

WALL MOUNTED SPLIT-TYPE AIR CONDITIONERS

**SERVICE MANUAL**

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Models:

KSWS009-H113

KSWS012-H113

KSWS018-H213

KSWS024-H213

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## **IMPORTANT NOTICE**

This service manual is intended for use by individuals possessing adequate backgrounds of electrical, electronic and mechanical experience. It is to be installed and service by a licensed HVAC technician. Any attempt to repair the appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

The information, specifications and parameter are subject to change due to technical modification or improvement without any prior notice. The accurate specifications are presented on the nameplate label.

### **How to order spare parts**

To have your order filled promptly and correctly, please furnish the following information:

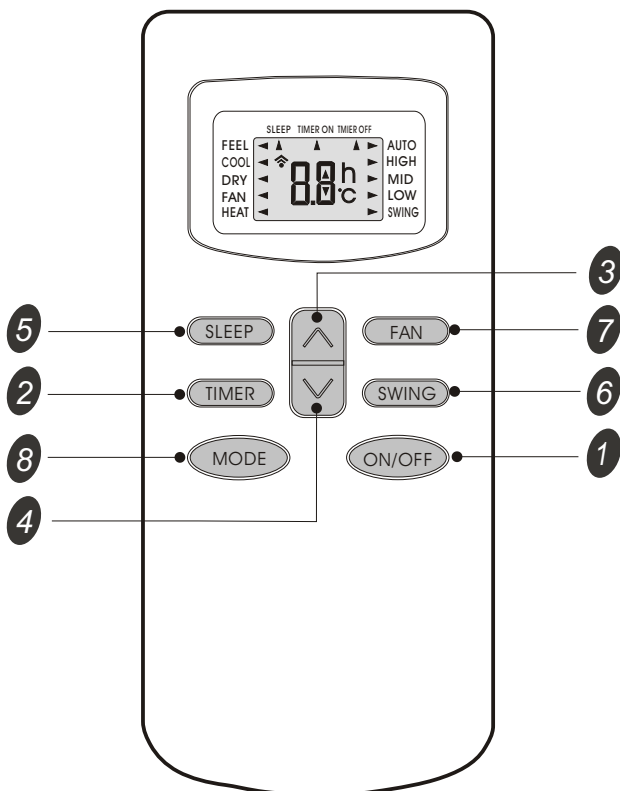
1. Model No. with Indoor or Outdoor
2. No. in the Explosion View
3. Part Name
4. The quantity you ordered

# Operation Details

## Remote controller

### Remote controller

The remote controller transmits signals to the system.



- 1 ON/OFF button**  
Used to start and stop operation when pressed.
- 2 TIMER button**  
Used to select TIMER operation.
- 3 UP button (TOO COOL button)**  
Used to increase the set room temperature and time.
- 4 DOWN button (TOO WARM button)**  
Used to decrease the set room temperature and time.
- 5 SLEEP button**  
Used to set or cancel sleep mode operation.
- 6 VANE control button**  
Used to adjust airflow direction.
- 7 FAN SPEED control button**  
Used to select the indoor fan motor speed: Auto, High, Mid and Low.
- 8 MODE button**  
Used to select the type of operation mode: Feel, Cooling, Dry, Fan and Heating(Only for Heat Pump).

*Note: Each mode and relevant function will be further specified in following pages.*

### Remote Control

The remote controller is not preset as Cooling Only Air Conditioner or Heat Pump by manufacturer. Each time after the remote controller replace batteries or is energized, the arrowhead will flash on the front of "Heat" or "Cool" on LCD of the remote controller. User can preset the remote controller type depending on the air conditioner type you have purchased as follows:  
Press any button when the arrowhead flashes on the front of "Cool", Cooling Only is set.  
Press any button when the arrowhead flashes on the front of "Heat", Heat Pump is set.  
If you don't press any button within 10 seconds, the remote controller is preset as Heat Pump automatically.

### Note :

If the air conditioner you purchased is a Cooling Only one, but you preset the remote controller as Heat Pump, it doesn't matter. But if the air conditioner you purchased is a Heat Pump one, and you preset the remote controller as Cooling Only, then you CAN NOT preset the Heating operation with the remote controller.

## Electronic Controller

### 1. Safety Control

#### (1) Time Delay Safety Control

3 minutes delay for compressor---The compressor is ceased for 3minutes to balance the pressure in the refrigeration cycle in order to protect the compressor.

2 minutes delay for 4-way valve---The 4-way valve is ceased for 2 minutes to prevent the refrigerant-gas abnormal noise when the HEATING operation is OFF or switch to the other operation mode.

#### (2) Indoor Pipe Temperature Sensor Frost Prevention Control

When the indoor pipe temperature sensor reads 32°F or below for 5 minutes, the indoor pipe temperature sensor frost prevention control starts. The compressor and outdoor fan stop and indoor fan operates at high speed for 3 minutes. After that, if the indoor pipe temperature sensor reads less than 41°F this control prolonged until the indoor pipe temperature sensor reads 41°F or more.

#### (3) High Temperature Protection Control

During HEATING operation, the outdoor fan motor and compressor are controlled by the indoor pipe temperature to prevent the high temperature of compressor.

Outdoor fan OFF: when the indoor pipe temperature is  $\geq 122^{\circ}\text{F}$

Outdoor fan ON: when the indoor pipe temperature is  $\leq 118.4^{\circ}\text{F}$

Compressor OFF: when the indoor pipe temperature is  $\geq 143.6^{\circ}\text{F}$

Compressor ON: when the indoor pipe temperature is  $\leq 118.4^{\circ}\text{F}$

### 2. "I Feel" Mode Operation

- (1) When the "I Feel" mode is selected, the operation mode and initial set temperature are determined by the initial room temperature at start-up of the operation except to turn off the air conditioner and operates it again.
- (2) If the mode is change to "I Feel" mode from other mode, the "I Feel" mode doesn't operate until compressor stop for more than 3 minutes.

| Mode  | Initial room temperature | Initial set temperature |
|---|--------------------------|-------------------------|
| COOLING   | 78.8°F or more           | 75.2°F                  |
| DRY   | 68°F to 77°F             | 64.4°F                  |
| HEATING for Heat Pump Type<br>FAN for Cooling Only Type | Less than 68°F           | 73.4°F                  |

In the "I Feel" mode , when the controller receives the up or down single of temperature, the set temperature can adjust by 33.8°F upper or lower. The biggest you can adjust by 35.6°F upper or lower.

### 3. "COOLING" Mode Operation

- (1) When the COOLING mode is selected without setting temperature, the system will set the set temperature at 78.8°F automatically with the AUTO FAN speed.
- (2) When selecting the COOLING mode operation, the system will operate according to the setting by the remote controller and the operation is as following:

|                  |                 |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Room Temp.       |                 |                 |                 |                 |                 |
| Set TEMP. +1.8°F |                 |                 |                 |                 |                 |
| Set TEMP. -1.8°F |                 |                 |                 |                 |                 |
| Time             | More than 2 min | More than 2 min | More than 2 min | More than 2 min | More than 2 min |
| Indoor Fan       | Set Speed       | Set Speed       | Set Speed       | Set Speed       | Set Speed       |
| Compressor ON    | OFF             | ON              | OFF             | ON              |                 |
| Outdoor Fan      | ON              | OFF             | ON              | OFF             | ON              |

**4. “DRY” Mode Operation**

- (1) The system for DRY operation used the same refrigerant circle as the cooling circle.
- (2) When the system operates in DRY mode ,at first it operates in cooling mode at 60. 8°F or64. 4°F for 3 minutes. And then, the system operates in cooling mode with low speed that regards the temperature of the room temperature sensor reads decrease 35.6°F as the set temperature. During the course of this, the fan speed set operation is failing but the vane motor can be controlled.

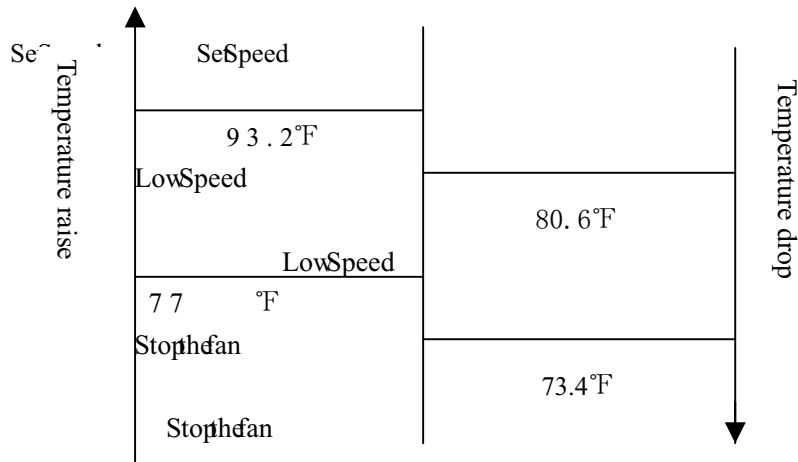
**5. “HEATING” Mode Operation (Only available for Heat Pump)**

- (1) When the HEATING mode is selected without setting temperature, the system will set the temperature at 73. 4°F automatically with the AUTO FAN speed.
- (2) When selecting the HEATING mode operation, the system will operate according to the setting by the remote controller and the operation is as following:

|                  |                 |                 |                 |                 |                 |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Set Temp. +1.8°F |                 |                 |                 |                 |                 |
| Set Temp. -1.8°F |                 |                 |                 |                 |                 |
| Room Temp.       |                 |                 |                 |                 |                 |
| Time             | More than 2 min | More than 2 min | More than 2 min | More than 2 min | More than 2 min |
| Compressor       | ON              | OFF             | ON              | OFF             | ON              |
| Outdoor fan      | ON              | OFF             | ON              | OFF             | ON              |

- (3) In HEATING mode, the indoor fan motor speed is controlled by Cold Air Prevention Control.
- (4) Cold Air Prevention Control

The function is intend to prevent cold air from being discharged when the heating operation starts or when defrosting.  
 The indoor fan speed will be controlled as following.  
 The vane angle is at the angle C(100° ).



During the heating operation, if the compressor stops that it will adjust the indoor fan speed, after 30 seconds to stop the fan.

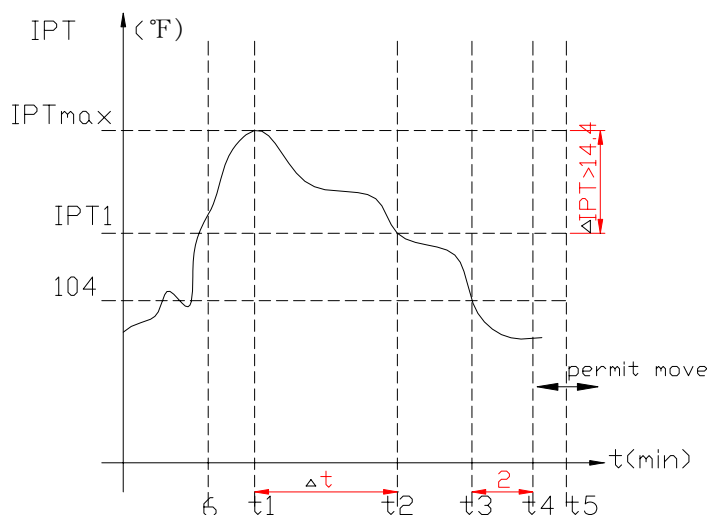
**(5) Defrost**

Defrosting of the outdoor heat exchange is controlled by the microprocessor with detection by the indoor pipe temperature sensor.

Defrost control type is according to the JC on the PCB whether is connected.

**When the JC is connect on the PCB**

When one of the conditions of A, Band C is satisfy, the defrosting operation stars.

**A. IPT--- indoor pipe temperature**

In the condition A, it must satisfy the conditions a), b) and c) then into defrosting operation.

- $IPT1$  satisfy  $IPT1 = IPT_{MAX} - \Delta IPT$  ( $14.4^{\circ}F$ )
- $t5 \geq 50$  minutes (the compressor cumulative operation time  $\geq 50$  minutes,  $t5$  is permitted move and lower than  $t1$  too).
- $IPT < 104^{\circ}F$ , and keep 2 minutes.

According to the condition A enter the defrosting operation, the first defrosting operation time is 8 minutes; After defrosting operation one cycle, and then judge and regulate the defrosting operation time.

- After the compressor cumulative operation time exceeds 120 minutes and the temperature of the IPT is less than  $95^{\circ}F$  for 2 minutes. When the defrosting operation time on this condition exceeds 8 minutes, it will terminate.
- After the compressor operates continuously for 20 minutes and the IPT is less than  $73.4^{\circ}F$  or from the last time of defrosting operation is 50 minutes or more interval. When the defrosting operation time on this condition exceeds 10 minutes, it will terminate.

**When the JC isn't connected on the PCB**

When the conditions of a) or b) is satisfy, the defrosting operation starts.

- Under the heating operation, the compressor cumulative operation time exceeds 50 minutes and the temperature of the outdoor pipe temperature sensor reads lower than  $-14.4^{\circ}F$
- Under the heating operation, the compressor cumulative operation time exceeds 50 minutes, if the indoor pipe temperature sensor reads lower than  $104^{\circ}F$  continuously for 2 minutes.

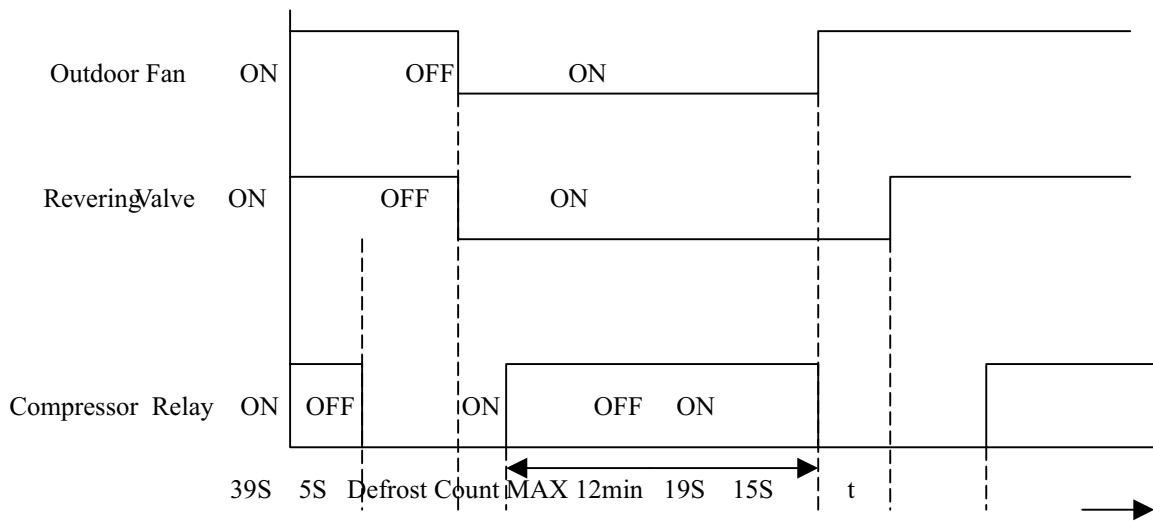
Note: If haven't the outdoor pipe temperature sensor that uses the condition b) to defrost, against use the condition a).

**Defrost terminating conditions**

When the condition c) or d) is satisfy, the defrosting operation will terminate.

- The outdoor defrost sensor reads  $68^{\circ}F$  or more.
- The defrosting time exceeds 10 minutes.

**Defrosting time chart**



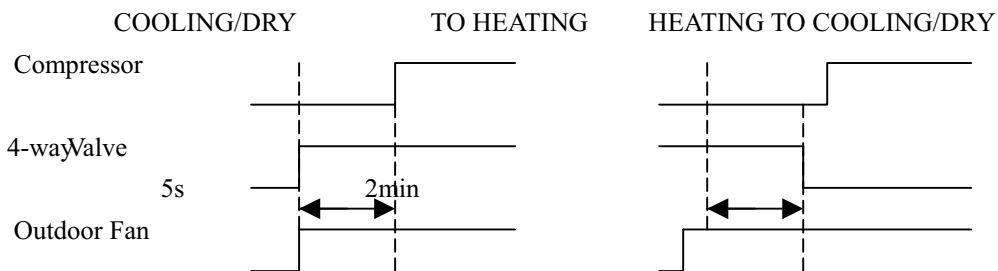
**6. “FAN” mode operation**

The indoor fan motor always turns on at the set speed and the vane motor turns on at the set fettle.

**7. 4-way Valve control**

HEATING ON  
COOLING/DRY OFF

The 4-way valve reverses for 5 seconds right before start-up of the compressor as following chart:



**8. “SLEEP” mode**

When the SLEEP button is pressed, the SLEEP mode is selected as following:

The indoor fan speed is set at the low speed, the power lamp and the sleep lamp is on, the temperature off after 5 minutes.

When selecting COOLING/DRY operation with SLEEP mode, the set temperature will be raised by 1.8°F 1 hour later and by 3.6°F 2 hour later.

When selecting HEATING operation with SLEEP mode, the set temperature will be dropped by 18°F 1 hour later and 3.6°F 2 hour later.

After the System operates in SLEEP mode for 8 hours, it will stop automatically.

**9. Fan motor control**

(1) Rotational frequency feedback control

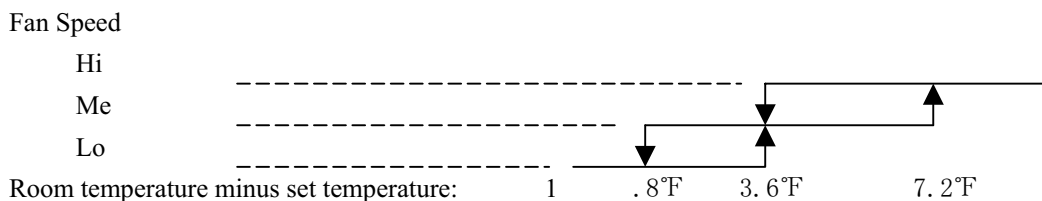
The indoor fan motor is equipped with a rotational frequency sensor, and outputs signal to the microprocessor to feedback the rotational frequency. Comparing the current rotational frequency with the target rotational frequency, the microprocessor adjusts fan motor electric to make the current rotational frequency close to the target rotational frequency. With this control, when the fan speed is switched, the rotational frequency changes smoothly.

(2) When the rotational frequency feedback signal has not output for 5 seconds (or when the microprocessor can't detect the signal for 5 seconds), the fan motor is regarded locked-up. Then the electric current to the fan

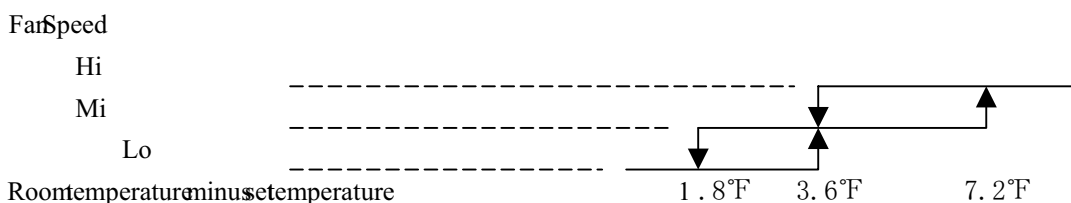
motor is shut off. 10 seconds later, the electric current is applied to the fan motor again. During the fan motor lock-up, the POWER indicator lamp flashes on and off 6 times/cycle or E6 to show the fan motor abnormality.

### 10. Auto Fan Speed Control

- (1) When the auto fan speed is selected, the indoor fan motor speed is automatically controlled by the room temperature and the set temperature.
- (2) In COOLING mode, the indoor fan motor operates as following:



- (3) In HEATING mode, the indoor fan motor operates as following;



### 11. Auto Vane Operation control

- (1) Vane motor drive
 

The unit is equipped with a stepping motor for the vane. The rotating direction, speed, and angle of the motor are controlled by pulse signal transmitted from indoor microprocessor.
- (2) Positioning
 

The vane is once pressed to the vane stopper below to confirm the standard position and then set to the desired angle. The positioning is decided as follows:

  - When the ON/OFF button is pressed.
  - When the vane control is change from AUTO to MANUAL.
  - When the SWING is finished.
  - When the test run starts.
  - When the power supply turns ON.
- (3) The auto vane changes as follows by pressing the VANE CONTROL button.
- (4) VANE AUTO mode
 

In vane auto mode, the microprocessor automatically determines the vane angle and operation to make the optimum room-temperature distribution.
- (5) SWING mode
 

When presses the SWING button, the vane swings.

### 12. TIMER Operation

- (1) To activate the air conditioner at the desire time, follow the procedure specified below(the remote control and air conditioner are switched off):
  - Press the Timer button.
  - Select the desired mode by pressing the Mode button.
  - Select the desired temperature by pressing the ▲ ▼ button(only possible when the 'cool' or 'heat' mode is selected).
  - Select the ventilator speed (low, medium or high) or automatic mode(only possible when the feel, Cool or Heat mode is selected) by pressing the Fan button.
  - The ventilator always operates in the Auto mode when the Dry mode is selected.
  - Select Swing or no Swing by pressing the Swing button.



- Press the Timer button('h' flashes).
- Use the ▲▼ button to select the time at which the air conditioner must activate (between 0 and 10 hours can be set at every half hour-between 10 and 24 hours can be set at every hour).
- Press the Timer button ('h' stops flashing) and the preset time appears in the display.
- Press the Timer button again to delete the selected data from the memory.

Note : If no buttons are pressed during the programming of the timer function, the remote control will switch off automatically after 10 seconds.

- (2) To switch the air conditioner off at the desired time, follow the procedure specified below (the remote control and air conditioner are switched off):
- Press the timer button.
  - Use the ▲▼ button to select the time at which.

### 13. EMERGENCY Operation

When the EMERGENCY Operation switch is pressed once, COOLING mode is selected and if in 3 seconds the EMERGENCY Operation switch is pressed again, mode is selected. Then pressed once again, the unit is switched off.

When the remote controller is missing, has failed or the batteries run down, press the EMERGENCY Operation switch on the front of the indoor unit. The unit will start.

The first 30 minutes of operation will be the test run operation. The operation is for servicing. The indoor fan runs at high speed and the system is in continuous operation. The thermostat is ON and the timer is reset to normal.

After 30 minutes of test run operation the system shifts to AUTO COOLING/HEATING mode, and the indoor fan runs in automatic speed. The operation continues until the EMERGENCY operation switch is pressed or a button on the remote controller is pressed and normal operation will start.

NOTE: Do not press the EMERGENCY Operation switch during normal operation.

### 14. AUTO RESTART Function(Optional)

1. When the indoor unit is controlled with the remote controller, the operation mode, set temperature, and the fan speed are memorized by the indoor electric control PCB. The AUTO RESTART function sets to work the moment power has restored after power failure. Then, the unit will restart automatically.

2. How to set the AUTO RESTART function.

- Press the emergency switch and power supply to the PCB following, hold 10 seconds and the buzzer will beep three times. The AUTO-RESTART is set.
- Do the operation again, the buzzer will beep four times and the AUTO-RESTART function is cancelled.

### 15. Failure Display and Handling

#### a) Failure Display

When the controller has failure, the buzzer will sound long for three times, and displays the failure from the failure lamp.

#### b) Failure Code

If have the digital pipe that displays the failure code for digital pipe, or display for the run lamp.

| Type of failure                               | The lamp flash | Display of digital pipe |
|---|----------------|-------------------------|
| The failure of room temperature sensor        | Once/cycle     | E1                      |
| The failure of indoor pipe temperature sensor | Twice/cycle    | E2                      |
| The failure of indoor fan motor               | 6 times/cycle  | E6                      |

#### c) Failure Handling

- When the room temperature sensor or the indoor pipe temperature sensor has a failure, the system will be shut off, the compressor will be OFF, and the outdoor fan and the indoor fan will be OFF. The system doesn't receive the signal of remote controller except the signal of shut off it. When the failure disappears, the controller can operate in normal mode. Before this, presses the "ON/OFF" to start the system, and it will operate in COOLING or HEATING for 30 minutes, and follows shut off. During

this, it displays the failure and the protection is failing. You must power off/on to operate it. In the failure, you can operate the FAN mode.

- When the outdoor protects in the COOLING or DRY, the outdoor unit stops, the indoor fan operates in set speed ; and in the HEATING, the outdoor unit stops, the indoor fan operates in cold air prevention control. The system doesn't receive the signal of remoter controller except the signal of shut off. When the system checks the voltage is 220V and the delay control is finished, it operates at normal again.
- When the indoor fan motor is failure, the compressor is stopped, the outdoor fan and indoor fan is stopped and display the failure. The system doesn't receive the signal of remoter controller except the signal of shut it off.

d) Display Of The Control

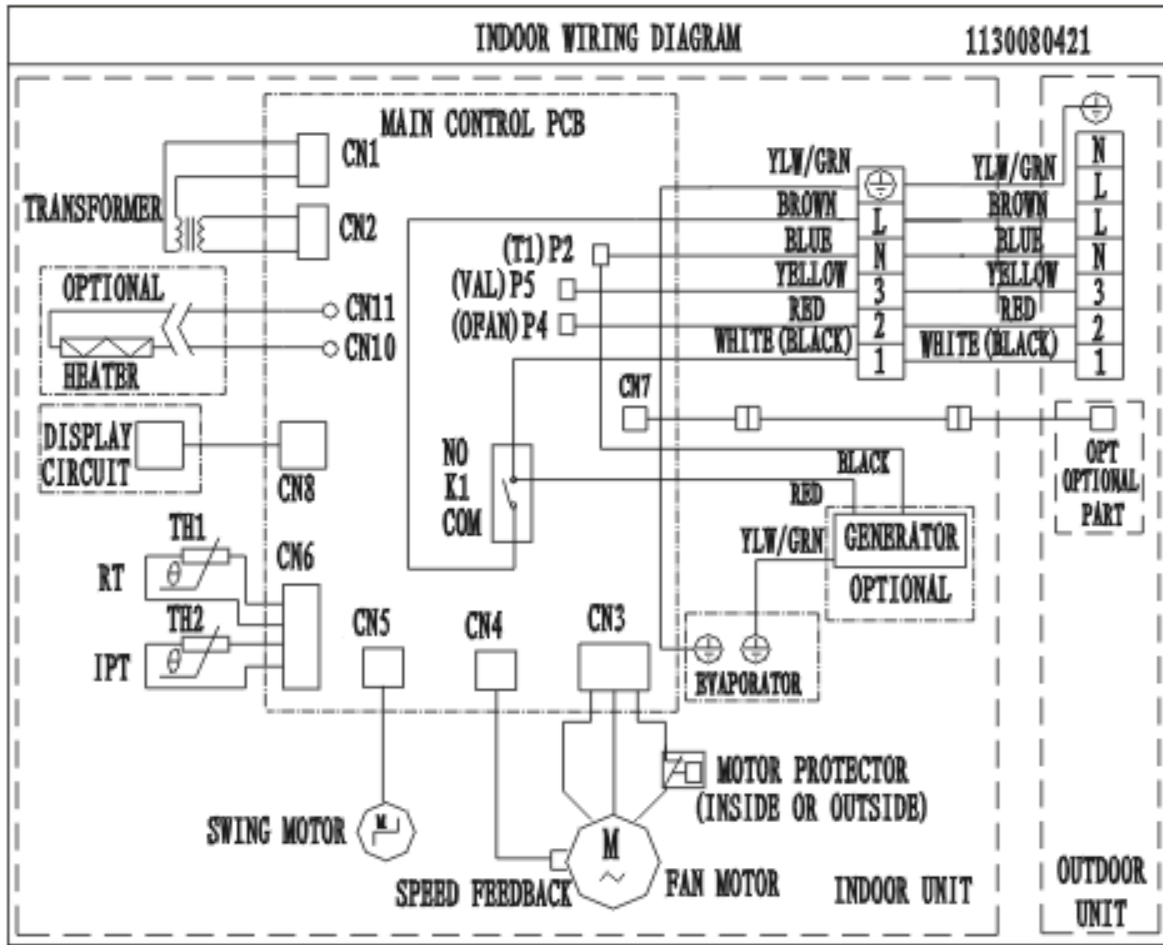
In the display board the lamp from left is the POWER lamp(Red), the SLEEP lamp(Yellow), the TIMER lamp(Yellow), the RUN lamp(Green).

g) When it gives the control power, the buzzer sounds long for 0.3 second per cycle.

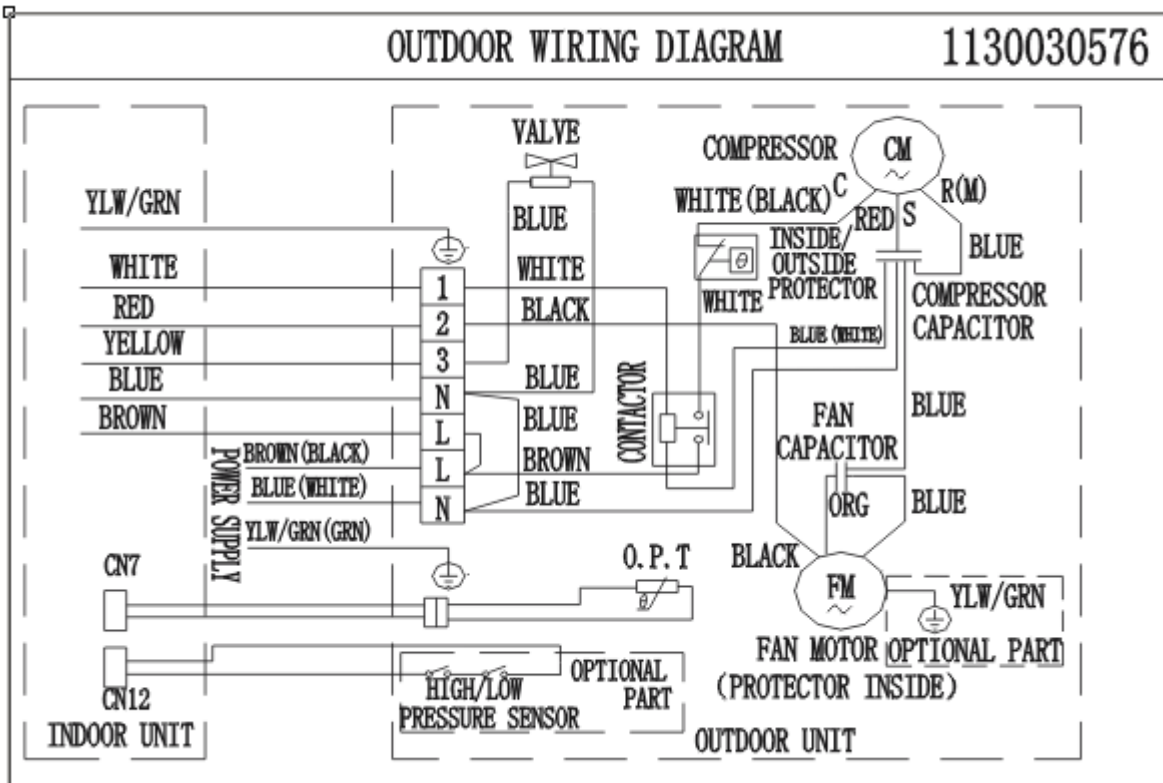
Wiring diagram

Model: KSW009-H113/ KSW012-H113

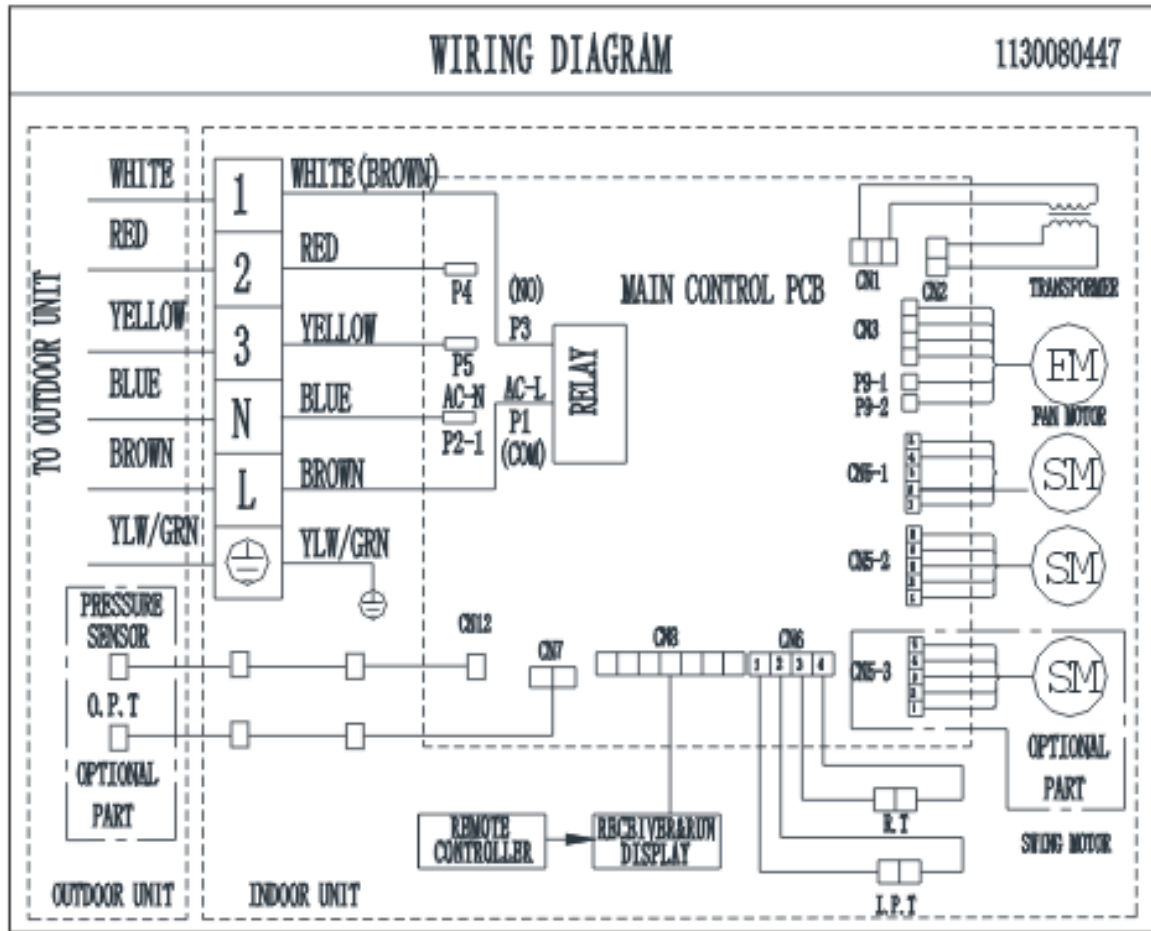
Indoor unit



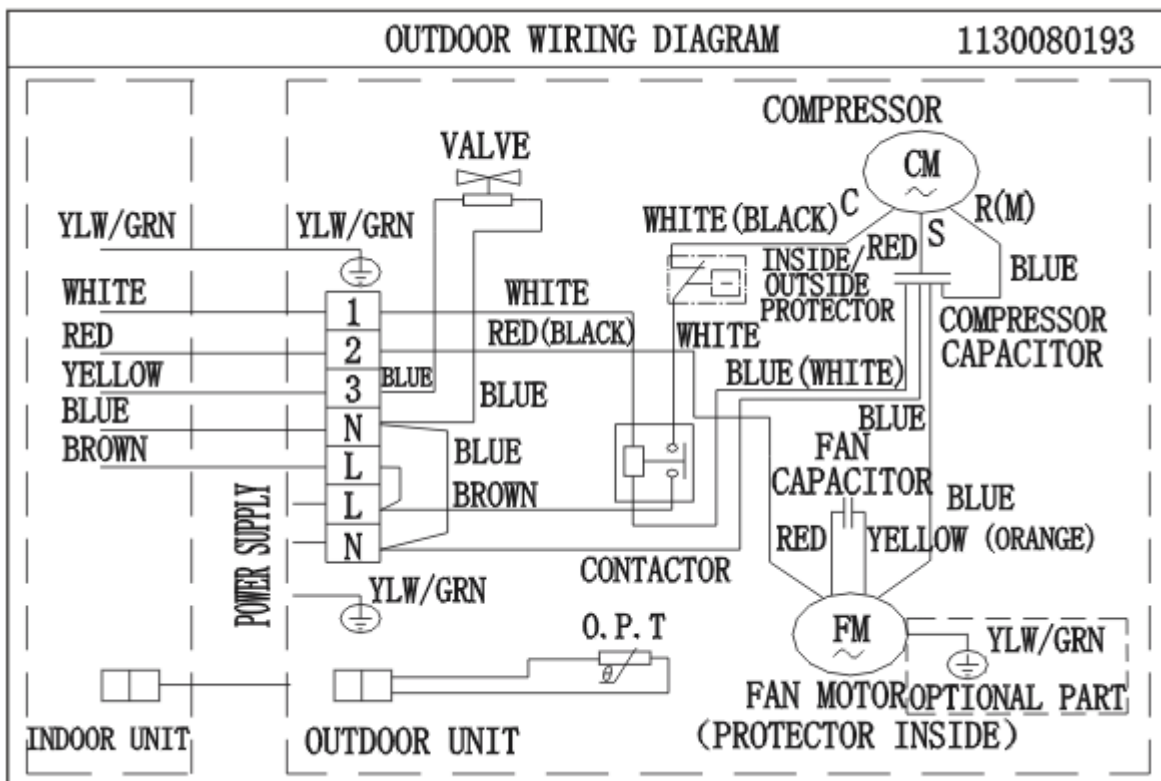
Outdoor unit



Wiring diagram  
 Model: KSW5018-H213  
 Indoor unit



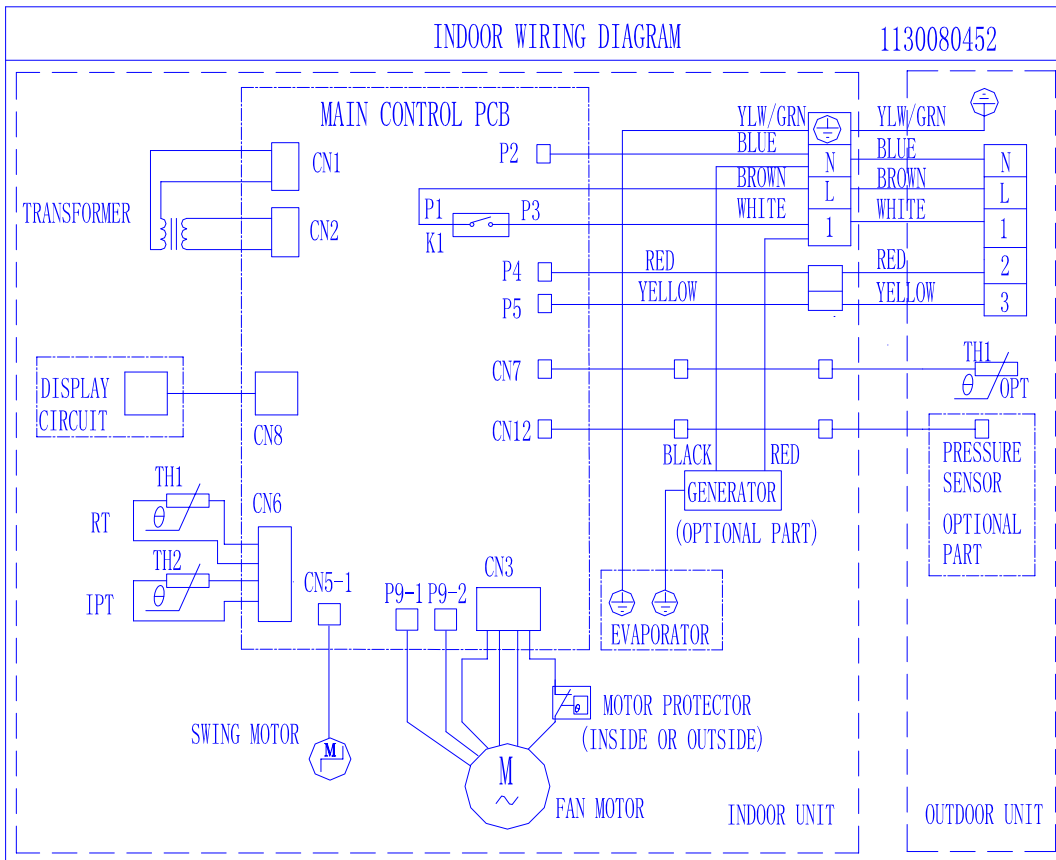
Outdoor unit



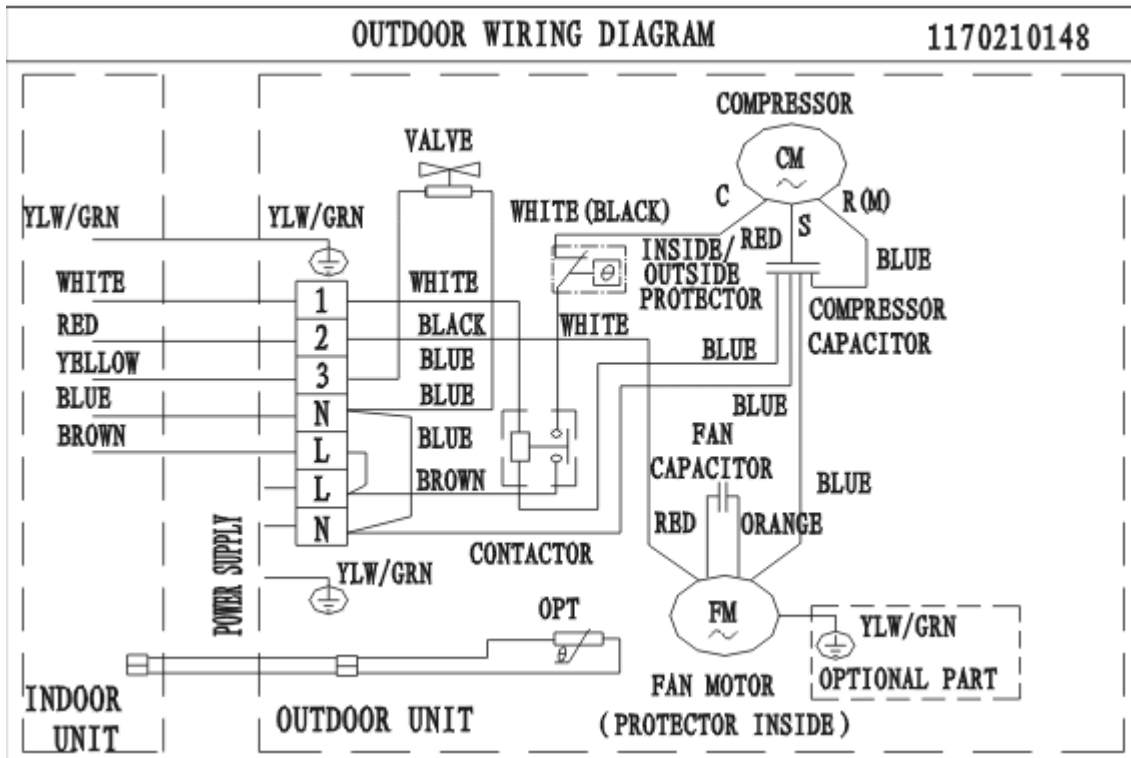
Wiring diagram

Model: KSW5024-H213

Indoor unit



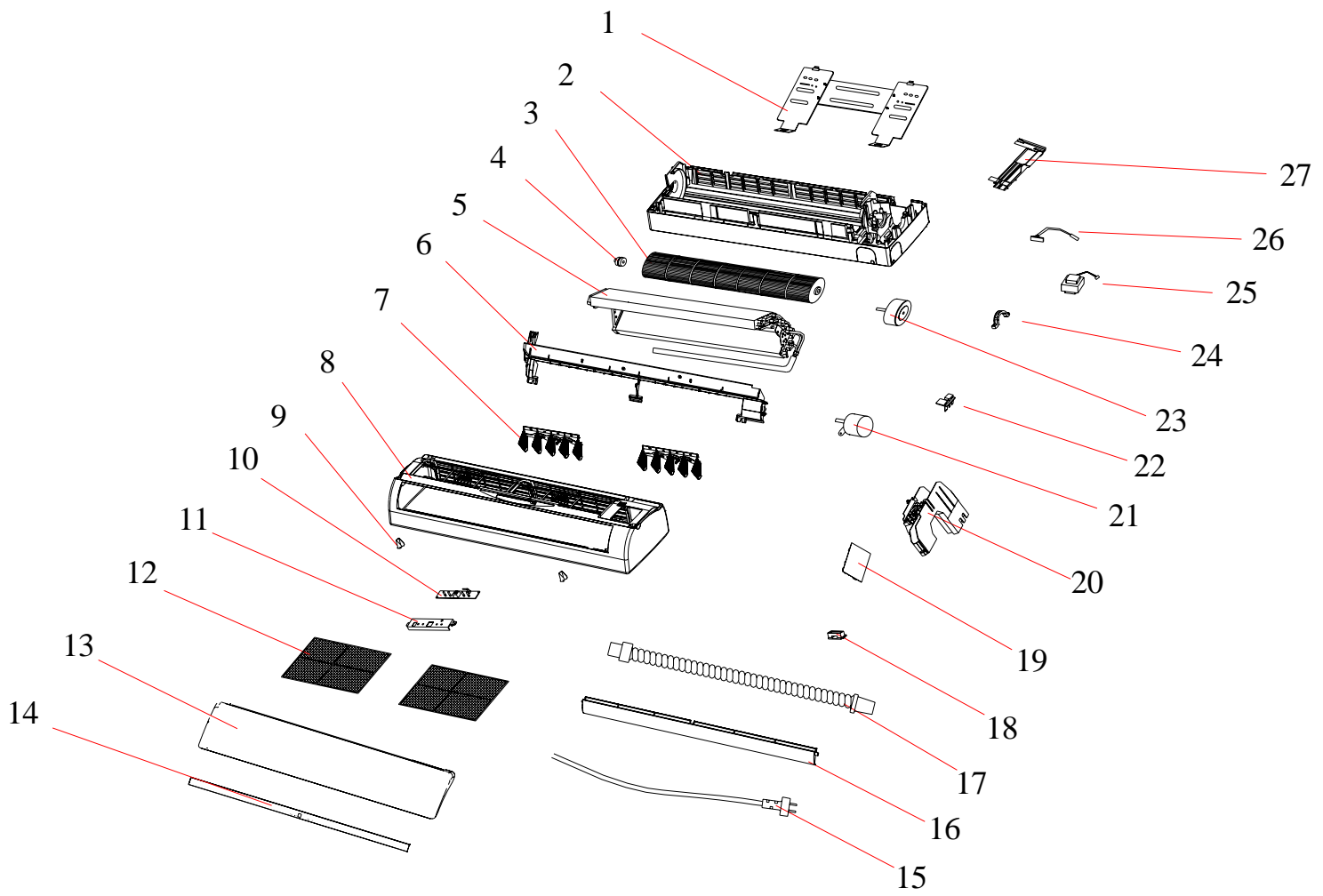
Outdoor unit



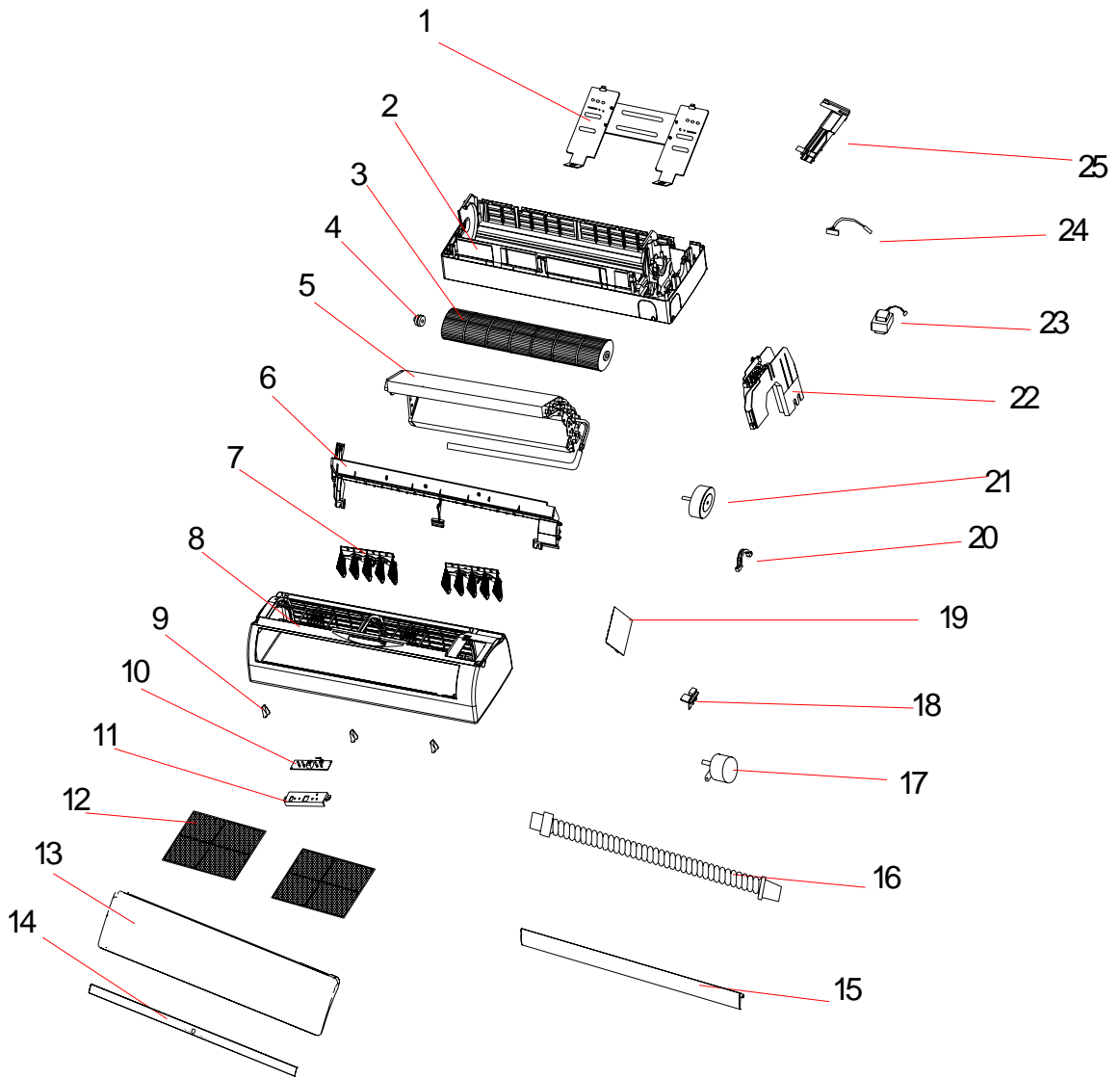
Explosion view

Model: KSWs009-H113/KSWs012-H113

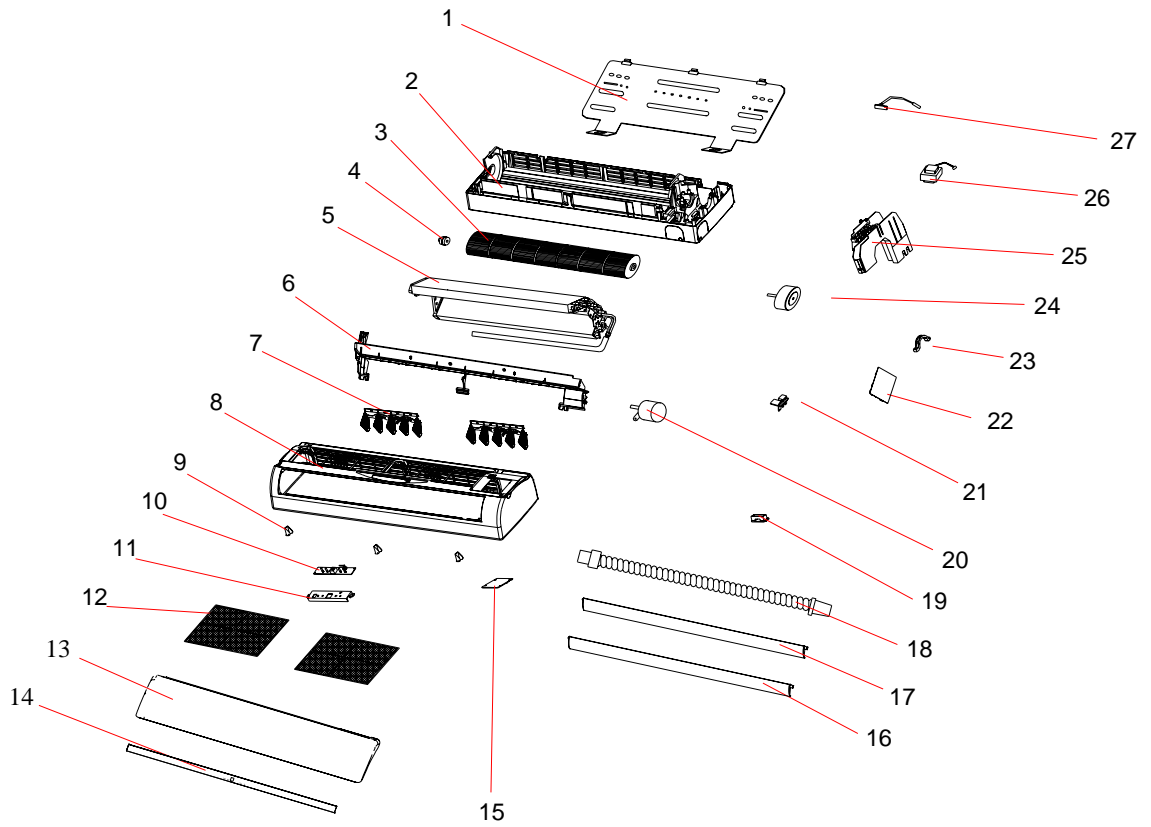
Indoor unit



Explosion view  
Model: KSW5018-H213  
Indoor unit



Explosion view  
Model: KSWS024-H213  
Indoor unit





## Part list

Model: KSW009-H113/KSW012-H113

## Indoor unit

| No. | Part Name                   | Q'ty | Remark                         |
|-----|-----------------------------|------|--------------------------------|
| 1   | Installation Plate          | 1    |                                |
| 2   | Base                        | 1    |                                |
| 3   | Cross Fan                   | 1    |                                |
| 4   | Bearing Mount               | 1    |                                |
| 5   | Evaporator                  | 1    |                                |
| 6   | Water Drainage Assembly     | 1    |                                |
| 7   | Vertical Vane Assembly      | 10   |                                |
| 8   | Face Frame                  | 1    |                                |
| 9   | Screw Cover                 | 2    |                                |
| 10  | Display PCB                 | 1    |                                |
| 11  | Display PCB Box             | 1    |                                |
| 12  | Air Filter                  | 2    |                                |
| 13  | Front Panel                 | 1    | Option                         |
| 14  | Display PCB Cover           | 1    |                                |
| 15  | Power Supply Cord           | 1    |                                |
| 16  | Vane                        | 1    |                                |
| 17  | Drainage Hose               | 1    |                                |
| 18  | Cable Clamp                 | 1    |                                |
| 19  | Main PCB                    | 1    |                                |
| 20  | Electrical Box              | 1    |                                |
| 21  | Vane Motor                  | 1    |                                |
| 22  | Sensor Holder               | 1    |                                |
| 23  | Indoor Motor                | 1    |                                |
| 24  | Indoor Motor Clamp          | 1    |                                |
| 25  | Transformer                 | 1    |                                |
| 26  | Indoor Sensor Assembly      | 1    |                                |
| 27  | In And Out Pipe Fixer       | 1    |                                |
| 28  | Remote Controller           | 1    | Not shown in<br>Explosion view |
| 29  | Remote Controller Supporter | 1    |                                |
| 30  | Indoor Carton               | 1    |                                |
| 31  | Left Foaming                | 1    |                                |
| 32  | Right Foaming               | 1    |                                |

## Part list

Model: KSWS018-H213

## Indoor unit

| No. | Part Name                   | Q'ty | Remark                         |
|-----|-----------------------------|------|--------------------------------|
| 1   | Installation Plate          | 1    |                                |
| 2   | Base                        | 1    |                                |
| 3   | Cross Fan                   | 1    |                                |
| 4   | Bearing Mount               | 1    |                                |
| 5   | Evaporator                  | 1    | 900- I K9-1.5                  |
| 6   | Water Drainage Assembly     | 1    |                                |
| 7   | Vertical Vane Assembly      | 12   |                                |
| 8   | Face Frame                  | 1    |                                |
| 9   | Screw Cover                 | 3    |                                |
| 10  | Display PCB                 | 1    |                                |
| 11  | Display PCB Box             | 1    |                                |
| 12  | Left Air Filter             | 1    |                                |
|     | Right Air Filter            | 1    |                                |
| 13  | Front Panel                 | 1    |                                |
| 14  | Display PCB cover           | 1    | option                         |
| 15  | Vane                        | 1    |                                |
| 16  | Drainage Hose               | 1    |                                |
| 17  | Vane Motor                  | 1    |                                |
| 18  | Sensor Holder               | 1    |                                |
| 19  | Main PCB                    | 1    |                                |
| 20  | Indoor Motor Cover          | 1    |                                |
| 21  | Indoor Motor                | 1    |                                |
| 22  | Electrical Box              | 1    |                                |
| 23  | Transformer                 | 1    |                                |
| 24  | Indoor Sensor Assembly      | 1    |                                |
| 25  | In And Out Pipe Fixer       | 1    |                                |
| 26  | Remote Controller           | 1    | Not shown in<br>Explosion view |
| 27  | Remote Controller Supporter | 1    |                                |
| 28  | Indoor Carton               | 1    |                                |
| 29  | Left Foaming                | 1    |                                |
| 30  | Right Foaming               | 1    |                                |
| 31  | Middle Pasteboard Supporter | 1    |                                |

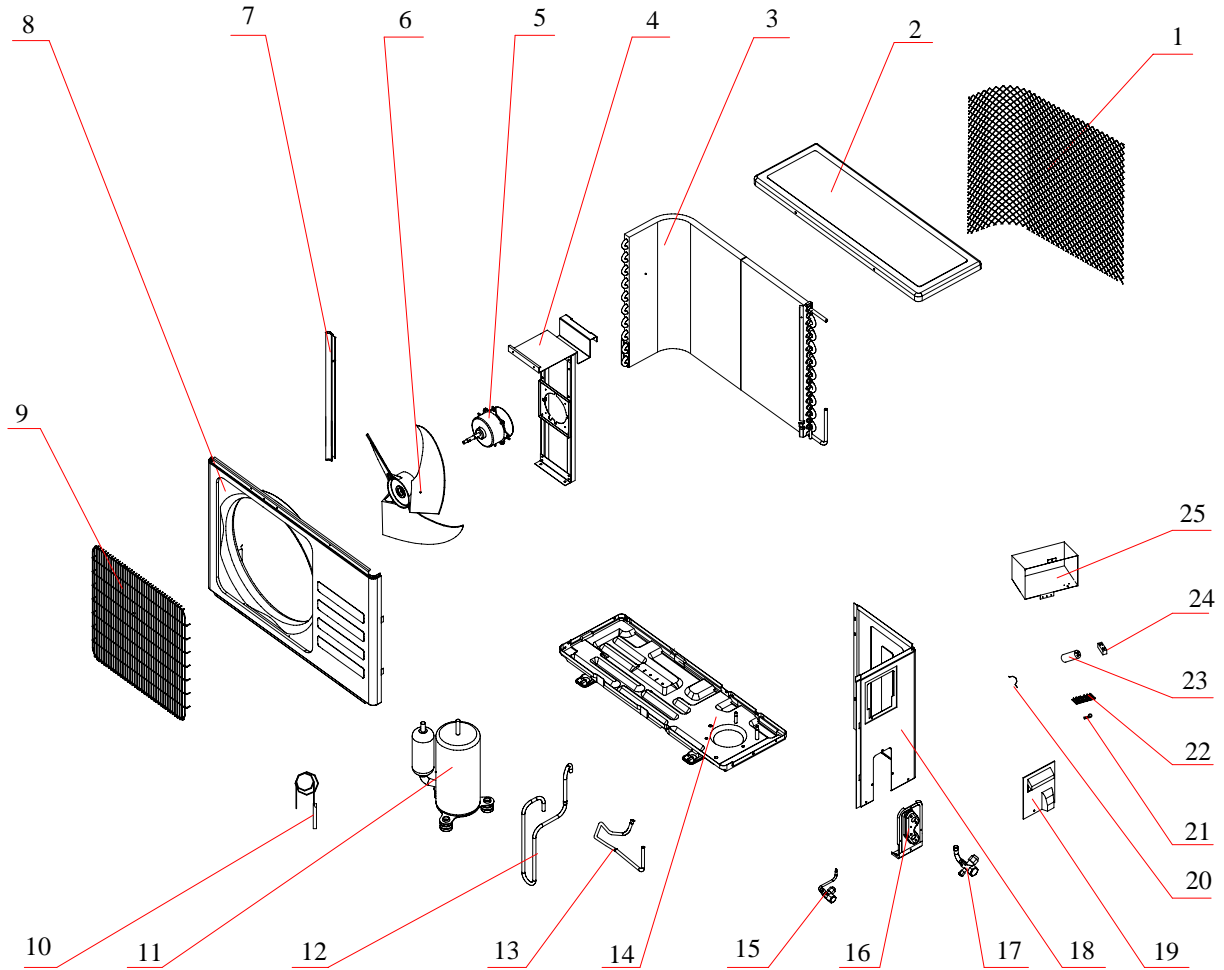
## Part list

Model: KSW5024-H213

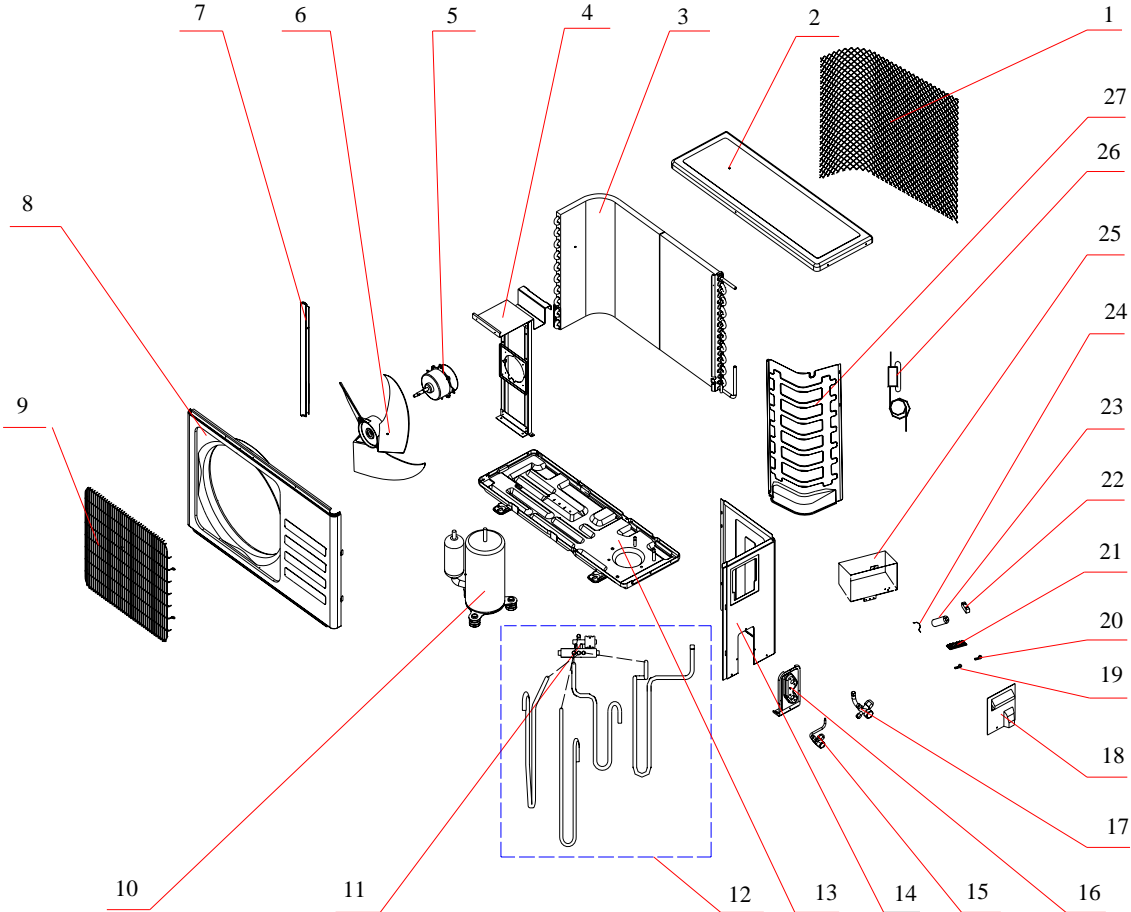
Indoor unit

| No. | Part Name                   | Q'ty | Remark                         |
|-----|-----------------------------|------|--------------------------------|
| 1   | Installation Plate          | 1    |                                |
| 2   | Base                        | 1    |                                |
| 3   | Cross Fan                   | 1    |                                |
| 4   | Bearing Mount               | 1    |                                |
| 5   | Evaporator                  | 1    | 1035- II K7-1.5                |
| 6   | Water Drainage Assembly     | 1    |                                |
| 7   | Vertical Vane Assembly A    | 14   |                                |
|     | Vertical Vane Assembly B    | 2    |                                |
| 8   | Face Frame                  | 1    |                                |
| 9   | Screw Cover                 | 3    |                                |
| 10  | Display PCB                 | 1    |                                |
| 11  | Display PCB Box             | 1    |                                |
| 12  | Left Air Filter             | 1    |                                |
|     | Right Air Filter            | 1    |                                |
| 13  | Front Panel                 | 1    |                                |
| 14  | Display PCB Cover           | 1    |                                |
| 15  | Electrical Box Cover        | 1    |                                |
| 16  | Vane A                      | 1    |                                |
| 17  | Vane B                      | 1    |                                |
| 18  | Drainage Hose               | 1    |                                |
| 19  | Cable Clamp                 | 1    |                                |
| 20  | Vane Motor                  | 2    |                                |
| 21  | Sensor Holder               | 1    |                                |
| 22  | Main PCB                    | 1    |                                |
| 23  | Indoor Motor Cover          | 1    |                                |
| 24  | Indoor Motor                | 1    |                                |
| 25  | Electrical Box              | 1    |                                |
| 26  | Transformer                 | 1    |                                |
| 27  | Indoor Sensor Assembly      | 1    |                                |
| 28  | Remote Controller           | 1    | Not shown in<br>Explosion view |
| 29  | Remote Controller Supporter | 1    |                                |
| 30  | Indoor Carton               | 1    |                                |
| 31  | Left Foaming                | 1    |                                |
| 32  | Right Foaming               | 1    |                                |
| 33  | Middle Pasteboard Supporter | 1    |                                |
| 34  | Middle Foaming Supporter    | 1    |                                |

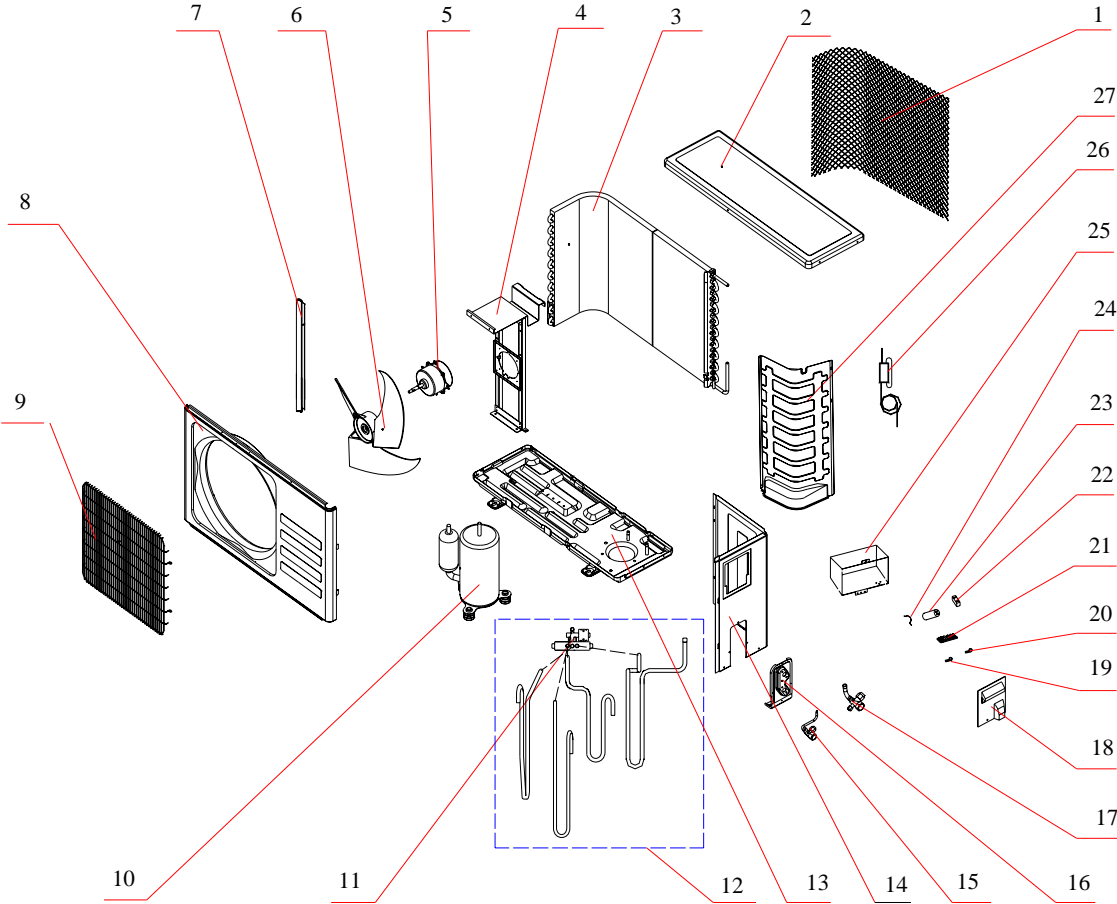
Explosion view  
Model: KSW5009-H113  
Outdoor unit



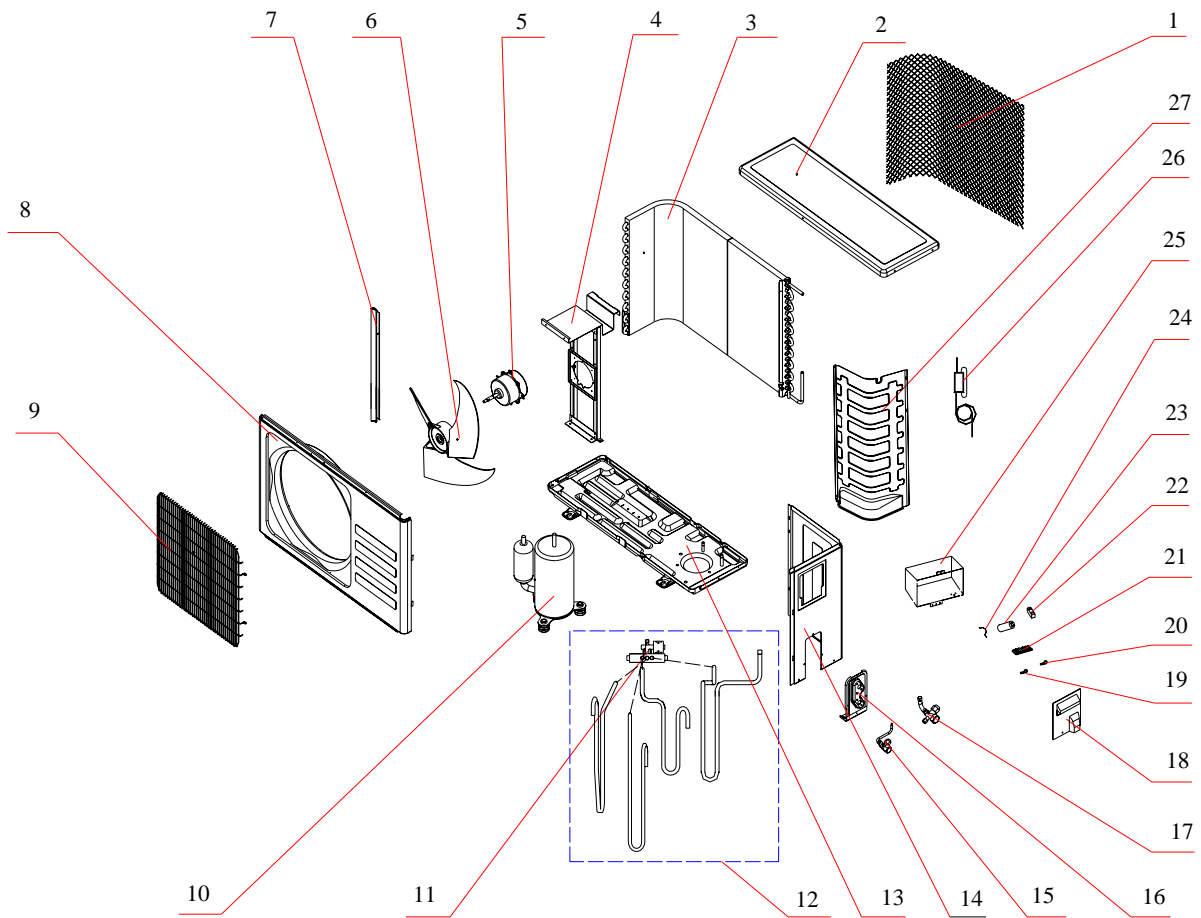
Explosion view  
Model: KSWS012-H113  
Outdoor unit



Explosion view  
Model: KSW018-H213  
Outdoor unit



Explosion view  
Model: KSW024-H213  
Outdoor unit



## Part list

Model: KSWS009-H113

## Outdoor unit

| No. | Part Name                     | Q'ty | Remark                              |
|-----|-------------------------------|------|-------------------------------------|
| 1   | Grille                        | 1    |                                     |
| 2   | Top Cover                     | 1    |                                     |
| 3   | Condenser                     | 1    |                                     |
| 4   | Outdoor Motor Supporter       | 1    |                                     |
| 5   | Outdoor Motor                 | 1    |                                     |
| 6   | Propeller Fan                 | 1    |                                     |
| 7   | Left Grille Supporter         | 1    |                                     |
| 8   | Front Plate                   | 1    |                                     |
| 9   | Fan Guard                     | 1    |                                     |
| 10  | Capillary Assembly            | 1    |                                     |
| 11  | Compressor And It Accessories | 1    |                                     |
| 12  | Discharge Pipe                | 1    |                                     |
| 13  | Suction Pipe                  | 1    |                                     |
| 14  | Base                          | 1    |                                     |
| 15  | Two-way Valve                 | 1    |                                     |
| 16  | Valve Supporter               | 1    |                                     |
| 17  | Three-way Valve               | 1    |                                     |
| 18  | Right Plate                   | 1    |                                     |
| 19  | Electrical Box Cover          | 1    |                                     |
| 20  | Capacitor Strip               | 1    |                                     |
| 21  | Cable Clamp                   | 1    |                                     |
| 22  | Terminal                      | 1    |                                     |
| 23  | Compressor Capacitor          | 1    |                                     |
| 24  | Fan Motor Capacitor           | 1    |                                     |
| 25  | Electrical Parts Box          | 1    |                                     |
| 26  | Base Carton                   | 1    | Not shown in the<br>Explosion view. |
| 27  | Cabinet Carton                | 1    |                                     |
| 28  | Base Forming                  | 1    |                                     |
| 29  | Cover Foaming                 | 1    |                                     |



## Part list

Model: KSWS012-H113

## Outdoor unit

| No. | Part Name                     | Q'ty | Remark           |
|-----|-------------------------------|------|------------------|
| 1   | Grille                        | 1    | Optional         |
| 2   | Top Cover                     | 1    |                  |
| 3   | Condenser                     | 1    |                  |
| 4   | Outdoor Motor Supporter       | 1    |                  |
| 5   | Outdoor Motor                 | 1    |                  |
| 6   | Propeller Fan                 | 1    |                  |
| 7   | Left Grille Supporter         | 1    |                  |
| 8   | Front Plate                   | 1    |                  |
| 9   | Fan Guard                     | 1    |                  |
| 10  | Compressor And It Accessories | 1    |                  |
| 11  | 4-way Valve                   | 1    |                  |
| 12  | 4-way Valve Assembly          | 1    | Optional         |
| 13  | Outdoor Base                  | 1    |                  |
| 14  | Right Plate                   | 1    |                  |
| 15  | Two-way Valve                 | 1    |                  |
| 16  | Valve Supporter               | 1    |                  |
| 17  | Three-way Valve               | 1    |                  |
| 18  | Electrical Box Cover          | 1    |                  |
| 19  | Outdoor cable Clamp           | 1    |                  |
| 20  | Outdoor cable Clamp           | 1    |                  |
| 21  | Outdoor terminal              | 1    |                  |
| 22  | Outdoor Fan Motor Capacitor   | 1    |                  |
| 23  | Compressor Capacitor          | 1    |                  |
| 24  | Compressor capacitor Strip    | 1    |                  |
| 25  | Outdoor electrical Parts Box  | 1    |                  |
| 26  | Capillary Assembly            | 1    |                  |
| 27  | Partition plate               | 1    | Optional         |
| 28  | Outdoor Base Carton           | 1    | Not shown in the |
| 29  | Outdoor Cabinet Carton        | 1    | Explosion view.  |

## Part list

Model: KSW018-H213

Outdoor unit

| No. | Part Name                     | Q'ty | Remark                              |
|-----|-------------------------------|------|-------------------------------------|
| 1   | Grille                        | 1    | Optional                            |
| 2   | Top Cover                     | 1    |                                     |
| 3   | Condenser                     | 1    |                                     |
| 4   | Outdoor Motor Supporter       | 1    |                                     |
| 5   | Outdoor Motor                 | 1    |                                     |
| 6   | Propeller Fan                 | 1    |                                     |
| 7   | Left Grille Supporter         | 1    |                                     |
| 8   | Front Plate                   | 1    |                                     |
| 9   | Fan Guard                     | 1    |                                     |
| 10  | Capillary Assembly            | 1    |                                     |
| 11  | Compressor And It Accessories | 1    |                                     |
| 12  | Discharge Pipe                | 1    | Optional                            |
| 13  | Suction Pipe                  | 1    | Optional                            |
| 14  | Outdoor Base                  | 1    |                                     |
| 15  | Two-way Valve                 | 1    |                                     |
| 16  | Valve Supporter               | 1    |                                     |
| 17  | Three-way Valve               | 1    |                                     |
| 18  | Right Plate                   | 1    |                                     |
| 19  | Electrical Box Cover          | 1    |                                     |
| 20  | Capacitor Strip               | 1    |                                     |
| 21  | Outdoor Cable Clamp           | 1    |                                     |
| 22  | Outdoor Terminal              | 1    |                                     |
| 23  | Compressor Capacitor          | 1    |                                     |
| 24  | Fan Motor Capacitor           | 1    |                                     |
| 25  | Outdoor electrical Parts Box  | 1    |                                     |
| 26  | Partition plate               | 1    | Not shown in the<br>Explosion view. |
| 27  | Base Carton                   | 1    |                                     |
| 28  | Outdoor Cabinet Carton        | 1    |                                     |
| 29  | Base Foaming                  | 1    |                                     |
| 30  | Cover Forming                 | 1    |                                     |
| 31  | 4 way valve                   | 1    |                                     |

## Part list

Model: KSWS024-H213

## Outdoor unit

| No. | Part Name                     | Q'ty | Remark                                 |
|-----|-------------------------------|------|--|
| 1   | Grille                        | 1    | Optional                               |
| 2   | Top Cover                     | 1    |  |
| 3   | Condenser                     | 1    |  |
| 4   | Outdoor Motor Supporter       | 1    |  |
| 5   | Outdoor Motor                 | 1    |  |
| 6   | Propeller Fan                 | 1    |  |
| 7   | Left Grille Supporter         | 1    |  |
| 8   | Front Plate                   | 1    |  |
| 9   | Fan Guard                     | 1    |  |
| 10  | Compressor And It Accessories | 1    |  |
| 11  | 4-way Valve                   | 1    |  |
| 12  | 4-way Valve Assembly          | 1    | Optional                               |
| 13  | Outdoor base                  | 1    |  |
| 14  | Right Plate                   | 1    |  |
| 15  | Two-way Valve                 | 1    |  |
| 16  | Valve Supporter               | 1    |  |
| 17  | Three-way Valve               | 1    |  |
| 18  | Electrical Box Cover          | 1    |  |
| 19  | Outdoor Cable Clamp           | 1    |  |
| 20  | Outdoor Cable Clamp           | 1    |  |
| 21  | Outdoor terminal              | 1    |  |
| 22  | Fan Motor Capacitor           | 1    |  |
| 23  | Compressor Capacitor          | 1    |  |
| 24  | Capacitor Strip               | 1    |  |
| 25  | Outdoor Electrical Parts Box  | 1    |  |
| 26  | Capillary Assembly            | 1    |  |
| 27  | Partition plate               | 1    |  |
| 28  | Outdoor sensor                | 1    | Not shown in<br>the Explosion<br>view. |
| 29  | Base Carton                   | 1    |  |
| 30  | Outdoor Cabinet Carton        | 1    |  |
| 31  | Base Foaming                  | 1    |  |

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