GREE
Change for life

# Service Manual

GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

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# 1. Summary

**Indoor Unit:**

A1 Panel:

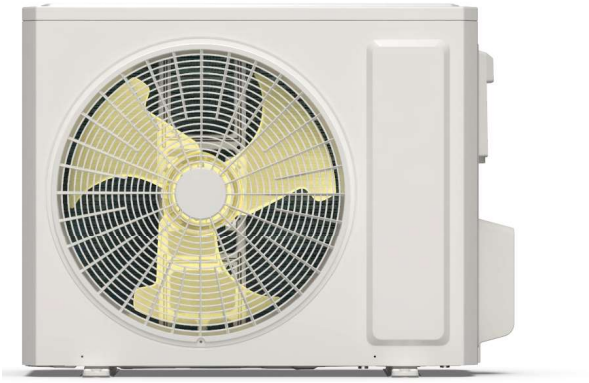
**Remote Controller:**

YAP1F7(WiFi)

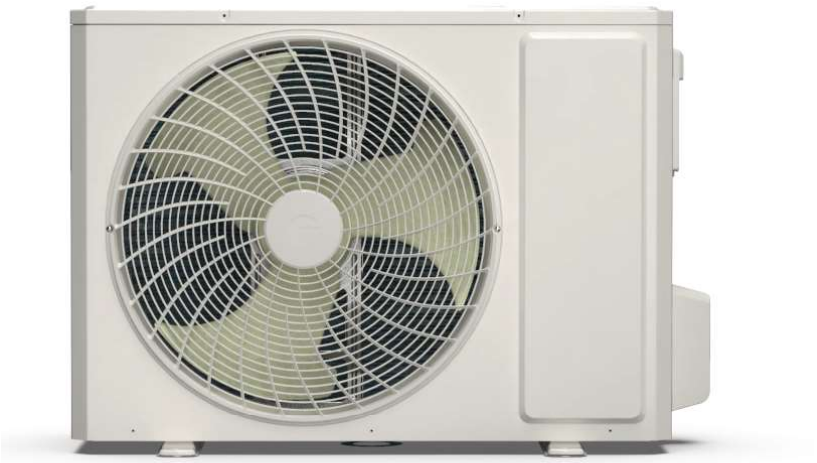
**Outdoor Unit:**

GWC12ATCXB-K6DNA1B/O

GWH12ATCXB-K6DNA1B/O



GWC24ATEXF-K6DNA1E/O
GWH24ATEXF-K6DNA1E/O
GWC28ATEXF-K6DNA1A/O
GWH28ATEXF-K6DNA1A/O



**Model list**:

| No. | Model | Product code | Indoor model | Indoor product code | Outdoor model | Outdoor product code |
|---|---|---|---|---|---|---|
| 1 | GWC12ATCXB-K6DNA1B | CB574013100 | GWC12ATCXB-K6DNA1B/I | CB574N13100 | GWC12ATCXB-K6DNA1B/O | CB574W13100 |
| 2 | GWH12ATCXB-K6DNA1B | CB574013200 | GWH12ATCXB-K6DNA1B/I | CB574N13200 | GWH12ATCXB-K6DNA1B/O | CB574W13200 |
| 3 | GWC24ATEXF-K6DNA1E | CB574014500 | GWC24ATEXF-K6DNA1E/I | CB574N14500 | GWC24ATEXF-K6DNA1E/O | CB574W14500 |
| 4 | GWH24ATEXF-K6DNA1E | CB574014400 | GWH24ATEXF-K6DNA1E/I | CB574N14400 | GWH24ATEXF-K6DNA1E/O | CB574W14400 |
| 5 | GWC28ATEXF-K6DNA1A | CB574013400 | GWC28ATEXF-K6DNA1A/I | CB574N13400 | GWC28ATEXF-K6DNA1A/O | CB574W13400 |
| 6 | GWH28ATEXF-K6DNA1A | CB574013300 | GWH28ATEXF-K6DNA1A/I | CB574N13300 | GWH28ATEXF-K6DNA1A/O | CB574W13300 |

# 2. Specifications

## 2.1 Specification Sheet

| Model | | | GWC12ATCXB-K6DNA1B | GWH12ATCXB-K6DNA1B |
|---|---|---|---|---|
| Product Code | | | CB574013100 | CB574013200 |
| Power Supply | Rated Voltage | V~ | 220-240 | 220-240 |
| | Rated Frequency | Hz | 50 | 50 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | W | 3517 | 3517 |
| Heating Capacity | | W | / | 3800 |
| Cooling Power Input | | W | 940 | 910 |
| Heating Power Input | | W | / | 970 |
| Cooling Current Input | | A | 4.4 | 4.4 |
| Heating Current Input | | A | / | 4.6 |
| Rated Input | | W | 1550 | 1600 |
| Rated Cooling Current | | A | 7.4 | 7.4 |
| Rated Heating Current | | A | / | 7.4 |
| Air Flow Volume | | $m^3/h$ | 660/540/505/405/380/330/310/200 | 660/540/505/405/380/330/310/200 |
| Dehumidifying Volume | | L/h | 1.6 | 1.6 |
| EER | | W/W | 3.74 | 3.86 |
| COP | | W/W | / | 3.92 |
| SEER | | | / | / |
| HSPF | | | / | / |
| Application Area | | $m^2$ | 16-24 | 16-24 |
| Indoor Unit | Model | | GWC12ATCXB-K6DNA1B/I | GWH12ATCXB-K6DNA1B/I |
| | Product Code | | CB574N13100 | CB574N13200 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ94×630 | Φ94×630 |
| | Cooling Speed | r/min | 1400/1200/1120/1050/980/920/750/500 | 1400/1200/1120/1050/980/920/750/500 |
| | Heating Speed | r/min | / | 1400/1200/1140/1080/1020/960/900 |
| | Fan Motor Power Output | W | 20 | 20 |
| | Fan Motor RLA | A | 0.3 | 0.3 |
| | Fan Motor Capacitor | μF | 1.5 | 1.5 |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ5 | Φ5 |
| | Evaporator Row-fin Gap | mm | 2-1.3 | 2-1.3 |
| | Evaporator Coil Length (LXDXW) | mm | 634×22.8×266.7 | 634×22.8×266.7 |
| | Swing Motor Model | | MP24HF | MP24HF |
| | Swing Motor Power Output | W | 1.5 | 1.5 |
| | Fuse Current | A | 3.15 | 3.15 |
| | Sound Pressure Level | dB (A) | Cooling:43/38/36/35/33/31/26 | Cooling:43/38/36/35/33/31/26<br>Heating:43/38/36/34/33/32/29 |
| | Sound Power Level | dB (A) | Cooling:59/54/52/51/49/47/42 | Cooling:60/52/50/49/47/45/40<br>Heating:58/53/51/49/48/47/44 |
| | Dimension (WXHXD) | mm | 835X275X200 | 835X275X200 |
| | Dimension of Carton Box (LXWXH) | mm | 890X329X260 | 890X329X260 |
| | Dimension of Package (LXWXH) | mm | 895X345X271 | 895X345X271 |
| | Net Weight | kg | 8.5 | 8.5 |
| | Gross Weight | kg | 10.5 | 10.5 |

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC12ATCXB-K6DNA1B/O | GWH12ATCXB-K6DNA1B/O |
| | Outdoor Unit Product Code | | CB574W13100 | CB574W13200 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO., LTD | ZHUHAI LANDA COMPRESSOR CO., LTD |
| | Compressor Model | | FTz-AN108ACBD | FTz-AN108ACBD |
| | Compressor Oil | | FW68DA or equivalent | FW68DA or equivalent |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | / | / |
| | Compressor RLA | A | 4.4 | 4.4 |
| | Compressor Power Input | W | 857 | 857 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºC | 16~30 | 16~30 |
| | Cooling Operation Ambient Temperature Range | ºC | -15~52 | -15~52 |
| | Heating Operation Ambient Temperature Range | ºC | / | -15~24 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7.94 | Φ7 |
| | Condenser Rows-fin Gap | mm | 1-1.3 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 677×19.05×528 | 669×19.05×528 |
| | Fan Motor Speed | rpm | 900 | 900 |
| | Fan Motor Power Output | W | 30 | 30 |
| | Fan Motor RLA | A | 0.4 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | $m^3/h$ | 2000 | 2000 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ400 | Φ400 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 51 | 52 |
| | Sound Power Level | dB (A) | 62 | 65 |
| | Dimension(WXHXD) | mm | 732X555X330 | 732X555X330 |
| | Dimension of Carton Box (LXWXH) | mm | 791X373X590 | 791X373X590 |
| | Dimension of Package(LXWXH) | mm | 794X376X615 | 794X376X615 |
| | Net Weight | kg | 24.5 | 27.5 |
| | Gross Weight | kg | 27 | 30 |
| | Refrigerant | | R32 | R32 |
| | Refrigerant Charge | kg | 0.5 | 0.75 |
| Connection Pipe | Connection Pipe Length | m | 5 | 5 |
| | Connection Pipe Gas Additional Charge | g/m | 12 | 16 |
| | Outer Diameter Liquid Pipe | | 1/4" | 1/4" |
| | Outer Diameter Gas Pipe | | 3/8" | 3/8" |
| | Max Distance Height | m | 10 | 10 |
| | Max Distance Length | m | 20 | 20 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

| Model | | | GWC24ATEXF-K6DNA1E | GWH24ATEXF-K6DNA1E |
|---|---|---|---|---|
| Product Code | | | CB574014500 | CB574014400 |
| Power Supply | Rated Voltage | V~ | 220-240 | 220-240 |
| | Rated Frequency | Hz | 50 | 50 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | W | 7100 | 7100 |
| Heating Capacity | | W | / | 7800 |
| Cooling Power Input | | W | 1920 | 1920 |
| Heating Power Input | | W | / | 2000 |
| Cooling Current Input | | A | 8.4 | 8.4 |
| Heating Current Input | | A | / | 8.8 |
| Rated Input | | W | 2800 | 2800 |
| Rated Cooling Current | | A | 14 | 14 |
| Rated Heating Current | | A | / | 14 |
| Air Flow Volume | | $m^3/h$ | 1200/1100/1050/950/850/800/750/600 | 1350/1100/1050/950/850/800/750/600 |
| Dehumidifying Volume | | L/h | 2.5 | 2.5 |
| EER | | W/W | 3.70 | 3.70 |
| COP | | W/W | / | 3.90 |
| SEER | | | / | / |
| HSPF | | | / | / |
| Application Area | | $m^2$ | 27-42 | 27-42 |
| Indoor Unit | Model | | GWC24ATEXF-K6DNA1E/I | GWH24ATEXF-K6DNA1E/I |
| | Product Code | | CB574N14500 | CB574N14400 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ111.5×830 | Φ111.5×830 |
| | Cooling Speed | r/min | 1250/1100/1000/950/900/850/800/650 | 1400/1150/1100/1000/900/850/800/650 |
| | Heating Speed | r/min | / | 1400/1200/1100/1000/900/850/800 |
| | Fan Motor Power Output | W | 45 | 60 |
| | Fan Motor RLA | A | 0.3 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ7 | Φ7 |
| | Evaporator Row-fin Gap | mm | 2-1.4 | 2-1.4 |
| | Evaporator Coil Length (LXDXW) | mm | 840×25.4×381 | 840×25.4×381 |
| | Swing Motor Model | | MP35CP | MP35CP |
| | Swing Motor Power Output | W | 2.5 | 2.5 |
| | Fuse Current | A | 3.15 | 3.15 |
| | Sound Pressure Level | dB (A) | 49/45/42/40/38/36/34/30 | Cooling:53/48/46/43/40/38/36/30<br>Heating:53/48/46/43/40/38/36 |
| | Sound Power Level | dB (A) | 64/60/57/55/53/51/49/45 | Cooling:68/63/61/58/55/53/51/45<br>Heating:68/63/61/58/55/53/51 |
| | Dimension (WXHXD) | mm | 1078x333x246 | 1078x333x246 |
| | Dimension of Carton Box (LXWXH) | mm | 1128x406x323 | 1128x406x323 |
| | Dimension of Package (LXWXH) | mm | 1133x414x333 | 1133x414x333 |
| | Net Weight | kg | 15 | 15 |
| | Gross Weight | kg | 18 | 18 |

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC24ATEXF-K6DNA1E/O | GWH24ATEXF-K6DNA1E/O |
| | Outdoor Unit Product Code | | CB574W14500 | CB574W14400 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO., LTD. | ZHUHAI LANDA COMPRESSOR CO., LTD. |
| | Compressor Model | | QXFS-M180zX170 | QXFS-M180zX170 |
| | Compressor Oil | | FW68DA or equivalent | FW68DA or equivalent |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | 24 | 24 |
| | Compressor RLA | A | 3.5 | 3.5 |
| | Compressor Power Input | W | 1350 | 1350 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºC | 16~30 | 16~30 |
| | Cooling Operation Ambient Temperature Range | ºC | -15~52 | -15~52 |
| | Heating Operation Ambient Temperature Range | ºC | / | -15~24 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ5 | Φ7 |
| | Condenser Rows-fin Gap | mm | 2-1.3 | 2-1.4 |
| | Condenser Coil Length (LXDXW) | mm | 855×22.8×609.6 | 804×38.1×616 |
| | Fan Motor Speed | rpm | 800 | 800 |
| | Fan Motor Power Output | W | 60 | 60 |
| | Fan Motor RLA | A | 0.65 | 0.65 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | $m^3/h$ | 3600 | 3600 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ520 | Φ520 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 60 | 60 |
| | Sound Power Level | dB (A) | 69 | 69 |
| | Dimension(WXHXD) | mm | 958x660x402 | 958x660x402 |
| | Dimension of Carton Box (LXWXH) | mm | 1029x453x715 | 1029x453x715 |
| | Dimension of Package(LXWXH) | mm | 1032x456x737 | 1032x456x737 |
| | Net Weight | kg | 39 | 42 |
| | Gross Weight | kg | 43.5 | 46.5 |
| | Refrigerant | | R32 | R32 |
| | Refrigerant Charge | kg | 0.9 | 1.2 |
| Connection Pipe | Connection Pipe Length | m | 5 | 5 |
| | Connection Pipe Gas Additional Charge | g/m | 12 | 16 |
| | Outer Diameter Liquid Pipe | | 1/4" | 1/4" |
| | Outer Diameter Gas Pipe | | 1/2" | 1/2" |
| | Max Distance Height | m | 25 | 25 |
| | Max Distance Length | m | 40 | 40 |
| | Note: The connection pipe applies metric diameter. | | | |

The above data is subject to change without notice. Please refer to the nameplate of the unit.

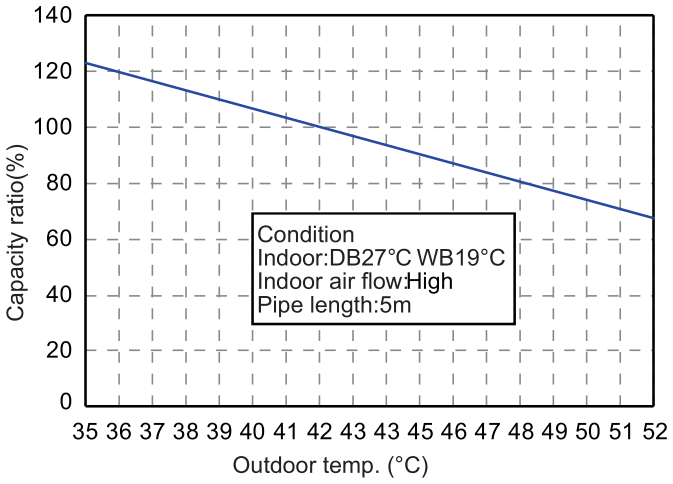
| Model | | | GWC28ATEXF-K6DNA1A | GWH28ATEXF-K6DNA1A |
|---|---|---|---|---|
| Product Code | | | CB574013400 | CB574013300 |
| Power Supply | Rated Voltage | V~ | 220-240 | 220-240 |
| | Rated Frequency | Hz | 50 | 50 |
| | Phases | | 1 | 1 |
| Power Supply Mode | | | Outdoor | Outdoor |
| Cooling Capacity | | W | 8200 | 8200 |
| Heating Capacity | | W | / | 9000 |
| Cooling Power Input | | W | 2485 | 2485 |
| Heating Power Input | | W | / | 2650 |
| Cooling Current Input | | A | 11 | 11 |
| Heating Current Input | | A | / | 11.7 |
| Rated Input | | W | 3500 | 3500 |
| Rated Cooling Current | | A | 15 | 15 |
| Rated Heating Current | | A | / | 15 |
| Air Flow Volume | | $m^3/h$ | 1250/1100/1050/950/850/800/750/600 | 1250/1100/1050/950/850/800/750/600 |
| Dehumidifying Volume | | L/h | 3 | 3 |
| EER | | W/W | 3.30 | 3.30 |
| COP | | W/W | / | 3.40 |
| SEER | | | / | / |
| HSPF | | | / | / |
| Application Area | | $m^2$ | 35-52 | 35-52 |
| Indoor Unit | Model | | GWC28ATEXF-K6DNA1A/I | GWH28ATEXF-K6DNA1A/I |
| | Product Code | | CB574N13400 | CB574N13300 |
| | Fan Type | | Cross-flow | Cross-flow |
| | Fan Diameter Length(DXL) | mm | Φ111.5×830 | Φ111.5X830 |
| | Cooling Speed | r/min | 1400/1150/1100/1000/900/850/800/650 | 1400/1150/1100/1000/900/850/800/650 |
| | Heating Speed | r/min | / | 1400/1200/1100/1000/900/850/800 |
| | Fan Motor Power Output | W | 60 | 60 |
| | Fan Motor RLA | A | 0.4 | 0.4 |
| | Fan Motor Capacitor | μF | / | / |
| | Evaporator Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Evaporator Pipe Diameter | mm | Φ7 | Φ7 |
| | Evaporator Row-fin Gap | mm | 2-1.2 | 2-1.2 |
| | Evaporator Coil Length (LXDXW) | mm | 840×25.4×381 | 840×25.4×381 |
| | Swing Motor Model | | MP35CP | MP35CP |
| | Swing Motor Power Output | W | 2.5 | 2.5 |
| | Fuse Current | A | 3.15 | 3.15 |
| | Sound Pressure Level | dB (A) | 52/46/44/42/39/36/35/30 | Cooling:52/46/44/42/39/36/35/30<br>Heating:52/46/44/42/39/37/35 |
| | Sound Power Level | dB (A) | 68/62/60/58/55/52/51/46 | Cooling:68/62/60/58/55/52/51/46<br>Heating:68/62/60/58/55/53/51 |
| | Dimension (WXHXD) | mm | 1078x333x246 | 1078x333x246 |
| | Dimension of Carton Box (LXWXH) | mm | 1128x406x323 | 1128x406x323 |
| | Dimension of Package (LXWXH) | mm | 1133x414x333 | 1133x414x333 |
| | Net Weight | kg | 15 | 15 |
| | Gross Weight | kg | 18 | 18 |

| | | | | |
|---|---|---|---|---|
| Outdoor Unit | Outdoor Unit Model | | GWC28ATEXF-K6DNA1A/O | GWH28ATEXF-K6DNA1A/O |
| | Outdoor Unit Product Code | | CB574W13400 | CB574W13300 |
| | Compressor Manufacturer | | ZHUHAI LANDA COMPRESSOR CO., LTD. | ZHUHAI LANDA COMPRESSOR CO., LTD. |
| | Compressor Model | | QXFS-B238zX070 | QXFS-B238zX070 |
| | Compressor Oil | | FW68DA or equivalent | FW68DA or equivalent |
| | Compressor Type | | Rotary | Rotary |
| | Compressor LRA. | A | 27 | 27 |
| | Compressor RLA | A | 4.3 | 4.3 |
| | Compressor Power Input | W | 2119 | 2119 |
| | Compressor Overload Protector | | / | / |
| | Throttling Method | | Electron expansion valve | Electron expansion valve |
| | Set Temperature Range | ºC | 16~30 | 16~30 |
| | Cooling Operation Ambient Temperature Range | ºC | -15~52 | -15~52 |
| | Heating Operation Ambient Temperature Range | ºC | / | -15~24 |
| | Condenser Form | | Aluminum Fin-copper Tube | Aluminum Fin-copper Tube |
| | Condenser Pipe Diameter | mm | Φ7 | Φ7 |
| | Condenser Rows-fin Gap | mm | 1.4 | 1.3 |
| | Condenser Coil Length (LXDXW) | mm | 890×38.1×616 | 890×38.1×616 |
| | Fan Motor Speed | rpm | 850 | 850 |
| | Fan Motor Power Output | W | 60 | 60 |
| | Fan Motor RLA | A | 0.65 | 0.65 |
| | Fan Motor Capacitor | μF | / | / |
| | Outdoor Unit Air Flow Volume | $m^3/h$ | 3600 | 3600 |
| | Fan Type | | Axial-flow | Axial-flow |
| | Fan Diameter | mm | Φ520 | Φ520 |
| | Defrosting Method | | / | Automatic Defrosting |
| | Climate Type | | T1 | T1 |
| | Isolation | | I | I |
| | Moisture Protection | | IPX4 | IPX4 |
| | Permissible Excessive Operating Pressure for the Discharge Side | MPa | 4.3 | 4.3 |
| | Permissible Excessive Operating Pressure for the Suction Side | MPa | 2.5 | 2.5 |
| | Sound Pressure Level | dB (A) | 60 | 61 |
| | Sound Power Level | dB (A) | 69 | 69 |
| | Dimension(WXHXD) | mm | 958x660x402 | 958x660x402 |
| | Dimension of Carton Box (LXWXH) | mm | 1029x453x715 | 1029x453x715 |
| | Dimension of Package(LXWXH) | mm | 1032x456x737 | 1032x456x737 |
| | Net Weight | kg | 44.5 | 45.5 |
| | Gross Weight | kg | 49 | 50 |
| | Refrigerant | | R32 | R32 |
| | Refrigerant Charge | kg | 1.4 | 1.4 |
| Connection Pipe | Connection Pipe Length | m | 5 | 5 |
| | Connection Pipe Gas Additional Charge | g/m | 12 | 16 |
| | Outer Diameter Liquid Pipe | | 1/4" | 1/4" |
| | Outer Diameter Gas Pipe | | 1/2" | 1/2" |
| | Max Distance Height | m | 25 | 25 |
| | Max Distance Length | m | 40 | 40 |
| | Note: The connection pipe applies metric diameter. | | | |

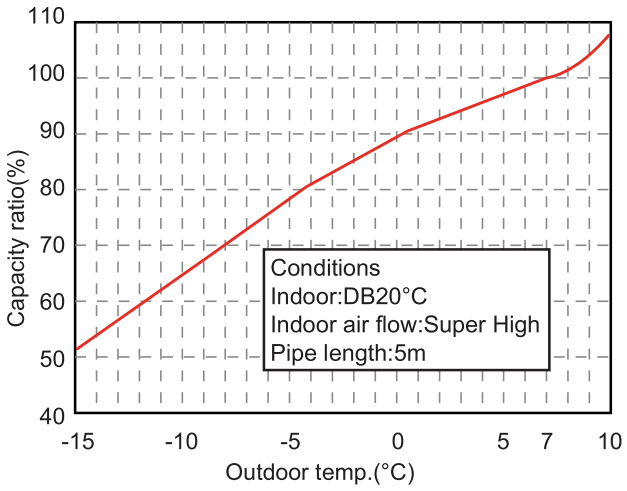
The above data is subject to change without notice. Please refer to the nameplate of the unit.

## 2.2 Capacity Variation Ratio According to Temperature

Cooling




Heating




## 2.3 Cooling and Heating Data Sheet in Rated Frequency

Cooling:

| Rated cooling condition(°C) (DB/WB) | | Model | Pressure of gas pipe connecting indoor and outdoor unit | Inlet and outlet pipe temperature of heat exchanger | | Fan speed of indoor unit | Fan speed of outdoor unit |
|---|---|---|---|---|---|---|---|
| Indoor | Outdoor | | P (MPa) | T1 (°C) | T2 (°C) | | |
| 27/19 | 35/24 | 12K | 0.8 to 1.1 | 11 to 14 | 64 to 37 | Super High | High |
| | | 24K | 0.9 to 1.1 | 12 to 14 | 75 to 37 | | |
| | | 28K | 0.8 to 1.0 | in:8 to 11<br>out:11 to14 | in:75 to 85<br>out:37 to 43 | | |

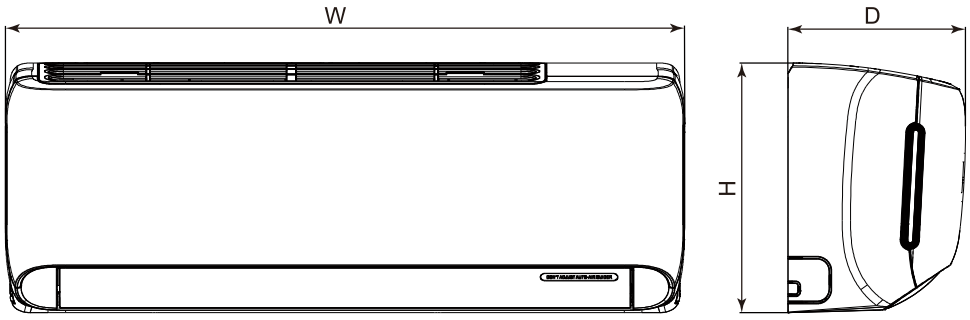
Heating:

| Rated heating condition(°C) (DB/WB) | | Model | Pressure of gas pipe connecting indoor and outdoor unit | Inlet and outlet pipe temperature of heat exchanger | | Fan speed of indoor unit | Fan speed of outdoor unit |
|---|---|---|---|---|---|---|---|
| Indoor | Outdoor | | P (MPa) | T1 (°C) | T2 (°C) | | |
| 20/- | 7/6 | 12K | 2.8 to 3.2 | 35 to 65 | 2 to 5 | Super High | High |
| | | 24K | 2.2 to 2.4 | 70 to 35 | 2 to 4 | | |
| | | 28K | 2.2 to 2.4 | in:75 to 85<br>out:37 to 43 | in:1 to 3<br>out:2 to 5 | | |

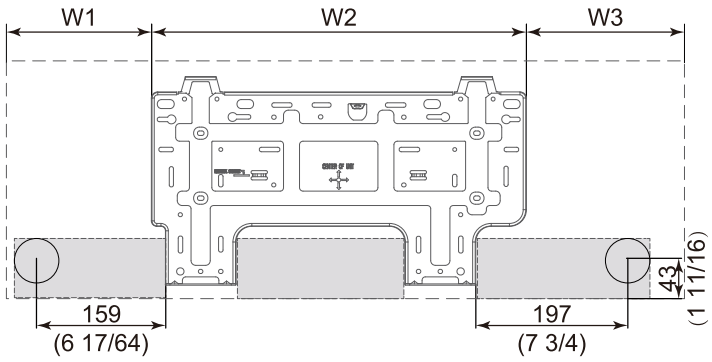
**Instruction:**
T1: Inlet and outlet pipe temperature of evaporator
T2: Inlet and outlet pipe temperature of condenser
P: Pressure at the side of big valve
Connection pipe length: 5 m.

# 3. Outline Dimension Diagram

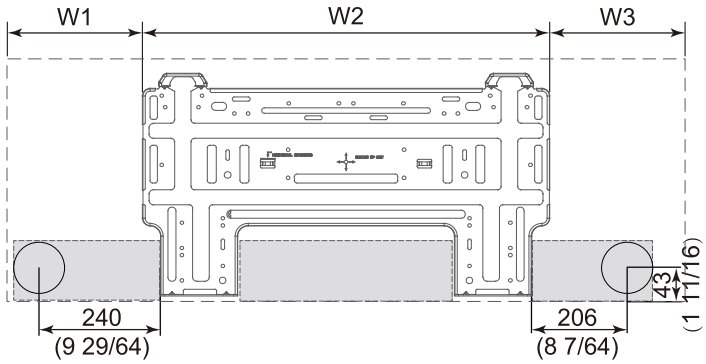
## 3.1 Indoor Unit




**ATC**




**ATE**



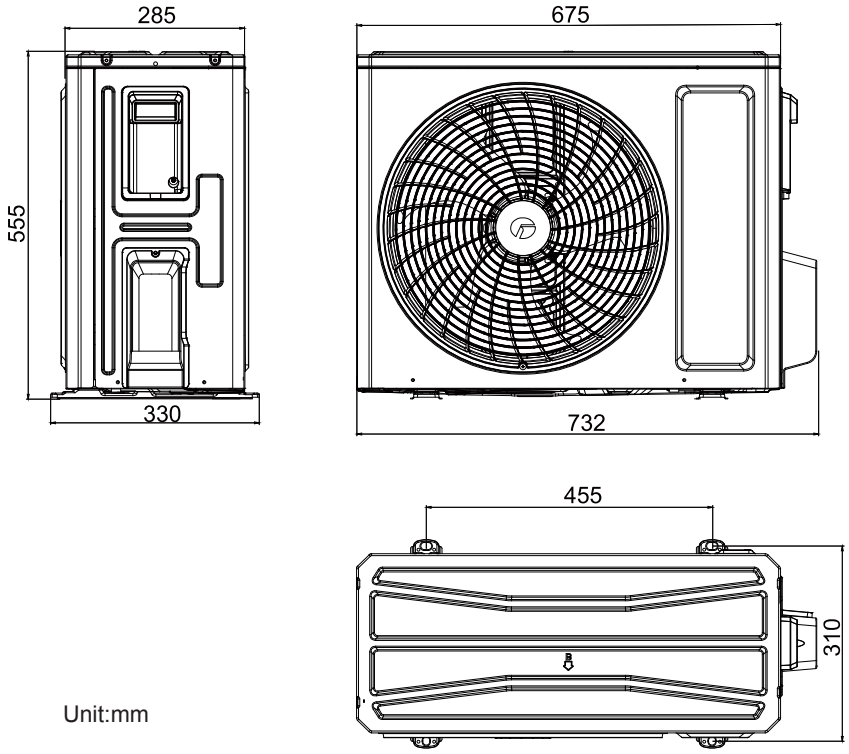

Unit:mm(inch)

Unit:mm

| Model | W | H | D | W1 | W2 | W3 |
|---|---|---|---|---|---|---|
| ATC | 835 | 275 | 200 | 178 | 462 | 195 |
| ATE | 1078 | 333 | 246 | 258.5 | 561.5 | 258 |

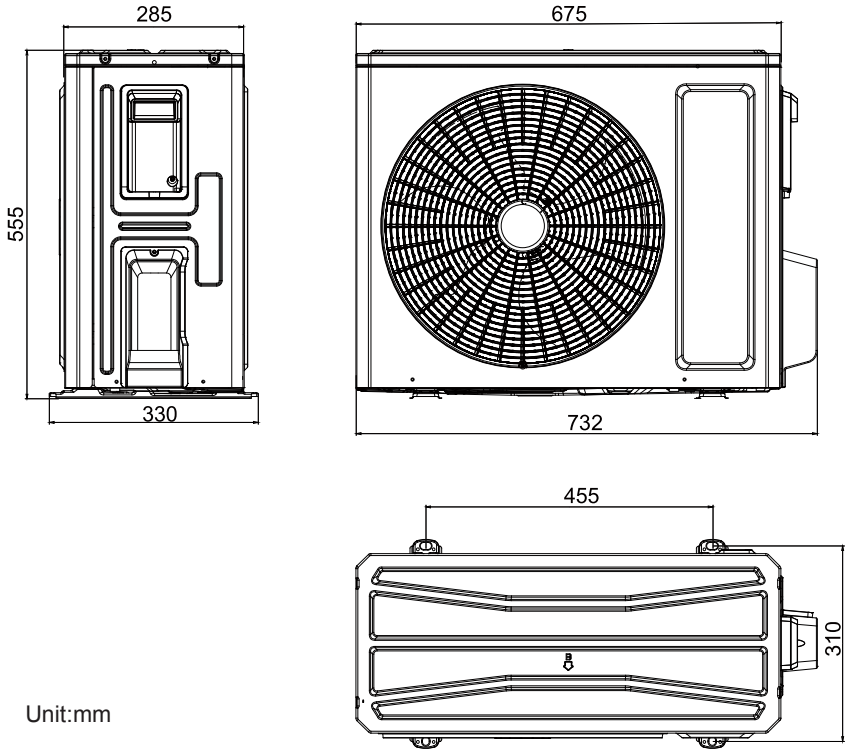
## 3.2 Outdoor Unit

GWC12ATCXB-K6DNA1B/O



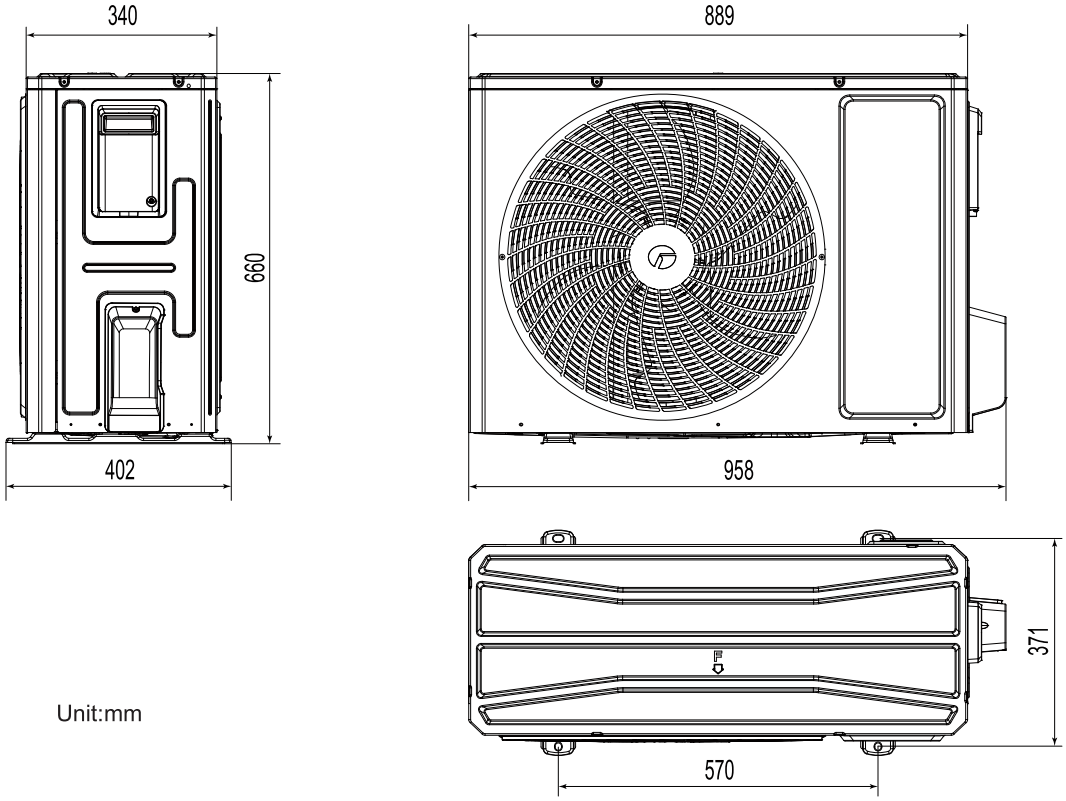

Unit:mm

GWH12ATCXB-K6DNA1B/O




Unit:mm

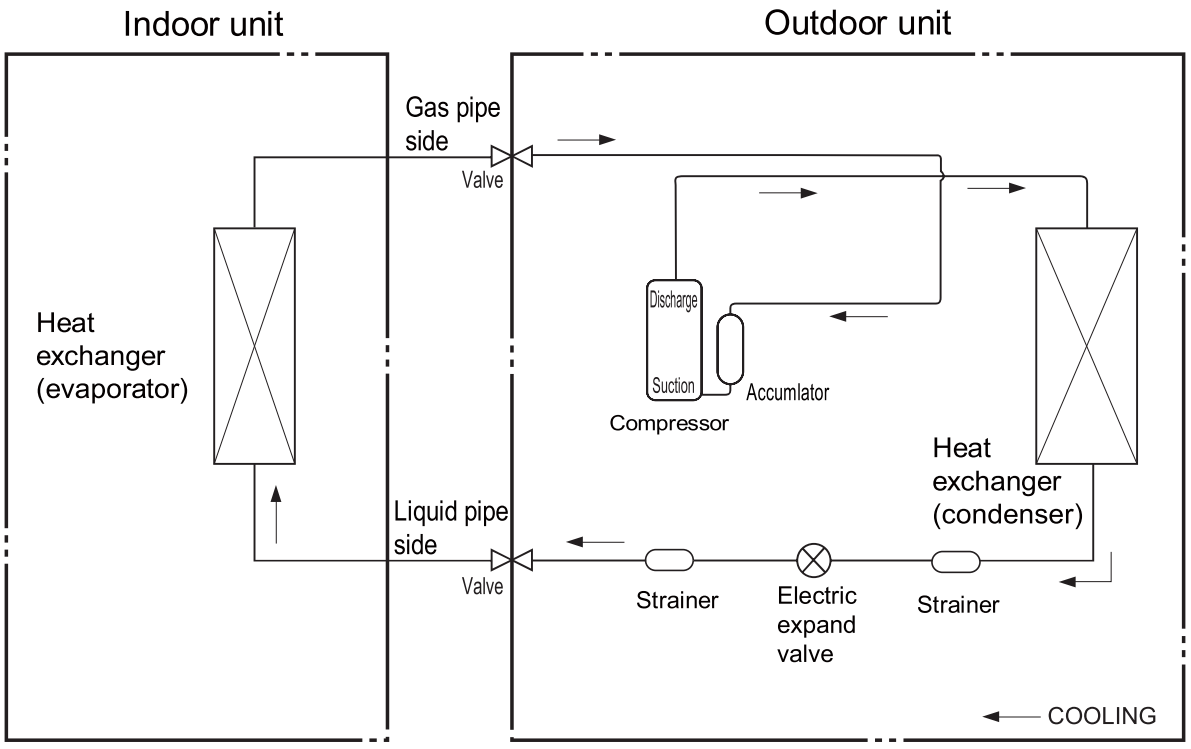
GWC24ATEXF-K6DNA1E/O
GWH24ATEXF-K6DNA1E/O
GWC28ATEXF-K6DNA1A/O
GWH28ATEXF-K6DNA1A/O



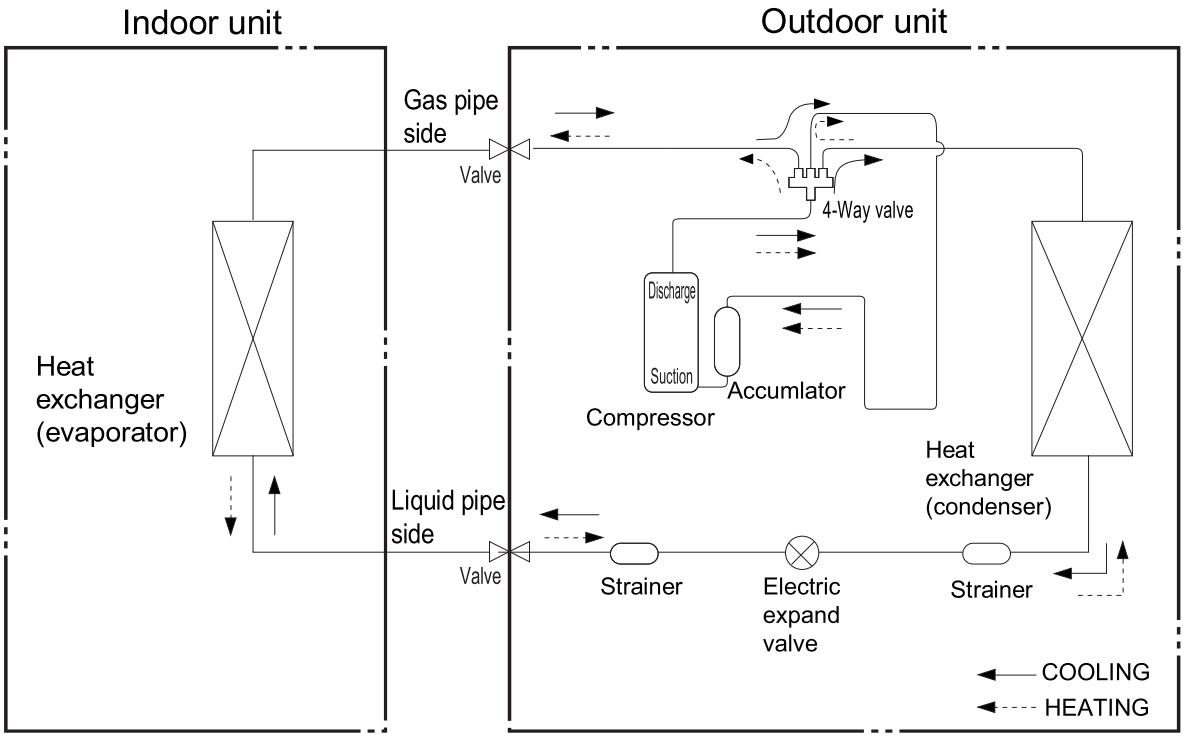

Unit:mm

# 4. Refrigerant System Diagram

## Cooling model




## Cooling and heating model




Connection pipe specification:
Liquid pipe:1/4"
Gas pipe:3/8" 12K
Gas pipe:1/2" 24/28K

# 5. Electrical Part

## 5.1 Wiring Diagram

### ●Instruction

| Symbol | Symbol Color |
|---|---|
| WH | White |
| YE | Yellow |
| RD | Red |
| YEGN | Yellow/Green |
| VT | Violet |

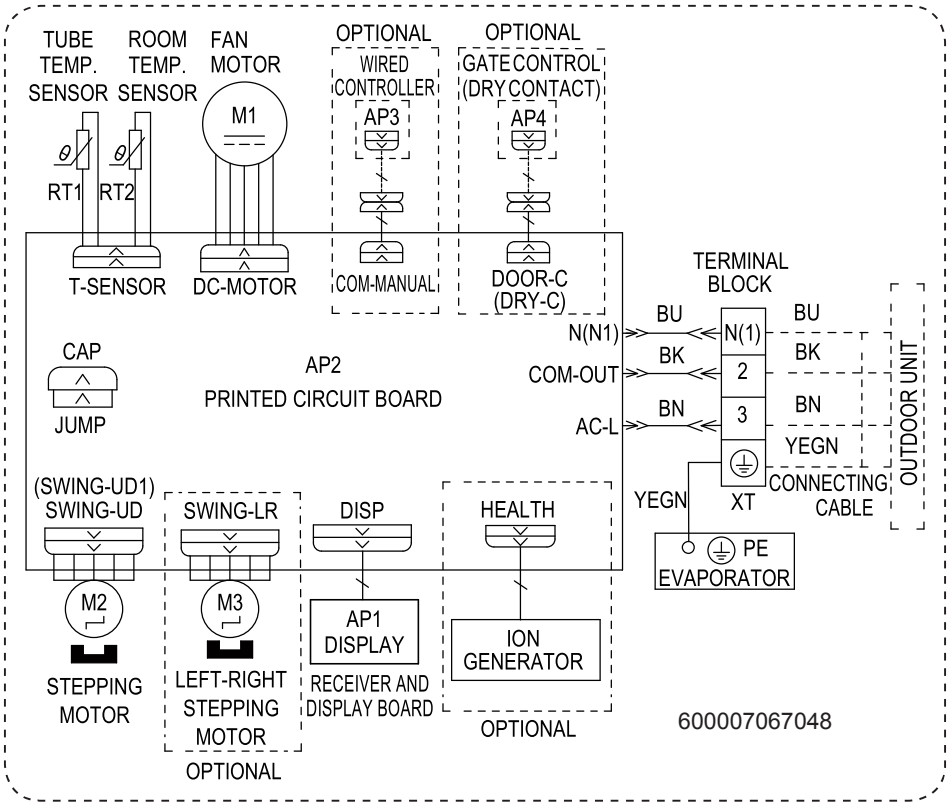
| Symbol | Symbol Color |
|---|---|
| GN | Green |
| BN | Brown |
| BU | Blue |
| BK | Black |
| OG | Orange |

| Symbol | Name |
|---|---|
| CAP | Jumper cap |
| COMP | Compressor |
| ⏚ | Grounding wire |
| / | / |
| / | / |

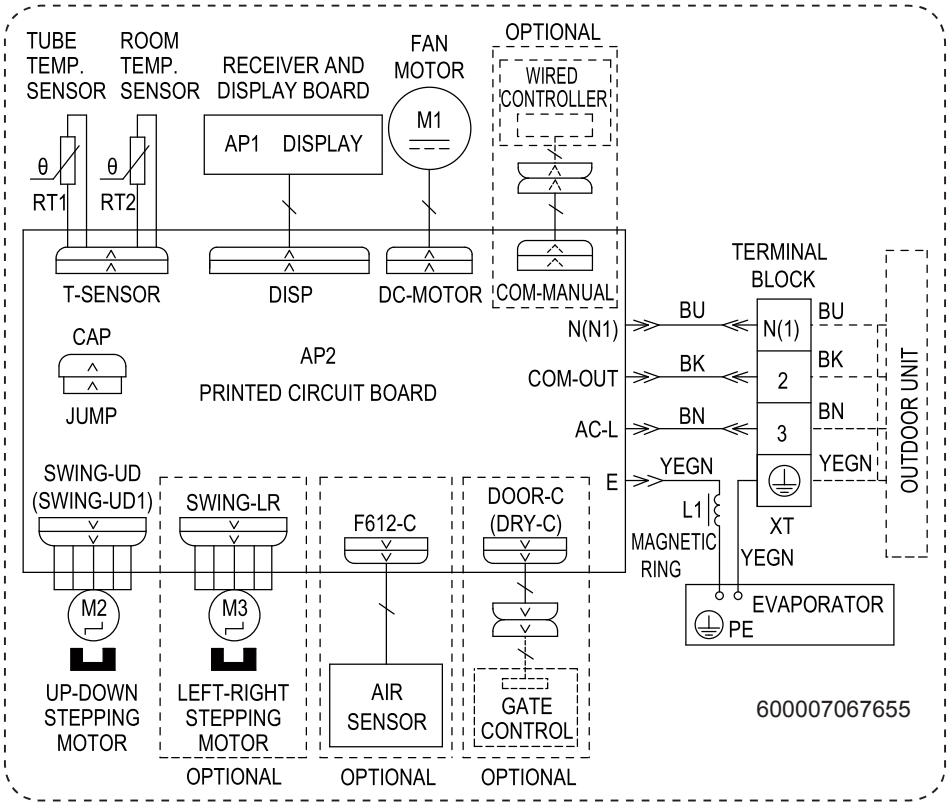
Note: Jumper cap is used to determine fan speed and the swing angle of horizontal lover for this model.

### ● Indoor Unit

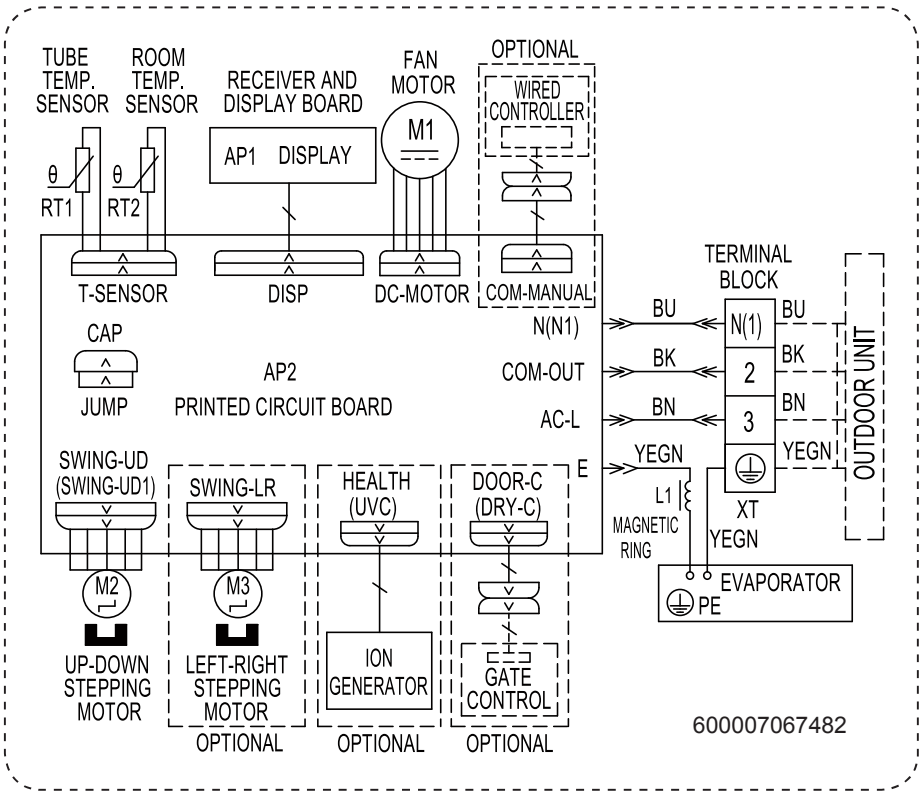
GWC12ATCXB-K6DNA1B/I



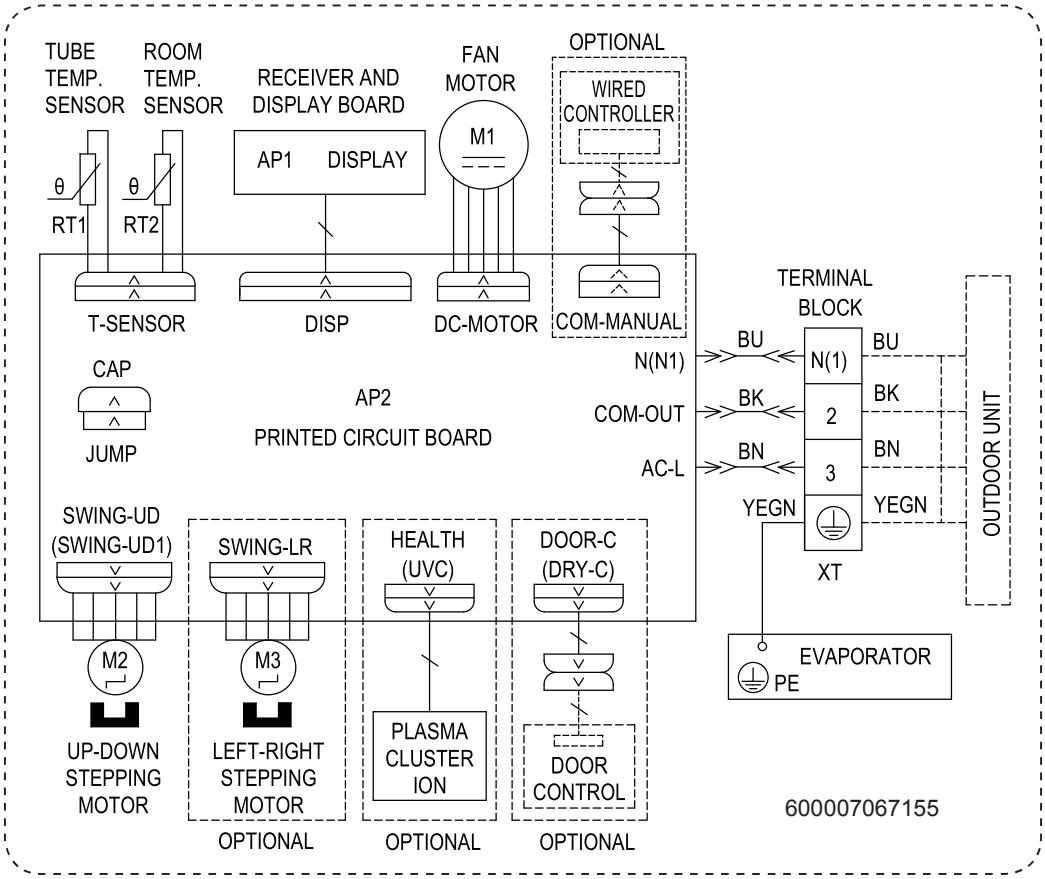
GWH12ATCXB-K6DNA1B/I




GWC24ATEXF-K6DNA1E/I
GWH24ATEXF-K6DNA1E/I

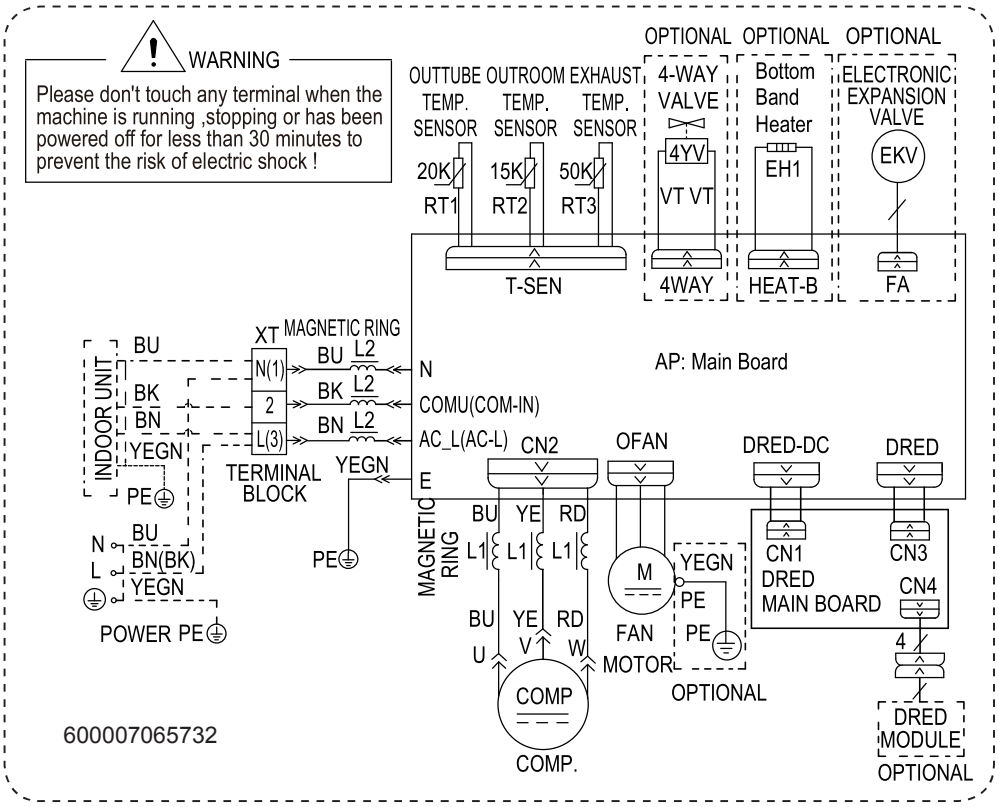


GWC28ATEXF-K6DNA1A/I
GWH28ATEXF-K6DNA1A/I

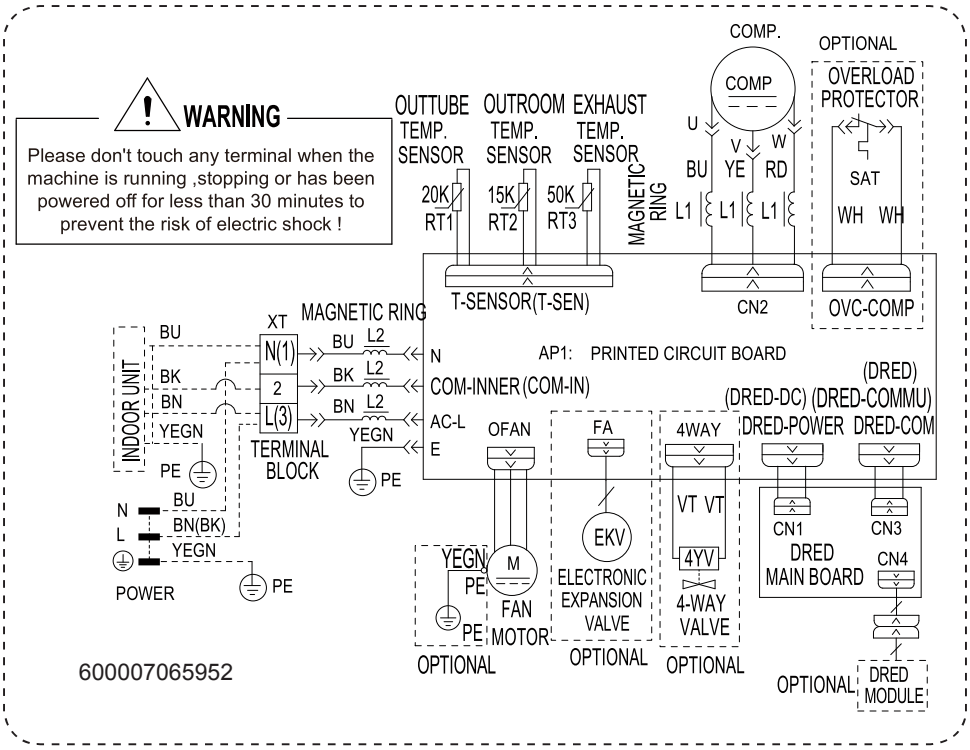


## ● Outdoor Unit

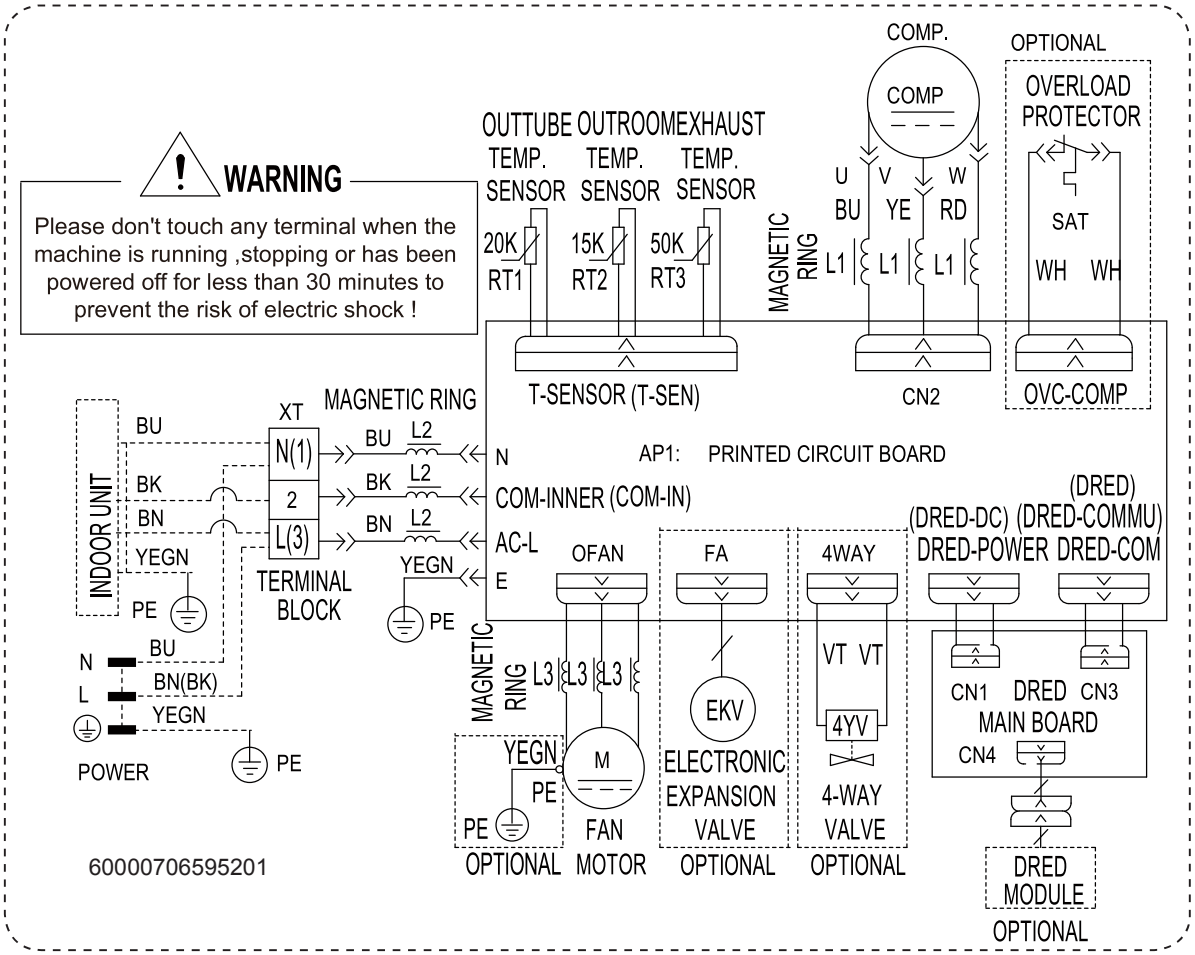
GWC12ATCXB-K6DNA1B/O GWH12ATCXB-K6DNA1B/O




GWC24ATEXF-K6DNA1E/O GWH28ATEXF-K6DNA1A/O
GWH24ATEXF-K6DNA1E/O



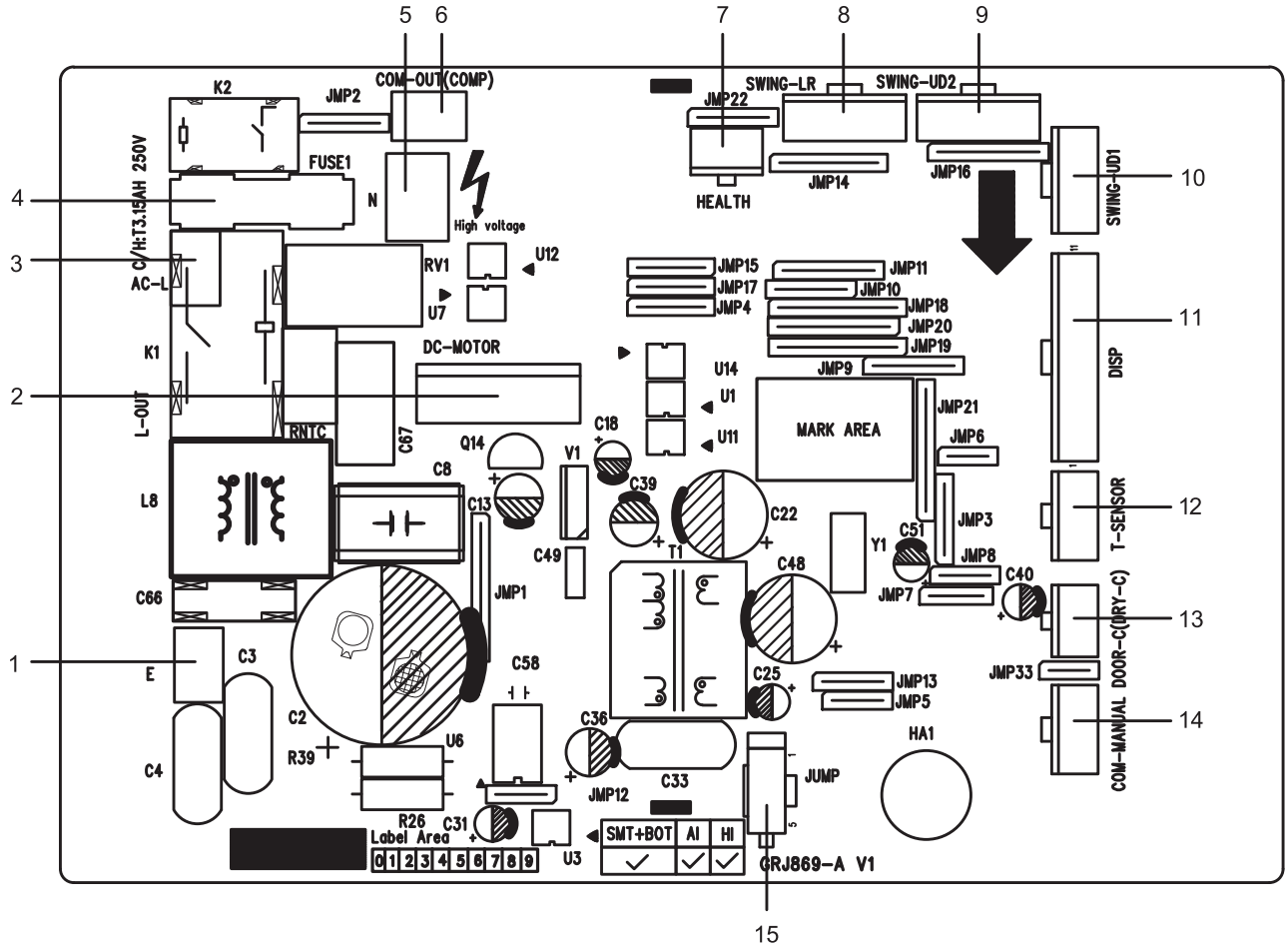
GWC28ATEXF-K6DNA1A/O




These wiring diagrams are subject to change without notice; please refer to the one supplied with the unit.

## 5.2 PCB Printed Diagram

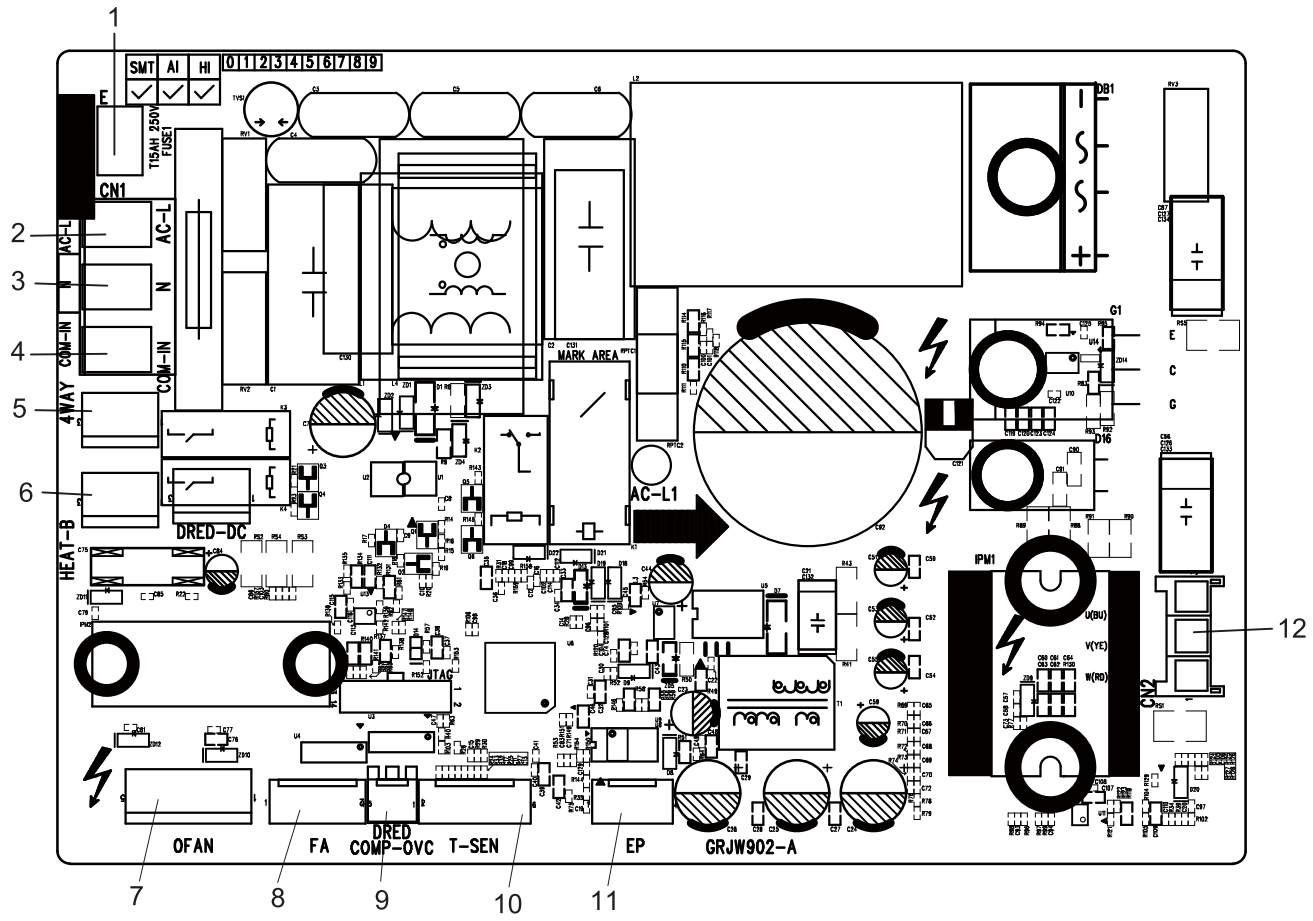
### Indoor Unit




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Earthing wire terminal | 9 | Up & down swing terminal 2 |
| 2 | Brushless DC Motor terminal | 10 | Up & down swing terminal 1 |
| 3 | Live wire terminal | 11 | Display board terminal |
| 4 | Fuse | 12 | Temperature sensor tube terminal |
| 5 | Neutral wire terminal | 13 | Door-control terminal (Dry contact) |
| 6 | Communication wire terminal | 14 | Wired controller |
| 7 | Health function terminal | 15 | Jumper cap terminal |
| 8 | Left & right swing terminal | | |

## Outdoor Unit

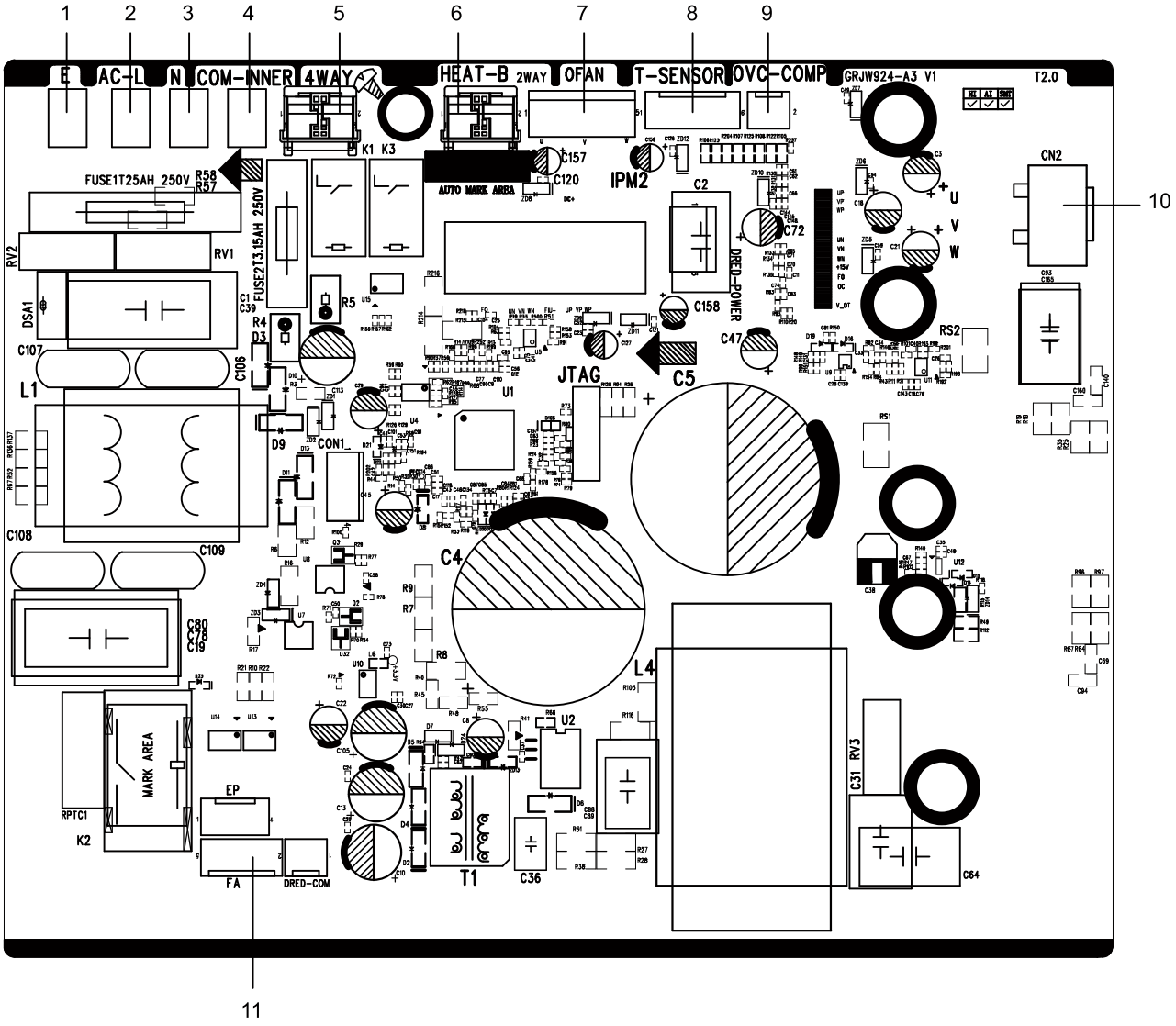
GWC12ATCXB-K6DNA1B/O GWH12ATCXB-K6DNA1B/O




| No. | Name |
|---|---|
| 1 | Earthing wire |
| 2 | Live wire |
| 3 | Neutral wire |
| 4 | Communication cable |
| 5 | 4-way valve |
| 6 | Electric heating belt of chasssis |

| No. | Name |
|---|---|
| 7 | Outdoor fan |
| 8 | Electronic expansion valve |
| 9 | Overload |
| 10 | Temperature sensor |
| 11 | E disk interface |
| 12 | Terminal of compressor |

GWC24ATEXF-K6DNA1E/O
GWH24ATEXF-K6DNA1E/O
GWC28ATEXF-K6DNA1A/O
GWH28ATEXF-K6DNA1A/O




| No. | Name | No. | Name |
|---|---|---|---|
| 1 | Earthing wire terminal | 7 | Outdoor fan terminal |
| 2 | Live wire terminal | 8 | Temperature sensor terminal |
| 3 | Neutral wire terminal | 9 | Overload terminal |
| 4 | Communication cable terminal | 10 | Three-phase terminal of compressor |
| 5 | 4-way valve terminal | 11 | Electronic expansion valve terminal |
| 6 | Electric heating belt of chassis terminal | | |

# 6. Function and Control

## 6.1 Remote Controller Introduction

**NOTE:**

● This is a general use remote controller. It could be used for the air conditioner with multifunction. For the functions which the model doesn't have, if press the corresponding button on the remote controller, the unit will keep the original running status.

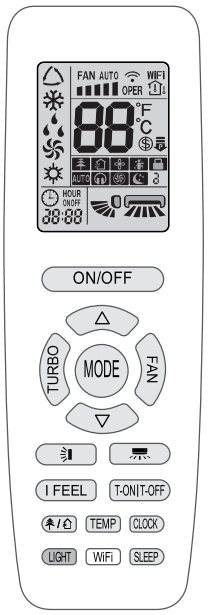
● After putting through the power, the air conditioner will give out a sound. Operation indicator "⏻" is ON. After that, you can operate the air conditioner by using remote controller.

● Under on status, pressing the button on the remote controller, the signal icon " " on the display of remote controller will blink once and the air conditioner will give out a "di" sound, which means the signal has been sent to the air conditioner.

● As for the models with functions of WiFi or wired controller, the indoor unit must has been controlled by standard remote controller under auto mode first, and then the function of adjustable temperature under auto mode can be realized by APP or the wired controller.

● This remote controller can adjust the temperature under auto mode. When matching with the unit which is without the function of adjustable temperature under auto mode, the set temperature under auto mode may be invalid, or the displayed set temperature on the unit is not same as that on the remote controller under auto mode.

**Buttons on remote controller**




**Introduction for icons on display screen**

| | | |
|---|---|---|
| | | I feel |
| FAN AUTO | | Set fan speed |
| | | Turbo mode |
| | | Send signal |
| Operation mode | | Auto mode |
| | | Cool mode |
| | | Dry mode |
| | | Fan mode |
| | | Heat mode |
| | | Sleep mode |
| | | 8℃ heating function |
| | | Power limiting operation |
| | | Health mode |
| | | Scavenging function |
| | | X-FAN function |
| Temp. display type | | Set temp. |
| | | Indoor ambient temp. |
| | | Outdoor ambient temp. |
| | | Clock |
| 88 | | Set temperature |
| WiFi | | WiFi function |
| 88:88 | | Set time |
| ONOFF | | TIMER ON / TIMER OFF |
| | | Left & right swing |
| | | Up & down swing |
| | | Child lock |
| | | Quiet |

ON/OFF

Press this button to turn on the unit. Press this button again to turn off the unit.

MODE

Press this button to select your required operation mode.

AUTO → COOL → DRY → FAN → HEAT

● When selecting auto mode, air conditioner will operate automatically according to ex-factory setting. Press "FAN" button can adjust fan speed. Press " / " " button can adjust fan blowing angle.

● After selecting cool mode, air conditioner will operate under cool mode. Cool indicator " " on indoor unit is ON. (This indicator is not available for some models.) Press "△" or " ▽ "button to adjust set temperature. Press "FAN" button to adjust fan speed. Press " / " " button to adjust fan blowing angle.

● When selecting dry mode, the air conditioner operates at low speed under dry mode. Dry indicator " " on indoor unit is ON. (This indicator is not available for some models.) Under dry mode, fan speed can't be adjusted. Press " / " "button to adjust fan blowing angle.

● When selecting fan mode, the air conditioner will only blow fan, no cooling and no heating. All indicators are OFF. Press "FAN" button to adjust fan speed. Press " / " " button to adjust fan blowing angle.

● When selecting heating mode, the air conditioner operates under heat mode. Heat indicator " " on indoor unit is ON. (This indicator is not available for some models.) Press "△" or " ▽ " button to adjust set temperature. Press "FAN" button to adjust fan speed. Press " / " " button to adjust fan blowing angle. (Cooling only unit won't receive heating mode signal. If setting heat mode with remote controller, press ON/OFF button can't start up the unit).

**NOTE:**

● For preventing cold air, after starting up heat mode, indoor unit will delay 1~5 minutes to blow air (actual delay time depends on indoor ambient temperature).

● Set temperature range from remote controller: 16~30°C(61-86°F). Fan speed: auto,quiet,low speed, low-medium speed,medium speed,medium-high speed, high speed.

● This mode indicator is not available for some models.

FAN

This button is used for setting Fan Speed in the sequence that goes from AUTO, , , , , , to , then back to Auto.

**NOTE:**

● Under AUTO speed, air conditioner will select proper fan speed automatically according to factory default setting.

● It's low fan speed under dry mode.

● X-FAN function: Holding fan speed button for 2s in cool or dry mode, the icon " " is displayed and the indoor fan will continue operation for a few minutes in order to dry the indoor unit even though you have turned off the unit. After energization, X-FAN OFF is defaulted. X-FAN is not available in auto, fan or heat mode.

This function indicates that moisture on evaporator of indoor unit will be blowed after the unit is stopped to avoid mould.

● Having set X-FAN function on: After turning off the unit by pressing ON/OFF button, indoor fan will continue running for a few minutes at low speed. In this period, hold fan speed button for 2s to stop indoor fan directly.

Having set X-FAN function off: After turning off the unit by pressing ON/OFF button, the complete unit will be off directly.

TURBO

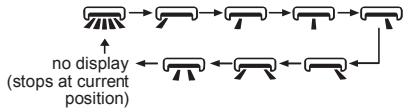
Under COOL or HEAT mode, press this button to turn to quick COOL or quick HEAT mode. " " icon is displayed on remote controller. Press this button again to exit turbo function and " " icon will disappear. If start this function, the unit will run at super-high fan speed to cool or heat quickly so that the ambient temp. approachs the preset temp. as soon as possible.

△ / ▽

● Press "△" or " ▽ " button once increase or decrease set temperature 1°C (°F). Holding "△" or " ▽ " button, 2s later, set temperature on remote controller will change quickly. On releasing button after setting is finished, temperature indicator on indoor unit will change accordingly.

● When setting T-ON, T-OFF or CLOCK, press "△" or "▽"button to adjust time. (Refer to CLOCK, TON, T-OFF buttons)

Press this button can select left & right swing angle. Fan blow angle can be selected circularly as below:



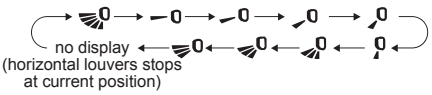

**NOTE:**

● Press this button continuously more than 2s, the main unit will swing back and forth from left to right, and then loosen the button, the unit will stop swinging and present position of guide louver will be kept immediately.

● Under left and right swing mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

● The function is only available for some models.

Press this button can select up & down swing angle. Fan blow angle can be selected circularly as below:




● When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.

● When selecting " 、 、 、 、 ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.

● When selecting " 、 、 ", air conditioner is blowing fan at fixed angle. Horizontal louver will send air at the fixed angle.

● Hold " "button above 2s to set your required swing angle. When reaching y our required angle, release the button.

**NOTE:**

● " 、 、 " may not be available. When air conditioner receives this signal, the air conditioner will blow fan automatically.

● Press this button continuously for more than 2s, the main unit will swing back and forth from up to down, and then loosen the button, the unit present position of guide louver will be kept immediately.

● Under up and down swing mode, when the status is switched from off to , if press this button again 2s later, status will switch to off status directly; if press this button again within 2s, the change of swing status will also depend on the circulation sequence stated above.

T-ON|T-OFF

● T-ON button

"T-ON" button can set the time for timer on. After pressing this button, " " icon disappears and the word "ON" on remote controller blinks. Press "△" or " ▽ " button to adjust T-ON setting. After each pressing "△" or " ▽ " button, T-ON setting will increase or decrease 1min. Hold "△" or " ▽ " button, 2s later, the time will change quickly until reaching your required time. Press "T-ON" to confirm it. The word "ON" will stop blinking. " " icon resumes displaying. Cancel T-ON: Unde the condition that T-ON is started up, press "T-ON " button to cancel it.

● T-OFF button

"T-OFF" button can set the time for timer off. After pressing this button, " ◷ " icon disappears and the word "OFF" on remote controller blinks. Press "△" or " ▽ " button to adjust T-OFF setting. After each pressing "△" or " ▽ " button, T-OFF setting will increase or decrease 1min. Hold "△" or " ▽ "button, 2s later, the time will change quickly until reaching your required time. Press "T-OFF" word "OFF" will stop blinking. " ◷ " icon resumes displaying. Cancel T-OFF. Under the condition that T-OFF is started up, press "T-OFF" button to cancel it.

**NOTE:**

● Under on and off status, you can set T-OFF or T-ON simultaneously.

● Before setting T-ON or T-OFF, please adjust the clock time.

● After starting up T-ON or T-OFF,set the constant circulating valid.

After that,air conditioner will be turned on or turned off according to setting time.ON/OFF button has no effect on setting.If you don't need this function, please use remote controller to cancel it.

● When the timer function is started up and the remote controller is not used for a long time, the air conditioner can be turned on or turned off by the timer function. You are suggested to put the remote controller at the position where the indoor unit can receive the remote signal, which can lead to more accurate timer.

I FEEL

Press this button to start I FEEL function and " " will be displayed on the remote controller. After this function is set, the remote controller will send the detected ambient temperature to the controller and the unit will automatically adjust the indoor temperature according to the detected temperature. Press this button again to cancel I FEEL function

and " " will disappear.

● Please put the remote controller near user when this function is set. Do not put the remote contro ller near the object of high temperature or low temperature in order to avoid detecting inaccurate amb ient temperature.

When I FEEL function is turned on, the remote controller should be put within the area where indoor unit can receive the signal sent by the remote controller.

CLOCK

Press this button to set clock time. " ◷ " icon on remote controller will blink. Press "△" or " ▽ " button within 5s to set clock time. Each pressing of "△" or " ▽ " button, clock time will increas e or decrease 1 minute.If hold "△" or " ▽ " button, 2s later, time will change quickly. Release this button when reaching your required time. Press "CLOCK" button to confirm the time. " ◷ " icon stops blinking.

**NOTE:**

● Clock time adopts 24-hour mode.

● The interval between two operations can't exceed 5s.

Otherwise, remote controller will quit setting status.

Operation for TIMER ON/TIMER OFF is the same.

SLEEP

● Press this button, can select Sleep 1 ( 1), Sleep 2 ( 2), Sleep 3 ( 3) and cancel the Sleep, circulate between these, after electrified, Sleep Cancel is defaulted.

● Sleep 1 is Sleep mode 1, in Cool modes; sleep status after run for one hour, the main unit setting temperature will increase 1 , two hours, setting temperature increased 2°C, then the unit will run at this setting temperature; In Heat mode: sleep status after run for one hour, the setting temperature

will decrease 1 , two hours, setting temperature will decrease 2 , then the unit will run at this setting temperature.

● Sleep 2 is sleep mode 2, that is air conditioner will run according to the presetting a group of sleep temperature curve.

● Sleep 3-the sleep curve setting under Sleep mode by DIY;

(1) Under Sleep 3 mode, press "Turbo" button for a long time, remote controller enters into user individuation sleep setting status, at this time, the time of remote controller will display "1hour", the setting temperature "88" will display the corresponding temperature of last setting sleep curve and blink (The first entering will display according to the initial curve setting value of original factory);

(2) Adjust "△" and " ▽ " button, could change the corresponding setting temperature, after adjusted, press "Turbo" button for confirmation;

(3) At this time, 1hour will be automatically increased at the timer position on the remote control, (that are "2hours" or "3hours" or "8hours"), the place of setting temperature "88" will display the corresponding temperature of last setting sleep

curve and blink;

(4) Repeat the above step (2)~(3) operation, until 8 hours temperature setting finished, sleep,curve setting finished, at this time, the remote controller will resume the original timer display; temperature display will resume to original setting temperature.

● Sleep3- the sleep curve setting under Sleep mode by DIY could be inquired:

The user could accord to sleep curve setting method to inquire the presetting sleep curve, enter into user individuation sleep setting status, but do not change the temperature, press "Turbo" button directly for confirmation. Note: In the above presetting or enquiry procedure, if continuously within 10s, there is no button pressed, the sleep curve setting within 10s, there is no button pressed, the sleep curve setting status will be automatically quit and resume to display the original displaying. In the presetting or enquiry procedure, press "ON/OFF" button, "Mode" button, "Sleep" button, the sleep curve setting or enquiry status will quit similarly.

WiFi

Press " WiFi " button to turn on WiFi function, " WiFi " icon will be displayed on the remote controller; Hold " WiFi " button for 5s to turn off WiFi function and " WiFi " icon will disappear.

Under off status, press "MODE" and " WiFi " buttons simultaneously for 1s, WiFi module will restore factory settings.

NOTE

● The function is only available for some models.

/

Press this button to achieve the on and off of health and scavenging functions in operation station. Press this button for the first time to start scavenging function; LCD displays
" ". Press the button for the second time to start health and scavenging functions simultaneously; LCD displays
" " and " ". Press this button for the third time to quit health and scavenging functions simultaneously. Press the button for the fourth time to start health function; LCD display " ". Press this button again to repeat the operation above.

● This function is applicable to partial of models .

LIGHT

Press this button to turn on or turn off the display light on the indoor unit.
The display light is defaulted on after energization.

TEMP

Press this button, you can see indoor set temperature, indoor ambient temperature on indoor unit' s display. The setting on remote controller is selected circularly as below:

## Function introduction for combination buttons

**Energy-saving function**

Under cooling mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off energy-saving function. When energy-saving function is started up, "SE" will be shown on remote controller, and air conditioner will adjust the set temperature automatically according to ex-factory setting to reach to the best energy-saving effect.
Press "TEMP" and "CLOCK" buttons simultaneously again to exit energy-saving function.

**NOTE:**

● Under energy-saving function, fan speed is defaulted at auto speed and it can't be adjusted.

● Under energy-saving function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.

● Sleep function and energy-saving function can't operate at the same time. If energy-saving function has been set under cool mode, press SLEEP button will cancel energy-saving function. If sleep function has been set under cool mode, start up the energy-saving function will cancel sleep function.

**8°C heating function(This function is not available for cool only models.)**

Under heat mode, press "TEMP" and "CLOCK" buttons simultaneously to start up or turn off 8°C heating function. When this function is started up, " " and "8°C" will be shown on remote controller, and the air conditioner keep the heating status at 8°C. Press "TEMP" and "CLOCK" buttons simultaneously again to exit 8°C heating function.

**NOTE:**

● Under 8°C heating function, fan speed is defaulted at auto speed and it can't be adjusted.

● Under 8°C heating function, set temperature can't be adjusted. Press "TURBO" button and the remote controller won't send signal.

● Sleep function and 8°C heating function can't operate at the same time. If 8°C heating function has been set under heat mode, press SLEEP button will cancel 8°C heating function. If sleep function has been set under heat mode, start up the 8°C heating function will cancel sleep function.

● Under °F temperature display, the remote controller will display 46°F heating.

**Child lock function**

Press "△" and " ▽ " simultaneously to turn on or turn off child lock function. When child lock function is on, " " icon is displayed on remote controller. If you operate the remote controller, the " " icon will blink three times without sending signal to the unit.

**Temperature display switchover function**

Under OFF status, press "▽" and "MODE" buttons simultaneously to switch temperature display between °C and °F.

**Auto clean function**

Under unit off status, hold "MODE" and "FAN" buttons simultaneously for 5s to turn on or turn off the internal clean function. When the internal clean function is turned on, indoor unit displays “CL” . During the self-cleaning process of evaporator, the unit will perform fast cooling or fast heating.There may be some noise, which is the sound of flowing liquid or thermal expansion or cold shrinkage. The air conditioner may blow cool or warm air, which is a normal phenomenon.
During cleaning, please make sure the room is well ventilated to avoid affecting the degree of comfort.

**NOTE:**

The self-cleaning function can only work under normal ambient temperature. If the room is dusty, clean once a month; if not, clean once every three months. After the self-cleaning function is turned on, you may leave the room. When self-cleaning is finished, the air conditioner will enter standby
mode.
This function is applicable for some models.

**function**

Press "MODE" and "SLEEP" buttons simultaneously to start function.

function is for limiting power of the whole unit.

Press this button, the remote controller will circularly display as the following:

● Maximum power limited under the mode is lower than that of mode.

● If you want to cancel the power limiting function, press the button till the icon in remote controller is not displayed.

● When the remote controller is turned off, power limiting function is cancelled. If you want to activatethe function, please repress this button.

● If the current power is lower than the maximum power of mode, then the power will not be limited after entering into such mode.

● For the model with one outdoor unit and two indoor units, if any one of indoor units enters into power limiting function, the outdoor unit will enter into the set limiting power mode of indoor unit; when two indoor units enter into power limiting mode, then the power of outdoor unit will be limited according
to the lower power of the two indoor units.

**NOTE:**

This function is only available for some models.

If “H1” is displayed on the remote controller while it’s not operated by the professional person/after-sales person, it belongs to the misoperation.

Please operate it as below to cancel it.Under the OFF status of remote controller, hold the Mode button for 5s to cancel “H1” display.

Note:

● If remote controller displays “H1”, it belongs to the normal function reminder. If the unit is defrosting under heating mode, it operates according to H1 defrosting mode. “H1” won’t be displayed on the panel of indoor unit;

● Once you set H1 mode, if you turn off unit by remote controller, H1 will display 3 times on the remote controller and then disappear;

● Also, when you set H1 mode, when you change to heating mode, H1 will display 3 times on the remote controller and then disappear.

## Replacement of batteries in remote controller

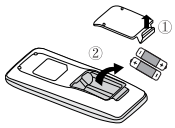


Fig.1

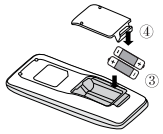


Fig.2

1. Lift the cover along the direction of arrow (as shown in Fig 1 ① ).

2.Take out the original batteries (as shown in Fig 1 ② ).

3.Place two 7# (AAA 1.5V) dry batteries, and make sure the position of “ + ” polar and “ - ” polar is correct (as shown in Fig 2 ③ ).

4.Reinstall the cover (as shown in Fig 2 ④ ).

**Notice:**

● During operation, point the remote control signal
sender at the receiving window on indoor unit.

● The distance between signal sender and receiving window should be no more than 8m, and there should be no obstacles between them.

● Signal may be interfered easily in the room where there is fluorescent lamp or wireless telephone; remote controller should be close to indoor unit during operation.

● Replace new batteries of the same model when replacement is required.

● When you don't use remote controller for a long time, please take out the batteries.

● If the display on remote controller is fuzzy or there's no display, please replace batteries.

## 6.2 Brief Description of Models and Functions

### ● Indoor Unit

**1.Basic function of system**

**(1)Cooling mode**

(1) Under this mode, fan and swing operates at setting status. Temperature setting range is 16~30$^{O}$C.

(2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.

**(2)Drying mode**

(1) Under this mode, fan operates at low speed and swing operates at setting status. Temperature setting range is 16~30$^{O}$C.

(2) During malfunction of outdoor unit or the unit is stopped because of protection, indoor unit keeps original operation status.

(3) Protection status is same as that under cooling mode.

(4) Sleep function is not available for drying mode.

**(3)Heating mode**

(1) Under this mode, Temperature setting range is 16~30$^{O}$C.

(2) Working condition and process for heating mode:

When turn on the unit under heating mode, indoor unit enters into cold air prevention status. When the unit is stopped or at OFF status, and indoor unit has been started up just now, the unit enters into residual heat-blowing status.

**(4)Working method for AUTO mode:**

1.Working condition and process for AUTO mode:

a.Under AUTO mode, standard heating Tpreset=20$^{O}$C and standard cooling Tpreset=25$^{O}$C. The unit will switch mode automatically according to ambient temperature.

2.Protection function

a. During cooling operation, protection function is same as that under cooling mode.

b. During heating operation, protection function is same as that under heating mode.

3. Display: Set temperature is the set value under each condition. Ambient temperature is (Tamb.-Tcompensation) for heat pump unit and Tamb. for cooling only unit.

4. If theres I feel function, Tcompensation is 0. Others are same as above.

**(5)Fan mode**

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30$^{O}$C.

**2. Other control**

**(1) Buzzer**

Upon energization or availably operating the unit or remote controller, the buzzer will give out a beep.

**(2) Auto fan**

Heating mode: During auto heating mode or normal heating ode, auto fan speed will adjust the fan speed automatically according to ambient temperature and set temperature.

**(3) Sleep**

After setting sleep function for a period of time, system will adjust set temperature automatically.

**(4) Timer function:**

General timer and clock timer functions are compatible by equipping remote controller with different functions.

**(5) Memory function**

memorize compensation temperature, off-peak energization value. Memory content: mode, up&down swing, light, set temperature, set fan speed, general timer (clock timer cant be memorized).

After power recovery, the unit will be turned on automatically according to memory content.

**(6) Health function**

During operation of indoor fan, set health function by remote controller. Turn off the unit will also turn off health function.

Turn on the unit by pressing auto button, and the health is defaulted ON.

**(7)I feel control mode**

After controller received I feel control signal and ambient temperature sent by remote controller, controller will work according to the ambient temperature sent by remote controller.

**(8)Entry condition for compulsory defrosting function**

When turn on the unit under heating ode and set temperature is 16$^{O}$C (or 16.5$^{O}$C by remote controller), press "△,▽,△,▽,△,▽" button successively within 5s and then indoor unit will enter into compulsory defrosting setting status:

(1) If theres only indoor units controller, it enters into indoor normal defrosting mode.

(2) If theres indoor units controller and outdoor units controller, indoor unit will send compulsory defrosting mode signal to outdoor unit and then outdoor unit will operate under normal defrosting mode. After indoor unit received the signal that outdoor unit has entered into defrosting status, indoor unit will cancel to send compulsory mode to outdoor unit. If outdoor unit hasnt received feedback signal from outdoor unit after 3min, indoor unit will also cancel to send compulsory defrosting signal.

**(9)Refrigerant recovery function:**

Enter into Freon recovery mode actively: Within 5min after energization, turn on the unit at 16$^{O}$C under cooling mode, and press light button for 3 times within 3s to enter into Freon recovery mode. Fo is displayed and Freon recovery mode will be sent to outdoor unit.

**(10)Ambient temperature display control mode**

1. When user set the remote controller to display set temperature (corresponding remote control code: 01), current set temperature will be displayed.

2. Only when remote control signal is switched to indoor ambient temperature display status (corresponding remote control code: 10) from other display status (corresponding remote control code: 00, 01,11),controller will display indoor ambient temperature for 3s

and then turn back to display set temperature.

Under this mode, indoor fan operates at set fan speed. Compressor, outdoor fan, 4-way valve and electric heating tube stop operation. Indoor fan can select to operate at high, medium, low or auto fan speed. Temperature setting range is 16~30$^{O}$C.

**(11)Off-peak energization function:**

Adjust compressors minimum stop time. The original minimum stop time is 180s and then we change to:

The time interval between two start-ups of compressor cant be less than 180+Ts(0≤T≤15). T is the variable of controller. Thats to say the minimum stop time of compressor is 180s~195s. Read-in T into memory chip when refurbish the memory chip each time. After power recovery, compressor can only be started up after 180+T s at least.

**(12) SE control mode**

The unit operates at SE status.

**(13) X-fan mode**

When X-fan function is turned on, after turn off the unit, indoor fan will still operate at low speed for 2min and then the complete unit will be turned off. When x-fan function is turned off, after turn off the unit, the complete unit will be turned off directly.

**(14) 8$^{O}$C heating function**

Under heating mode, you can set 8$^{O}$C heating function by remote controller. The system will operate at 8$^{O}$C set temperature.

**(15)Turbo function**

Turbo function can be set under cooling and heating modes. Press Fan Speed button to cancel turbo setting. Turbo function is not available under auto, drying and fan modes.

## ● Outdoor Unit

**1. Cooling mode:**

Working condition and process of cooling mode:

① When Tindoor ambient temperature≥Tpreset, unit enters into cooling mode. Indoor fan, outdoor fan and compressor start operation. Indoor fan operates according to set fan speed.

② When Tindoor ambient temperature≤Tpreset-2℃, compressor stops operation and outdoor fan will stop 30s later. Indoor fan operates according to set fan speed.

③ When Tpreset-2℃＜Tindoor ambient temperature ＜ Tpreset, unit operates according to the previous status.

Under cooling mode, 4-way valve is not energized. Temperature setting range is 16~30 ℃. If compressor stops because of malfunction in cooling mode, indoor fan and swing motor will work according to the original status.

**2. Drying mode**

(1) Working condition and process of drying mode

① When Tindoor ambient temperature ＞ Tpreset, unit will be in drying mode. Outdoor fan and compressor start operation while indoor fan will operate at low fan speed.

② When Tpreset-2℃ ≤Tindoor ambient temperature≤Tpreset, unit operates according to the previous status.

③ When Tindoor ambient temperature ＜ Tpreset-2 ℃, compressor stops operation and outdoor fan will stop 30s later.

(2) Under drying mode, 4-way valve is not energized. Temperature setting range is 16~30℃.

(3) Protection function: same as in cooling mode.

**3. Fan mode**

(1) Under this mode, indoor fan can select different fan speed (except Turbo) or auto fan speed. Compressor, outdoor fan and 4-way valve all stop operation.

(2) In fan mode, temperature setting range is 16~30℃.

**4. Heating mode**

Working condition and process of heating mode:

① When Tpreset-(Tindoor ambient temperature-Tcompensation)≥1℃, unit enters into heating mode. Compressor, outdoor fan and 4-way valve start operation.

② When -2 ℃ ＜ Tpreset-(Tindoor ambient temperature-Tcompensation) ＜ 1℃, unit operates according to the previous status.

③ When Tpreset-(Tindoor ambient temperature-Tcompensation)≤-2 ℃, compressor stops operation and outdoor fan will stop 30s later. Indoor fan will be in residual-heat blowing status.

④ When unit is turned off under heating mode or changed to other modes from heating mode, 4-way valve will be power-off 2min after compressor stops working (compressor is in operation status under heating mode).

⑤ When Toutdoor ambient temperature ＞ 30 ℃, compressor stops operation immediately. Outdoor fan will stop 30s later.

⑥ Under the condition that compressor is turned on, when unit is changed to heating mode from cooling or drying mode, 4-way valve will be energized in 2~3mins delay.

Note: Tcompensation is determined by IDU and ODU. If IDU controls the compensation temperature, then Tcompensation is determined according to the value sent by IDU to ODU; If IDU does not control the compensation temperature, then Tcompensation will default to 3℃ by the ODU.

**5. Freon recovery mode**

After the Freon recovery signal from IDU is received, cooling at rated frequency will be forcibly turned on to recover Freon.

Indoor unit will display Fo. If any signal from remote controller is received, unit will exit from Freon recovery mode and indoor unit stops displaying Fo.

**6. Compulsory defrosting**

If unit is turned on under heating mode and set temperature is 16 ℃ (by remote controller), press "△,▽,△,▽,△,▽" within 5s, unit will enter into compulsory defrosting mode and send the signal to ODU. When the compulsory defrosting signal from ODU is received, IDU will exit from the compulsory defrosting mode and stop sending the signal to ODU.

After ODU receives the compulsory defrosting code, it will start compulsory defrosting. Defrosting frequency and opening angle will be the same as in normal defrosting mode. When compulsory defrosting is finished, the complete unit resumes original status.

**7. Auto mode**

Auto mode is determined by controller of IDU. See IDU logic for details.

**8. 8$^{O}$C heating**

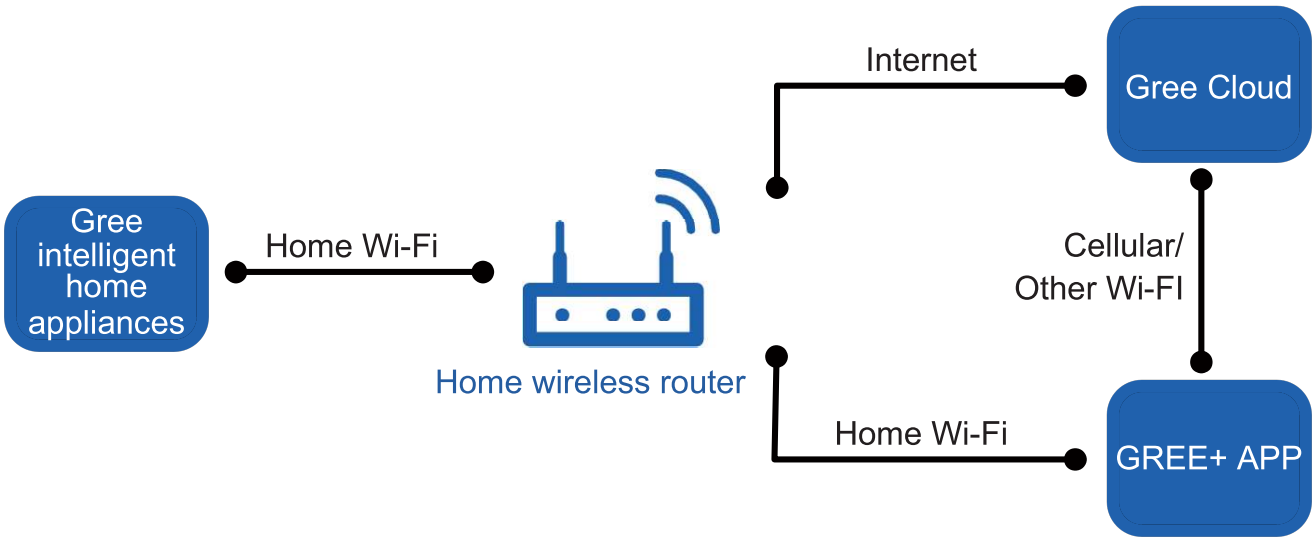
Set temperature is 8$^{O}$C. Display board of IDU displays 8$^{O}$C. Under this mode, "Cold air prevention" function is shielded.

If compressor is operating under this mode, fan speed will adjust according to auto fan speed; if compressor stops operation under this mode, indoor fan will be in residual-heat blowing status.

**When power on, communication light will be blinking in a normal way (after receiving a group of correct signals, blinking stops for 0.2s~0.3s). If theres no communication, communication light will be always on. If other ODU has malfunction, communication light will be on for 1s and off for 1s in a circular way.**

## 6.3 GREE+ App Operation Manual

### Control Flow Chart




### Operating Systems

Requirement for User's smart phone:

iOS system
Support iOS7.0 and above version

Android system
Support Android 4.4 and above version

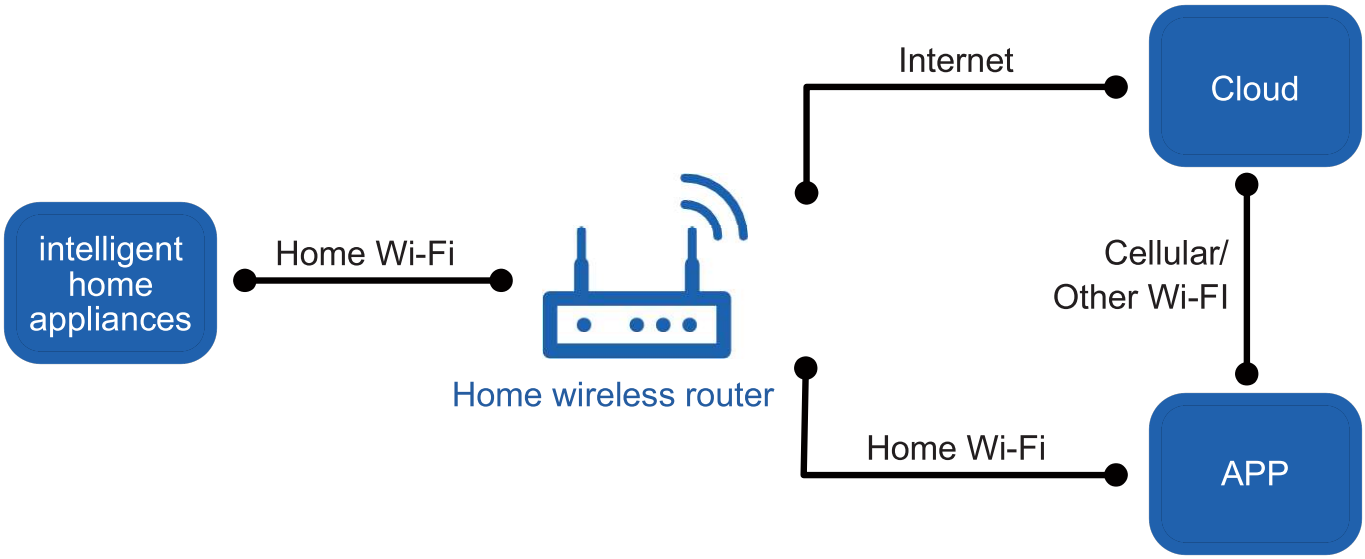
### Download and installation

GREE+ App Download Linkage

Scan the QR code or search "GREE+" in the application market to download and install it. When "GREE+" App is installed, register the account and add the device to achieve long-distance control and LAN control of Gree smart home appliances.
For more information, please refer to "Help" in App.

## 6.4 Ewpe Smart App Operation Manual

### Control Flow Chart




### Operating Systems

Requirement for User's smart phone:

iOS system
Support iOS7.0 and above version

Android system
Support Android 4.4 and above version

### Download and installation

App Download Linkage

Scan the QR code or search "Ewpe Smart" in the application market to download and install it. When "Ewpe Smart" App is installed, register the account and add the device to achieve long-distance control and LAN control of smart home appliances.
For more information, please refer to "Help" in App.

# 7. Notes for Installation and Maintenance

## Safety Precautions: Important!

**Please read the safety precautions carefully before installation and maintenance.**

**The following contents are very important for installation and maintenance.**

**Please follow the instructions below.**

**•The installation or maintenance must accord with the instructions.**

**•Comply with all national electrical codes and local electrical codes.**

**•Pay attention to the warnings and cautions in this manual.**

**•All installation and maintenance shall be performed by distributor or qualified person.**

**•All electric work must be performed by a licensed technician according to local regulations and the instructions given in this manual.**

**•Be caution during installation and maintenance. Prohibit incorrect operation to prevent electric shock, casualty and other accidents.**

## ⚠ WARNINGS

### Electrical Safety Precautions:

**1. Cut off the power supply of air conditioner before checking and maintenance.**

**2. The air condition must apply specialized circuit and prohibit share the same circuit with other appliances.**

**3. The air conditioner should be installed in suitable location and ensure the power plug is touchable.**

**4. Make sure each wiring terminal is connected firmly during installation and maintenance.**

**5. Have the unit adequately grounded. The grounding wire cant be used for other purposes.**

**6. Must apply protective accessories such as protective boards, cable-cross loop and wire clip.**

**7. The live wire, neutral wire and grounding wire of power supply must be corresponding to the live wire, neutral wire and grounding wire of the air conditioner.**

**8. The power cord and power connection wires cant be pressed by hard objects.**

**9. If power cord or connection wire is broken, it must be replaced by a qualified person.**

**10. If the power cord or connection wire is not long enough, please get the specialized power cord or connection wire from the manufacture or distributor. Prohibit prolong the wire by yourself.**

**11. For the air conditioner without plug, an air switch must be installed in the circuit. The air switch should be all-pole parting and the contact parting distance should be more than 3mm.**

**12. Make sure all wires and pipes are connected properly and the valves are opened before energizing.**

**13. Check if there is electric leakage on the unit body. If yes, please eliminate the electric leakage.**

**14. Replace the fuse with a new one of the same specification if it is burnt down; dont replace it with a cooper wire or conducting wire.**

**15. If the unit is to be installed in a humid place, the circuit breaker must be installed.**

### Installation Safety Precautions:

**1. Select the installation location according to the requirement of this manual.(See the requirements in installation part)**

**2. Handle unit transportation with care; the unit should not be carried by only one person if it is more than 20kg.**

**3. When installing the indoor unit and outdoor unit, a sufficient fixing bolt must be installed; make sure the installation support is firm.**

**4. Ware safety belt if the height of working is above 2m.**

**5. Use equipped components or appointed components during installation.**

**6. Make sure no foreign objects are left in the unit after finishing installation.**

### Refrigerant Safety Precautions:

**1. When refrigerant leaks or requires discharge during installation, maintenance, or disassembly, it should be handled by certified professionals or otherwise in compliance with local laws and regulations.**

**2.Avoid contact between refrigerant and fire as it generates poisonous gas; Prohibit prolong the connection pipe by welding.**

**3. Apply specified refrigerant only. Never have it mixed with any other refrigerant. Never have air remain in the refrigerant line as it may lead to rupture or other hazards.**

**4. Make sure no refrigerant gas is leaking out when installation is completed.**

**5. If there is refrigerant leakage, please take sufficient measure to minimize the density of refrigerant.**

**6. Never touch the refrigerant piping or compressor without wearing glove to avoid scald or frostbite.**

**Improper installation may lead to fire hazard, explosion, electric shock or injury.**

# Safety Precautions for Installing and Relocating the Unit:

**To ensure safety, please be mindful of the following precautions.**

## ⚠ WARNINGS

**1. When installing or relocating the unit, be sure to keep the refrigerant circuit free from air or substances other than the specified refrigerant.**

Any presence of air or other foreign substance in the refrigerant circuit will cause system pressure rise or compressor rupture, resulting in injury.

**2.When installing or moving this unit, do not charge the refrigerant which is not comply with that on the nameplate or unqualified refrigerant.**

Otherwise, it may cause abnormal operation, wrong action, mechanical malfunction or even series safety accident.

**3.When refrigerant needs to be recovered during relocating or repairing the unit, be sure that the unit is running in cooling mode.Then, fully close the valve at high pressure side (liquid valve).About 30-40 seconds later, fully close the valve at low pressure side (gas valve), immediately stop the unit and disconnect power. Please note that the time for refrigerant recovery should not exceed 1 minute.**

If refrigerant recovery takes too much time, air may be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**4.During refrigerant recovery, make sure that liquid valve and gas valve are fully closed and power is disconnected before detaching the connection pipe.**

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**5.When installing the unit, make sure that connection pipe is securely connected before the compressor starts running.**

If compressor starts running when stop valve is open and connection pipe is not yet connected, air will be sucked in and cause pressure rise or compressor rupture, resulting in injury.

**6.Prohibit installing the unit at the place where there may be leaked corrosive gas or flammable gas.**

If there leaked gas around the unit, it may cause explosion and other accidents.

**7.Do not use extension cords for electrical connections. If the electric wire is not long enough, please contact a local service center authorized and ask for a proper electric wire.**

Poor connections may lead to electric shock or fire.

**8.Use the specified types of wires for electrical connections between the indoor and outdoor units. Firmly clamp the wires so that their terminals receive no external stresses.**

Electric wires with insufficient capacity, wrong wire connections and insecure wire terminals may cause electric shock or fire.

## Safety Precautions for Refrigerant

Appliance filled with flammable gas R32.

Before install and use the appliance, read the owner's manual first.

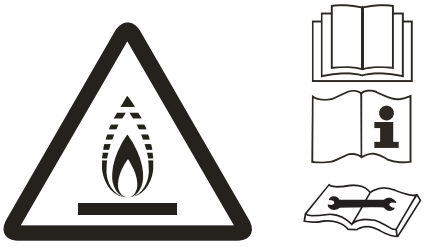
Before install the appliance, read the installation manual first.

Before repair the appliance, read the service manual first.

• To realize the function of the air conditioner unit, a special refrigerant circulates in the system. The used refrigerant is the fluoride R32,which is specially cleaned. The refrigerant is flammable and inodorous. Furthermore, it can leads to explosion under certain conditions. But the flammability of the refrigerant is very low. It can be ignited only by fire.
• Compared to common refrigerants, R32 is a nonpolluting refrigerant with no harm to the ozonosphere. The influence upon the greenhouse effect is also lower. R32 has got very good thermodynamic features which lead to a really high energy efficiency. The units therefore need a less filling.

## WARNING:

• Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacture.
Should repair be necessary,contact your nearest authorized Service Centre. Any repairs carried out by unqualified personnel may be dangerous. The appliance shall be stored in a room without continuously operating ignition sources. (for example:open flames , an operating gas appliance or an operating electric heater.)
• Do not pierce or burn.
• Appliance shall be installed, operated and stored in a room with a floor area larger than Xm$^2$.(Please refer to table "a" in section of " Safety operation of flammable refrigerant " for space X.)
• Appliance filled with flammable gas R32. For repairs, strictly follow manufacturers instructions only.Be aware that refrigrants not contain odour.
• Read specialists manual.



This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
1) Frequency band(s) in which the radio equipment operates: 2400MHz-2483.5MHz
2) Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates: 20dBm

R32: 675
This marking indicates that this product should not be disposed with other house hold wastes. To prevent possible harm to the environment or human health from uncontrolled waste throughout the EU. To prevent possible harm to the environment or human health. From uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased.They can take this product for environmental safe recycling.
If it needs to install, move or maintain the air conditioner, please contact dealer or local servicecenter to conduct it at first. Air conditioner must be installed, moved or maintained by appointed unit. Otherwise, it may cause serious damage or personal injury or death.

## Safety Operation of Flammable Refrigerant

### Qualification requirement for installation and maintenance man

• All the work men who are engaging in the refrigeration system should bear the valid certification awarded by the authoritative organization and the qualification for dealing with the refrigeration system recognized by this industry. If it needs other technician to maintain and repair the appliance, they should be supervised by the person who bears the qualification for using the flammable refrigerant.
•It can only be repaired by the method suggested by the equipments manufacturer.

### Installation notes

• The air conditioner is not allowed to use in a room that has running fire (such as fire source,working coal gas ware, operating heater).
• It is not allowed to drill hole or burn the connection pipe.
• The air conditioner must be installed in a room that is larger than the minimum room area.
The minimum room area is shown on the nameplate or following table a.
• Leak test is a must after installation.