Service Manual

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1. Summary

Indoor Unit:

A1 Panel:
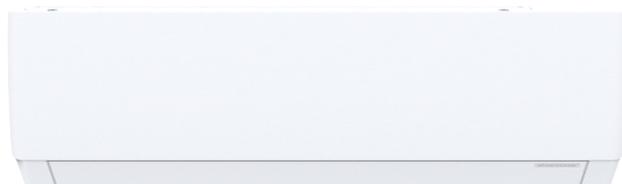
Outdoor Unit:

GWH07AGAXB-K6DNA1A/O
GWH09AGCXB-K6DNA1A/O
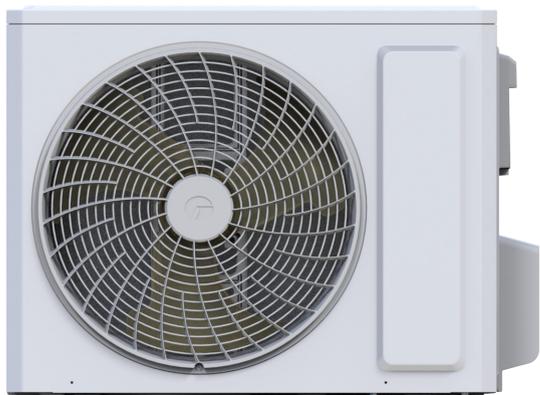
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GWH24AGEXF-K6DNA1A/O
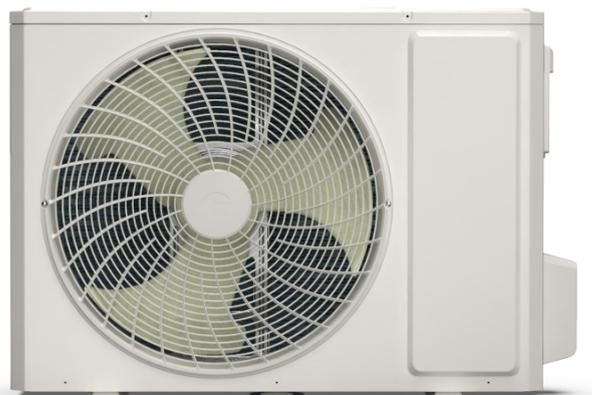
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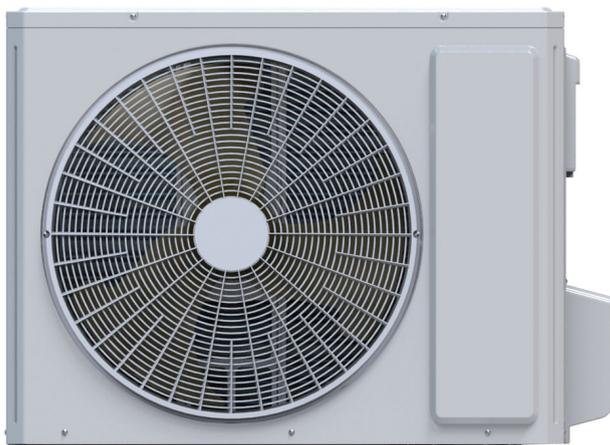
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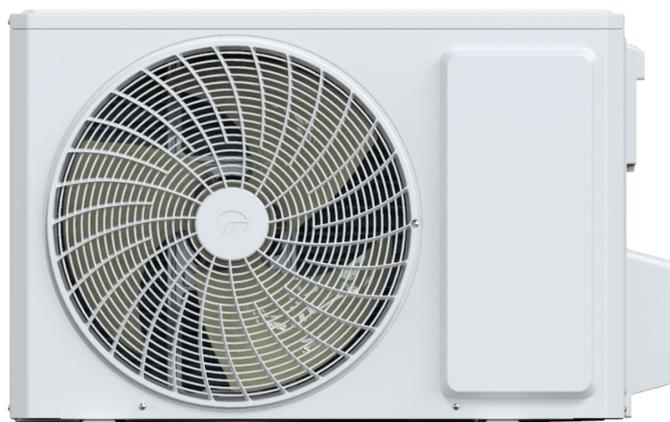
Remote Controller:

YAP1F7(WiFi)

Model list:

No	Model	Product code	Indoor model	Indoor product code	Outdoor model	Outdoor product code
1	GWH07AGAXB-K6DNA1A	CB385012200	GWH07AGAXB-K6DNA1A/I	CB385N12200	GWH07AGAXB-K6DNA1A/O	CB385W12200
2	GWH09AGCXB-K6DNA1A	CB385012100	GWH09AGCXB-K6DNA1A/I	CB385N12100	GWH09AGCXB-K6DNA1A/O	CB385W12100
3	GWH18AGDXE-K6DNA1A	CB385012900	GWH18AGDXE-K6DNA1A/I	CB385N12900	GWH18AGDXE-K6DNA1A/O	CB385W12900
4	GWH21AGEXF-K6DNA1A	CB385014100	GWH21AGEXF-K6DNA1A/I	CB385N14100	GWH21AGEXF-K6DNA1A/O	CB385W14100
5	GWH24AGEXF-K6DNA1A	CB385013900	GWH24AGEXF-K6DNA1A/I	CB385N13900	GWH24AGEXF-K6DNA1A/O	CB385W13900
6	GWH28AGEXH-K6DNA1A	CB385014300	GWH28AGEXH-K6DNA1A/I	CB385N14300	GWH28AGEXH-K6DNA1A/O	CB385W14300

2. Specifications

2.1 Specification Sheet

Model			GWH07AGAXB-K6DNA1A	GWH09AGCXB-K6DNA1A
Product Code			CB385012200	CB385012100
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	2250	2650
Heating Capacity		W	2700	3200
Cooling Power Input		W	600	575
Heating Power Input		W	720	745
Cooling Current Input		A	3.1	2.95
Heating Current Input		A	3.8	3.95
Rated Input		W	1250	1350
Rated Cooling Current		A	4.9	5.65
Rated Heating Current		A	5.65	6
Air Flow Volume		m^3/h	520/470/450/420/310/290/250	740/630/560/490/420/390/360
Dehumidifying Volume		L/h	0.6	0.8
EER		W/W	3.75	4.6
COP		W/W	3.75	4.3
SEER		W/W	/	4.3
HSPF		W/W	/	/
Application Area		m^2	10-16	12-18
Indoor Unit	Model		GWH07AGAXB-K6DNA1A/I	GWH09AGCXB-K6DNA1A/I
	Product Code		CB385N12200	CB385N12100
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ93X505	Φ98×630
	Cooling Speed	r/min	1300/1200/1120/1050/920/800/750	1350/1200/1100/1000/850/750/650
	Heating Speed	r/min	1300/1200/1120/1050/950/850/800	1200/1100/1040/950/900/880/850
	Fan Motor Power Output	W	20	15
	Fan Motor RLA	A	0.22	0.22
	Fan Motor Capacitor	μF	1	/
	Evaporator Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Evaporator Pipe Diameter	mm	Φ5	Φ5
	Evaporator Row-fin Gap	mm	2-1.4	2-1.4
	Evaporator Coil Length (LXDXW)	mm	509×22.8×266.7	634×22.8×304.8
	Swing Motor Model		MP24AK MP24BA MP24HF	MP24HF MP24AK MP24BA
	Swing Motor Power Output	W	1.5/1.5/1.5	1.5 1.5 1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling:39/36/34/32/28/23/22 Heating:39/36/33/31/29/25/23	Cooling:42/37/36/32/28/24/20 Heating:39/36/33/31/29/28/27
	Sound Power Level	dB (A)	Cooling:55/52/50/48/44/39/38 Heating:55/52/49/47/45/41/39	Cooling:57/52/51/47/43/39/35 Heating:57/52/49/47/45/44/43
	Dimension (WXHXD)	mm	704×260×185	825×293×196
	Dimension of Carton Box (LXWXH)	mm	748×316×247	870×349×257
	Dimension of Package (LXWXH)	mm	753×332×258	875×365×268
	Net Weight	kg	7.5	9.5
	Gross Weight	kg	9	11.5

2. Specifications

			GWH07AGAXB-K6DNA1A/O	GWH09AGCXB-K6DNA1A/O
	Outdoor Unit Model		GWH07AGAXB-K6DNA1A/O	GWH09AGCXB-K6DNA1A/O
	Outdoor Unit Product Code		CB385W12200	CB385W12100
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXF-A082zC170	QXF-A082zC170
	Compressor Oil		ZE-G;ES RB68GX or equivalent	ZE-G;ES RB68GX or equivalent
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	15.00	15.00
	Compressor RLA	A	2.56	2.56
	Compressor Power Input	W	756.6	756.6
	Compressor Overload Protector		/	/
	Throttling Method		Capillary	Electron expansion valve
	Set Temperature Range	℃	16~30	16~30
	Cooling Operation Ambient Temperature Range	℃	-10~50	-10~50
	Heating Operation Ambient Temperature Range	℃	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7	Φ7
	Condenser Rows-fin Gap	mm	1-1.2	2-1.4
	Condenser Coil Length (LXDXW)	mm	666×19.05×527	666×38.1×527
	Fan Motor Speed	rpm	850	850
Outdoor Unit	Fan Motor Power Output	W	30	30
	Fan Motor RLA	A	0.40	0.4
	Fan Motor Capacitor	μF	/	2.5
	Outdoor Unit Air Flow Volume	m³/h	1950	1950
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ400	Φ400
	Defrosting Method		Automatic Defrosting	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 (H/M/L)	dB (A)	50/-/-	50/-/-
	Sound Power Level (H/M/L)	dB (A)	60/-/-	61/-/-
	Dimension(WXHXD)	mm	732×555×330	732×555×330
	Dimension of Carton Box (LXWXH)	mm	791×373×590	791×373×590
	Dimension of Package(LXWXH)	mm	794×376×615	794×376×615
	Net Weight	kg	24	26.5
	Gross Weight	kg	26.5	29
	Refrigerant		R32	R32
	Refrigerant Charge	kg	0.46	0.65
	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	16	16
Connection Pipe	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	3/8	3/8
	Max Distance Height	m	10	10
	Max Distance Length	m	15	15
	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			GWH28AGEXH-K6DNA1A	GWH21AGEXF-K6DNA1A
Product Code			CB385014300	CB385014100
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	8500	6400
Heating Capacity		W	9000	7400
Cooling Power Input		W	2297	1542
Heating Power Input		W	2647	1805
Cooling Current Input		A	10.4	11.5
Heating Current Input		A	12	11
Rated Input		W	3650	2600
Rated Cooling Current		A	18.5	12.5
Rated Heating Current		A	16.5	12.5
Air Flow Volume		m^3/h	1300/1050/1000/900/800/750/700/500	1300/1100/1050/950/900/850/800/700
Dehumidifying Volume		L/h	3	2.5
EER		W/W	3.7	4.15
COP		W/W	3.4	4.10
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	32-50	27-42
Indoor Unit	Model		GWH28AGEXH-K6DNA1A/I	GWH21AGEXF-K6DNA1A/I
	Product Code		CB385N14300	CB385N14100
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ108×830	Φ98×630
	Cooling Speed	r/min	1400/1150/1100/1000/900/850/800//600	1400/1150/1100/1000/900/850/800/650
	Heating Speed	r/min	1400/1200/1100/1000/900/800/750/-	1400/1200/1100/1000/900/800/750/-
	Fan Motor Power Output	W	60	60
	Fan Motor RLA	A	0.38	0.28
	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	2-1.3
	Evaporator Coil Length (LXDXW)	mm	850×25.4×342.9	850×25.4×342.9
	Swing Motor Model		MP24HF/MP24AK/MP24HF	MP24HF/MP24AK/MP24HF
	Swing Motor Power Output	W	1.5/1.5/1.5	1.5/1.5/1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling:49/43/42/39/37/35/32/30 Heating:48/43/41/37/34/31/29/-	Cooling:49/43/41/38/35/33/29/27 Heating:39/36/33/31/29/28/27/-
	Sound Power Level	dB (A)	Cooling:65/59/58/55/53/51/48/46 Heating:64/59/57/53/50/47/45/-	Cooling:62/55/53/50/47/45/41/39 Heating:57/52/49/47/45/44/43/-
	Dimension (WXHXD)	mm	1075×333×246	1075×333×246
	Dimension of Carton Box (LXWXH)	mm	1128×406×323	1128×406×323
	Dimension of Package (LXWXH)	mm	1133×414×333	1133×414×333
	Net Weight	kg	16	16
	Gross Weight	kg	19	19

		GWH28AGEXH-K6DNA1A/O	GWH21AGEXF-K6DNA1A/O
	Outdoor Unit Model	GWH28AGEXH-K6DNA1A/O	GWH21AGEXF-K6DNA1A/O
	Outdoor Unit Product Code	CB385W14300	CB385W14100
	Compressor Manufacturer	ZHUHAI LANDA COMPRESSOR CO.,LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model	QXFS-B238zX070	QXFS-M180zX170
	Compressor Oil	/	/
	Compressor Type	Rotary	Rotary
	Compressor LRA.	A	27.00	24.00
	Compressor RLA	A	4.30	3.50
	Compressor Power Input	W	2020	1350
	Compressor Overload Protector	/	HPC 115/95U1 KSD115ºC
	Throttling Method	Electron expansion valve	Electron expansion valve
	Set Temperature Range	ºC	16~30	16~30
	Cooling Operation Ambient Temperature Range	ºC	-10~50	-10~50
	Heating Operation Ambient Temperature Range	ºC	-15~24	-15~24
	Condenser Form	Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	955X38.1X704	890×38.1×616
	Fan Motor Speed	rpm	850	880
	Fan Motor Power Output	W	90	60
Outdoor Unit	Fan Motor RLA	A	0.70	0.65
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m³/h	4500	3800
	Fan Type	Axial-flow	Axial-flow
	Fan Diameter	mm	Φ570	Φ520
	Defrosting Method	Automatic Defrosting	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 (H/M/L)	dB (A)	62/-/-	58/-/-
	Sound Power Level (H/M/L)	dB (A)	72/-/-	67/-/-
	Dimension(WXHXD)	mm	1000×746×427	958×660×402
	Dimension of Carton Box (LXWXH)	mm	1077×480×785	1029×453×715
	Dimension of Package(LXWXH)	mm	1080×483×810	1032×456×737
	Net Weight	kg	51.5	42.5
	Gross Weight	kg	56.5	47
	Refrigerant	R32	R32
	Refrigerant Charge	kg	1.7	1.3
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	40	16
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	5/8	1/2
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
	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			GWH18AGDXE-K6DNA1A	GWH24AGEXF-K6DNA1A
Product Code			CB385012900	CB385013900
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	5000	7100
Heating Capacity		W	6000	8000
Cooling Power Input		W	1290	1844
Heating Power Input		W	1460	2000
Cooling Current Input		A	6	8.1
Heating Current Input		A	6.5	8.8
Rated Input		W	2300	3200
Rated Cooling Current		A	10	14.5
Rated Heating Current		A	10	13.5
Air Flow Volume		m^3/h	1050/910/870/830/770/660/600	1300/1050/1000/900/820/750/650
Dehumidifying Volume		L/h	1.8	2.5
EER		W/W	3.87	3.85
COP		W/W	4.1	4.00
SEER		W/W	/	/
HSPF		W/W	/	/
Application Area		m^2	23-34	27-42
Indoor Unit	Model		GWH18AGDXE-K6DNA1A/I	GWH24AGEXF-K6DNA1A/I
	Product Code		CB385N12900	CB385N13900
	Fan Type		Cross-flow	Cross-flow
	Fan Diameter Length(DXL)	mm	Φ106X739	Φ108×830
	Cooling Speed	r/min	1400/1200/1120/1050/980/860/750	1400/1150/1100/1000/900/850/800/650
	Heating Speed	r/min	1400/1200/1120/1050/950/850/750	1400/1200/1100/1000/900/800/750/-/-
	Fan Motor Power Output	W	50	60
	Fan Motor RLA	A	0.25	0.28
	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	2-1.3
	Evaporator Coil Length (LXDXW)	mm	715×25.4×304.8	850×25.4×342.9
	Swing Motor Model		MP35CP	MP24AK/MP24HF/MP24HF
	Swing Motor Power Output	W	2.5	1.5/1.5/1.5
	Fuse Current	A	3.15	3.15
	Sound Pressure Level	dB (A)	Cooling:46/41/39/37/35/32/27 Heating:48/43/41/39/35/32/28	Cooling:50/44/43/40/36/34/32/30 Heating:50/45/42/39/36/34/32/-
	Sound Power Level	dB (A)	Cooling:62/57/55/63/51/48/43 Heating:58/53/51/49/45/42/38	Cooling:66/60/59/56/52/50/48/46 Heating:66/61/58/55/52/50/48/-
	Dimension (WXHXD)	mm	982X311X221	1075×333×246
	Dimension of Carton Box (LXWXH)	mm	1039X377X287	1128×406×323
	Dimension of Package (LXWXH)	mm	1044X385X297	1133×414×333
	Net Weight	kg	13	16
	Gross Weight	kg	15.5	19

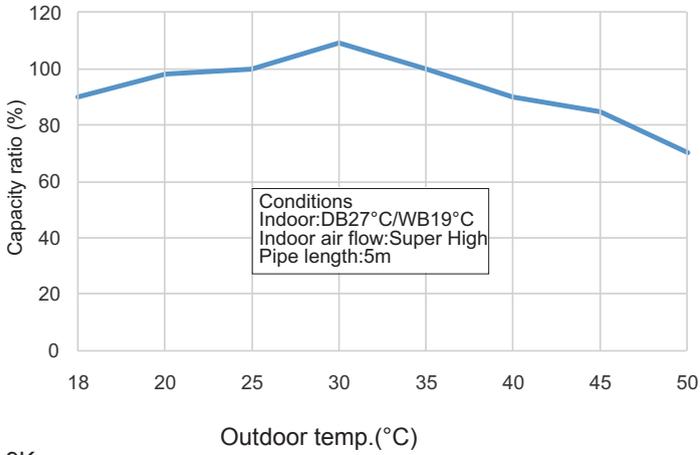| Outdoor Unit	Outdoor Unit Model		GWH18AGDXE-K6DNA1A/O	GWH24AGEXF-K6DNA1A/O
	Outdoor Unit Product Code		CB385W12900	CB385W13900
	Compressor Manufacturer		ZHUHAI LANDA COMPRESSOR CO., LTD	ZHUHAI LANDA COMPRESSOR CO.,LTD
	Compressor Model		QXF-M130zF170	QXFS-M180zX170
	Compressor Oil		RB68GX or equivalent	/
	Compressor Type		Rotary	Rotary
	Compressor LRA.	A	/	24.00
	Compressor RLA	A	5.36	3.50
	Compressor Power Input	W	1196	1350
	Compressor Overload Protector		/	HPC 115/95U1 KSD115ºC
	Throttling Method		Electron expansion valve	Electron expansion valve
	Set Temperature Range	ºC	16~30	16~30
	Cooling Operation Ambient Temperature Range	ºC	-10~50	-10~50
	Heating Operation Ambient Temperature Range	ºC	-15~24	-15~24
	Condenser Form		Aluminum Fin-copper Tube	Aluminum Fin-copper Tube
	Condenser Pipe Diameter	mm	Φ7.94	Φ7.94
	Condenser Rows-fin Gap	mm	2-1.4	2-1.4
	Condenser Coil Length (LXDXW)	mm	865×38.1×528	934×38.1×616
	Fan Motor Speed	rpm	950	880
	Fan Motor Power Output	W	40	60
	Fan Motor RLA	A	0.70	0.65
	Fan Motor Capacitor	μF	/	/
	Outdoor Unit Air Flow Volume	m^3/h	3000	3600
	Fan Type		Axial-flow	Axial-flow
	Fan Diameter	mm	Φ445	Φ520
	Defrosting Method		Automatic Defrosting	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 (H/M/L)	dB (A)	58/-/-	61/-/-
	Sound Power Level (H/M/L)	dB (A)	68/-/-	68/-/-
	Dimension(WXHXD)	mm	873×555×376	958×660×402
	Dimension of Carton Box (LXWXH)	mm	948×428×591	1029×453×715
	Dimension of Package(LXWXH)	mm	951×431×620	1032×456×737
	Net Weight	kg	37	43.5
	Gross Weight	kg	40	48
	Refrigerant		R32	R32
	Refrigerant Charge	kg	1	1.45
Connection Pipe	Connection Pipe Length	m	5	5
	Connection Pipe Gas Additional Charge	g/m	12	16
	Outer Diameter Liquid Pipe	inch	1/4	1/4
	Outer Diameter Gas Pipe	inch	1/2	5/8
	Max Distance Height	m	10	10
	Max Distance Length	m	25	25
	Note: The connection pipe applies metric diameter.			

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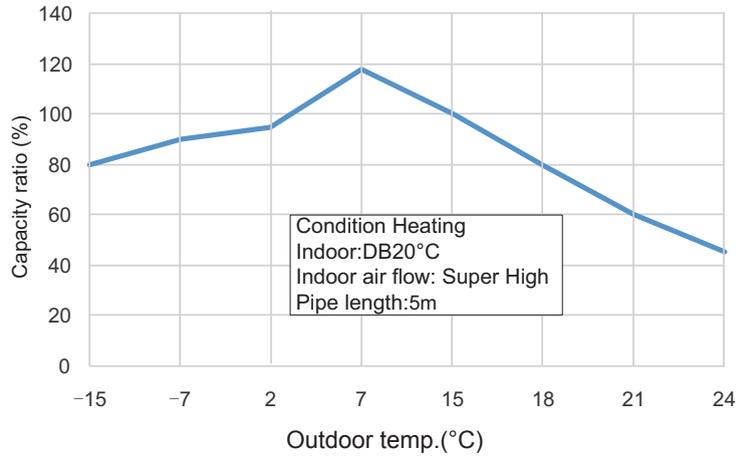
2. Specifications

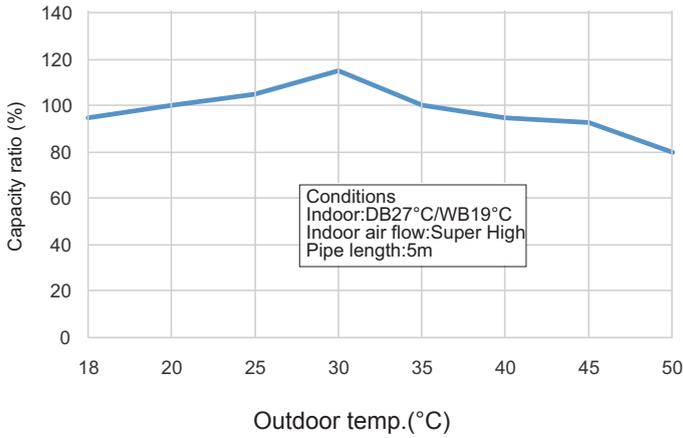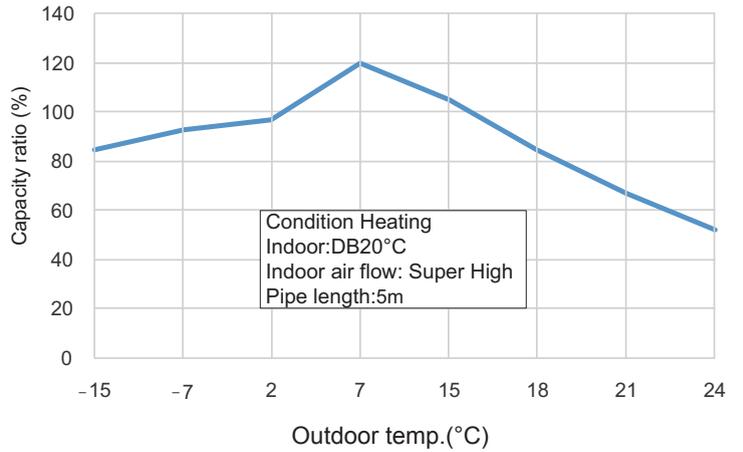## 2.2 Capacity Variation Ratio According to Temperature

7K

Cooling

Conditions
Indoor:DB27°C/WB19°C
Indoor air flow:Super High
Pipe length:5m

Heating:

Condition Heating
Indoor:DB20°C
Indoor air flow: Super High
Pipe length:5m

9K

Cooling

Conditions
Indoor:DB27°C/WB19°C
Indoor air flow:Super High
Pipe length:5m

Heating:

Condition Heating
Indoor:DB20°C
Indoor air flow: Super High
Pipe length:5m

18/21/24K

Cooling

Conditions
Indoor:DB27°C/WB19°C
Indoor air flow:Super High
Pipe length:5m

Heating:
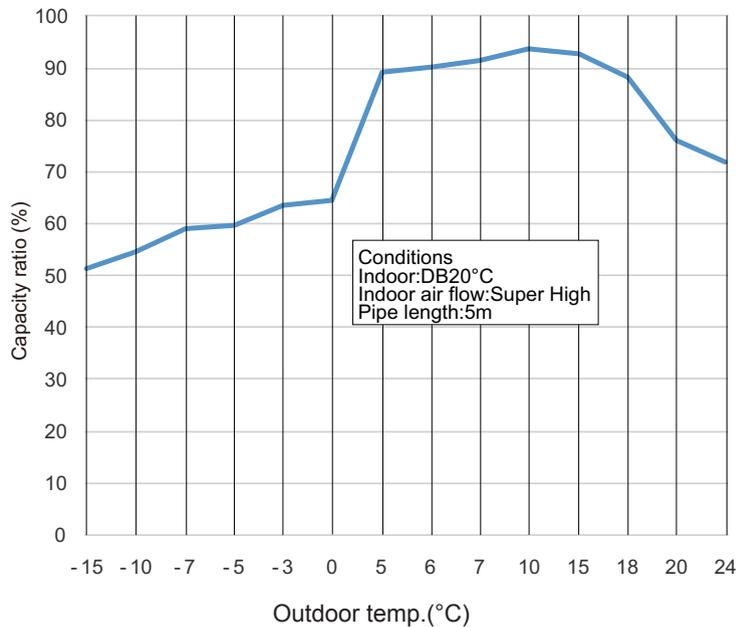
Conditions
Indoor:DB20°C
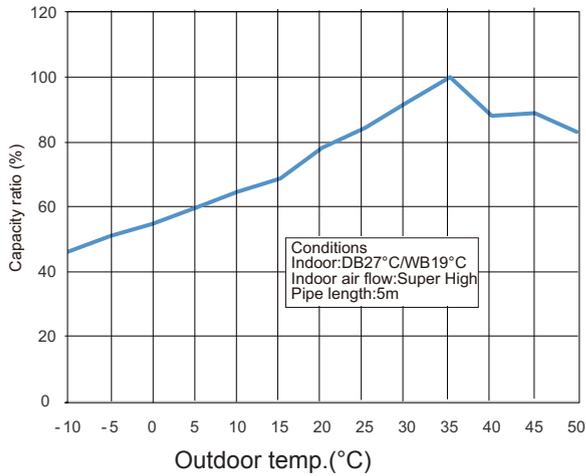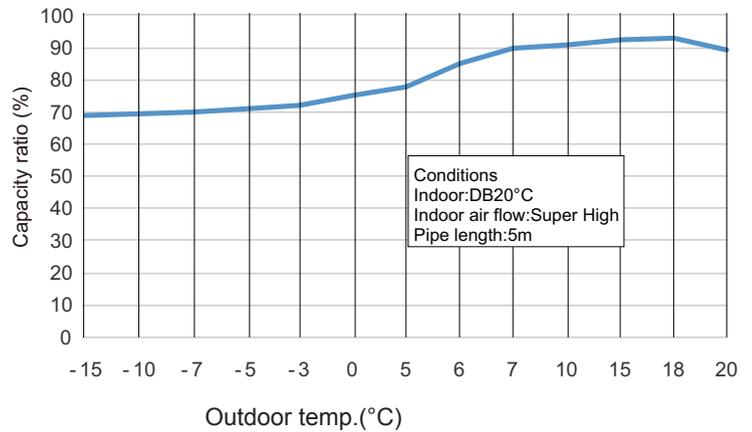Indoor air flow:Super High
Pipe length:5m

28K
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	7K	0.8~1.1	12 ~ 15	75~40	TURBO	High
		9K	1~1.3	12 ~15	78~38		
		21/24K	0.9~1.1	12 ~ 14	75 ~ 37		
		28K	0.7~0.9	10 ~ 12	78 ~ 37		

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	7K	2.0~2.6	75~38	2 ~ 5	TURBO	High
		9K	2.0~2.5	70~35	2 ~5		
		21/24K	2.2~2.4	70 ~ 35	2 ~ 4		
		28K	2.4~2.7	71 ~ 36	1 ~ 7		

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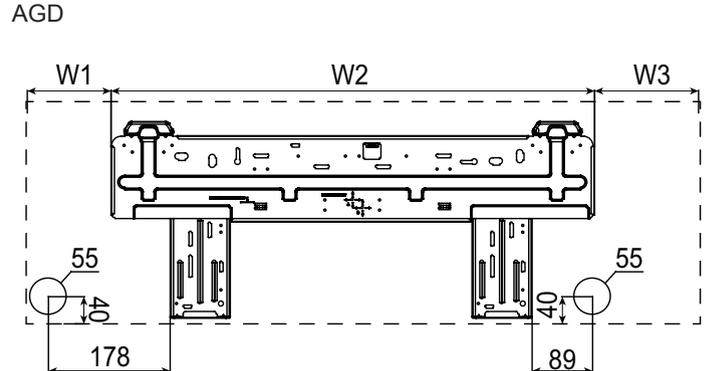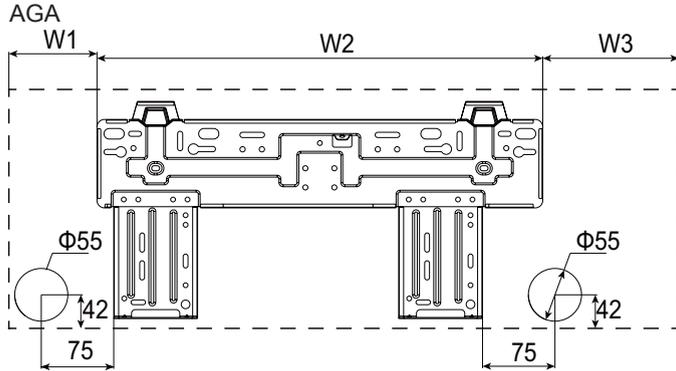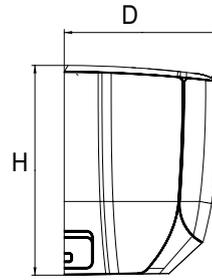T1: Inlet and outlet pipe temperature of evaporator
T2: Inlet and outlet pipe temperature of condenser
P: Pressure at the side of big valve
Connection pipe length: 5 m.

3. Outline Dimension Diagram

3.1 Indoor Unit

AGA

AGD

AGC

AGE
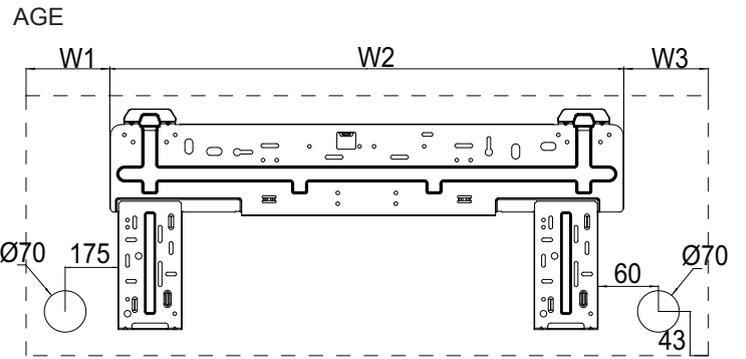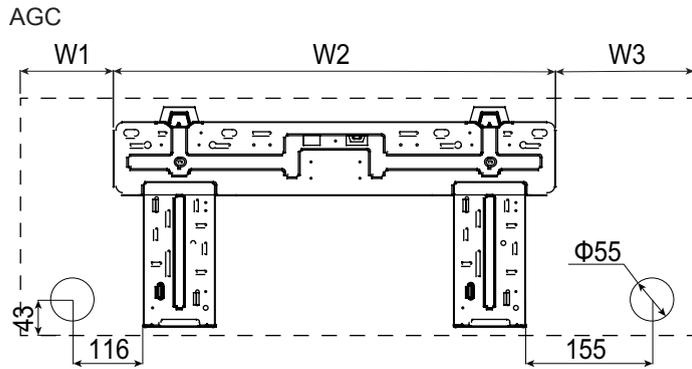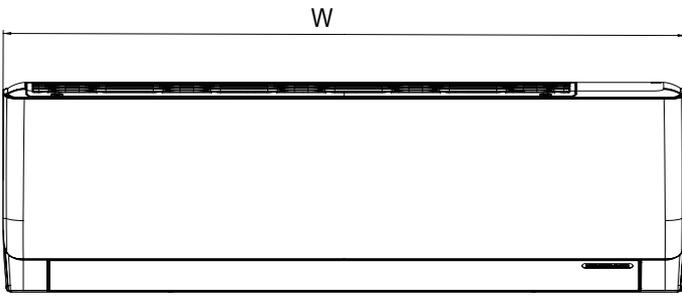
Unit:mm

Model	W	H	D	W1	W2	W3
AGA	704	260	185	93	462	149
AGC	825	293	196	113	542	170
AGD	982	311	221	122.5	707.5	152
AGE	1075	333	246	184	707.5	183.5

* Recommended distance

3. Outline Dimension Diagram

3.2 Outdoor Unit

07/09K
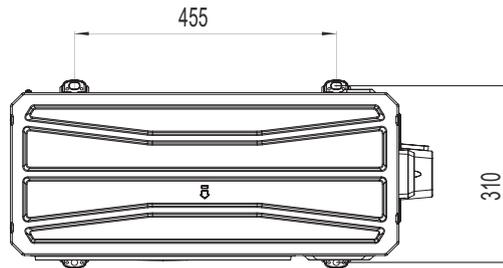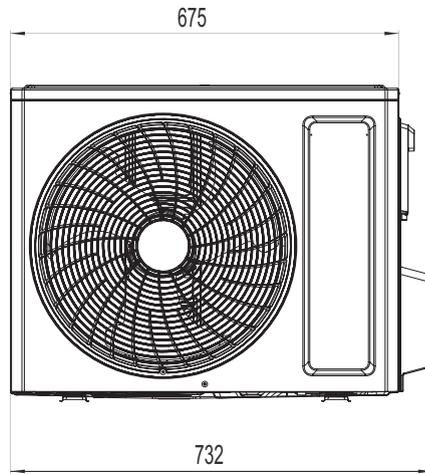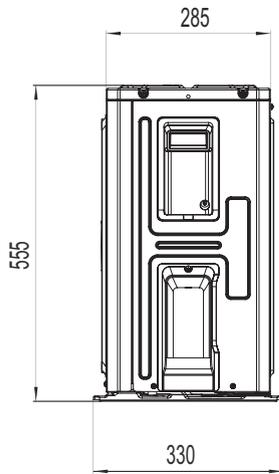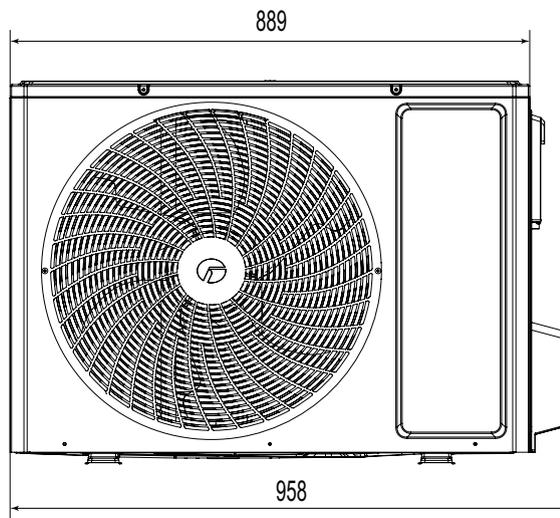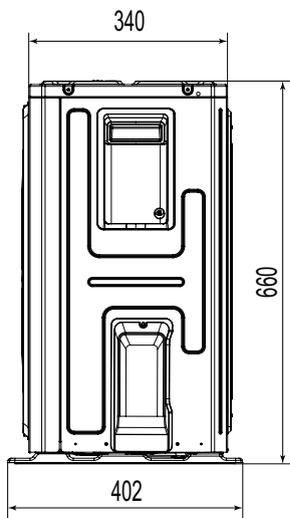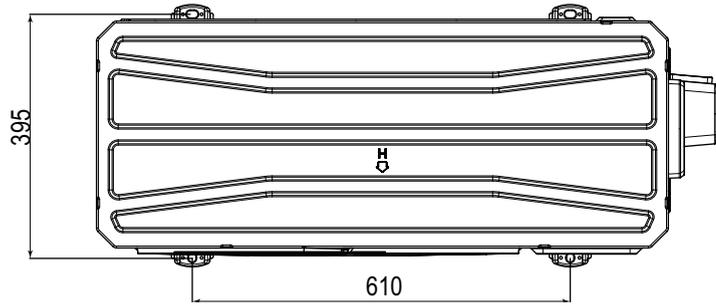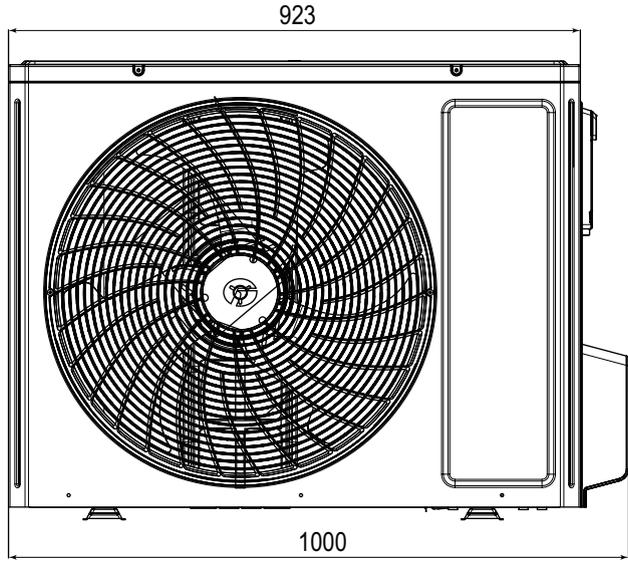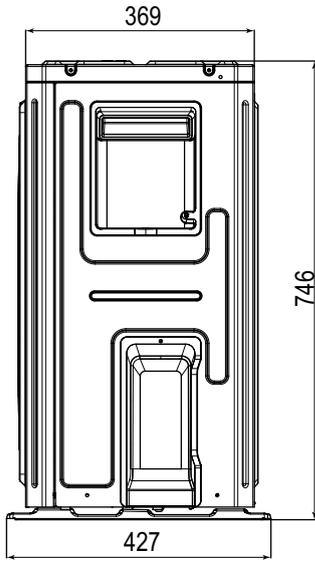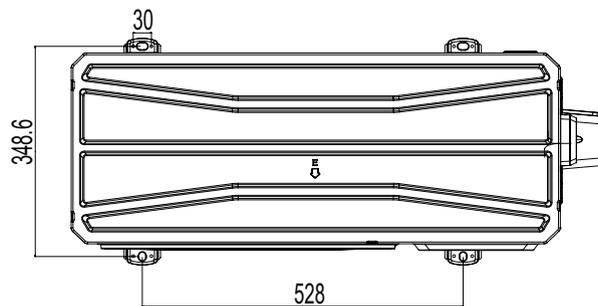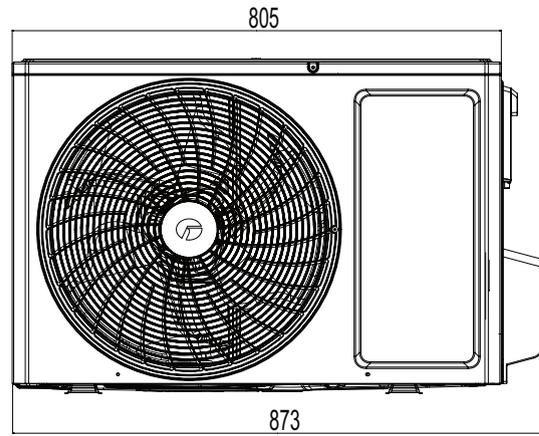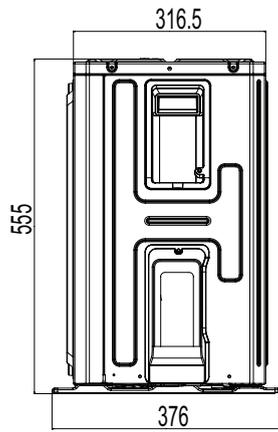
285

555

330

675

732

455

310

Unit:mm

21/28K

340

660

402

889

958

371

570

Unit:mm

28K

369

746

427

923

1000

395

H

610

Unit:mm

18K

316.5

555

376

805

873

30

348.6

E

528

Unit:mm

4. Refrigerant System Diagram

7K

Cooling and heating model
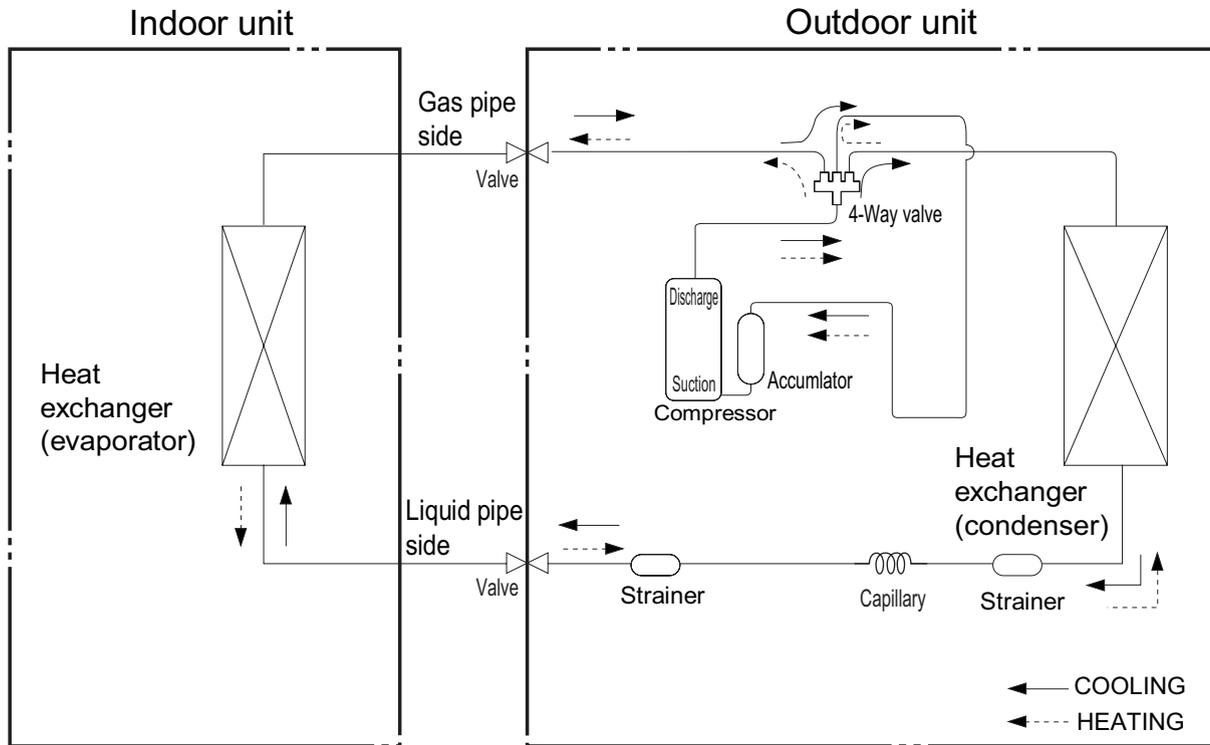
Indoor unit

Outdoor unit

Gas pipe side

Valve

4-Way valve

Discharge

Suction

Accumlator

Compressor

Heat exchanger (evaporator)

Liquid pipe side

Valve

Strainer

Capillary

Strainer

Heat exchanger (condenser)

◄——— COOLING
◄---- HEATING

Connection pipe specification:
Liquid pipe:1/4"
Gas pipe:3/8"

9/18/21/24/28K

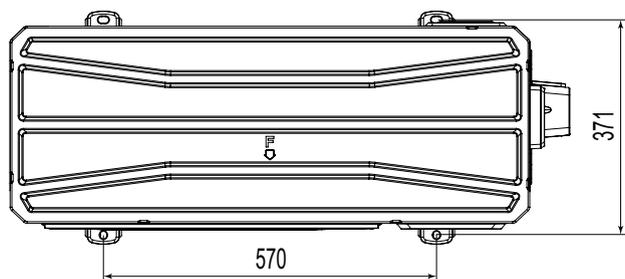**Cooling and heating model**

Indoor unit

Outdoor unit

Gas pipe side

Valve

4-Way valve

Discharge

Suction

Accumlator

Compressor

Heat exchanger (evaporator)

Liquid pipe side

Valve

Strainer

Electric expand valve

Strainer

Heat exchanger (condenser)

◄——— COOLING
◄---- HEATING
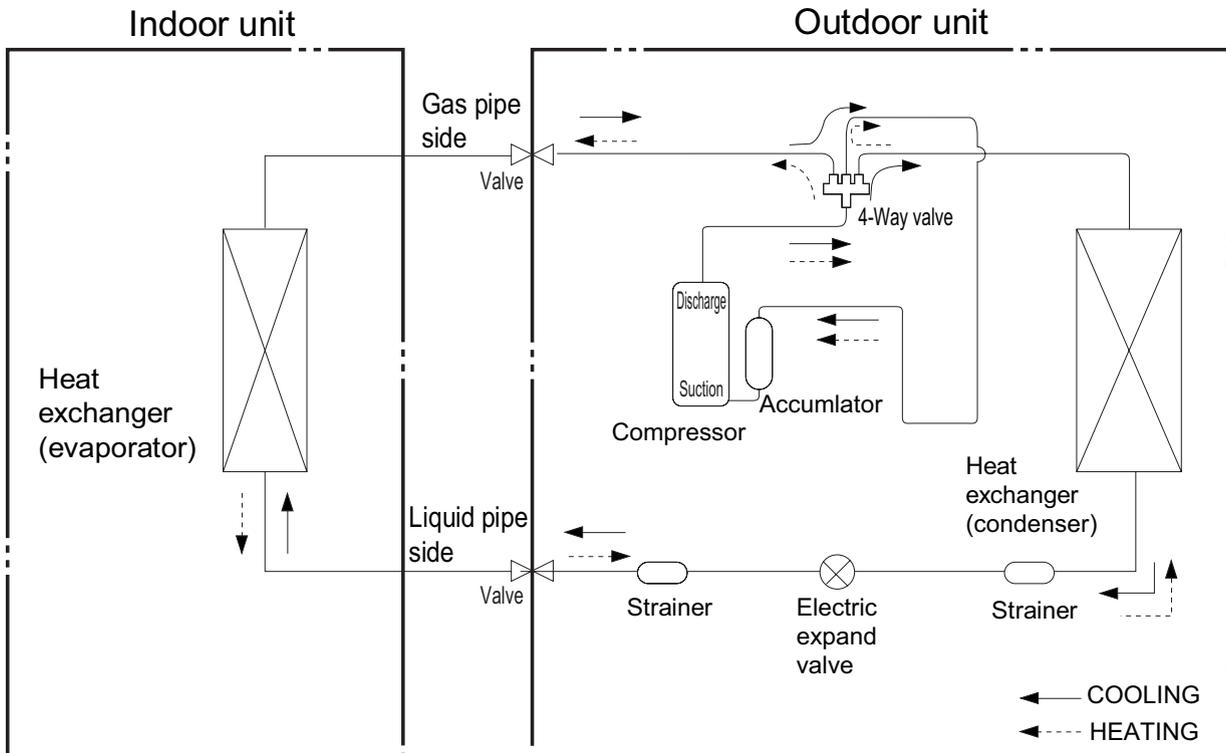
Connection pipe specification:
Liquid pipe:1/4"
Gas pipe:3/8" 9K
Gas pipe:1/2" 18/21K
Gas pipe:5/8" 28K

5. Electrical Part

5.1 Wiring Diagram

●Instruction

Symbol	Symbol Color		Symbol	Symbol Color		Symbol	Name
WH	White		GN	Green		CAP	Jumper cap
YE	Yellow		BN	Brown		COMP	Compressor
RD	Red		BU	Blue		⏚	Grounding wire
YEGN	Yellow/Green		BK	Black		/	/
VT	Violet		OG	Orange		/	/

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

● Indoor Unit

7K

600007063739

9K

TUBE TEMP. SENSOR
ROOM TEMP. SENSOR
RECEIVER AND DISPLAY BOARD
FAN MOTOR

OPTIONAL WIRED CONTROLLER AP3
OPTIONAL GATE CONTROL AP4

θ RT1 θ RT2

AP1 DISPLAY

M1

T-SENSOR   DISP   DC-MOTOR |COM-MANUAL| (DRY-C) DOOR-C

CAP
JUMP

AP2
PRINTED CIRCUIT BOARD

TERMINAL BLOCK

N(N1)   BU   N(1)   BU
COM-OUT   BK   2   BK
AC-L   BN   3   BN
YEGN

YEGN   XT   CONNECTING CABLE

OUTDOOR UNIT

SWING-UD1   SWING-UD2   SWING-LR   HEALTH

M2   M3   M4

UP-DOWN STEPPING MOTOR   UP-DOWN STEPPING MOTOR   LEFT-RIGHT STEPPING MOTOR   PLASMACLUSTER ION

OPTIONAL   OPTIONAL

PE EVAPORATOR

600007065783

18/21/24/28K

TUBE TEMP. SENSOR
ROOM TEMP. SENSOR
RECEIVER AND DISPLAY BOARD
LEFT-RIGHT STEPPING MOTOR
FAN MOTOR
OPTIONAL WIRED CONTROLLER

θ RT1 θ RT2

AP1 DISPLAY

M4

M1

T-SENSOR   DISP   SWING-LR   DC-MOTOR   COM-MANUAL

CAP
JUMP

AP2
PRINTED CIRCUIT BOARD

TERMINAL BLOCK

N   BU   N(1)   BU
COM-OUT   BK   2   BK
AC-L   BN   3   BN
E   YEGN   YEGN   YEGN

XT   CONNECTING CABLE

OUTDOOR UNIT

SWING-UD1   SWING-UD2   (DRY-C) DOOR-C   HEALTH

M2   M3

UP-DOWN STEPPING MOTOR   UP-DOWN STEPPING MOTOR   DRY CONTACT   PLASMACLUSTER ION

OPTIONAL   OPTIONAL

PE EVAPORATOR

60000706411701

5. Electrical Part

● Outdoor Unit

7/9K

600007065732

18/21/24/28K

600007065952

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

5. Electrical Part

5.2 PCB Printed Diagram

Indoor Unit

7K

GRJ871-A1

No.	Name
1	Terminal of communication
2	Fuse
3	Live wire terminal
4	Neutral wire terminal
5	PG Motor terminal
6	Interface of health function
7	Up&down swing interface 2
8	Up&down swing interface 1

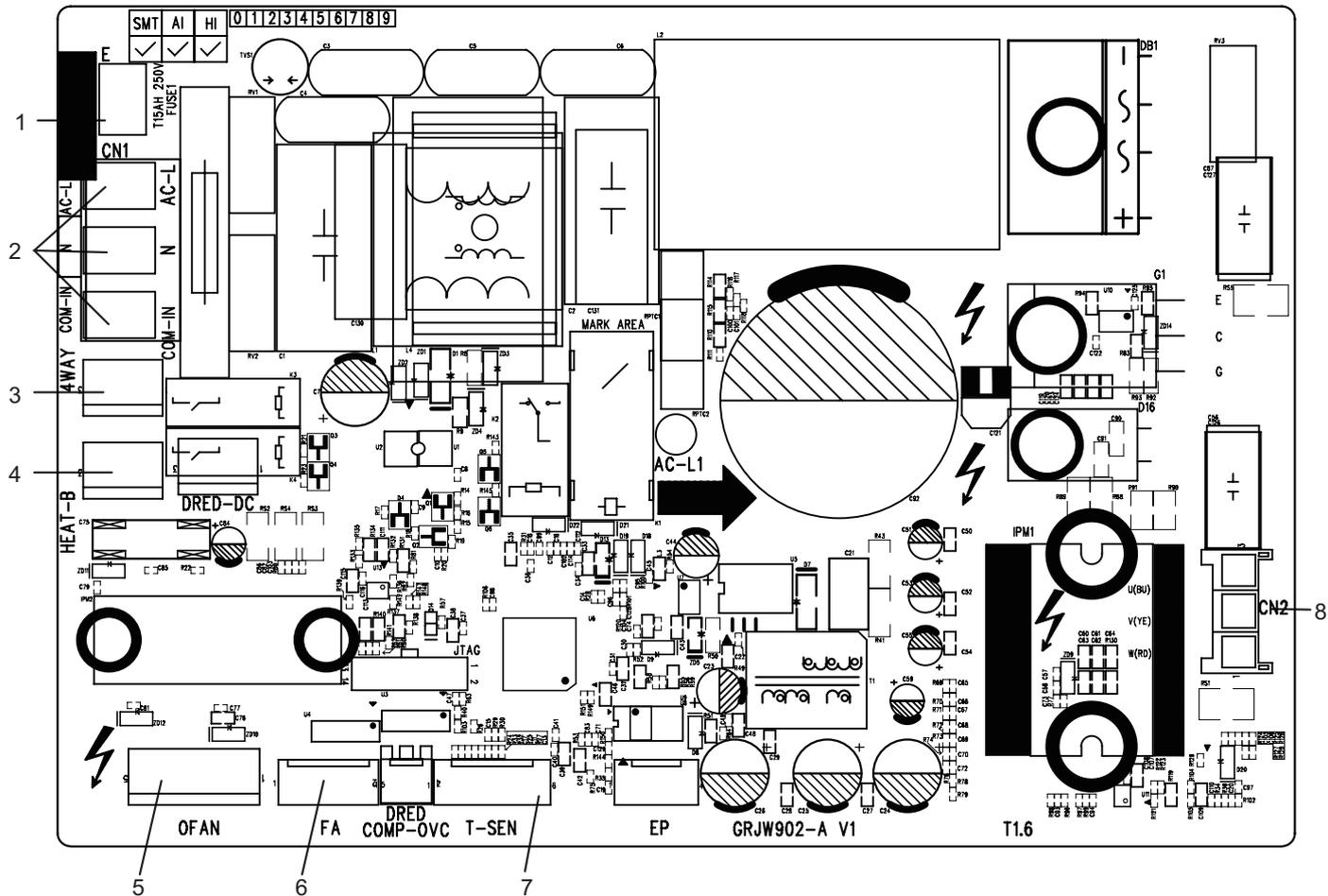| No.	Name
9	Left &Right swing interface(only for the model with this function)
10	Interface of PG feedback
11	Display interface
12	Terminal of temperature sensor
13	Jumper cap
14	Interface of gate-control (only for the model with this function)
15	Wired controller terminal (only for the model with this function)
16	Terminal of live wire used for supplying power for outdoor unit
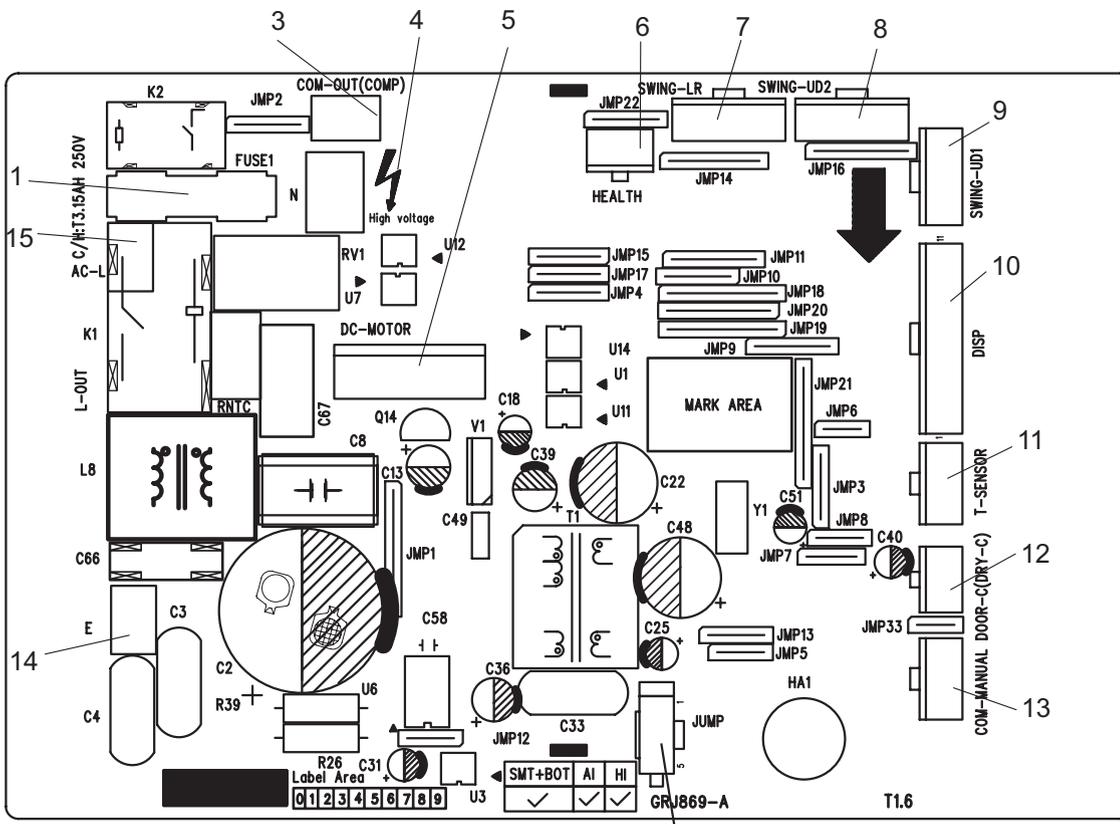
No.	Name		No.	Name
1	Fuse		9	Up&down swing 1
2	Live wire		10	Interface of display board
3	Neutral wire		11	Temperature sensor
4	Dommunication wire		12	Door control
5	DC fan		13	Wired controller
6	Cold plasma		14	Earthing wire
7	Left&right swing		15	Terminal of live wire
8	Up&down swing 2			

Outdoor Unit

7/9K

No.	Name
1	Earthing wire
2	Neutral wire, live wire and communication cable
3	4-way valve
4	Electric heating belt of chassis
5	Interface of outdoor fan
6	Interface of electronic expansion valve
7	Temperature sensor
8	Three-phase terminal of compressor
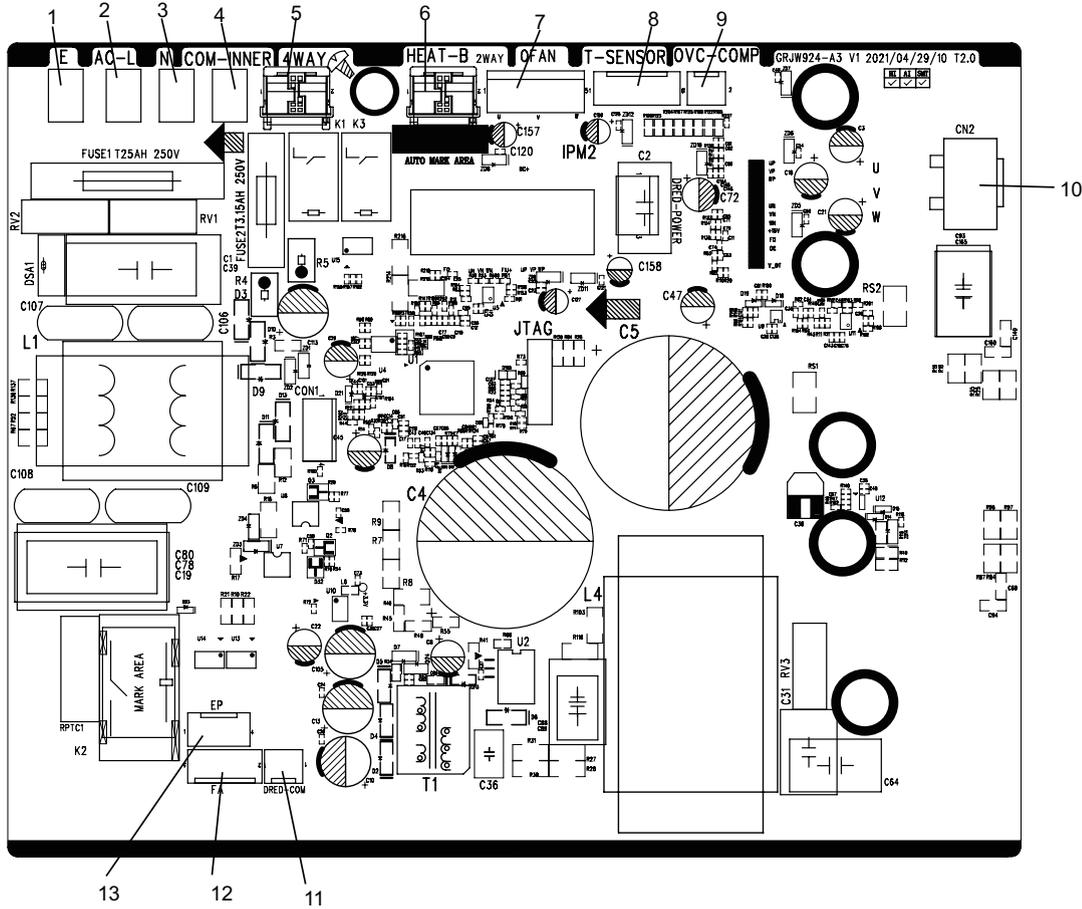
21/24K

No.	Name		No.	Name
1	Eathing wire		9	Overload interface of compressor
2	Live wire		10	Interface of compressor
3	Neutral wire		11	DRED interface
4	Communication cable		12	Interface of electronic expansion valve
5	4-way valve		13	E disk interface
6	Electric heating belt of chassis			
7	Interface of outdoor fan			
8	Temperature sensor			
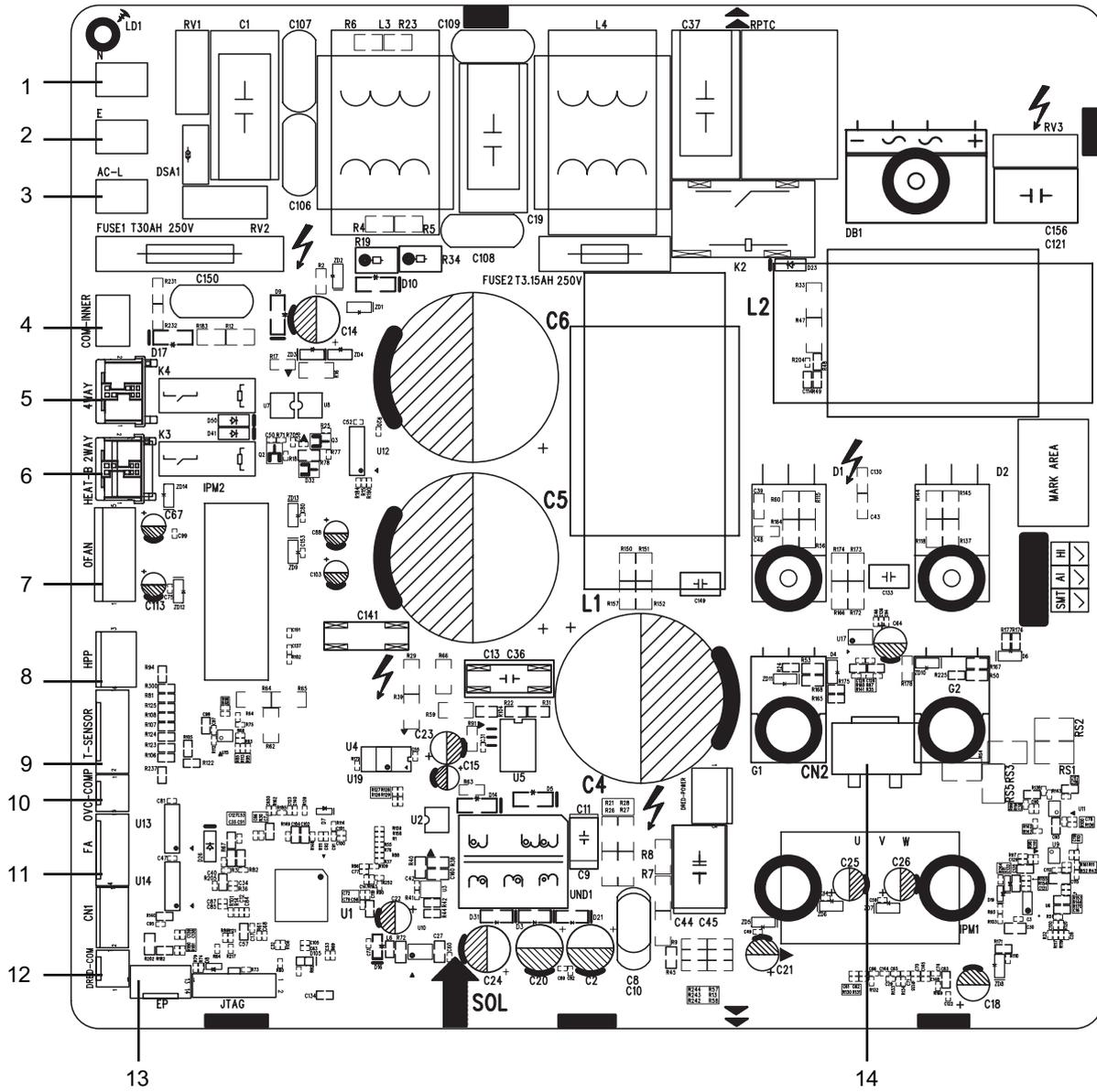
No.	Name		No.	Name
1	Neutral wire		8	Terminal of high pressure protection
2	Earthing wire		9	Temperature sensor
3	Live wire		10	Overload interface of compressor
4	Communication cable		11	Interface of electronic expansion valve
5	4-way valve		12	Terminal of DRED
6	Electric heating belt of chassis		13	E disk interface
7	Interface of outdoor fan		14	Interface of compressor

18K

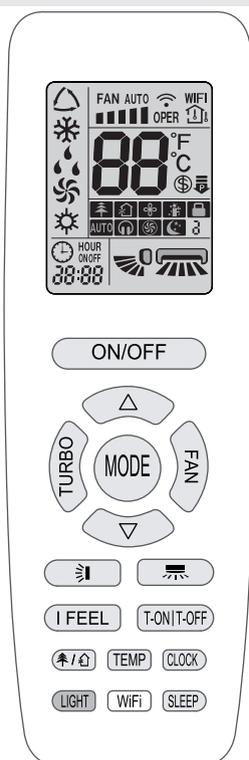| No	Name	No	Name
1	Earthing wire	8	Interface of outdoor fan
2	Live wire	9	Temperature sensor
3	Communication cable	10	Overload interface of compressor
4	Neutral wire	11	Dred communication
5	4-way valve	12	E disk interface
6	Electric heating belt of chassis	13	Interface of compressor
7	Interface of electronic expansion valve		

6. Function and Control

6.1 Remote Controller Introduction

Notice:

1.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.

2.After putting through the power, the air conditioner will give out a sound. Operation indicator " ⏻ " is ON (red indicator, the colour is different for different models). After that, you can operate the air condition-er by using remote controller.

3.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 condition-er will give out a " di " sound, which means the signal has been sent to the air conditioner.

4.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.

5.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.

ON/OFF button

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

MODE button

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 the sensed temperature. Set temperature can't be adjusted and will not be displayed as well. 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. 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. 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. Press "FAN" button to adjust fan speed. Press" 🌬 "/" 🌬 " button to adjust fan blowing angle. When selecting heat mode, the air conditioner operates under heat mode. Press "▲" or "▼" button to adjust set temperature. 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. 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).
● Under auto mode, temperature can be displayed;Under auto mode, set temperature can be adjusted.
● This mode indicator is not available for some models.

FAN button

This button is used for setting Fan Speed in the sequence that goes from AUTO, 🎧 , ▪ , ▪▪ , ▪▪▪ , ▪▪▪▪ , ▪▪▪▪▪ , 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 Hold 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 per- iod, Hold fan speed button for 2s to stop indoor fan directly. Having set X-FAN function off: After turning off the unit by pressing " " button, the complete unit will be off directly.

TURBO button

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 temperature approaches the preset temperature as soon as possible.
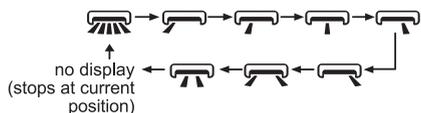
△/▽ button

● Press " △ " or " ▽" button once increase or d ecrease 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)

button

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

no display
(stops at current position)

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.

button

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

no display
(horizontal louvers stops at current position)
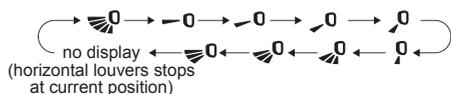
● When selecting " ", air conditioner is blowing fan automatically. Horizontal louver will automatically swing up & down at maximum angle.
●When selecting " ", air conditioner is blowing fan at fixed position. Horizontal louver will stop at the fixed position.
● When selecting " ", air conditioner is 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 your 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 button

● 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.

I FEEL button

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

6. Function and Control

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 button

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 button

● 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℃ , 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 button

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.
● This function is only available for some models.

⋀/⌂ button

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 button

Press this button to turn off display light on indoor unit. " ☼ " icon on remote controller disappears. Press this button again to turn on display light. " ☼ " icon is displayed.
Press and hold the LIGHT button for 5 seconds to activate or cancel the auto light function. When the set temperature on the remote controller blinks 3 times, it means the auto light function is successfully turned on. When this function is active, the panel lamp will light up for 20 seconds every time the indoor unit receives a signal from the remote controller and then go off automatically.
Auto light function is only available for some models.

TEMP button

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:

no display ⟶ ⌂

6. Function and Control

Introduction for icons on display screen

	I feel
FAN AUTO ▮▮▮▮▮	Set fan speed (No ▮▮▮▮、▮▮▮▮ fan speed. It's displayed only after turning it on.)
⊛	Turbo mode
⌒	Send signal
△	Auto mode (Operation mode)
❄	Cool mode
♨	Dry mode
✺	Fan mode
☀	Heat mode
☾ ｊ	Sleep mode
$	8°C heating function
🗊	Power limiting operation
⚘	Health mode
⌂	Scavenging function
⌗	Quiet
❀	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
≋⁰	Up & down swing
🔒	Child lock

Function introduction for combination buttons

Energy-saving function

Under cooling mode, press "TEMP" and "CLOCK"buttons simultaneously to start up or turn off energysaving 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-factorysetting to reach to the best energy-saving effect. Press "TEMP" and "CLOCK" buttons simultaneously again to exit energysaving 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

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.

Night mode

Under cooling or heating mode, when turning on sleep mode and turn to low speed or quiet notch, the outdoor unit would enter into night mode.

Note:
When you feel that the cooling and heating effect is poor, please press "FAN" button to other fan speed or press "SLEEP" button to exit the night mode.
The night mode can only work under normal ambient temperature.
This function is only available for some models.

Auto clean function

Under unit off status, hold "MODE" and "FAN" buttons simultaneously for 5s to turn on or turn off the auto clean function. When the auto clean function is turned on, indoor unit displays "CL" . During the auto clean 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 process, please make sure the room is well ventilated to avoid affecting the comfort.

Note:
● The auto clean function can only work under normal ambient temperature. If the room is dusty, clean it once a month; if not, clean it once every three months. After the auto clean function is turned on,you can leave the room. When auto clean is finished, the air conditioner will enter standby status.
● This function is only available for some models.

● ● ● ● ● ● ● Technical Information

6. Function and Control

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 circu-larly display as the following:

$$\longrightarrow \quad \square \longrightarrow \quad \square \longrightarrow \quad \underset{\text{No Setting}}{\text{blank}}$$
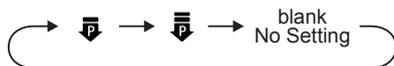
● Maximum power limited under the mode is lower than that of mode.

● 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.

Replacement of batteries in remote controller

1. Lift the cover along the direction of arrow (as shown in Fig 1①).

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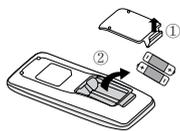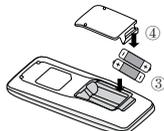
4.Reinstall the cover (as shown in Fig 2 ④).

Fig.1   Fig.2

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.**