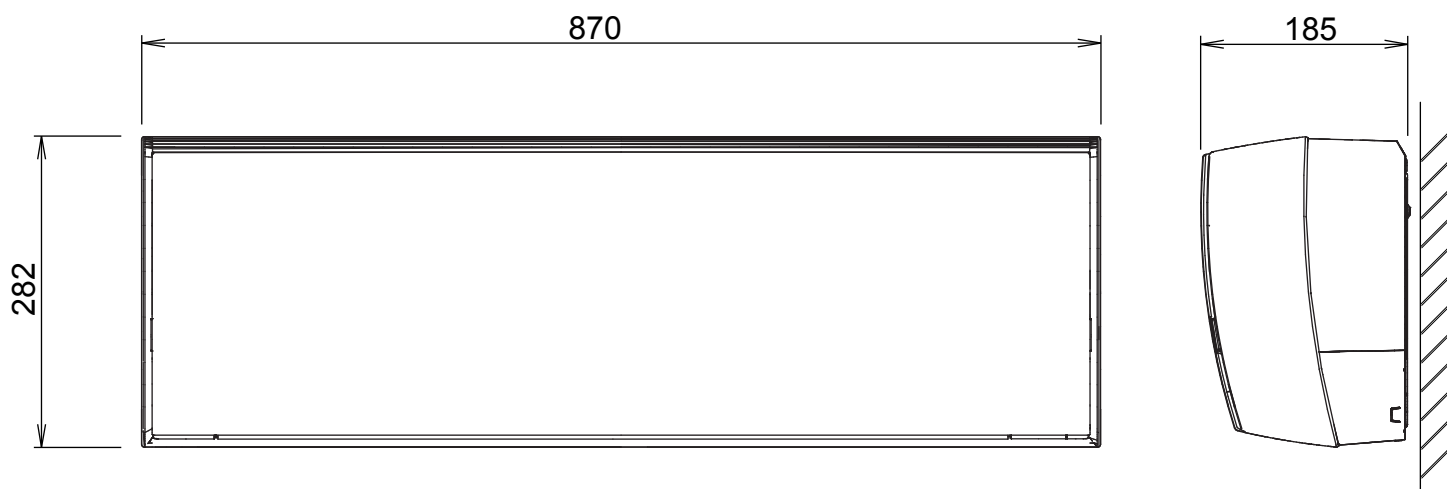
## WEIGHT

|              |                |                |
|--------------|----------------|----------------|
| INDOOR UNIT  | Shipping / Net | 12 kg / 9.5 kg |
| OUTDOOR UNIT | Shipping / Net | 40 kg / 36 kg  |

## DIMENSIONS

unit : mm

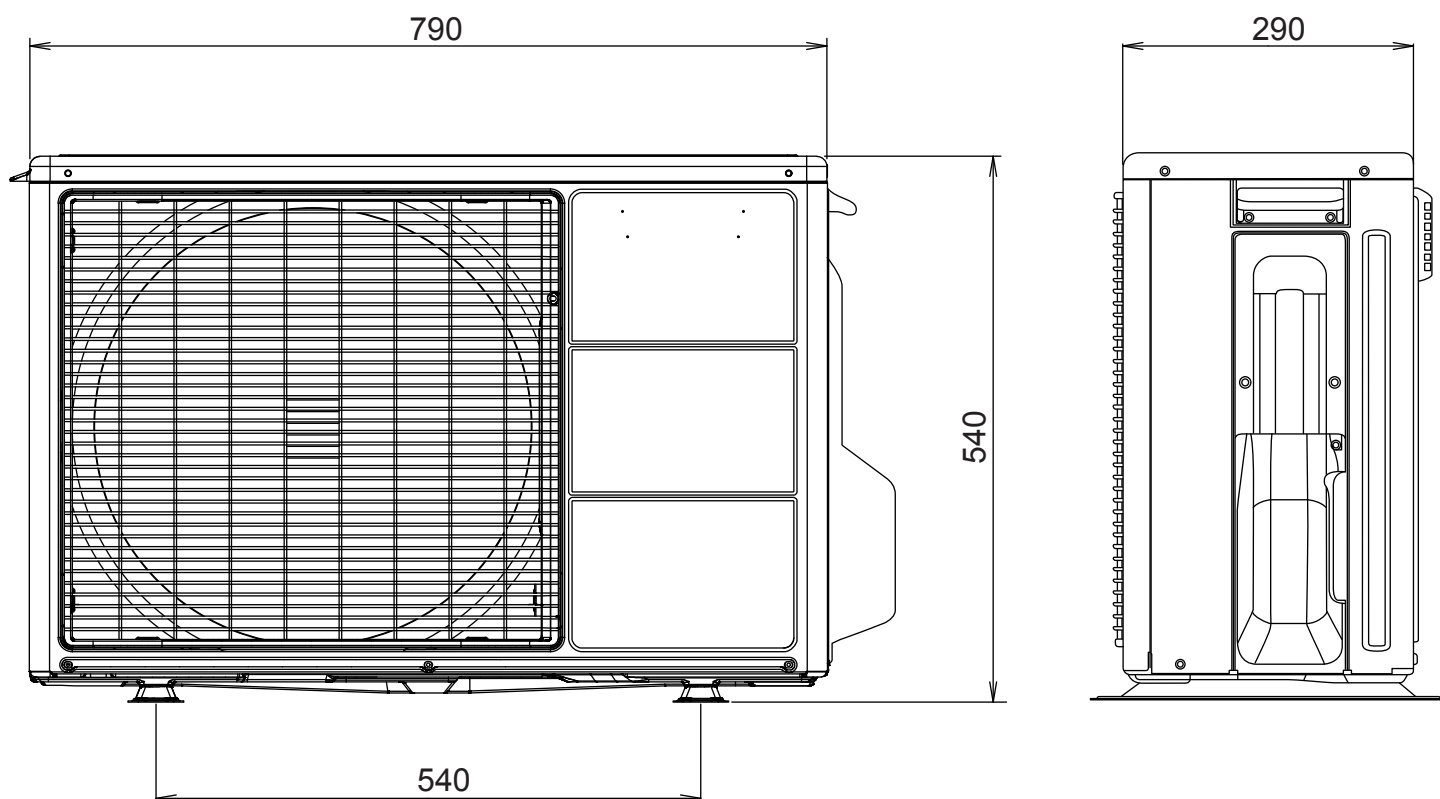
### INDOOR UNIT



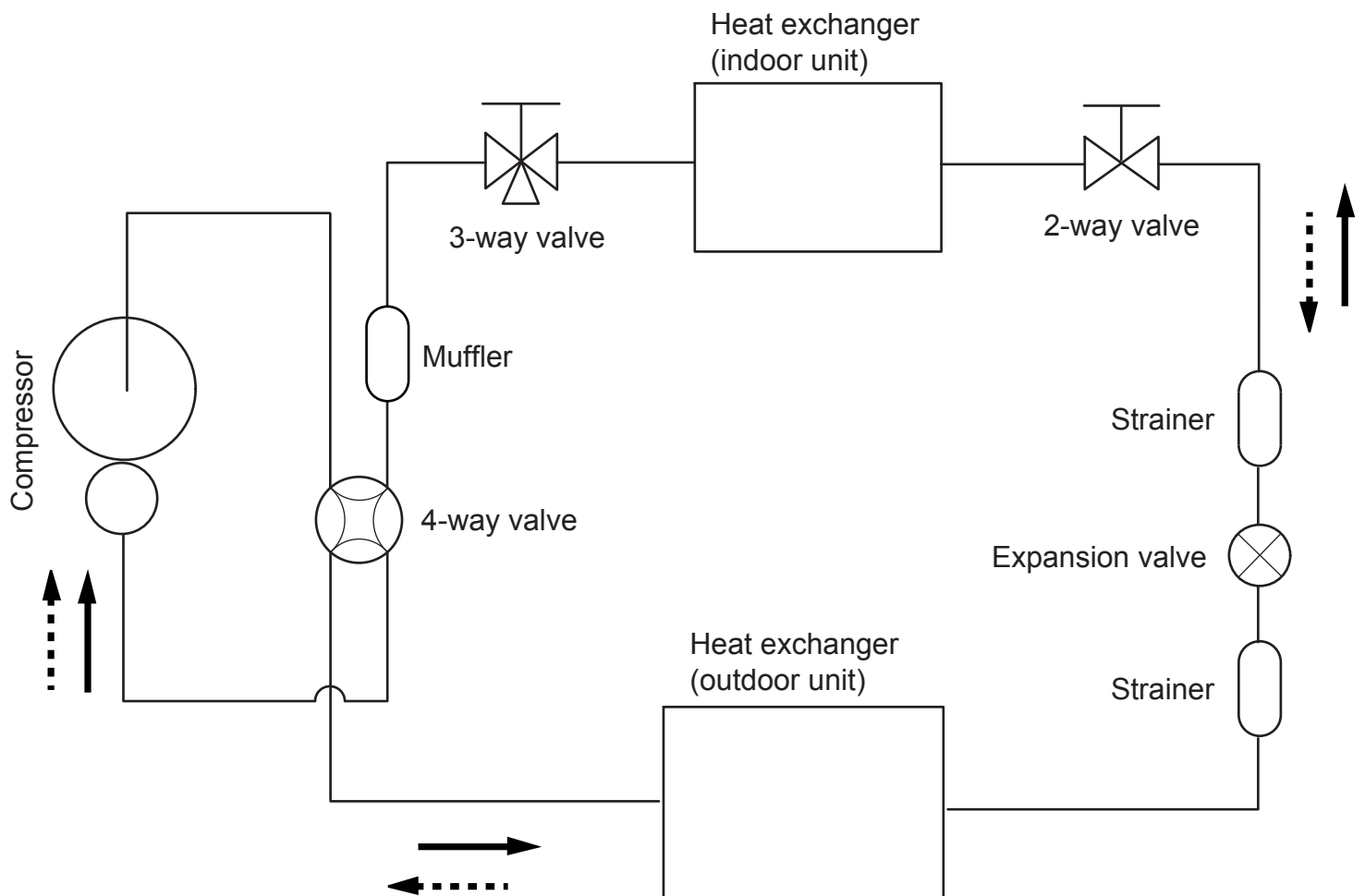
Drain hose length  
600 mm

Drain pipe diameter  
Inside : 14.2 mm  
Outside : 16.2 mm

### OUTDOOR UNIT



## REFRIGERANT SYSTEM DIAGRAM



Refrigerant direction

————→ Cooling

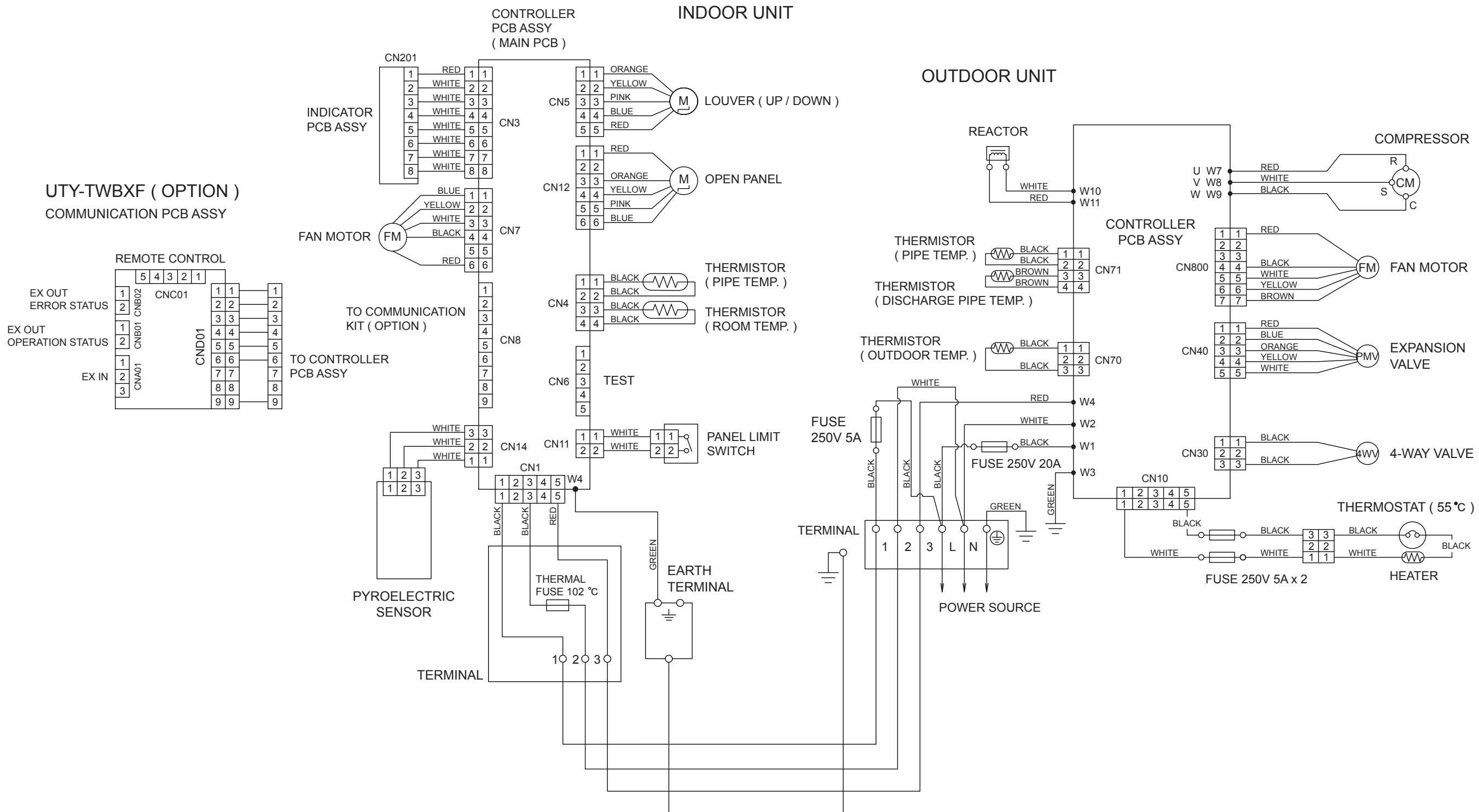
.....→ Heating

Refrigerant pipe diameter

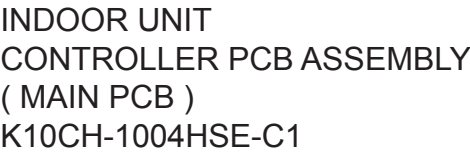
Liquid : 1/4" (6.35 mm)

Gas : 3/8" (9.52 mm)

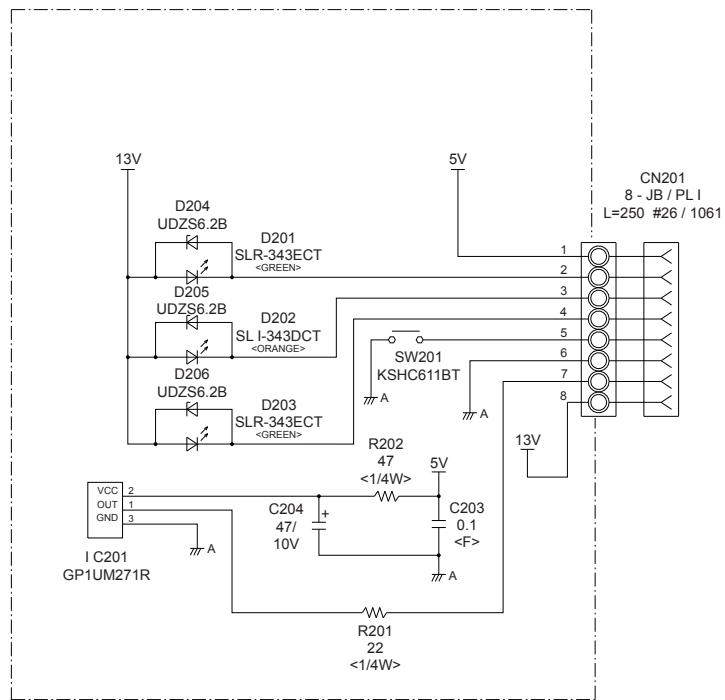
## CIRCUIT DIAGRAM



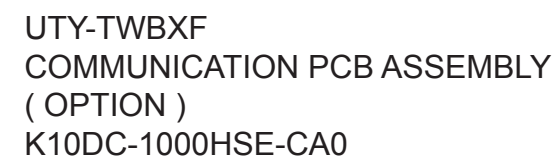
CONTROL UNIT  
EZ-0100YHSE



INDOOR UNIT  
INDICATOR PCB ASSEMBLY  
K10CX-1000HSE-D0

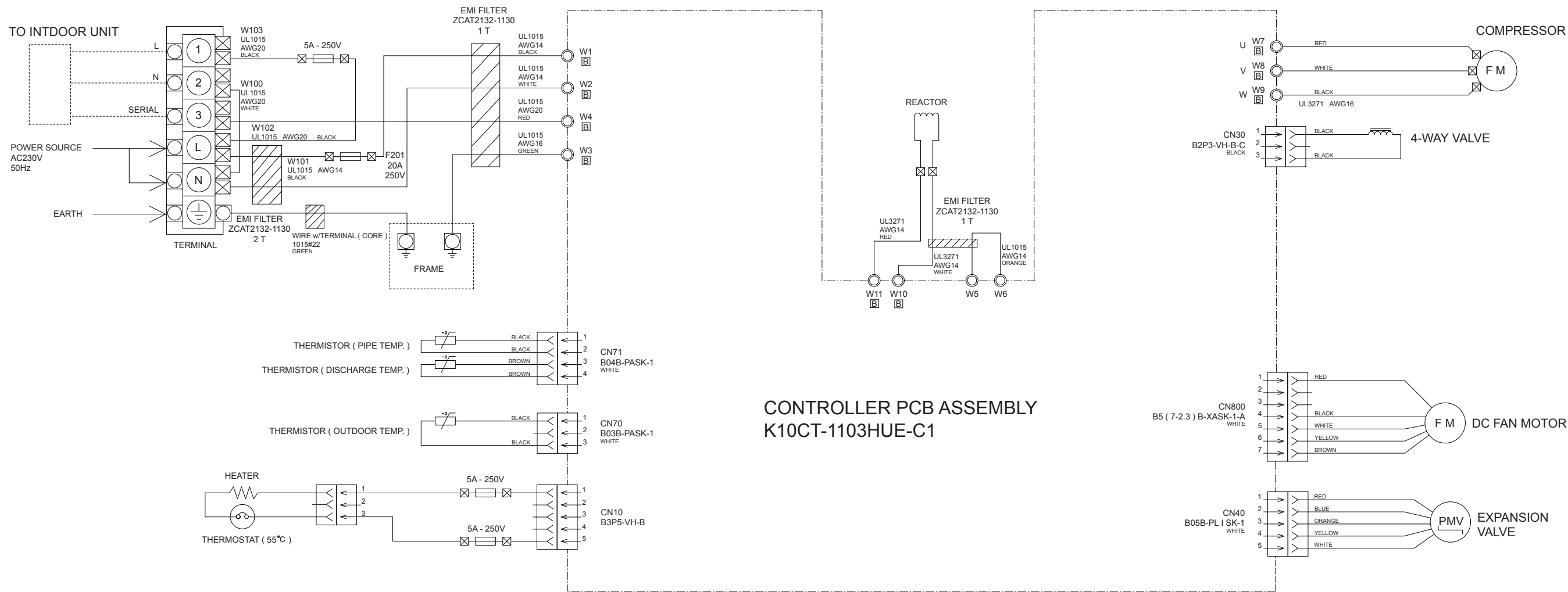




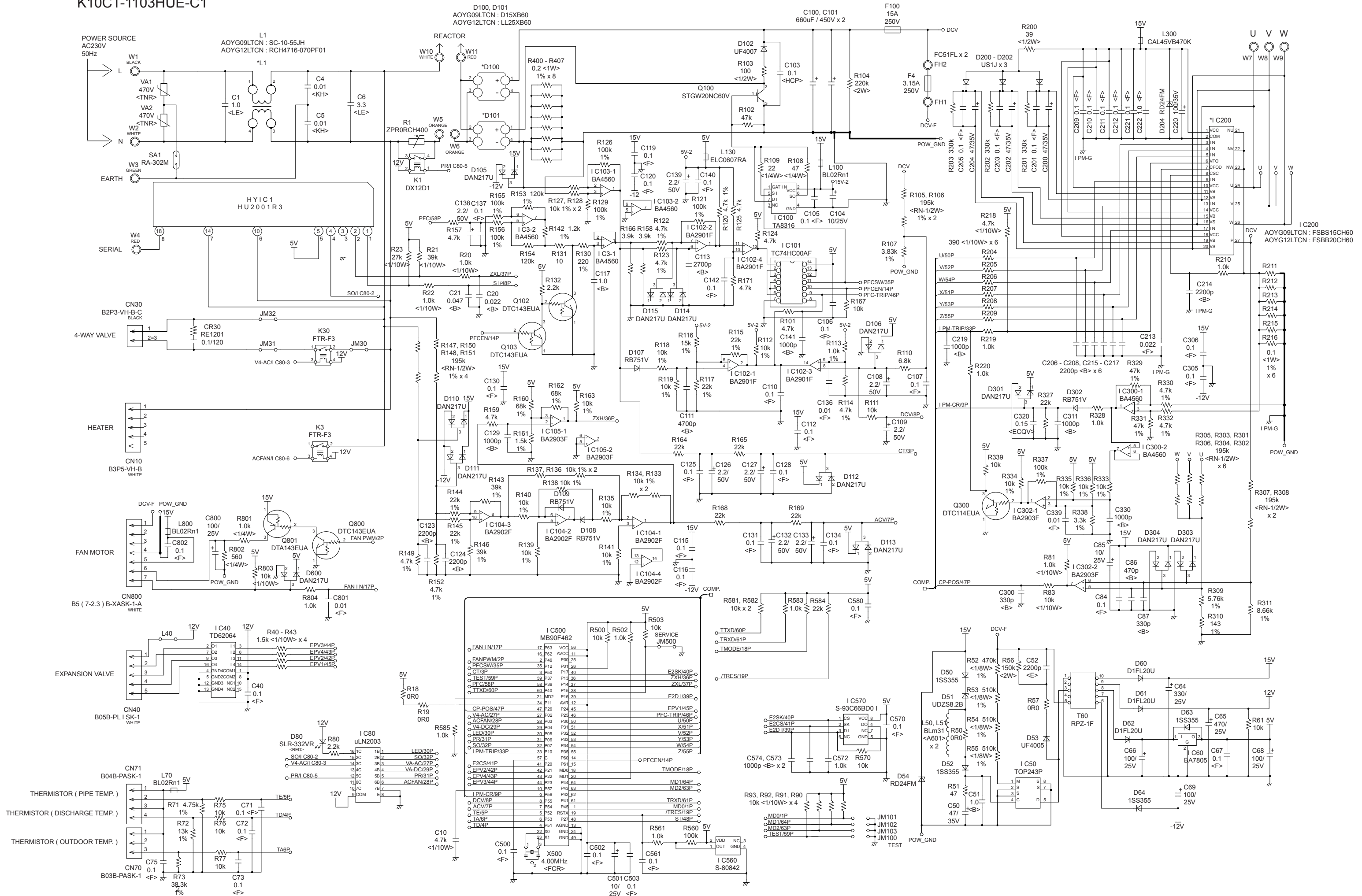


OUTDOOR PCB  
CIRCUIT DIAGRAM

INVERTER ASSEMBLY  
EZ-011RHUE



OUTDOOR UNIT  
CONTROLLER PCB ASSEMBLY  
K10CT-1103HUE-C1



## ERROR DETECTION

### INDOOR UNIT REMOTE CONTROL

If you use a wireless remote control, the lamp on the photo detector unit will output error codes by way of blinking patterns.

If you use a wired remote control, error codes will appear on the remote control display.

See the lamp blinking patterns and error codes in the table.

An error display is displayed only during operation.

● : 0.5s ON / 0.5s OFF

( ) : Number of flashing

◇ : Constantly flashing



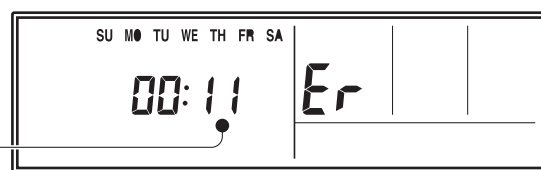
OPERATION indicator lamp (green)

TIMER indicator lamp (orange)

ECONOMY indicator lamp (green)

Wired remote control display (Option)

If an error occurs, the following display will be shown.  
("Er" will appear in the set room temperature display.)



Error code

| Indoor unit lamp  |                |                 | Wired remote control | Description                                                          |
|-------------------|----------------|-----------------|----------------------|----------------------------------------------------------------------|
| OPERATION (green) | TIMER (orange) | ECONOMY (green) |                      |                                                                      |
| ● (1)             | ● (1)          | ◇               | 11                   | Serial communication error                                           |
| ● (1)             | ● (2)          | ◇               | 12                   | Wired remote control communication error                             |
| ● (1)             | ● (5)          | ◇               | 15                   | Check run unfinished                                                 |
| ● (2)             | ● (2)          | ◇               | 22                   | Indoor unit capacity error                                           |
| ● (2)             | ● (3)          | ◇               | 23                   | Combination error                                                    |
| ● (3)             | ● (2)          | ◇               | 32                   | Indoor unit PCB model information error                              |
| ● (3)             | ● (5)          | ◇               | 35                   | Manual auto switch error                                             |
| ● (4)             | ● (1)          | ◇               | 41                   | Room temp. sensor error                                              |
| ● (4)             | ● (2)          | ◇               | 42                   | Indoor unit Heat Ex. Middle temp. sensor error                       |
| ● (5)             | ● (1)          | ◇               | 51                   | Indoor unit fan motor error                                          |
| ● (5)             | ● (8)          | ◇               | 58                   | Intake grille error                                                  |
| ● (5)             | ● (15)         | ◇               | 5U                   | Indoor unit error                                                    |
| ● (6)             | ● (2)          | ◇               | 62                   | Outdoor unit main PCB model information error or communication error |
| ● (6)             | ● (3)          | ◇               | 63                   | Inverter error                                                       |
| ● (6)             | ● (4)          | ◇               | 64                   | Active filter error, PFC circuit error                               |
| ● (6)             | ● (5)          | ◇               | 65                   | Trip terminal L error                                                |
| ● (6)             | ● (10)         | ◇               | 6A                   | Display PCB microcomputers communication error                       |
| ● (7)             | ● (1)          | ◇               | 71                   | Discharge temp. sensor error                                         |

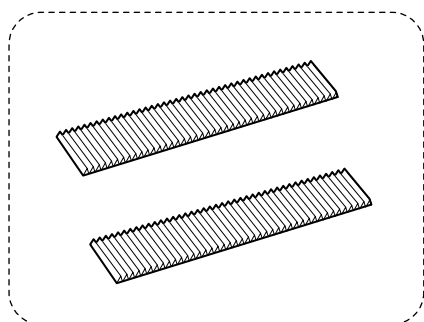
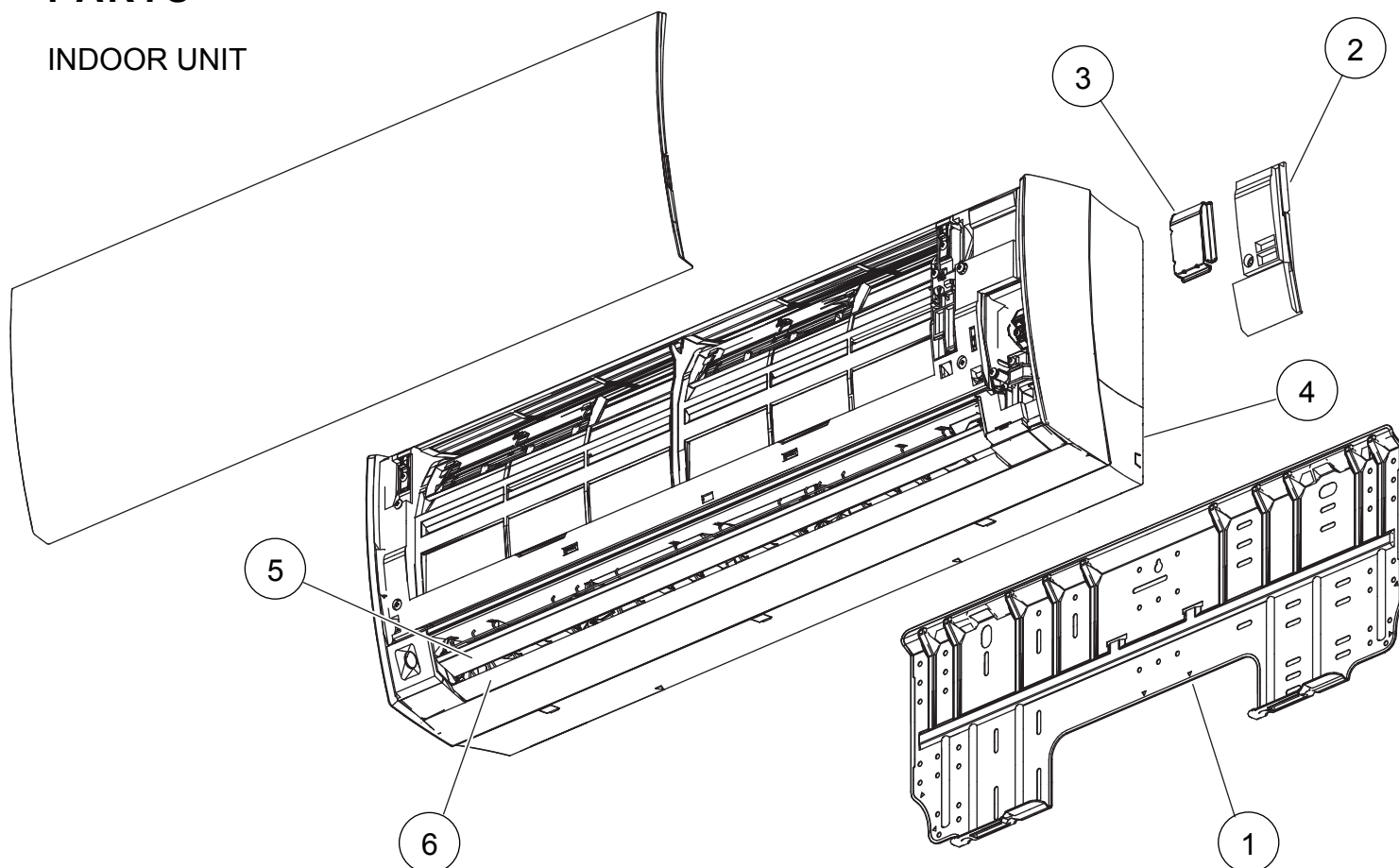
| Indoor unit lamp  |                |                 | Wired remote control | Description                                                                                           |
|-------------------|----------------|-----------------|----------------------|-------------------------------------------------------------------------------------------------------|
| OPERATION (green) | TIMER (orange) | ECONOMY (green) |                      |                                                                                                       |
| ● (7)             | ● (2)          | ◇               | 72                   | Compressor temp. sensor error                                                                         |
| ● (7)             | ● (3)          | ◇               | 73                   | Outdoor unit Heat Ex. liquid temp. sensor error                                                       |
| ● (7)             | ● (4)          | ◇               | 74                   | Outdoor temp. sensor error                                                                            |
| ● (7)             | ● (5)          | ◇               | 75                   | Suction Gas temp. sensor error                                                                        |
| ● (7)             | ● (6)          | ◇               | 76                   | • 2-way valve temp. sensor error<br>• 3-way valve temp. sensor error                                  |
| ● (7)             | ● (7)          | ◇               | 77                   | Heat sink temp. sensor error                                                                          |
| ● (8)             | ● (2)          | ◇               | 82                   | • Sub-cool Heat Ex. gas inlet temp. sensor error<br>• Sub-cool Heat Ex. gas outlet temp. sensor error |
| ● (8)             | ● (3)          | ◇               | 83                   | Liquid pipe temp. sensor error                                                                        |
| ● (8)             | ● (4)          | ◇               | 84                   | Current sensor error                                                                                  |
| ● (8)             | ● (6)          | ◇               | 86                   | • Discharge pressure sensor error<br>• Suction pressure sensor error<br>• High pressure switch error  |
| ● (9)             | ● (4)          | ◇               | 94                   | Trip detection                                                                                        |
| ● (9)             | ● (5)          | ◇               | 95                   | Compressor rotor position detection error (permanent stop)                                            |
| ● (9)             | ● (7)          | ◇               | 97                   | Outdoor unit fan motor error                                                                          |
| ● (9)             | ● (9)          | ◇               | 99                   | 4-way valve error                                                                                     |
| ● (10)            | ● (1)          | ◇               | A1                   | Discharge temp. error                                                                                 |
| ● (10)            | ● (3)          | ◇               | A3                   | Compressor temp. error                                                                                |
| ● (10)            | ● (4)          | ◇               | A4                   | High pressure error                                                                                   |
| ● (10)            | ● (5)          | ◇               | A5                   | Low pressure error                                                                                    |

## OUTDOOR UNIT

| LED                            | ERROR                          |
|--------------------------------|--------------------------------|
| on                             | Discharge temperature abnormal |
| 5.0 second on / 5.0 second off | DC fan abnormal                |
| 2.0 second on / 2.0 second off | CT abnormal                    |
| 0.5 second on / 0.5 second off | IPM overcurrent protection     |
| 0.1 second on / 0.1 second off | Thermistor abnormal            |
| 0.1 second on / 2.0 second off | Compressor location abnormal   |

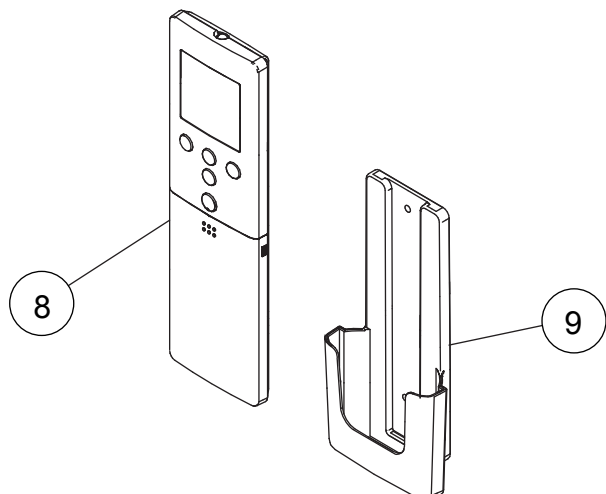
# PARTS

## INDOOR UNIT

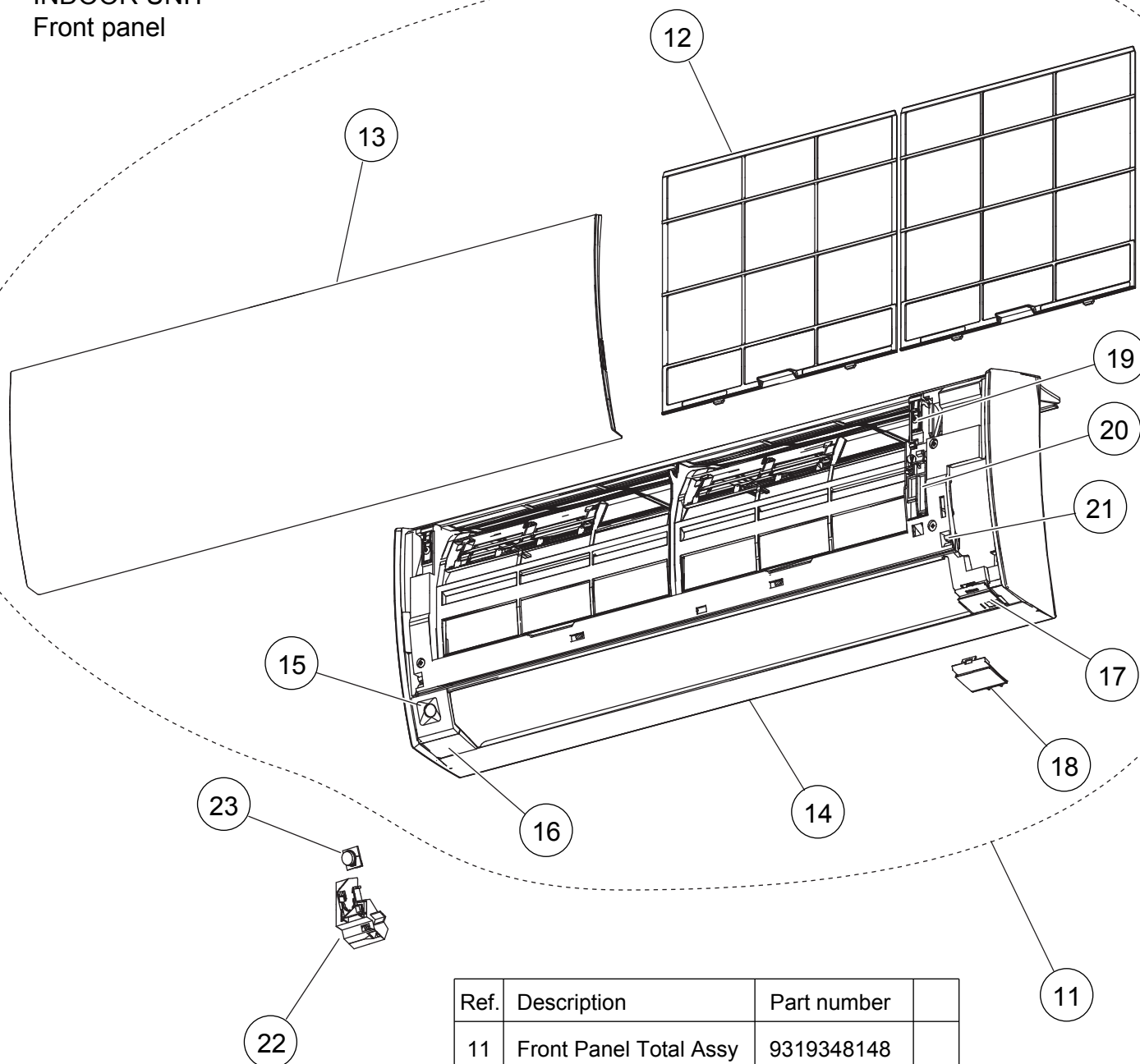


7

| Ref. | Description           | Part number |  |
|------|-----------------------|-------------|--|
| 1    | Bracket Panel         | 9318913002  |  |
| 2    | Wire Cover            | 9318911008  |  |
| 3    | Wire Shield           | 9318919004  |  |
| 4    | Under Cover           | 9318879001  |  |
| 5    | Louver (Upper)        | 9318880007  |  |
| 6    | Louver (Lower)        | 9318881004  |  |
| 7    | Air Clean Filter Assy | 9317250009  |  |
| 8    | Remote Control        | 9319207001  |  |
| 9    | Remote Control Holder | 9318912005  |  |



INDOOR UNIT  
Front panel

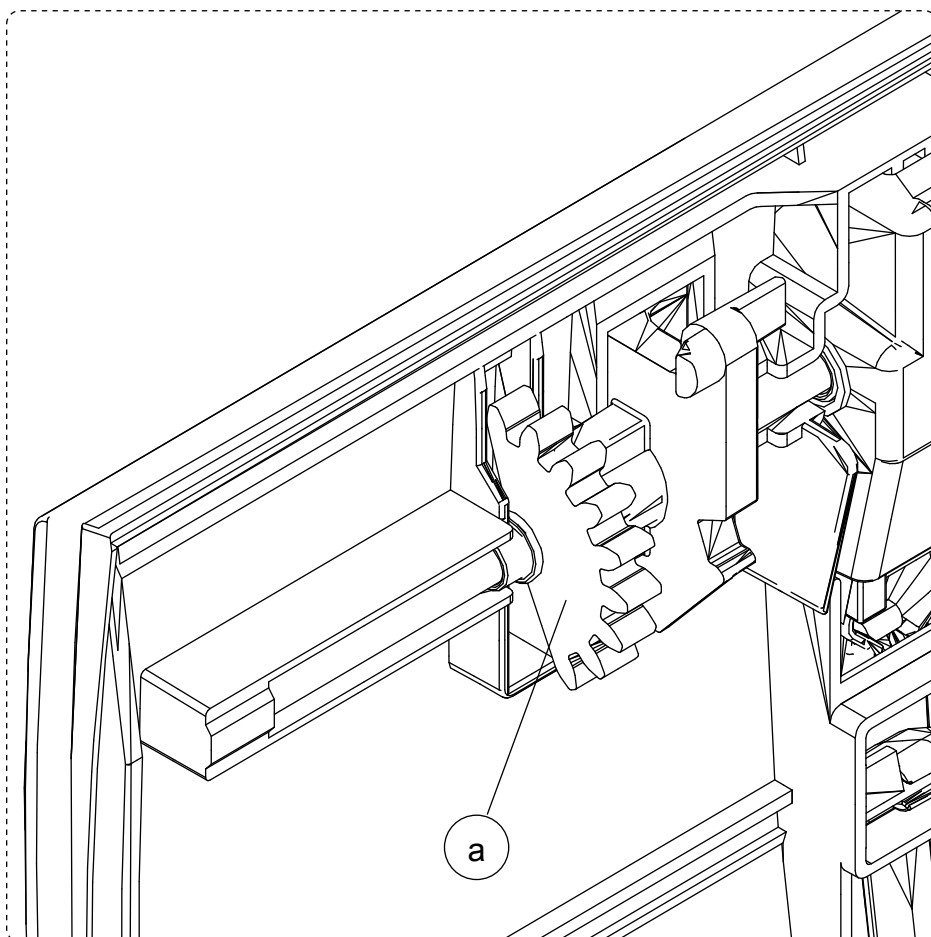
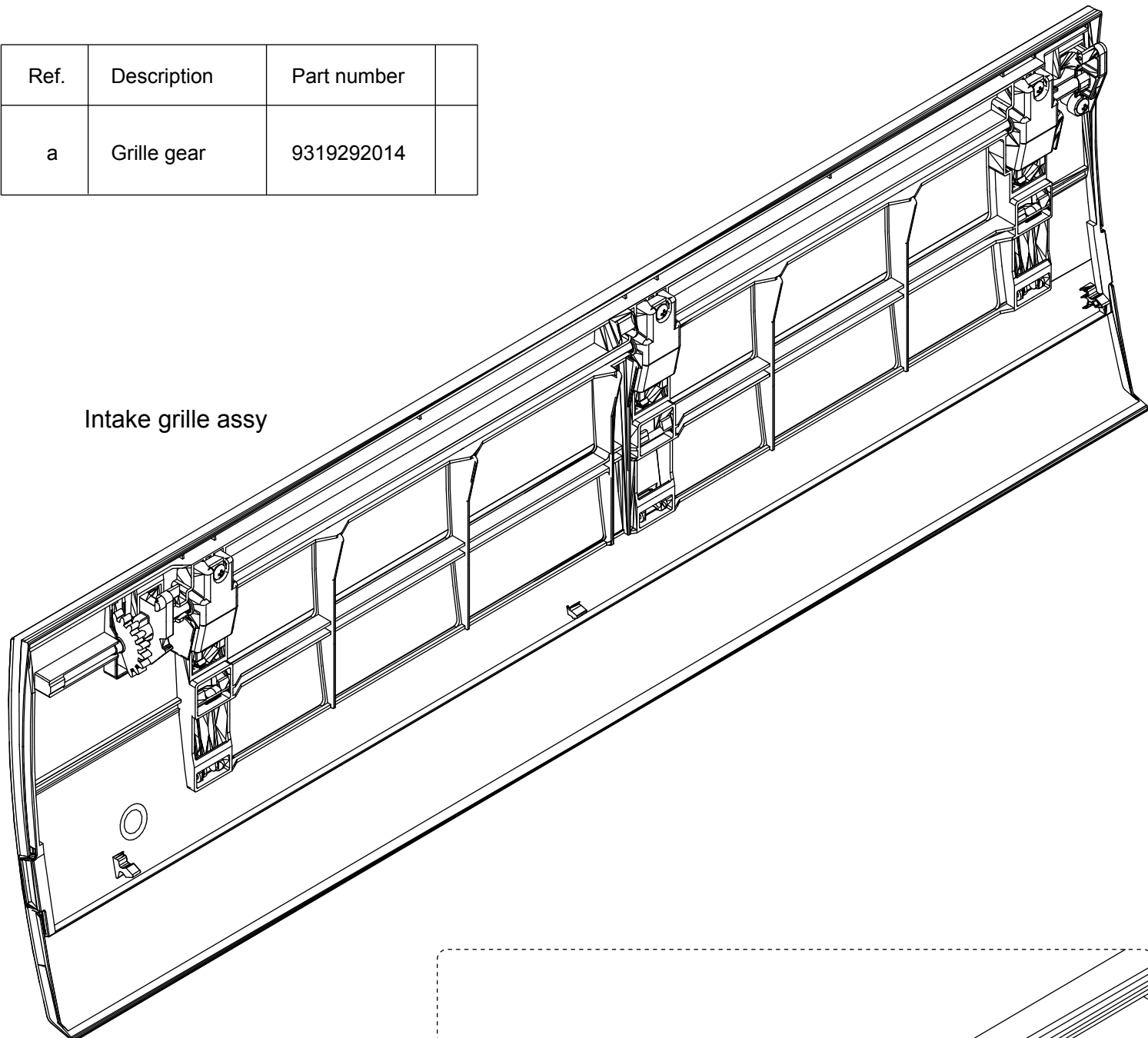


| Ref. | Description             | Part number |  |
|------|-------------------------|-------------|--|
| 11   | Front Panel Total Assy  | 9319348148  |  |
| 12   | Air Filter              | 9318883008  |  |
| 13   | Intake Grille Assy      | 9319351155  |  |
| 14   | Front Panel             | 9318876000  |  |
| 15   | Front Panel Cover T     | 9318909005  |  |
| 16   | Display Plate Holder L  | 9318894004  |  |
| 17   | Display Plate Holder R  | 9318895001  |  |
| 18   | Display Plate R         | 9318893007  |  |
| 19   | Arm Cover               | 9318900002  |  |
| 20   | Grille Stay             | 9318899009  |  |
| 21   | Grille Clamper B        | 9316951006  |  |
| 22   | Motion LED Display Case | 9318907001  |  |
| 23   | Pyroelectric Sensor     | 9317755023  |  |



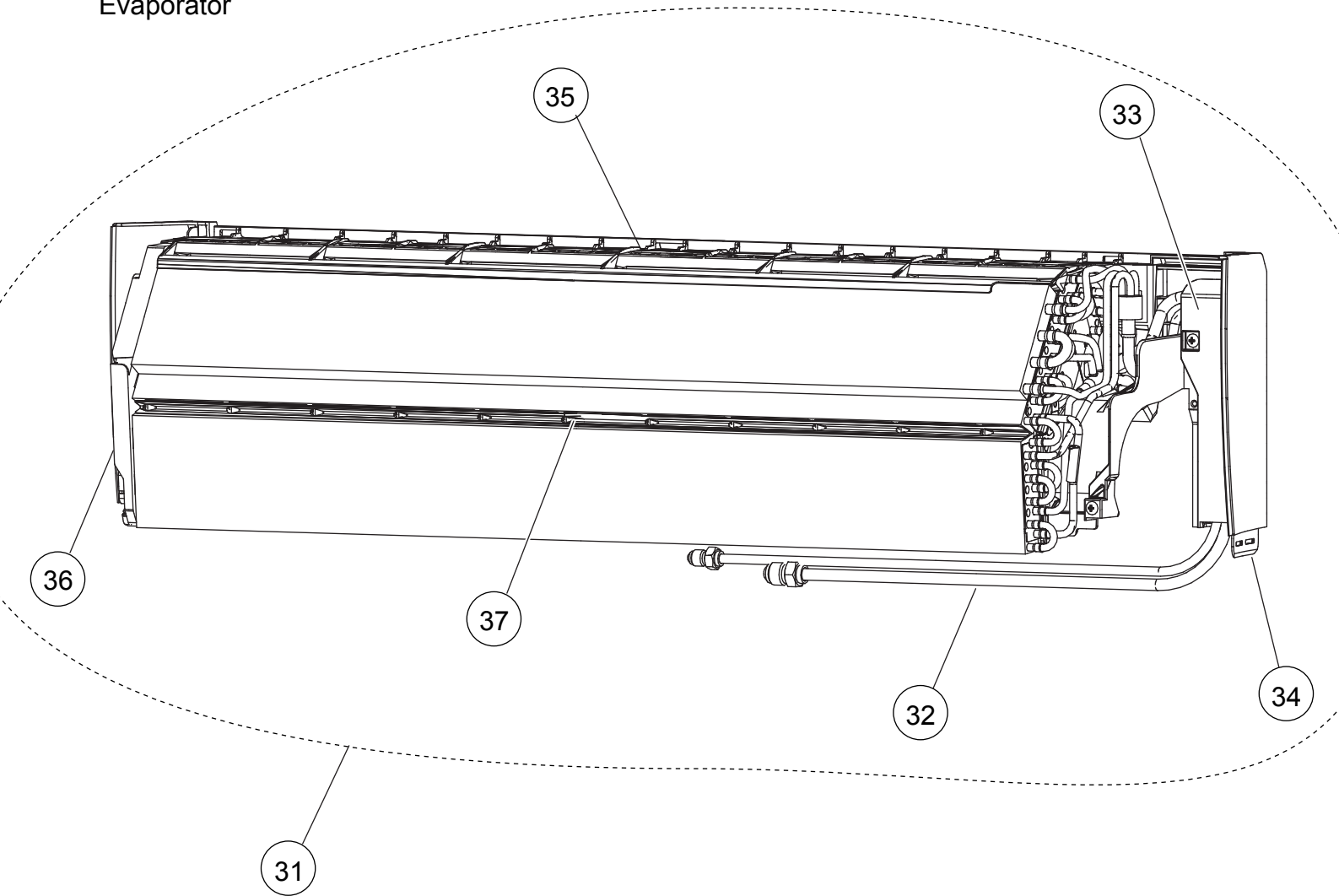
| Ref. | Description | Part number |  |
|------|-------------|-------------|--|
| a    | Grille gear | 9319292014  |  |

Intake grille assy

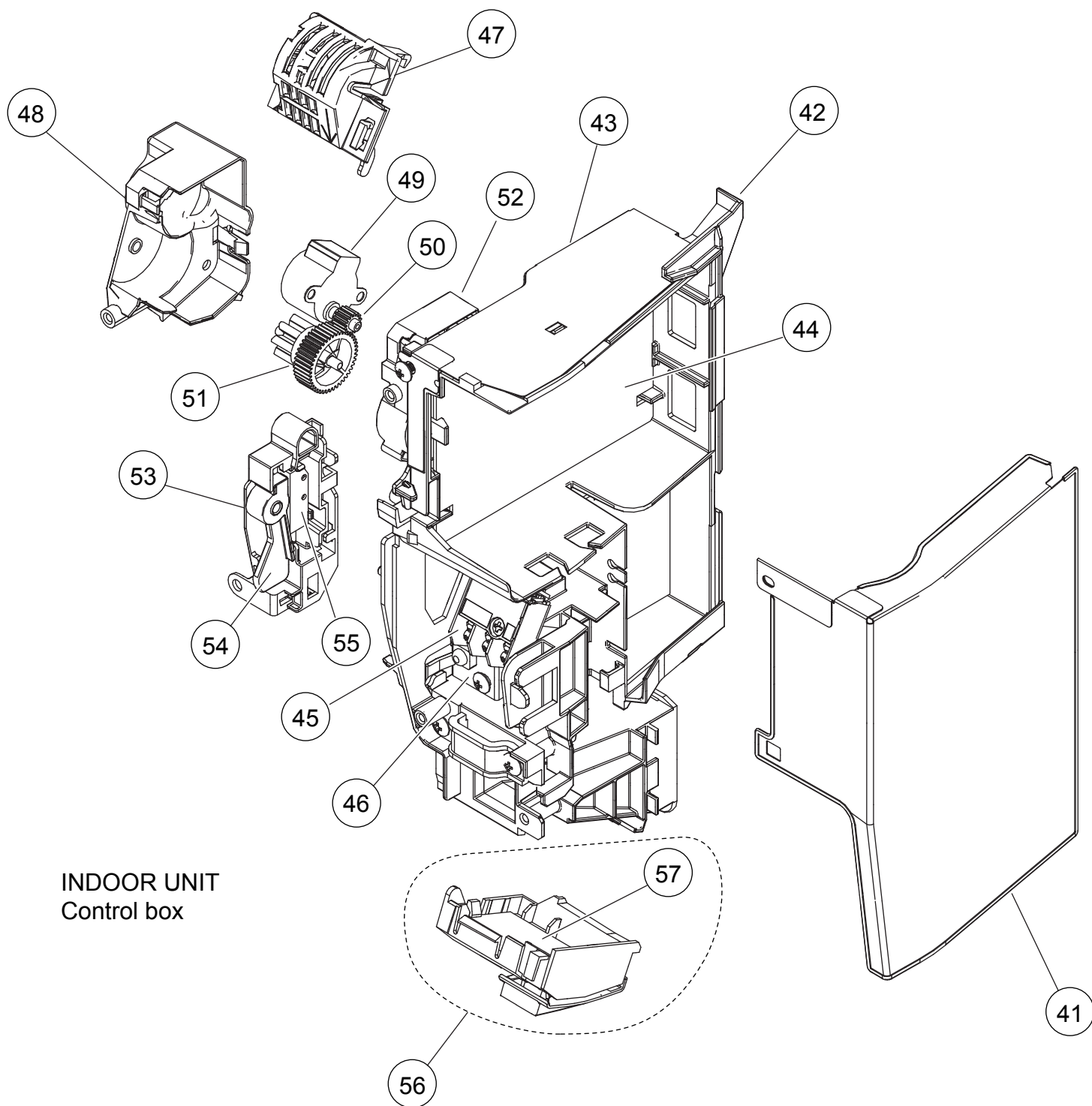




INDOOR UNIT  
Evaporator



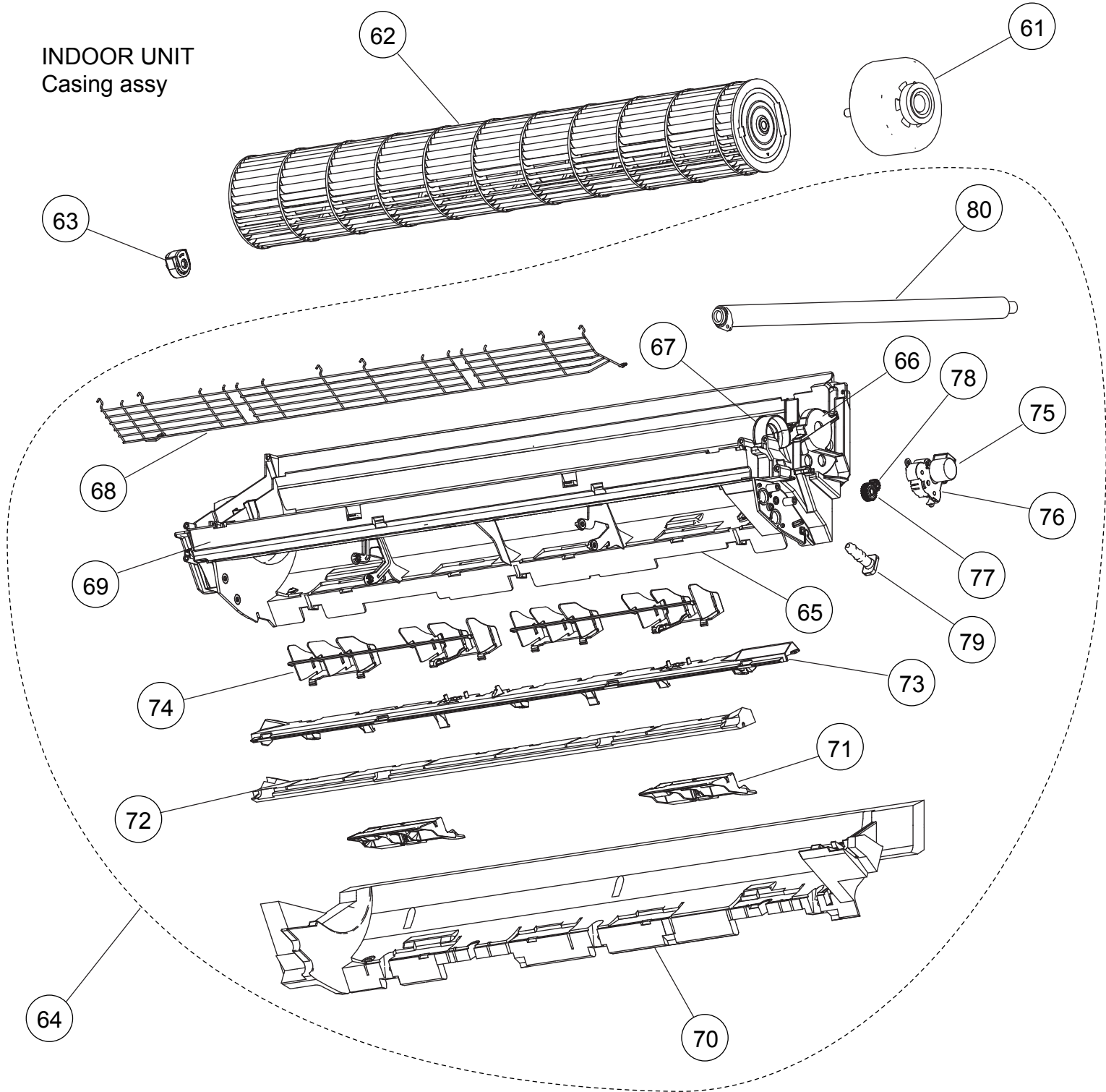
| Ref. | Description           | Part number |  |
|------|-----------------------|-------------|--|
| 31   | Evaporator Total Assy | 9319327006  |  |
| 32   | Joint Pipe Assy       | 9319322001  |  |
| 33   | Joint Pipe Holder     | 9318901009  |  |
| 34   | Base                  | 9318874006  |  |
| 35   | Filter Guide          | 9318887006  |  |
| 36   | Evaporator Holder L   | 9318875003  |  |
| 37   | Air Seal              | 9319295008  |  |



| Ref. | Description            | Part number |  |
|------|------------------------|-------------|--|
| 41   | Cover Shield A         | 9318916003  |  |
| 42   | Control Box            | 9318882001  |  |
| 43   | Box Shield Assy        | 9319344003  |  |
| 44   | Controller PCB Assy    | 9708713052  |  |
| 45   | Terminal               | 9900638009  |  |
| 46   | Earth Terminal         | 9318918007  |  |
| 47   | Room Thermistor Holder | 9319068008  |  |
| 48   | Gear Cover             | 9318902006  |  |
| 49   | Step Motor             | 9900384166  |  |

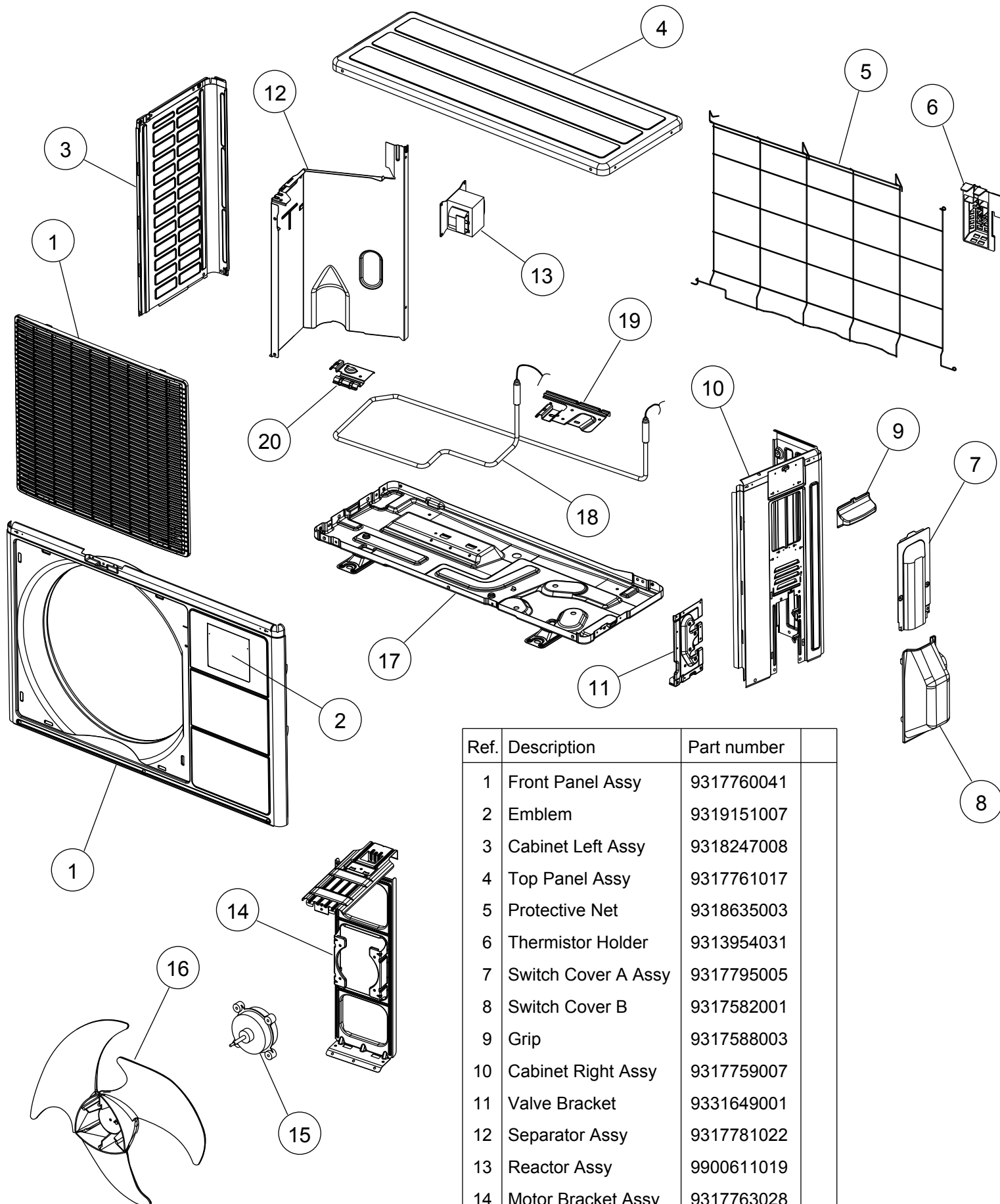
| Ref. | Description      | Part number |  |
|------|------------------|-------------|--|
| 50   | Gear B           | 9319294001  |  |
| 51   | Panel Gear       | 9319293004  |  |
| 52   | Gear Case        | 9318903003  |  |
| 53   | Switch Case      | 9319332000  |  |
| 54   | Grille Key Top   | 9319334004  |  |
| 55   | Micro Switch     | 9900625009  |  |
| 56   | Display Assy     | 9708823010  |  |
| 57   | Display PCB Assy | 9708824017  |  |
| --   | Thermistor Assy  | 9900627003  |  |

INDOOR UNIT  
Casing assy



| Ref. | Description        | Part number |
|------|--------------------|-------------|
| 61   | Fan Motor          | 9602947003  |
| 62   | Crossflow Fan Assy | 9319361000  |
| 63   | Bearing C Assy     | 9306628017  |
| 64   | Casing Assy        | 9319342009  |
| 65   | Casing             | 9318873009  |
| 66   | Motor Cover        | 9316601000  |
| 67   | Motor Cover        | 9318888003  |
| 68   | Fan Guard          | 9318924008  |
| 69   | Casing Cover F     | 9318923001  |
| 70   | Casing Cover B     | 9318920000  |

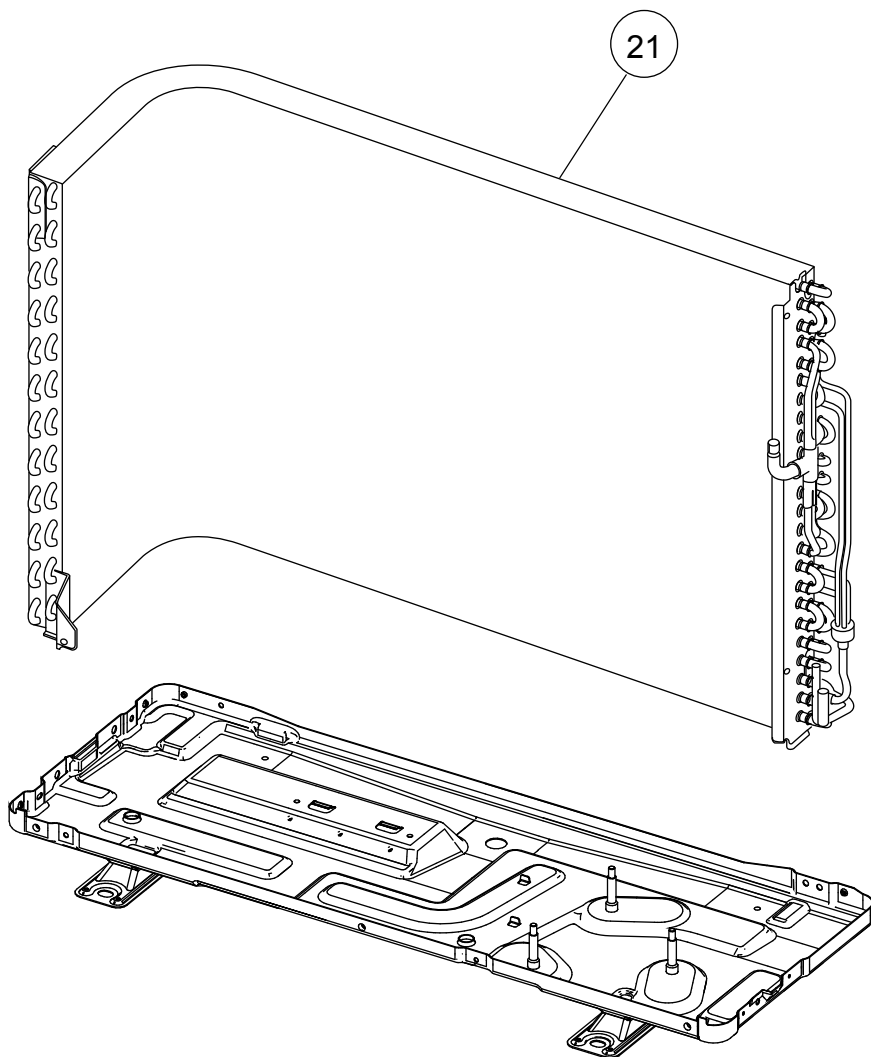
| Ref. | Description        | Part number |
|------|--------------------|-------------|
| 71   | Pipe Bracket       | 9318889000  |
| 72   | Panel Cover        | 9319296005  |
| 73   | Louver Holder      | 9318886009  |
| 74   | R and L Louver     | 9318885002  |
| 75   | Motor Step         | 9900384128  |
| 76   | Louver Gear Holder | 9318905007  |
| 77   | Louver Gear        | 9318904000  |
| 78   | Gear A             | 9309994003  |
| 79   | Drain Cap          | 9316177017  |
| 80   | Drain Hose Assy    | 9316904002  |



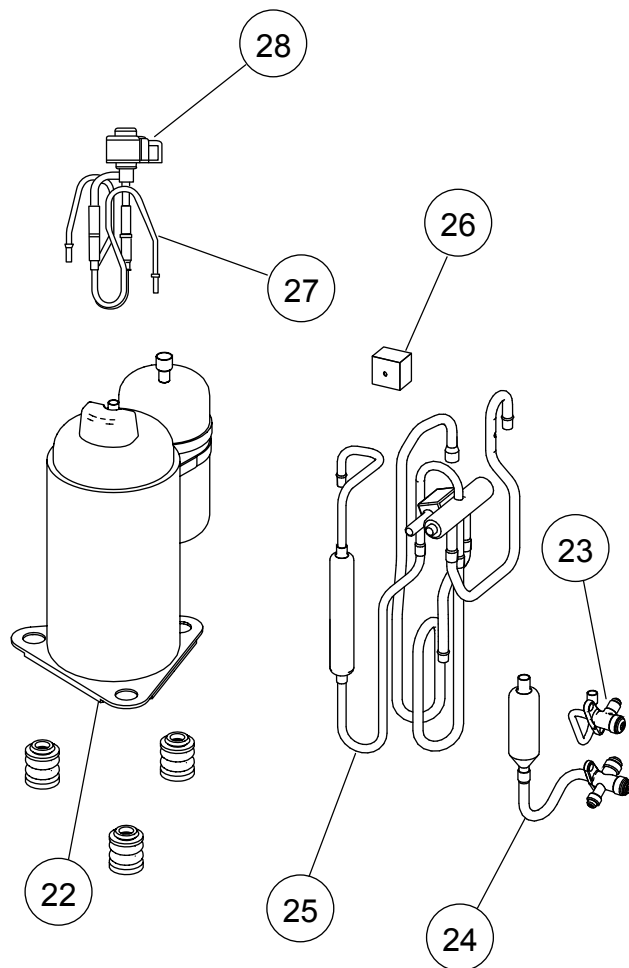
## PARTS

### OUTDOOR UNIT

| Ref. | Description         | Part number |
|------|---------------------|-------------|
| 1    | Front Panel Assy    | 9317760041  |
| 2    | Emblem              | 9319151007  |
| 3    | Cabinet Left Assy   | 9318247008  |
| 4    | Top Panel Assy      | 9317761017  |
| 5    | Protective Net      | 9318635003  |
| 6    | Thermistor Holder   | 9313954031  |
| 7    | Switch Cover A Assy | 9317795005  |
| 8    | Switch Cover B      | 9317582001  |
| 9    | Grip                | 9317588003  |
| 10   | Cabinet Right Assy  | 9317759007  |
| 11   | Valve Bracket       | 9331649001  |
| 12   | Separator Assy      | 9317781022  |
| 13   | Reactor Assy        | 9900611019  |
| 14   | Motor Bracket Assy  | 9317763028  |
| 15   | Fan Motor           | 9602864003  |
| 16   | Propeller Fan       | 9313808013  |
| 17   | Base Assy           | 9316885059  |
| 18   | Heater Unit Assy    | 9900616007  |
| 19   | Heater Holder A     | 9318631005  |
| 20   | Heater Holder B     | 9318651003  |

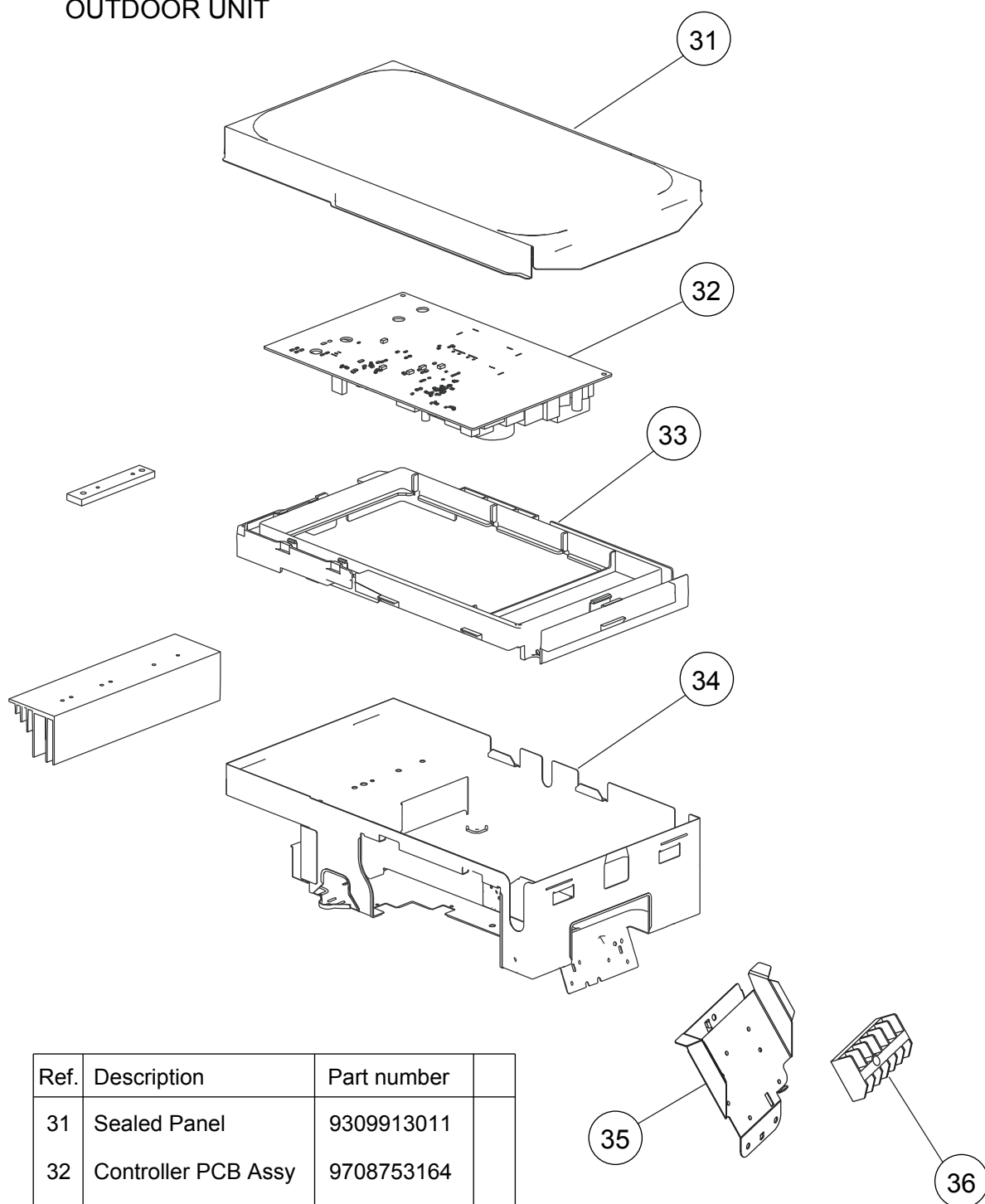


## OUTDOOR UNIT



| Ref. | Description            | Part number |
|------|------------------------|-------------|
| 21   | Condenser Total Assy   | 9332359005  |
| 22   | Compressor Assy        | 9317619004  |
| 23   | 2 way Valve Assy       | 9332371000  |
| 24   | 3 way Valve Sub Assy   | 9317109000  |
| 25   | 4 way Valve Assy       | 9333982007  |
| 26   | Solenoid               | 9970110047  |
| 27   | Pulse Motor Valve Assy | 9332368000  |
| 28   | Expansion Valve Coil   | 9970095030  |

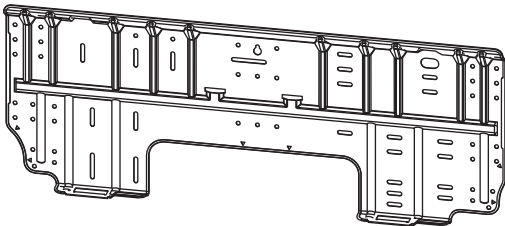
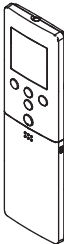
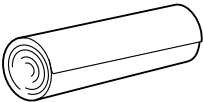
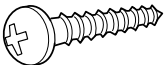
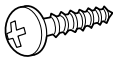
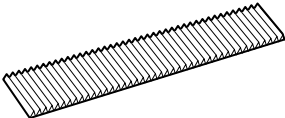
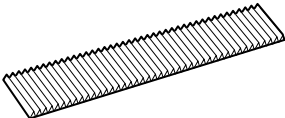
## OUTDOOR UNIT



| Ref. | Description         | Part number |  |
|------|---------------------|-------------|--|
| 31   | Sealed Panel        | 9309913011  |  |
| 32   | Controller PCB Assy | 9708753164  |  |
| 33   | PCB Holder          | 9313074029  |  |
| 34   | Inverter Case Assy  | 9315690081  |  |
| 35   | Terminal Bracket    | 9315233073  |  |
| 36   | Terminal 6P         | 9900435028  |  |
| --   | Outdoor Thermistor  | 9900544010  |  |
| --   | Thermistor Assy     | 9900614003  |  |

# ACCESSORIES

## INDOOR UNIT

| Name and Shape                                                                                                                | Part number |
|-------------------------------------------------------------------------------------------------------------------------------|-------------|
| Bracket panel<br>                            | 9318913002  |
| Remote control<br>                           | 9319207001  |
| Remote control holder<br>                   | 9318912005  |
| Battery (penlight)<br>                     | 0600185077  |
| Cloth tape<br>                             | 9308117007  |
| Tapping screw (big)<br>(φ 4 x 25)<br>      | 0700076046  |
| Tapping screw (small)<br>(φ 3 x 12)<br>    | 0700019036  |
| Air cleaning filter<br>(ion deodorant)<br> | 9311925088  |
| Air cleaning filter<br>(electric)<br>      | 9312153077  |

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