TRANE®

Technical Service Manual

R-410A Split System

18~22 SEER, Inverter Systems - 60 and 50 Hz

Single Split	Indoor Unit	Outdoor Unit
Cooling only	4MYW8-A	4TYK8-A
Heat pump	4MXW8-A	4TXK8-A

June 2010

Warnings, Cautions and Notices

Warnings, Cautions and Notices. Note that warnings, cautions and notices appear at appropriate intervals throughout this manual. Warnings are provide to alert installing contractors to potential hazards that could result in personal injury or death. Cautions are designed to alert personnel to hazardous situations that could result in personal injury, while notices indicate a situation that could result in equipment or property-damage-only accidents.

Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

ATTENTION: Warnings, Cautions and Notices appear at appropriate sections throughout this literature. Read these carefully.

⚠ **WARNING**: Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠**CAUTION**: Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.

NOTICE: Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns!

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Responsible Refrigerant Practices!

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified. The Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

⚠WARNING

Electrocution and Fire Hazards with Improperly Installed and Grounded Field Wiring!

Improperly installed and grounded field wiring poses FIRE & ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in the National Electrical Codes (NEC) and your local/state electrical codes. All field wiring MUST be performed by qualified personnel. Failure to follow these requirements could result in death or serious injury.

⚠WARNING

R410A Refrigerant under Higher Pressure than R22!

The units described in this manual use R410A refrigerant which operates at 50 to 70% higher pressures than R-22. Use only R-410A approved service equipment. Refrigerant cylinders are painted with "pink" color to indicate the type of refrigerant and may contain a "dip" tube to allow for charging of liquid refrigerant into the system. For specific handling concerns with R-410A, please contact your local Trane representative. Failure to use R-410A approved service equipment could result in standard equipment exploding under R-410A higher pressure which could result in death or serious injury.

NOTICE:

Use PVE Oil with R-410A Mini-Split Units!

All R-410A mini-splits use a PVE oil (Polyvinyl Ether Oil) that readily absorbs moisture from the atmosphere. To limit this "hygroscopic" action, the system should remain sealed whenever possible. If a system has been open to the atmosphere for more than 4 hours, the compressor oil must be replaced. Never break a vacuum with air and always change the driers when opening the system for component replacement. For specific handling concerns with PVE oil, contact your local Trane representative.

USE ONLY THE FACTORY RECOMMENDED - DAFNE HERMETIC OIL FV50S - for servicing these units.

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Model Specifications

60Hz Heat pump models

Model		4MXW8509A9 4TXK8509A9		4MXW8509A1 4TXK8509A1	
Function		COOLING	HEATING	COOLING	HEATING
Rated Voltage		115V		208-230V	
Frequency(Hz)		60Hz		60Hz	
Total Capacity (W) (High/Standard/Low *):		3100/2637/1300	3250/2725/930	3100/2637/1300	3250/2725/930
Total Capacity (Btu/h) (High/ Standard/Low *):		10600/9000/4435	11100/9300/3200	10600/9000/4435	11100/9300/3200
Power Input (W) (High/ Standard/Low *)		1050/660/180	1100/680/220	1050/630/180	1100/680/220
Nominal Input Current (A)		16.8	17	6.5/5.8	6.8/6.1
SEER/HSPF		22	9.8	22	9.8
Air Flow Volume (m^3/h) (H/M/L)**		560/500/430/370		560/500/430/370	
Dehumidifying Volume (l/h)		0.8		0.8	
EER / C.O.P (W/W)		4.0/4.0		4.2/4.0	
Indoor unit	Model of Indoor Unit	4MXW8509A9		4MXW8509A1	
	Fan Motor Speed (r/min) (SH/H/M/L)	1300/1060/920/740	1320/1200/1100/960	1300/1060/920/740	1320/1200/1100/960
	Output of Fan Motor (w)	20		20	
	Fan Motor Capacitor (uF)	4		1	
	Fan Motor RLA(A)	0.38		0.2	
	Fan Type-Piece	Cross flow fan – 1		Cross flow fan – 1	
	Diameter-Length (mm)	φ92 X 645		φ92 X 645	
	Evaporator	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Row-Fin Gap(mm)	2-1.4		2-1.4	
	Coil length (l) x height (H) x coil width (L)	645X25.4X267		645X25.4X267	
	Swing Motor Model	MP24AA		MP24AA	
	Output of Swing Motor (W)	2.4		2.4	
	Fuse (A)	PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A	
	Sound Pressure Level dB (A) (SH/H/M/L)	38/34/30/26		38/34/30/26	
	Sound Power Level dB (A)(SH/H/M/L)***	48/44/40/36		48/44/40/36	
	Dimension (W/H/D) (mm)	845×275×180		845×275×180	
	Dimension of Package (L/W/H) (mm)	915×255×355		915×255×355	
	Net Weight /Gross Weight (kg)	11/14		11/14	
	Room Temp. sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
Outdoor unit	Model of Outdoor Unit	4TXK8509A9		4TXK8509A1	
	Compressor Manufacturer/trademark	SANYO		SANYO	
	Compressor Model	C-6RZ110H1A		C-6RZ110H1A	
	Compressor Type	Twin rotory		Twin rotory	
	L.R.A. (A)	33		33	
	Compressor RLA(A)	4.59		4.59	
	Compressor Power Input(W)	800		800	
	Overload Protector	Int11l-3979		Int11l-3979	
	Throttling Method	Electronic Expansion Valve throttling		Electronic Expansion Valve throttling	
	Starting Method	Transducer starting		Transducer starting	
	Working Temp Range (℃)	18℃≤T≤48℃	(-15)℃≤T≤24℃	18℃≤T≤48℃	(-15)℃≤T≤24℃
	Condenser	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Rows-Fin Gap(mm)	2-1.4		2-1.4	
	Coil length (l) x height (H) x coil width (L)	608X508X44		608X508X44	
	Fan Motor Speed (rpm)	900		900	
	Output of Fan Motor (W)	40		40	
	Fan Motor RLA(A)	0.17		0.17	
	Fan Motor Capacitor (uF)	/		/	
	Air Flow Volume of Outdoor Unit m^3/h	1900		1900	
	Fan Type-Piece	Axial fan –1		Axial fan –1	
	Fan Diameter (mm)	398.5		398.5	
	Defrosting Method	Auto defrost		Auto defrost	
	Climate Type	T1		T1	
	Isolation	I		I	
	Moisture Protection	IP24		IP24	
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8		3.8	
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2		1.2	
	Sound Pressure Level dB (A) (H/M/L)	≤53		≤53	
	Sound Power Level dB (A) (H/M/L)	≤63		≤63	
	Dimension (W/H/D) (mm)	848X320X540		848X320X540	
	Dimension of Package (L/W/H)(mm)	878X360X580		878X360X580	
	Net Weight /Gross Weight (kg)	36/41		36/41	
	Refrigerant Charge (kg)	R410A / 1.2		R410A / 1.2	
	Temp.sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
	Discharge sensor	50K		50K	

Model		4MXW8512A9 4TXK8512A9		4MXW8512A1 4TXK8512A1	
Function		COOLING	HEATING	COOLING	HEATING
Rated Voltage		115V		208-230V	
Frequency(Hz)		60Hz		60Hz	
Total Capacity (W) (High/Standard/Low *):		4100/3458/1320	4200/3800/950	4100/3458/1320	4200/3800/950
Total Capacity (Btu/h) (High/ Standard/Low *):		14000/11800/4500	14500/13100/3250	14000/11800/4500	14500/13100/3250
Power Input (W) (High/ Standard/Low *)		1450/990/120	1500/1190/220	1450/960/120	1500/1190/220
Nominal Input Current (A)		17	18.2	7.0/6.3	7.5/6.8
SEER/HSPF		20	9.6	20	9.6
Air Flow Volume (m^3/h) (H/M/L)**		510/470/430/370		510/470/430/370	
Dehumidifying Volume (l/h)		1.4		1.4	
EER / C.O.P (W/W)		3.5/3.2		3.6/3.2	
Indoor unit	Model of Indoor Unit	4MXW8512A9		4MXW8512A1	
	Fan Motor Speed (r/min) (SH/H/M/L)	1300/1080/900/740	1300/1160/1040/920	1300/1080/900/740	1300/1160/1040/920
	Output of Fan Motor (w)	20		20	
	Fan Motor Capacitor (uF)	4		1	
	Fan Motor RLA(A)	0.38		0.2	
	Fan Type-Piece	Cross flow fan – 1		Cross flow fan – 1	
	Diameter-Length (mm)	φ92 X 645		φ92 X 645	
	Evaporator	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Row-Fin Gap(mm)	2-1.4		2-1.4	
	Coil length (l) x height (H) x coil width (L)	645X25.4X267		645X25.4X267	
	Swing Motor Model	MP24AA		MP24AA	
	Output of Swing Motor (W)	2.4		2.4	
	Fuse (A)	PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A	
	Sound Pressure Level dB (A) (SH/H/M/L)	40/36/32/26		40/36/32/26	
	Sound Power Level dB (A)(SH/H/M/L)***	50/46/42/36		50/46/42/36	
	Dimension (W/H/D) (mm)	845×275×180		845×275×180	
	Dimension of Package (L/W/H) (mm)	915×255×355		915×255×355	
	Net Weight /Gross Weight (kg)	11/14		11/14	
	Room Temp. sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
Outdoor unit	Model of Outdoor Unit	4TXK8512A9		4TXK8512A1	
	Compressor Manufacturer/trademark	SANYO		SANYO	
	Compressor Model	C-6RZ110H1A		C-6RZ110H1A	
	Compressor Type	Twin rotory		Twin rotory	
	L.R.A. (A)	33		33	
	Compressor RLA(A)	4.59		4.59	
	Compressor Power Input(W)	800		800	
	Overload Protector	Int11l-3979		Int11l-3979	
	Throttling Method	Electronic Expansion Valve throttling		Electronic Expansion Valve throttling	
	Starting Method	Transducer starting		Transducer starting	
	Working Temp Range (℃)	18℃≤T≤48℃	(-15)℃≤T≤24℃	18℃≤T≤48℃	(-15)℃≤T≤24℃
	Condenser	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ9		Φ9	
	Rows-Fin Gap(mm)	2-1.4		2-1.4	
	Coil length (l) x height (H) x coil width (L)	747X508X44		747X508X44	
	Fan Motor Speed (rpm)	900		900	
	Output of Fan Motor (W)	40		40	
	Fan Motor RLA(A)	0.17		0.17	
	Fan Motor Capacitor (uF)	/		/	
	Air Flow Volume of Outdoor Unit m^3/h	1900		1900	
	Fan Type-Piece	Axial fan –1		Axial fan –1	
	Fan Diameter (mm)	398.5		398.5	
	Defrosting Method	Auto defrost		Auto defrost	
	Climate Type	T1		T1	
	Isolation	I		I	
	Moisture Protection	IP24		IP24	
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8		3.8	
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2		1.2	
	Sound Pressure Level dB (A) (H/M/L)	≤55		≤55	
	Sound Power Level dB (A) (H/M/L)	≤65		≤65	
	Dimension (W/H/D) (mm)	848X320X540		848X320X540	
	Dimension of Package (L/W/H)(mm)	878X360X580		878X360X580	
	Net Weight /Gross Weight (kg)	40/44		40/44	
	Refrigerant Charge (kg)	R410A / 1.3		R410A / 1.3	
	Temp.sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
	Discharge sensor	50K		50K	

Model		4MXW8518A1 4TXK8518A1		4MXW8524A1 4TXK8524A1	
Function		COOLING	HEATING	COOLING	HEATING
Rated Voltage		208-230V		208-230V	
Frequency(Hz)		60Hz		60Hz	
Total Capacity (W) (High/Standard/Low *):		6550/5275/1750	7473/7327/1202	7325/6300/2812	7618/7560/1260
Total Capacity (Btu/h) (High/ Standard/Low *):		22350/18000/6000	25500/25000/4100	25000/21500/9600	26000/25800/4300
Power Input (W) (High/ Standard/Low *)		2650/1500/300	2750/2700/335	2650/1790/500	2750/2700/400
Nominal Input Current (A)		7.67/6.94	14.06/12.72	9.15/8.28	14.06/12.72
SEER/HSPF		18	10.5	18	10.1
Air Flow Volume (m^3/h) (H/M/L)**		850/780/650/550		900/800/700/600	
Dehumidifying Volume (l/h)		1.8		2	
EER / C.O.P (W/W)		3.5/2.7		3.5/2.8	
Indoor unit	Model of Indoor Unit	4MXW8518A1		4MXW8524A1	
	Fan Motor Speed (r/min) (SH/H/M/L)	1350/1200/1050/900	1420/1250/1150/1050	1350/1150/1100/850	1350/1150/1100/900
	Output of Fan Motor (w)	20		35	
	Fan Motor Capacitor (uF)	1.5		2.5	
	Fan Motor RLA(A)	0.25		0.45	
	Fan Type-Piece	Cross flow fan – 1		Cross flow fan – 1	
	Diameter-Length (mm)	Φ98X710		Φ98X765	
	Evaporator	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Row-Fin Gap(mm)	2-1.4		2-1.5	
	Coil length (l) x height (H) x coil width (L)	715X304.8X25.4		765X342.9X25.4	
	Swing Motor Model	MP28VB		MP35XX	
	Output of Swing Motor (W)	2.5		2.5	
	Fuse (A)	PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A	
	Sound Pressure Level dB (A) (SH/H/M/L)	46/44/40/35		48/44/40/35	
	Sound Power Level dB (A)(SH/H/M/L)***	56/54/50/45		58/54/50/45	
	Dimension (W/H/D) (mm)	940X298X200		1008X315X219	
	Dimension of Package (L/W/H) (mm)	1010X285X380		1073X395X313	
	Net Weight /Gross Weight (kg)	13/17		16/21	
	Room Temp. sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
Outdoor unit	Model of Outdoor Unit	4TXK8518A1		4TXK8524A1	
	Compressor Manufacturer/trademark	SANYO		SANYO	
	Compressor Model	C-6RZ146H1A		C-6RZ146H1A	
	Compressor Type	Twin rotory		Twin rotory	
	L.R.A. (A)	41		41	
	Compressor RLA(A)	8.4		8.4	
	Compressor Power Input(W)	1640		1640	
	Overload Protector	1NT11L-3979		1NT11L-3979	
	Throttling Method	Electronic Expansion Valve throttling		Electronic Expansion Valve throttling	
	Starting Method	Transducer starting		Transducer starting	
	Working Temp Range (℃)	18℃≤T≤48℃	(-15)℃≤T≤24℃	18℃≤T≤48℃	(-15)℃≤T≤24℃
	Condenser	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Rows-Fin Gap(mm)	2-1.4		2-1.4	
	Coil length (l) x height (H) x coil width (L)	837x660x38.1		967x748x38.1	
	Fan Motor Speed (rpm)	690		780	
	Output of Fan Motor (W)	60		90	
	Fan Motor RLA(A)	0.62		0.9	
	Fan Motor Capacitor (uF)	3		4	
	Air Flow Volume of Outdoor Unit m^3/h	3200		4200	
	Fan Type-Piece	Axial fan –1		Axial fan –1	
	Fan Diameter (mm)	520		552	
	Defrosting Method	Auto defrost		Auto defrost	
	Climate Type	T1		T1	
	Isolation	I		I	
	Moisture Protection	IP24		IP24	
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8		3.8	
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2		1.2	
	Sound Pressure Level dB (A) (H/M/L)	≤55		≤55	
	Sound Power Level dB (A) (H/M/L)	≤65		≤65	
	Dimension (W/H/D) (mm)	890X700X340		920X790X370	
	Dimension of Package (L/W/H)(mm)	1030X460X735		1065X485X840	
	Net Weight /Gross Weight (kg)	50/55		54/60	
	Refrigerant Charge (kg)	R410A/1.45		R410A/1.80	
	Temp.sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
	Discharge sensor	50K		50K	

60Hz Cooling only models

Model		4MYW8509A9 4TYK8509A9	4MYW8509A1 4TYK8509A1
Function		COOLING	COOLING
Rated Voltage		115V	208-230V
Frequency(Hz)		60Hz	60Hz
Total Capacity (W) (High/Standard/Low *):		3100/2637/1300	3100/2637/1300
Total Capacity (Btu/h) (High/ Standard/Low *):		10600/9000/4435	10600/9000/4435
Power Input (W) (High/ Standard/Low *)		1050/660/180	1050/630/180
Nominal Input Current (A)		16.8	6.5/5.8
SEER/HSPF		22	22
Air Flow Volume (m^3/h) (SH/H/M/L)**		560/500/430/370	560/500/430/370
Dehumidifying Volume (l/h)		0.8	0.8
EER / C.O.P (W/W)		4.0	4.2
Indoor unit	Model of Indoor Unit	4MYW8509A9	4MYW8509A1
	Fan Motor Speed (r/min) (SH/H/M/L)	1300/1060/920/740	1300/1060/920/740
	Output of Fan Motor (w)	20	20
	Fan Motor Capacitor (uF)	4	1
	Fan Motor RLA(A)	0.38	0.2
	Fan Type-Piece	Cross flow fan – 1	Cross flow fan – 1
	Diameter-Length (mm)	φ92 X 645	φ92 X 645
	Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ7	Φ7
	Row-Fin Gap(mm)	2-1.4	2-1.4
	Coil length (l) x height (H) x coil width (L)	645X25.4X267	645X25.4X267
	Swing Motor Model	MP24AA	MP24AA
	Output of Swing Motor (W)	2.4	2.4
	Fuse (A)	PCB 3.15A	PCB 3.15A
	Sound Pressure Level dB (A) (SH/H/M/L)	38/34/30/26	38/34/30/26
	Sound Power Level dB (A) (SH/H/M/L)***	48/44/40/36	48/44/40/36
	Dimension (W/H/D) (mm)	845×275×180	845×275×180
	Dimension of Package (L/W/H) (mm)	915×255×355	915×255×355
	Net Weight /Gross Weight (kg)	11/14	11/14
	Room Temp. sensor	15K	15K
	Pipe Temp. sensor	20K	20K
Outdoor unit	Model of Outdoor Unit	4TYK8509A9	4TYK8509A1
	Compressor Manufacturer/trademark	SANYO	SANYO
	Compressor Model	C-6RZ110H1A	C-6RZ110H1A
	Compressor Type	Twin rotory	Twin rotory
	L.R.A. (A)	33	33
	Compressor RLA(A)	4.59	4.59
	Compressor Power Input(W)	800	800
	Overload Protector	Int11l-3979	Int11l-3979
	Throttling Method	Electronic Expansion Valve throttling	Electronic Expansion Valve throttling
	Starting Method	Transducer starting	Transducer starting
	Working Temp Range (℃)	18℃≤T≤48℃	18℃≤T≤48℃
	Condenser	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ7	Φ7
	Rows-Fin Gap(mm)	2-1.4	2-1.4
	Coil length (l) x height (H) x coil width (L)	608X44X508	608X44X508
	Fan Motor Speed (rpm)	900/650	900/650
	Output of Fan Motor (W)	40	40
	Fan Motor RLA(A)	0.17	0.17
	Fan Motor Capacitor (uF)	/	/
	Air Flow Volume of Outdoor Unit m^3/h	1900	1900
	Fan Type-Piece	Axial fan –1	Axial fan –1
	Fan Diameter (mm)	398.5	398.5
	Defrosting Method	/	/
	Climate Type	T1	T1
	Isolation	I	I
	Moisture Protection	IP24	IP24
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8	3.8
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2	1.2
	Sound Pressure Level dB (A) (H/M/L)	≤53	≤53
	Sound Power Level dB (A) (H/M/L)	≤63	≤63
	Dimension (W/H/D) (mm)	848X320X540	848X320X540
	Dimension of Package (L/W/H)(mm)	878X360X580	878X360X580
	Net Weight /Gross Weight (kg)	36/41	36/41
	Refrigerant Charge (kg)	R410A / 1.2	R410A / 1.2
	Temp.sensor	15K	15K
	Pipe Temp. sensor	20K	20K
	Discharge sensor	50K	50K

Model		4MYW8512A9 4TYK8512A9	4MYW8512A1 4TYK8512A1
Function		COOLING	COOLING
Rated Voltage		115V	208-230V
Frequency(Hz)		60Hz	60Hz
Total Capacity (W) (High/Standard/Low *):		4100/3458/1320	4100/3458/1320
Total Capacity (Btu/h) (High/ Standard/Low *):		14000/11800/4500	14000/11800/4500
Power Input (W) (High/ Standard/Low *)		1450/990/120	1450/960/120
Nominal Input Current (A)		17	7.0/6.3
SEER/HSPF		20	20
Air Flow Volume (m^3/h) (SH/H/M/L)**		510/470/430/370	510/470/430/370
Dehumidifying Volume (l/h)		1.2	1.2
EER / C.O.P (W/W)		3.5	3.6
Indoor unit	Model of Indoor Unit	4MYW8512A9	4MYW8512A1
	Fan Motor Speed (r/min) (SH/H/M/L)	1300/1080/900/740	1300/1080/900/740
	Output of Fan Motor (w)	20	20
	Fan Motor Capacitor (uF)	4	1
	Fan Motor RLA(A)	0.38	0.2
	Fan Type-Piece	Cross flow fan – 1	Cross flow fan – 1
	Diameter-Length (mm)	φ92 X 645	φ92 X 645
	Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ7	Φ7
	Row-Fin Gap(mm)	2-1.4	2-1.4
	Coil length (l) x height (H) x coil width (L)	645X25.4X267	645X25.4X267
	Swing Motor Model	MP24AA	MP24AA
	Output of Swing Motor (W)	2.4	2.4
	Fuse (A)	PCB 3.15A	PCB 3.15A
	Sound Pressure Level dB (A) (SH/H/M/L)	40/36/32/26	40/36/32/26
	Sound Power Level dB (A) (SH/H/M/L)***	50/46/42/36	50/46/42/36
	Dimension (W/H/D) (mm)	845×275×180	845×275×180
	Dimension of Package (L/W/H) (mm)	915×255×355	915×255×355
	Net Weight /Gross Weight (kg)	11/14	11/14
	Room Temp. sensor	15K	15K
	Pipe Temp. sensor	20K	20K
Outdoor unit	Model of Outdoor Unit	4TYK8512A9	4TYK8512A1
	Compressor Manufacturer/trademark	SANYO	SANYO
	Compressor Model	C-6RZ110H1A	C-6RZ110H1A
	Compressor Type	Twin rotory	Twin rotory
	L.R.A. (A)	33	33
	Compressor RLA(A)	4.59	4.59
	Compressor Power Input(W)	800	800
	Overload Protector	Int11l-3979	Int11l-3979
	Throttling Method	Electronic Expansion Valve throttling	Electronic Expansion Valve throttling
	Starting Method	Transducer starting	Transducer starting
	Working Temp Range (℃)	18℃≤T≤48℃	18℃≤T≤48℃
	Condenser	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ9	Φ9
	Rows-Fin Gap(mm)	2-1.4	2-1.4
	Coil length (l) x height (H) x coil width (L)	747X44X508	747X44X508
	Fan Motor Speed (rpm)	900/680	900/680
	Output of Fan Motor (W)	40	40
	Fan Motor RLA(A)	0.17	0.17
	Fan Motor Capacitor (uF)	/	/
	Air Flow Volume of Outdoor Unit m^3/h	1900	1900
	Fan Type-Piece	Axial fan –1	Axial fan –1
	Fan Diameter (mm)	398.5	398.5
	Defrosting Method	/	/
	Climate Type	T1	T1
	Isolation	I	I
	Moisture Protection	IP24	IP24
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8	3.8
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2	1.2
	Sound Pressure Level dB (A) (H/M/L)	≤55	≤55
	Sound Power Level dB (A) (H/M/L)	≤65	≤65
	Dimension (W/H/D) (mm)	848X320X540	848X320X540
	Dimension of Package (L/W/H)(mm)	878X360X580	878X360X580
	Net Weight /Gross Weight (kg)	41/44	41/44
	Refrigerant Charge (kg)	R410A / 1.3	R410A / 1.3
	Temp.sensor	15K	15K
	Pipe Temp. sensor	20K	20K
	Discharge sensor	50K	50K

Model		4MYW8518A1 4TYK8518A1	4MYW8524A1 4TYK8524A1
Function		COOLING	COOLING
Rated Voltage		208-230V	208-230V
Frequency(Hz)		60Hz	60Hz
Total Capacity (W) (High/Standard/Low *):		6550/5275/1750	7325/6300/2812
Total Capacity (Btu/h) (High/ Standard/Low *):		22350/18000/6000	25000/21500/9600
Power Input (W) (High/ Standard/Low *)		2650/1500/300	2650/1790/500
Nominal Input Current (A)		7.67/6.94	9.15/8.28
SEER/HSPF		18	18
Air Flow Volume (m^3/h) (SH/H/M/L)**		850/780/650/550	950/800/700/600
Dehumidifying Volume (l/h)		2	2.5
EER / C.O.P (W/W)		3.5	3.5
Indoor unit	Model of Indoor Unit	4MYW8518A1	4MYW8524A1
	Fan Motor Speed (r/min) (SH/H/M/L)	1350/1200/1050/900	1400/1150/1100/850
	Output of Fan Motor (w)	25	35
	Fan Motor Capacitor (uF)	1.5	2.5
	Fan Motor RLA(A)	0.25	0.45
	Fan Type-Piece	Cross flow fan – 1	Cross flow fan – 1
	Diameter-Length (mm)	Φ98X710	Φ98X765
	Evaporator	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ7	Φ7
	Row-Fin Gap(mm)	2-1.4	2-1.5
	Coil length (l) x height (H) x coil width (L)	715X304.8X25.4	765X342.9X25.4
	Swing Motor Model	MP28VB	MP35XX
	Output of Swing Motor (W)	2.5	2.5
	Fuse (A)	PCB 3.15A Transformer 0.2A	PCB 3.15A Transformer 0.2A
	Sound Pressure Level dB (A) (SH/H/M/L)	46/44/40/35	48/44/40/35
	Sound Power Level dB (A) (SH/H/M/L)***	56/54/50/45	58/54/50/45
	Dimension (W/H/D) (mm)	940X298X200	1007X315X219
	Dimension of Package (L/W/H) (mm)	1010X285X380	1073X395X313
	Net Weight /Gross Weight (kg)	13/17	16/21
	Room Temp. sensor	15K	15K
	Pipe Temp. sensor	20K	20K
Outdoor unit	Model of Outdoor Unit	4TYK8518A1	4TYK8524A1
	Compressor Manufacturer/trademark	SANYO	SANYO
	Compressor Model	C-6RZ146H1A	C-6RZ146H1A
	Compressor Type	Twin rotory	Twin rotory
	L.R.A. (A)	41	41
	Compressor RLA(A)	8.4	8.4
	Compressor Power Input(W)	1640	1640
	Overload Protector	1NT11L-3979	1NT11L-3979
	Throttling Method	Electronic Expansion Valve throttling	Electronic Expansion Valve throttling
	Starting Method	Transducer starting	Transducer starting
	Working Temp Range (℃)	18℃≤T≤48℃	18℃≤T≤48℃
	Condenser	Aluminum fin-copper tube	Aluminum fin-copper tube
	Pipe Diameter (mm)	Φ7	Φ7
	Rows-Fin Gap(mm)	2-1.4	2-1.4
	Coil length (l) x height (H) x coil width (L)	837x38.1x660	967x38.1x748
	Fan Motor Speed (rpm)	690/500	780/500
	Output of Fan Motor (W)	60	90
	Fan Motor RLA(A)	0.62	0.9
	Fan Motor Capacitor (uF)	3	4
	Air Flow Volume of Outdoor Unit m^3/h	3200	4200
	Fan Type-Piece	Axial fan –1	Axial fan –1
	Fan Diameter (mm)	520	552
	Defrosting Method	/	/
	Climate Type	T1	T1
	Isolation	I	I
	Moisture Protection	IP24	IP24
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8	3.8
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2	1.2
	Sound Pressure Level dB (A) (H/M/L)	≤54	≤56
	Sound Power Level dB (A) (H/M/L)	≤64	≤66
	Dimension (W/H/D) (mm)	890X340X700	920X370X790
	Dimension of Package (L/W/H)(mm)	1030X460X735	1065X485X840
	Net Weight /Gross Weight (kg)	50/55	54/60
	Refrigerant Charge (kg)	R410A/1.45	R410A/1.80
	Temp.sensor	15K	15K
	Pipe Temp. sensor	20K	20K
	Discharge sensor	50K	50K

50Hz Heat pump models

Model		4MXW8509AB 4TXK8509AB		4MXW8512AB 4TXK8512AB	
Function		COOLING	HEATING	COOLING	HEATING
Rated Voltage		220-240V～		220-240V～	
Total Capacity (W) (High/Standard/Low *):		3100/2500/1180	3800/2750//1200	4000/3500/1220	4297/4000/1310
Total Capacity (Btu/h) (High/ Standard/Low *):		10600/9000/4036	13000/9386/4096	13714/12000/4172	14660/13650/4480
Power Input (W) (High/ Standard/Low *)		1330/730/280	1365/745/310	1560/1060/295	1420/1100/330
Nominal Input Current (A)		6.1	6.3	7.0	7.2
SEER/HSPF		17	9	17	9
Air Flow Volume (m^3/h) (H/M/L)**		500/440/400/360		560/500/430/380	
Dehumidifying Volume (l/h)		0.8		1.4	
EER / C.O.P (W/W)		3.2	3.4	3.2	3.4
Indoor unit	Model of Indoor Unit	4MXW8509AB		4MXW8512AB	
	Fan Motor Speed (r/min) (SH/H/M/L)	1260/1050/920/730	1320/1200/1100/950	1260/1070/900/730	1300/1150/1000/950
	Output of Fan Motor (w)	10		20	
	Fan Motor Capacitor (uF)	1		1	
	Fan Motor RLA(A)	0.1		0.25	
	Fan Type-Piece	Cross flow fan – 1		Cross flow fan – 1	
	Diameter-Length (mm)	Φ×596		Φ92 X 645	
	Evaporator	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Row-Fin Gap(mm)	2-1.5		2-1.4	
	Coil length (l) x height (H) x coil width (L)	581X264X25.4		645X25.4X267	
	Swing Motor Model	MP24AA		MP24AA	
	Output of Swing Motor (W)	1.5		2.4	
	Fuse (A)	PCB 3.15A		PCB 3.15A	
	Sound Pressure Level dB (A) (SH/H/M/L)	40/37/31/23		44/37/32/25	
	Sound Power Level dB (A) (SH/H/M/L)***	50/47/41/33		54/47/42/35	
	Dimension (W/H/D) (mm)	790×265×170		845×275×180	
	Dimension of Package (L/W/H) (mm)	870×248×355		915×255×355	
	Net Weight /Gross Weight (kg)	9/12		10/13	
	Room Temp. sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
Outdoor unit	Model of Outdoor Unit	4TXK8509AB		4TXK8512AB	
	Compressor Manufacturer/trademark	MITSUBISHI		MITSUBISHI	
	Compressor Model	KNB092FHBMC		KNB092FHBMC	
	Compressor Type	Single-rotary		Single-rotary	
	L.R.A. (A)	25		25	
	Compressor RLA(A)	8.9		8.9	
	Compressor Power Input(W)	895		895	
	Overload Protector	222KT-XH-2P-400mm		222KT-XH-2P-400mm	
	Throttling Method	Capillary throttling		Capillary throttling	
	Starting Method	Transducer starting		Transducer starting	
	Working Temp Range (℃)	18℃≤T≤48℃	(-15)℃≤T≤24℃	18℃≤T≤48℃	(-15)℃≤T≤24℃
	Condenser	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ9.52		Φ7	
	Rows-Fin Gap(mm)	1-1.6		2-1.4	
	Coil length (l) x height (H) x coil width (L)	608X508X22		608x498x22	
	Fan Motor Speed (rpm)	830		880	
	Output of Fan Motor (W)	30		30	
	Fan Motor RLA(A)	0.3		0.3	
	Fan Motor Capacitor (uF)	2.5		2	
	Air Flow Volume of Outdoor Unit m^3/h	1900		1900	
	Fan Type-Piece	Axial fan –1		Axial fan-1	
	Fan Diameter (mm)	Φ400		Φ400	
	Defrosting Method	Auto defrost		Auto defrost	
	Climate Type	T1		T1	
	Isolation	I		I	
	Moisture Protection	IP24		IP24	
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8		3.8	
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2		1.2	
	Sound Pressure Level dB (A) (H/M/L)	≤53		≤52	
	Sound Power Level dB (A) (H/M/L)	≤63		≤62	
	Dimension (W/H/D) (mm)	848X260X540		848X260X540	
	Dimension of Package (L/W/H)(mm)	878X360X580		878X360X580	
	Net Weight /Gross Weight (kg)	35/40		36/41	
	Refrigerant Charge (kg)	R410A / 0.8		R410A / 1.15	
	Temp.sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
	Discharge sensor	50K		50K	

Model		4MXW8518AB 4TXK8518AB		4MXW8524AB 4TXK8524AB	
Function		COOLING	HEATING	COOLING	HEATING
Rated Voltage		220-240V～		220-240V～	
Total Capacity (W) (High/Standard/Low *):		6600/5275/1260	6800/5850/1120	7000/6450/1400	8200/7000/1200
Total Capacity (Btu/h) (High/ Standard/Low *):		22500/18000/4300	23200/20000/3800	24000/22000/4800	28000/24000/4100
Power Input (W) (High/ Standard/Low *)		2650/1600/380	2650/1620/350	2500/1985/350	2700/1930/350
Nominal Input Current (A)		10.7	11.5	11.4	12.4
SEER/HSPF		16.5	9	16	9
Air Flow Volume (m^3/h) (H/M/L)**		850/780/650/550		900/800/700/550	
Dehumidifying Volume (l/h)		1.8		2	
EER / C.O.P (W/W)		3.2	3.4	3.2	3.4
Indoor unit	Model of Indoor Unit	4MXW8518AB		4MXW8524AB	
	Fan Motor Speed (r/min) (SH/H/M/L)	1350/1200/1050/900	1420/1250/1150/1050	1250/1100/950/800	1300/1100/1000/850
	Output of Fan Motor (w)	20		25	
	Fan Motor Capacitor (uF)	1.5		1.5	
	Fan Motor RLA(A)	0.25		0.3	
	Fan Type-Piece	Cross flow fan – 1		Cross flow fan – 1	
	Diameter-Length (mm)	Φ98X710		Φ98X765	
	Evaporator	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Row-Fin Gap(mm)	2-1.4		2-1.5	
	Coil length (l) x height (H) x coil width (L)	715X304.8X25.4		765X342.9X25.4	
	Swing Motor Model	MP28VB		MP35XX	
	Output of Swing Motor (W)	2.5		2.5	
	Fuse (A)	PCB 3.15A Transformer 0.2A		PCB 3.15A Transformer 0.2A	
	Sound Pressure Level dB (A) (SH/H/M/L)	46/44/40/35		51/47/42/39	
	Sound Power Level dB (A) (SH/H/M/L)***	56/54/50/45		61/57/52/49	
	Dimension (W/H/D) (mm)	940X298X200		1007X315X219	
	Dimension of Package (L/W/H) (mm)	1010X285X380		1073X395X313	
	Net Weight /Gross Weight (kg)	13/17		16/21	
	Room Temp. sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
Outdoor unit	Model of Outdoor Unit	4TXK8518AB		4TXK8524AB	
	Compressor Manufacturer/trademark	Sanyo		Sanyo	
	Compressor Model	C-6RZ146H1A		C-6RZ146H1A	
	Compressor Type	Twin rotary		Twin rotary	
	L.R.A. (A)	41		41	
	Compressor RLA(A)	8.4		8.4	
	Compressor Power Input(W)	1640		1640	
	Overload Protector	1NT11L-3979		1NT11L-3979	
	Throttling Method	Electric expand valve		Electric expand valve	
	Starting Method	Transducer starting		Transducer starting	
	Working Temp Range (℃)	18℃≤T≤48℃	(-15)℃≤T≤24℃	18℃≤T≤48℃	(-15)℃≤T≤24℃
	Condenser	Aluminum fin-copper tube		Aluminum fin-copper tube	
	Pipe Diameter (mm)	Φ7		Φ7	
	Rows-Fin Gap(mm)	2-1.4		2-1.4	
	Coil length (l) x height (H) x coil width (L)	870x660x19.05		837x660x38.1	
	Fan Motor Speed (rpm)	690		690	
	Output of Fan Motor (W)	60		60	
	Fan Motor RLA(A)	0.62		0.62	
	Fan Motor Capacitor (uF)	3		3	
	Air Flow Volume of Outdoor Unit m^3/h	2700		3200	
	Fan Type-Piece	Axial fan –1		Axial fan –1	
	Fan Diameter (mm)	Φ520		Φ520	
	Defrosting Method	Auto defrost		Auto defrost	
	Climate Type	T1		T1	
	Isolation	I		I	
	Moisture Protection	IP24		IP24	
	Permissible Excessive Operating Pressure for the Discharge Side(MPa)	3.8		3.8	
	Permissible Excessive Operating Pressure for the Suction Side(MPa)	1.2		1.2	
	Sound Pressure Level dB (A) (H/M/L)	≤54		≤54	
	Sound Power Level dB (A) (H/M/L)	≤64		≤64	
	Dimension (W/H/D) (mm)	890X700X340		890X700X340	
	Dimension of Package (L/W/H)(mm)	1030X460X735		1030X460X735	
	Net Weight /Gross Weight (kg)	47/52		50/55	
	Refrigerant Charge (kg)	R410A/1.10		R410A/1.40	
	Temp.sensor	15K		15K	
	Pipe Temp. sensor	20K		20K	
	Discharge sensor	50K		50K	

Piping Specifications

60Hz Models

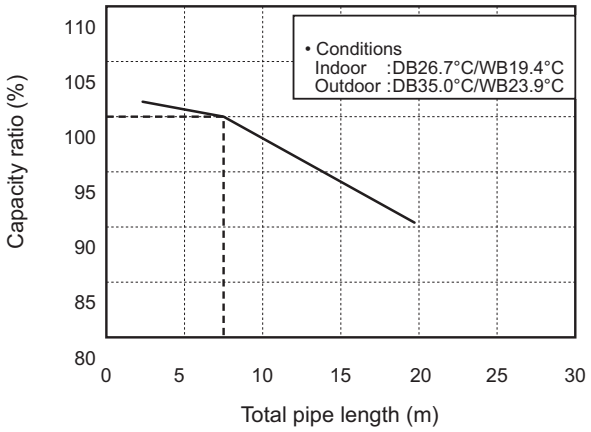
Model		4MYW8509A9 4TYK8509A9	4MYW8509A1 4TYK8509A1	4MYW8512A9 4TYK8512A9	4MYW8512A1 4TYK8512A1	4MYW8518A1 4TYK8518A1	4MYW8524A1 4TYK8524A1
Connection Pipe	Length (m)	7.6	7.6	7.6	7.6	7.6	7.6
	Gas additional charge(g/m)	15	15	15	15	30	30
	Outer Diameter	Φ6(1/4”)	Φ6(1/4”)	Φ6(1/4”)	Φ6(1/4”)	Φ6(1/4”)	Φ6(1/4”)
		Φ9(3/8”)	Φ9(3/8”)	Φ9(3/8”)	Φ9(3/8”)	Φ12(1/2”)	Φ16(5/8”)
	Max Distance	15	15	15	15	20	20
		30	30	30	30	40	40

50Hz Models

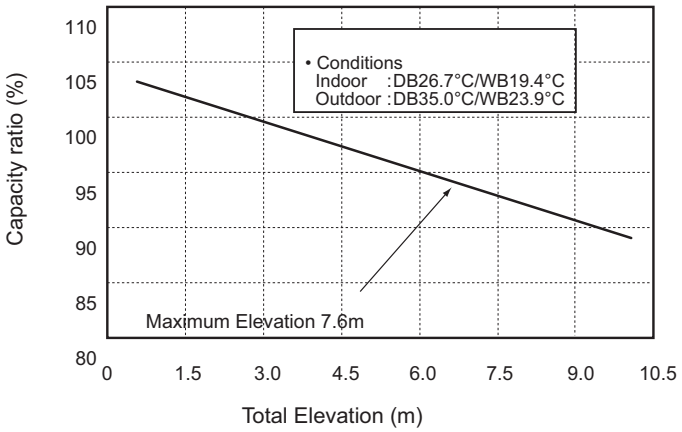
Model		4MXW8509AB 4TXK8509AB	4MXW8512AB 4TXK8512AB	4MXW8518AB 4TXK8518AB	4MXW8524AB 4TXK8524AB
Connection Pipe	Length (m)	5	5	5	5
	Gas additional charge(g/m)	15	15	20	50
	Outer Diameter	Φ6(1/4”)	Φ6(1/4”)	Φ6	Φ6
		Φ9.52(3/8”)	Φ12(1/2”)	Φ12	Φ12
	Max Distance	15	15	20	20
		30	30	40	40

Capacity Variation Ratio According to Pipe Length

*For 9/12 Mbh models:

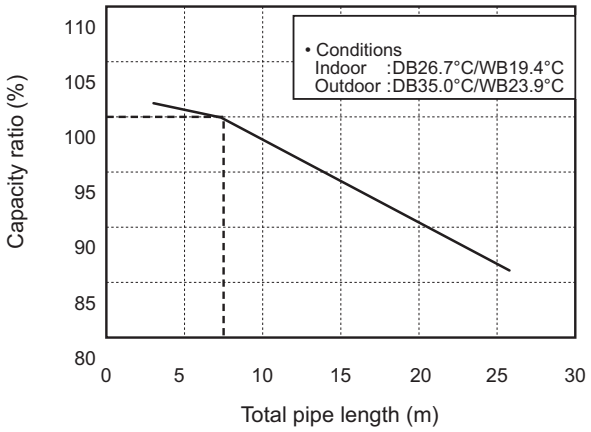


Standard pipe length 7.6m
Maximum pipe length: 20m

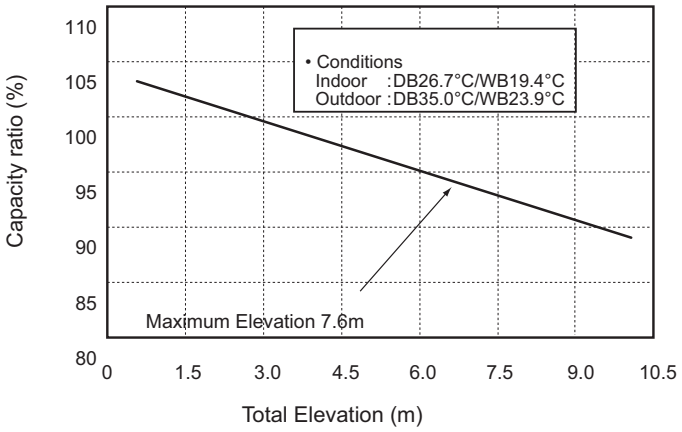


Maximum pipe length: 10m

*For 18/24 Mbh models:

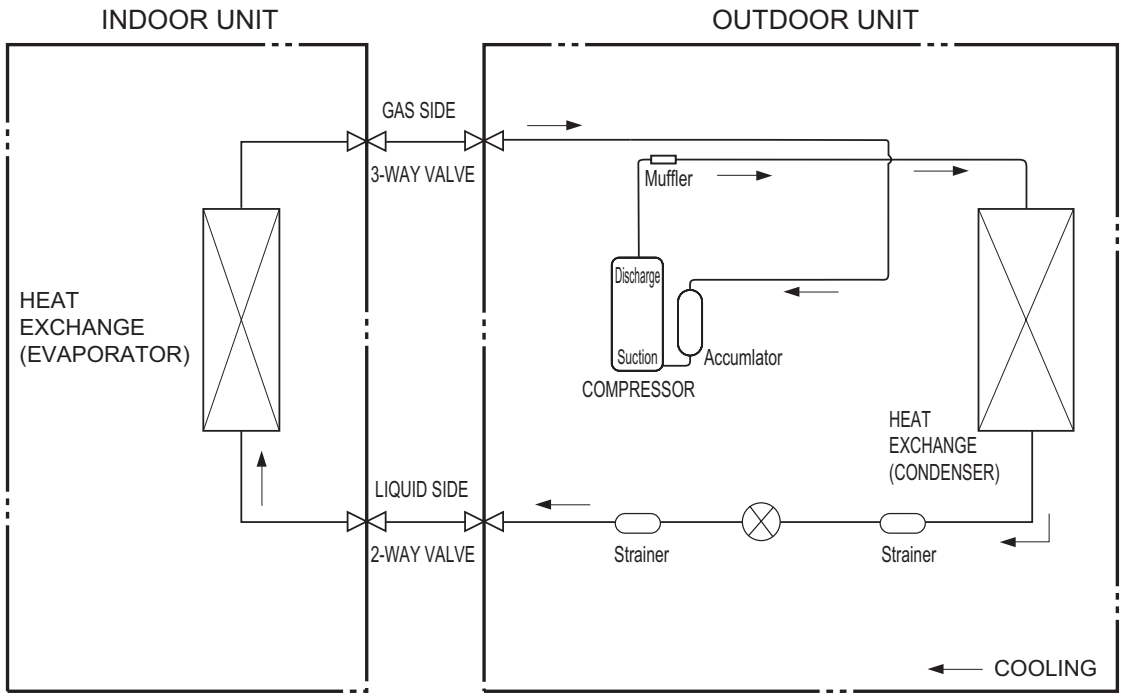


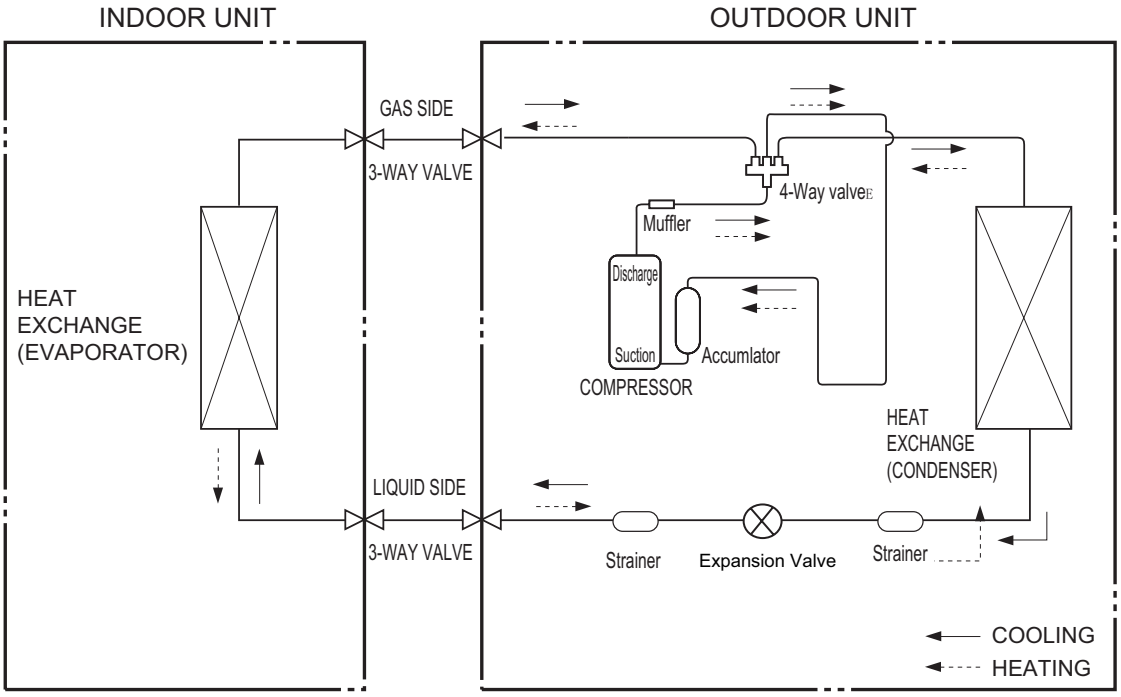
Standard pipe length 7.6m
Maximum pipe length 25m



Maximum pipe length: 10m

System Diagram





Electrical Characteristics

60Hz Models

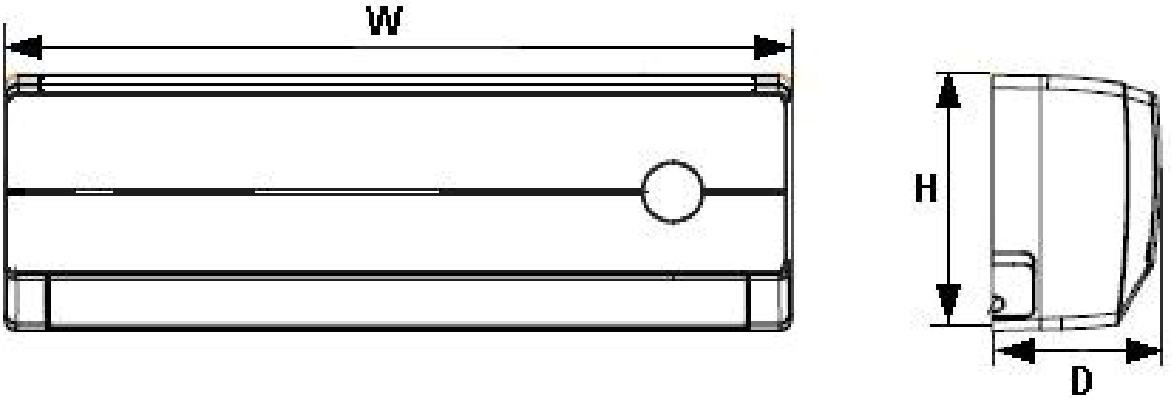
Model			Power Supply			Current		OFM	
Indoor	Outdoor	Hz	Voltage	Min.	Max.	MCA	MFA	W	FLA
4MYW8509A9000AA	4TYK8509A9000AA	60Hz	115V	103V	127V	6.4	15	40	0.17
4MYW8512A9000AA	4TYK8512A9000AA	60Hz	115V	103V	127V	6.4	15	40	0.17
4MYW8509A1000AA	4TYK8509A1000AA	60Hz	220V	198V	242V	6.2	15	40	0.17
4MYW8512A1000AA	4TYK8512A1000AA	60Hz	220V	198V	242V	6.2	15	40	0.17
4MYW8518A1000AA	4TYK8518A1000AA	60Hz	220V	198V	242V	11.6	25	60	0.62
4MYW8524A1000AA	4TYK8524A1000AA	60Hz	220V	198V	242V	12.2	25	90	0.9
4MXW8509A9000AA	4TXK8509A9000AA	60Hz	115V	103V	127V	6.4	15	40	0.17
4MXW8512A9000AA	4TXK8512A9000AA	60Hz	115V	103V	127V	6.4	15	40	0.17
4MXW8509A1000AA	4TXK8509A1000AA	60Hz	220V	198V	242V	6.2	15	40	0.17
4MXW8512A1000AA	4TXK8512A1000AA	60Hz	220V	198V	242V	6.2	15	40	0.17
4MXW8518A1000AA	4TXK8518A1000AA	60Hz	220V	198V	242V	11.6	25	60	0.62
4MXW8524A1000AA	4TXK8524A1000AA	60Hz	220V	198V	242V	12.2	25	90	0.9

50Hz Models

Model			Power Supply			Current		OFM	
Indoor	Outdoor	Hz	Voltage	Min.	Max.	MCA	MFA	W	FLA
4MXW8509AB000AA	4TXK8509AB000AA	50Hz	220V	198V	242V	11.6	25	30	0.3
4MXW8512AB000AA	4TXK8512AB000AA	50Hz	220V	198V	242V	11.8	25	30	0.3
4MXW8518AB000AA	4TXK8518AB000AA	50Hz	220V	198V	242V	9.8	15	60	0.62
4MXW8524AB000AA	4TXK8524AB000AA	50Hz	220V	198V	242V	11.7	25	60	0.62

Dimensions

Indoor Units



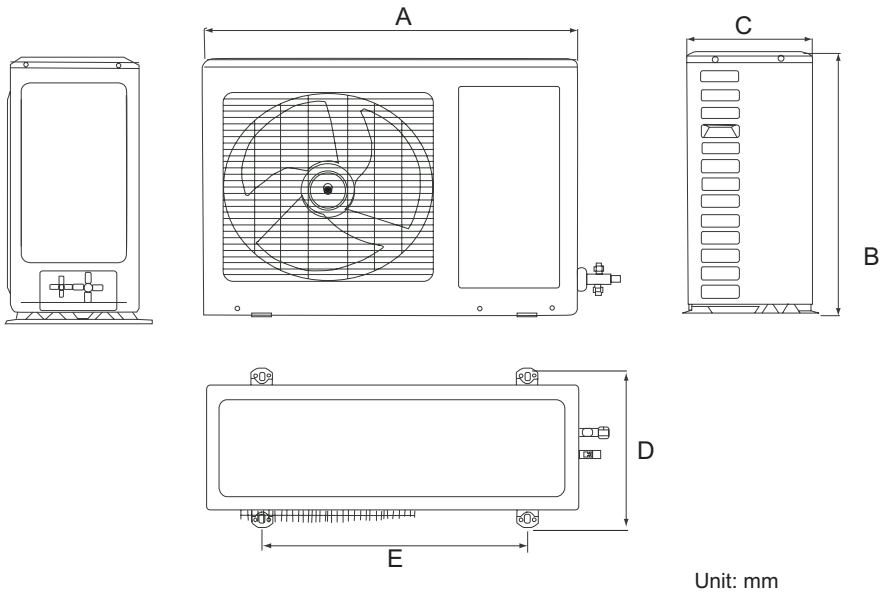
60Hz Models

Dimenssions(mm)			
unit	W(width)	H(height)	D(depth)
4MYW8509A	845	275	180
4MYW8512A	845	275	180
4MYW8518A	940	298	200
4MYW8524A	1007	315	219

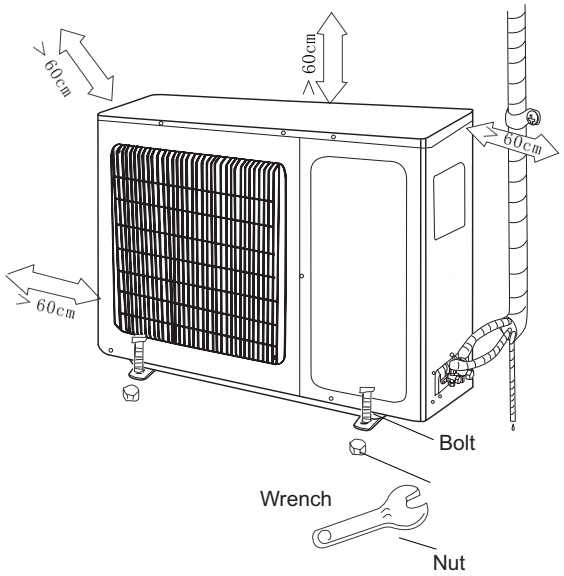
50Hz Models

Dimenssions(mm)			
unit	W(width)	H(height)	D(depth)
4MYW8509A	790	265	170
4MYW8512A	845	275	180
4MYW8518A	940	298	200
4MYW8524A	1007	315	219

Outdoor Units



Unit: mm



60Hz Models

Dimenssions(mm)					
unit	A(width)	B(height)	C(depth)	D	E
4TXK/4TYK8509A	762	540	257	320	540
4TXK/4TYK8512A	762	540	257	320	540
4TXK/4TYK8518A	890	700	340	396	560
4TXK/4TYK8524A	920	790	370	427	610

50Hz Models

Dimenssions(mm)					
unit	A(width)	B(height)	C(depth)	D	E
4TXK8509A	762	540	257	320	540
4TXK8512A	762	540	257	320	540
4TXK8518A	890	700	340	396	550
4TXK8524A	890	700	340	396	560

Capacity Tables

Model	4MYW8509A1/4TYK8509A1 4MXW8509A1/4TXK8509A1

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	9597	8993	8805	8041	8703	8304
	Sensible Capacity (Btu/h)	7543	7235	7109	6543	6355	6177
	Input (W)	574	599	621	627	707	718
	Compressor Frequency (Hz)	41	41	41	41	41	41
24℃ D 17℃ W	Total Capacity (Btu/h)	9966	9328	9089	8601	8884	8833
	Sensible Capacity (Btu/h)	7805	7628	7512	7553	6413	6410
	Input (W)	576	613	623	630	710	722
	Compressor Frequency (Hz)	41	41	41	41	41	41
27℃ D 19℃ W	Total Capacity (Btu/h)	10648	9625	9000	8355	9276	9099
	Sensible Capacity (Btu/h)	8177	7724	7198	6922	6444	6491
	Input (W)	606	622	630	645	720	732
	Compressor Frequency (Hz)	41	41	41	41	41	41
32℃ D 23℃ W	Total Capacity (Btu/h)	11263	10358	9399	8863	9423	9232
	Sensible Capacity (Btu/h)	8280	7969	7563	7235	6232	6184
	Input (W)	609	625	650	688	748	787
	Compressor Frequency (Hz)	41	41	41	41	41	41

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D 11℃ W	7℃ D 6℃ W	4℃ D 3℃ W	0℃ D -1℃ W	-4℃ D -6℃ W	-7℃ D -8℃ W
15℃	Total Capacity (Btu/h)	10850	10460	12170	12864	11347	9692
	Input (W)	700	656	831	1049	1057	1089
	Compressor Frequency (Hz)	44	44	44	44	44	44
18℃	Total Capacity (Btu/h)	10659	10180	11577	12105	10759	9343
	Input (W)	717	676	850	1105	1111	1093
	Compressor Frequency (Hz)	44	44	44	44	44	44
20℃	Total Capacity (Btu/h)	10034	9300	10971	11242	9850	8735
	Input (W)	722	680	859	1098	1105	1040
	Compressor Frequency (Hz)	44	44	44	44	44	44
22℃	Total Capacity (Btu/h)	9539	9007	9609	10285	8860	7846
	Input (W)	710	673	886	1043	1057	989
	Compressor Frequency (Hz)	44	44	44	44	44	44

Model	4MXW8509AB/4TXK8509AB

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	9597	8993	8805	8041	8703	8304
	Sensible Capacity (Btu/h)	7543	7235	7109	6543	6355	6177
	Input (W)	665	694	719	727	819	832
	Compressor Frequency (Hz)	41	41	41	41	41	41
24℃ D 17℃ W	Total Capacity (Btu/h)	9966	9328	9089	8601	8884	8833
	Sensible Capacity (Btu/h)	7805	7628	7512	7553	6413	6410
	Input (W)	667	710	722	730	822	837
	Compressor Frequency (Hz)	41	41	41	41	41	41
27℃ D 19℃ W	Total Capacity (Btu/h)	10648	9625	9000	8355	9276	9099
	Sensible Capacity (Btu/h)	8177	7724	7198	6922	6444	6491
	Input (W)	702	721	730	747	834	849
	Compressor Frequency (Hz)	41	41	41	41	41	41
32℃ D 23℃ W	Total Capacity (Btu/h)	11263	10358	9399	8863	9423	9232
	Sensible Capacity (Btu/h)	8280	7969	7563	7235	6232	6184
	Input (W)	706	725	753	797	867	912
	Compressor Frequency (Hz)	41	41	41	41	41	41

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D	7℃ D	4℃ D	0℃ D	-4℃ D	-7℃ D
		11℃ W	6℃ W	3℃ W	-1℃ W	-6℃ W	-8℃ W
15℃	Total Capacity (Btu/h)	10950	10558	12283	12983	11452	9782
	Input (W)	766	718	910	1149	1158	1193
	Compressor Frequency (Hz)	44	44	44	44	44	44
18℃	Total Capacity (Btu/h)	10757	10274	11684	12217	10859	9429
	Input (W)	786	741	931	1210	1218	1197
	Compressor Frequency (Hz)	44	44	44	44	44	44
20℃	Total Capacity (Btu/h)	10126	9386	11073	11346	9941	8816
	Input (W)	791	745	941	1203	1210	1139
	Compressor Frequency (Hz)	44	44	44	44	44	44
22℃	Total Capacity (Btu/h)	9627	9090	9698	10381	8942	7918
	Input (W)	778	737	971	1143	1158	1084
	Compressor Frequency (Hz)	44	44	44	44	44	44

Model	4MYW8509A9/4TYK8509A9 4MXW8509A9/4TXK8509A9

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	9597	8993	8805	8041	8703	8304
	Sensible Capacity (Btu/h)	7543	7235	7109	6543	6355	6177
	Input (W)	601	628	651	657	741	752
	Compressor Frequency (Hz)	41	41	41	41	41	41
24℃ D 17℃ W	Total Capacity (Btu/h)	9966	9328	9089	8601	8884	8833
	Sensible Capacity (Btu/h)	7805	7628	7512	7553	6413	6410
	Input (W)	603	642	652	660	744	757
	Compressor Frequency (Hz)	41	41	41	41	41	41
27℃ D 19℃ W	Total Capacity (Btu/h)	10648	9625	9000	8355	9276	9099
	Sensible Capacity (Btu/h)	8177	7724	7198	6922	6444	6491
	Input (W)	634	651	660	675	754	767
	Compressor Frequency (Hz)	41	41	41	41	41	41
32℃ D 23℃ W	Total Capacity (Btu/h)	11263	10358	9399	8863	9423	9232
	Sensible Capacity (Btu/h)	8280	7969	7563	7235	6232	6184
	Input (W)	638	655	681	721	783	824
	Compressor Frequency (Hz)	41	41	41	41	41	41

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D 11℃ W	7℃ D 6℃ W	4℃ D 3℃ W	0℃ D -1℃ W	-4℃ D -6℃ W	-7℃ D -8℃ W
15℃	Total Capacity (Btu/h)	10850	10460	12170	12864	11347	9692
	Input (W)	700	656	831	1049	1057	1089
	Compressor Frequency (Hz)	44	44	44	44	44	44
18℃	Total Capacity (Btu/h)	10659	10180	11577	12105	10759	9343
	Input (W)	717	676	850	1105	1111	1093
	Compressor Frequency (Hz)	44	44	44	44	44	44
20℃	Total Capacity (Btu/h)	10034	9300	10971	11242	9850	8735
	Input (W)	722	680	859	1098	1105	1040
	Compressor Frequency (Hz)	44	44	44	44	44	44
22℃	Total Capacity (Btu/h)	9539	9007	9609	10285	8860	7846
	Input (W)	710	673	886	1043	1057	989
	Compressor Frequency (Hz)	44	44	44	44	44	44

Model	4MYW8512A1/4TYK8512A1 4MXW8512A1/4TXK8512A1

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	12015	11554	10681	9985	9292	8981
	Sensible Capacity (Btu/h)	9011	8449	7883	7183	5949	5477
	Input (W)	865	852	861	876	915	901
	Compressor Frequency (Hz)	59	59	59	59	59	59
24℃ D 17℃ W	Total Capacity (Btu/h)	13417	12363	11527	10855	9858	9510
	Sensible Capacity (Btu/h)	9292	8609	7951	7238	6361	5316
	Input (W)	873	889	912	929	958	944
	Compressor Frequency (Hz)	59	59	59	59	59	59
27℃ D 19℃ W	Total Capacity (Btu/h)	14008	13052	11800	11565	10176	9828
	Sensible Capacity (Btu/h)	10005	9234	8531	8012	6985	6497
	Input (W)	922	934	960	975	981	1050
	Compressor Frequency (Hz)	59	59	59	59	59	59
32℃ D 23℃ W	Total Capacity (Btu/h)	15083	13626	9292	12319	11401	13643
	Sensible Capacity (Btu/h)	10105	8747	8706	8459	7631	9270
	Input (W)	1046	1079	1104	1143	1176	1081
	Compressor Frequency (Hz)	59	59	59	59	59	59

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D 11℃ W	7℃ D 6℃ W	4℃ D 3℃ W	0℃ D -1℃ W	-4℃ D -6℃ W	-7℃ D -8℃ W
15℃	Total Capacity (Btu/h)	15998	14618	13420	13792	12477	11788
	Input (W)	1131	1090	1019	1236	1243	1263
	Compressor Frequency (Hz)	65	65	65	65	65	65
18℃	Total Capacity (Btu/h)	15525	13821	13005	13456	12323	11602
	Input (W)	1170	1143	1065	1281	1312	1322
	Compressor Frequency (Hz)	65	65	65	65	65	65
20℃	Total Capacity (Btu/h)	14905	13100	12085	13169	11921	10746
	Input (W)	1228	1190	1131	1362	1332	1129
	Compressor Frequency (Hz)	65	65	65	65	65	65
22℃	Total Capacity (Btu/h)	14389	12757	11886	12715	11103	10052
	Input (W)	1275	1222	1158	1341	1355	1364
	Compressor Frequency (Hz)	65	65	65	65	65	65

Model	4MXW8512AB/4TXK8512AB

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	12219	11750	10862	10154	9449	9134
	Sensible Capacity (Btu/h)	9164	8592	8016	7305	6050	5570
	Input (W)	9094	940	951	968	1011	995
	Compressor Frequency (Hz)	59	59	59	59	59	59
24℃ D 17℃ W	Total Capacity (Btu/h)	13645	12573	11722	11039	10025	9671
	Sensible Capacity (Btu/h)	9449	8755	8086	7360	6468	5407
	Input (W)	963	981	1006	1025	1058	1042
	Compressor Frequency (Hz)	59	59	59	59	59	59
27℃ D 19℃ W	Total Capacity (Btu/h)	14245	13274	12000	11761	10348	9994
	Sensible Capacity (Btu/h)	10175	9390	8676	8148	7104	6607
	Input (W)	1018	1032	1060	1077	1083	1160
	Compressor Frequency (Hz)	59	59	59	59	59	59
32℃ D 23℃ W	Total Capacity (Btu/h)	15338	13857	9449	12527	11594	13874
	Sensible Capacity (Btu/h)	10277	8896	8854	8603	7760	9427
	Input (W)	1156	1191	1220	1263	1298	1193
	Compressor Frequency (Hz)	59	59	59	59	59	59

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D	7℃ D	4℃ D	0℃ D	-4℃ D	-7℃ D
		11℃ W	6℃ W	3℃ W	-1℃ W	-6℃ W	-8℃ W
15℃	Total Capacity (Btu/h)	16670	15231	13983	14371	13000	12283
	Input (W)	1045	1008	942	1143	1149	1168
	Compressor Frequency (Hz)	65	65	65	65	65	65
18℃	Total Capacity (Btu/h)	16177	14402	13551	14021	12841	12089
	Input (W)	1081	1056	985	1184	1213	1222
	Compressor Frequency (Hz)	65	65	65	65	65	65
20℃	Total Capacity (Btu/h)	15531	13650	12592	13721	12421	11197
	Input (W)	1135	1100	1045	1259	1231	1044
	Compressor Frequency (Hz)	65	65	65	65	65	65
22℃	Total Capacity (Btu/h)	14993	13293	12385	13249	11569	10474
	Input (W)	1178	1130	1070	1240	1253	1261
	Compressor Frequency (Hz)	65	65	65	65	65	65

Model	4MYW8512A9/4TYK8512A9 4MXW8512A9/4TXK8512A9

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	12015	11554	10681	9985	9292	8981
	Sensible Capacity (Btu/h)	9011	8449	7883	7183	5949	5477
	Input (W)	8493	878	888	904	944	929
	Compressor Frequency (Hz)	59	59	59	59	59	59
24℃ D 17℃ W	Total Capacity (Btu/h)	13417	12363	11527	10855	9858	9510
	Sensible Capacity (Btu/h)	9292	8609	7951	7238	6361	5316
	Input (W)	900	916	940	958	988	973
	Compressor Frequency (Hz)	59	59	59	59	59	59
27℃ D 19℃ W	Total Capacity (Btu/h)	14008	13052	11800	11565	10176	9828
	Sensible Capacity (Btu/h)	10005	9234	8531	8012	6985	6497
	Input (W)	951	964	990	1006	1012	1083
	Compressor Frequency (Hz)	59	59	59	59	59	59
32℃ D 23℃ W	Total Capacity (Btu/h)	15083	13626	9292	12319	11401	13643
	Sensible Capacity (Btu/h)	10105	8747	8706	8459	7631	9270
	Input (W)	1079	1113	1139	1179	1213	1114
	Compressor Frequency (Hz)	59	59	59	59	59	59

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D 11℃ W	7℃ D 6℃ W	4℃ D 3℃ W	0℃ D -1℃ W	-4℃ D -6℃ W	-7℃ D -8℃ W
15℃	Total Capacity (Btu/h)	15998	14618	13420	13792	12477	11788
	Input (W)	1131	1090	1019	1236	1243	1263
	Compressor Frequency (Hz)	65	65	65	65	65	65
18℃	Total Capacity (Btu/h)	15525	13821	13005	13456	12323	11602
	Input (W)	1170	1143	1065	1281	1312	1322
	Compressor Frequency (Hz)	65	65	65	65	65	65
20℃	Total Capacity (Btu/h)	14905	13100	12085	13169	11921	10746
	Input (W)	1228	1190	1131	1362	1332	1129
	Compressor Frequency (Hz)	65	65	65	65	65	65
22℃	Total Capacity (Btu/h)	14389	12757	11886	12715	11103	10052
	Input (W)	1275	1222	1158	1341	1355	1364
	Compressor Frequency (Hz)	65	65	65	65	65	65

Model	4MYW8518A1/4TYK8518A1 4MXW8518A1/4TXK8518A1

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	17427	16526	15379	14223	16447	11967
	Sensible Capacity (Btu/h)	12721	12312	11687	11022	12994	9633
	Input (W)	1238	1450	1458	1585	1703	1715
	Compressor Frequency (Hz)	65	65	65	65	65	65
24℃ D 17℃ W	Total Capacity (Btu/h)	18529	17403	16488	15482	14359	13980
	Sensible Capacity (Btu/h)	13434	12721	12151	11503	10756	10554
	Input (W)	1262	1484	1483	1622	1754	1772
	Compressor Frequency (Hz)	65	65	65	65	65	65
27℃ D 19℃ W	Total Capacity (Btu/h)	19454	19071	18000	17331	16267	14434
	Sensible Capacity (Btu/h)	14281	14151	13513	13137	12462	11172
	Input (W)	1280	1408	1500	1642	1784	1818
	Compressor Frequency (Hz)	65	65	65	65	65	65
32℃ D 23℃ W	Total Capacity (Btu/h)	19894	20122	19802	19276	18389	17737
	Sensible Capacity (Btu/h)	13926	14386	14455	14362	13977	13745
	Input (W)	1298	1428	1536	1712	1870	1925
	Compressor Frequency (Hz)	65	65	65	65	65	65

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D 11℃ W	7℃ D 6℃ W	4℃ D 3℃ W	0℃ D -1℃ W	-4℃ D -6℃ W	-7℃ D -8℃ W
15℃	Total Capacity (Btu/h)	27934	25523	24556	20826	18667	17693
	Input (W)	2779	2526	2486	2334	2328	2260
	Compressor Frequency (Hz)	90	90	90	90	90	90
18℃	Total Capacity (Btu/h)	27238	25100	23829	20420	18550	17720
	Input (W)	2855	2655	2526	2388	2337	2268
	Compressor Frequency (Hz)	90	90	90	90	90	90
20℃	Total Capacity (Btu/h)	27066	25000	23657	20282	18013	17503
	Input (W)	2905	2700	2558	2381	2325	2282
	Compressor Frequency (Hz)	90	90	90	90	90	90
22℃	Total Capacity (Btu/h)	26274	24604	22896	19177	17868	17400
	Input (W)	2955	2666	2538	2430	2330	2270
	Compressor Frequency (Hz)	90	90	90	90	90	90

Model	4MXW8518AB/4TXK8518AB

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	17427	16526	15379	14223	16447	11967
	Sensible Capacity (Btu/h)	12721	12312	11687	11022	12994	9633
	Input (W)	1321	1547	1555	1691	1816	1829
	Compressor Frequency (Hz)	65	65	65	65	65	65
24℃ D 17℃ W	Total Capacity (Btu/h)	18529	17403	16488	15482	14359	13980
	Sensible Capacity (Btu/h)	13434	12721	12151	11503	10756	10554
	Input (W)	1346	1583	1582	1730	1871	1890
	Compressor Frequency (Hz)	65	65	65	65	65	65
27℃ D 19℃ W	Total Capacity (Btu/h)	19454	19071	18000	17331	16267	14434
	Sensible Capacity (Btu/h)	14281	14151	13513	13137	12462	11172
	Input (W)	1366	1502	1600	1752	1903	1939
	Compressor Frequency (Hz)	65	65	65	65	65	65
32℃ D 23℃ W	Total Capacity (Btu/h)	19894	20122	19802	19276	18389	17737
	Sensible Capacity (Btu/h)	13926	14386	14455	14362	13977	13745
	Input (W)	1385	1524	1639	1826	1994	2054
	Compressor Frequency (Hz)	65	65	65	65	65	65

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D	7℃ D	4℃ D	0℃ D	-4℃ D	-7℃ D
		11℃ W	6℃ W	3℃ W	-1℃ W	-6℃ W	-8℃ W
15℃	Total Capacity (Btu/h)	22347	20419	19645	16661	14934	14154
	Input (W)	1668	1516	1491	1400	1397	1356
	Compressor Frequency (Hz)	90	90	90	90	90	90
18℃	Total Capacity (Btu/h)	21791	20080	19063	16336	14840	14176
	Input (W)	1713	1593	1516	1433	1402	1361
	Compressor Frequency (Hz)	90	90	90	90	90	90
20℃	Total Capacity (Btu/h)	21653	20000	18926	16226	14410	14003
	Input (W)	1743	1620	1535	1428	1395	1369
	Compressor Frequency (Hz)	90	90	90	90	90	90
22℃	Total Capacity (Btu/h)	21019	19683	18317	15342	14295	13920
	Input (W)	1773	1600	1523	1458	1398	1362
	Compressor Frequency (Hz)	90	90	90	90	90	90

Model	4MYW8524A1/4TYK8524A1 4MXW8524A1/4TXK8524A1

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		21220	20538	19568	18500	17548	13224
21℃ D 15℃ W	Total Capacity (Btu/h)	15067	14961	14617	14163	13757	10613
	Sensible Capacity (Btu/h)	1573	1656	1755	1762	1960	2135
	Input (W)	65	65	65	65	65	65
	Compressor Frequency (Hz)	22479	21596	20773	19671	18852	14630
24℃ D 17℃ W	Total Capacity (Btu/h)	16456	16111	15787	15224	14855	11733
	Sensible Capacity (Btu/h)	1586	1667	1783	1808	1977	2125
	Input (W)	65	65	65	65	65	65
	Compressor Frequency (Hz)	23558	22974	21500	21265	20401	15477
27℃ D 19℃ W	Total Capacity (Btu/h)	17166	17063	16500	16343	15951	12306
	Sensible Capacity (Btu/h)	1606	1687	1790	1824	1957	2151
	Input (W)	65	65	65	65	65	65
	Compressor Frequency (Hz)	24005	24053	24339	24633	20981	19306
32℃ D 23℃ W	Total Capacity (Btu/h)	16323	17029	17913	18821	16616	15832
	Sensible Capacity (Btu/h)	1580	1720	1799	1961	2076	2276
	Input (W)	65	65	65	65	65	65
	Compressor Frequency (Hz)						

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D 11℃ W	7℃ D 6℃ W	4℃ D 3℃ W	0℃ D -1℃ W	-4℃ D -6℃ W	-7℃ D -8℃ W
15℃	Total Capacity (Btu/h)	27320	26391	24100	20472	18602	17994
	Input (W)	2839	2642	2517	2408	2340	2106
	Compressor Frequency (Hz)	90	90	90	90	90	90
18℃	Total Capacity (Btu/h)	27169	26094	23913	20339	18391	17857
	Input (W)	2829	2675	2537	2418	2624	2100
	Compressor Frequency (Hz)	90	90	90	90	90	90
20℃	Total Capacity (Btu/h)	26762	25800	23833	20182	18174	17981
	Input (W)	2855	2700	2560	2444	2343	2044
	Compressor Frequency (Hz)	90	90	90	90	90	90
22℃	Total Capacity (Btu/h)	26197	25466	23018	19337	17927	17533
	Input (W)	2942	2736	2624	2498	2391	2144
	Compressor Frequency (Hz)	90	90	90	90	90	90

Model	4MXW8524AB/4TXK8524AB

SUMMER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		25℃	30℃	35℃	40℃	45℃	50℃
21℃ D 15℃ W	Total Capacity (Btu/h)	21714	21015	20023	18930	17956	13532
	Sensible Capacity (Btu/h)	15417	15309	14957	14492	14077	10860
	Input (W)	1745	1837	1947	1954	2174	2367
	Compressor Frequency (Hz)	65	65	65	65	65	65
24℃ D 17℃ W	Total Capacity (Btu/h)	23002	22098	21256	20128	19290	14970
	Sensible Capacity (Btu/h)	16839	16486	16154	15578	15201	12006
	Input (W)	1759	1848	1978	2005	2192	2356
	Compressor Frequency (Hz)	65	65	65	65	65	65
27℃ D 19℃ W	Total Capacity (Btu/h)	24106	23509	22000	21759	20876	15837
	Sensible Capacity (Btu/h)	17565	17460	16884	16723	16322	12592
	Input (W)	1781	1871	1985	2022	2171	2385
	Compressor Frequency (Hz)	65	65	65	65	65	65
32℃ D 23℃ W	Total Capacity (Btu/h)	24563	24612	24905	25206	21469	19755
	Sensible Capacity (Btu/h)	16703	17425	18330	19259	17003	16200
	Input (W)	1752	1907	1995	2175	2302	2524
	Compressor Frequency (Hz)	65	65	65	65	65	65

WINTER		OUTDOOR TEMPERATURE DRY					
Indoor conditions		12℃ D	7℃ D	4℃ D	0℃ D	-4℃ D	-7℃ D
		11℃ W	6℃ W	3℃ W	-1℃ W	-6℃ W	-8℃ W
15℃	Total Capacity (Btu/h)	25414	24550	22418	19044	17304	16738
	Input (W)	2029	1888	1799	1721	1673	1505
	Compressor Frequency (Hz)	90	90	90	90	90	90
18℃	Total Capacity (Btu/h)	25274	24273	22244	18920	17108	16611
	Input (W)	2023	1912	1813	1728	1876	1501
	Compressor Frequency (Hz)	90	90	90	90	90	90
20℃	Total Capacity (Btu/h)	24895	24000	22170	18774	16906	16726
	Input (W)	2041	1930	1830	1747	1675	1461
	Compressor Frequency (Hz)	90	90	90	90	90	90
22℃	Total Capacity (Btu/h)	24370	23689	21412	17988	16676	16310
	Input (W)	2103	1956	1876	1785	1709	1533
	Compressor Frequency (Hz)	90	90	90	90	90	90

Wiring Diagrams

Figure 1. 4MYW8509A9 - 4TYK8509A9

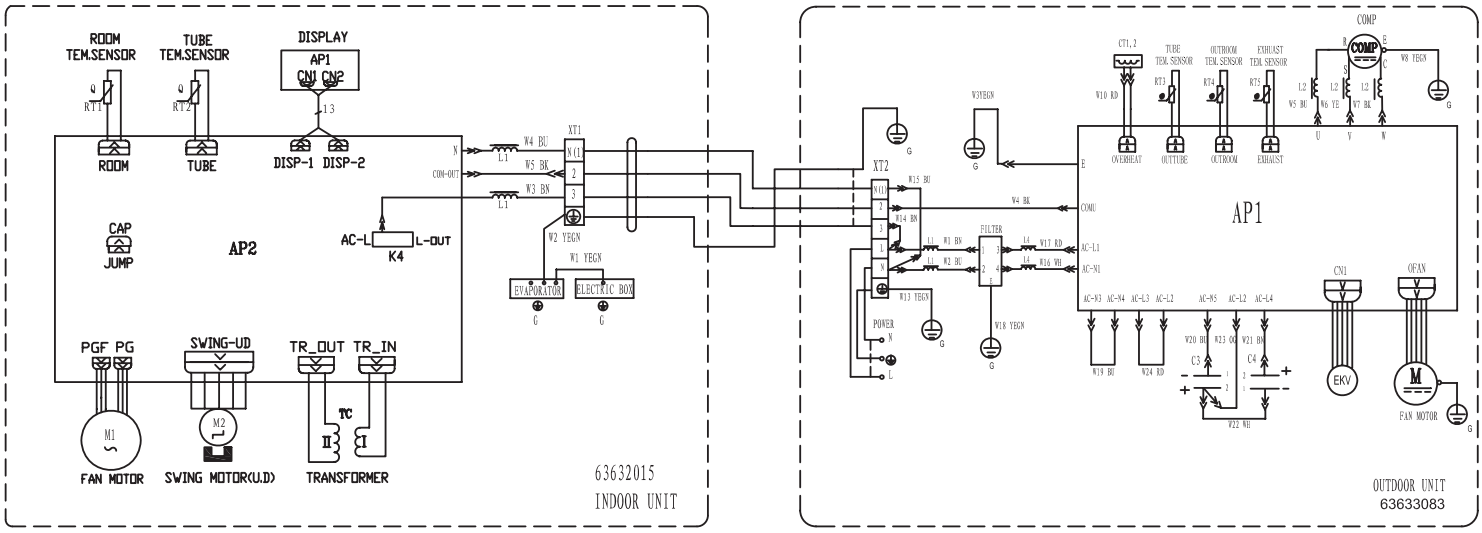


Figure 2. 4MYW8509A1 - 4TYK8509A1

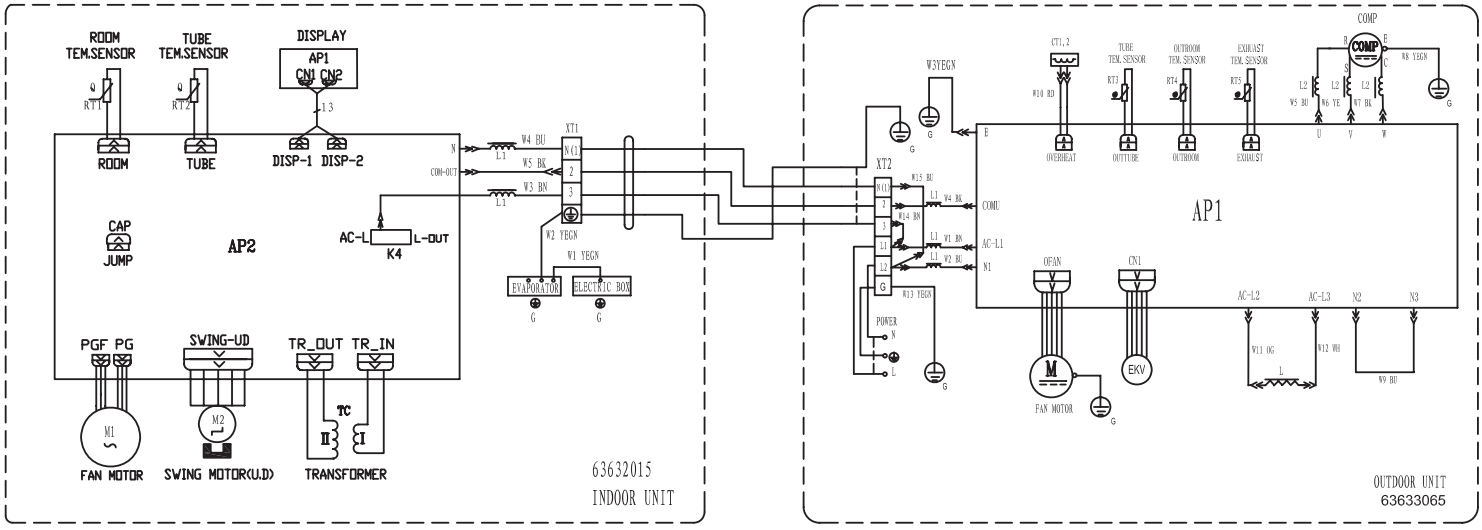


Figure 3. 4MYW8512A9 - 4TYK8512A9

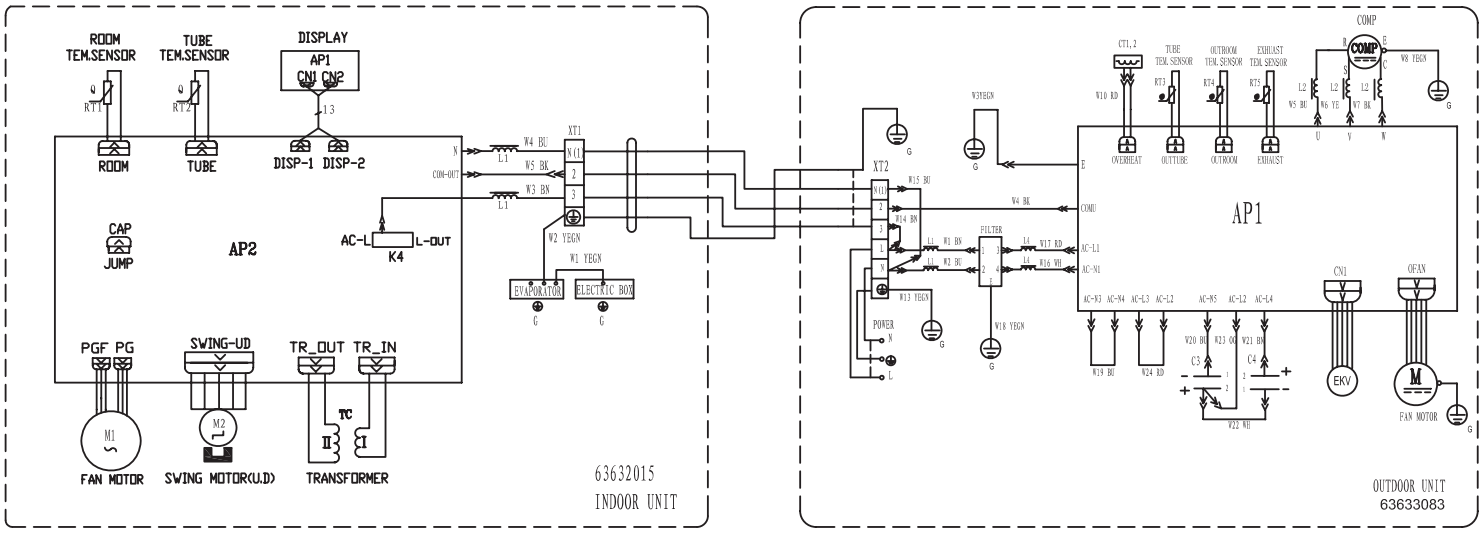


Figure 4. 4MYW8512A1 - 4TYK8512A1

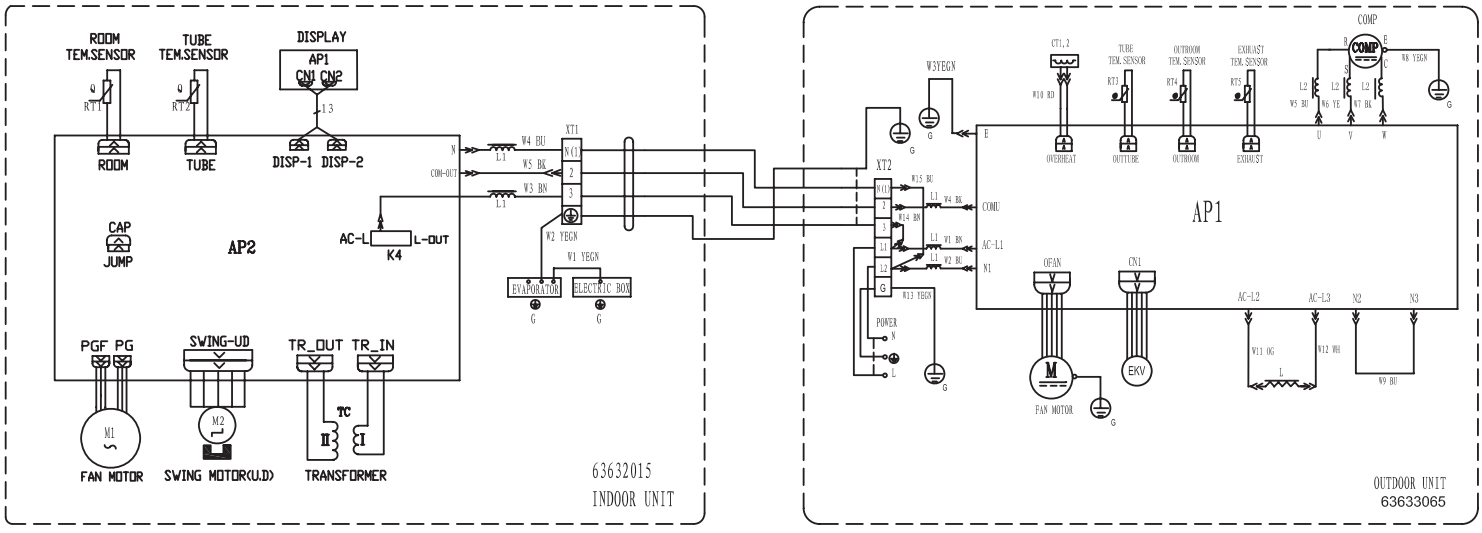


Figure 5.4MYW8518A1 - 4TYK8518A1

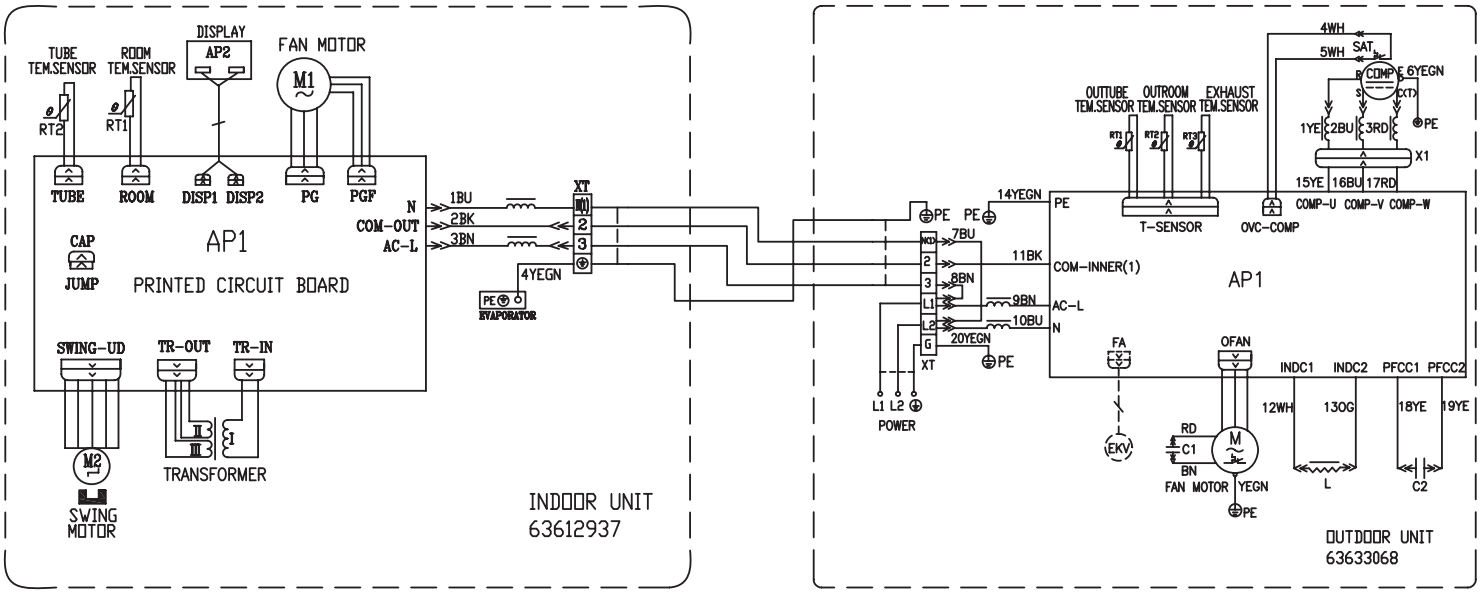


Figure 6. 4MYW8524A1 - 4TYK8524A1

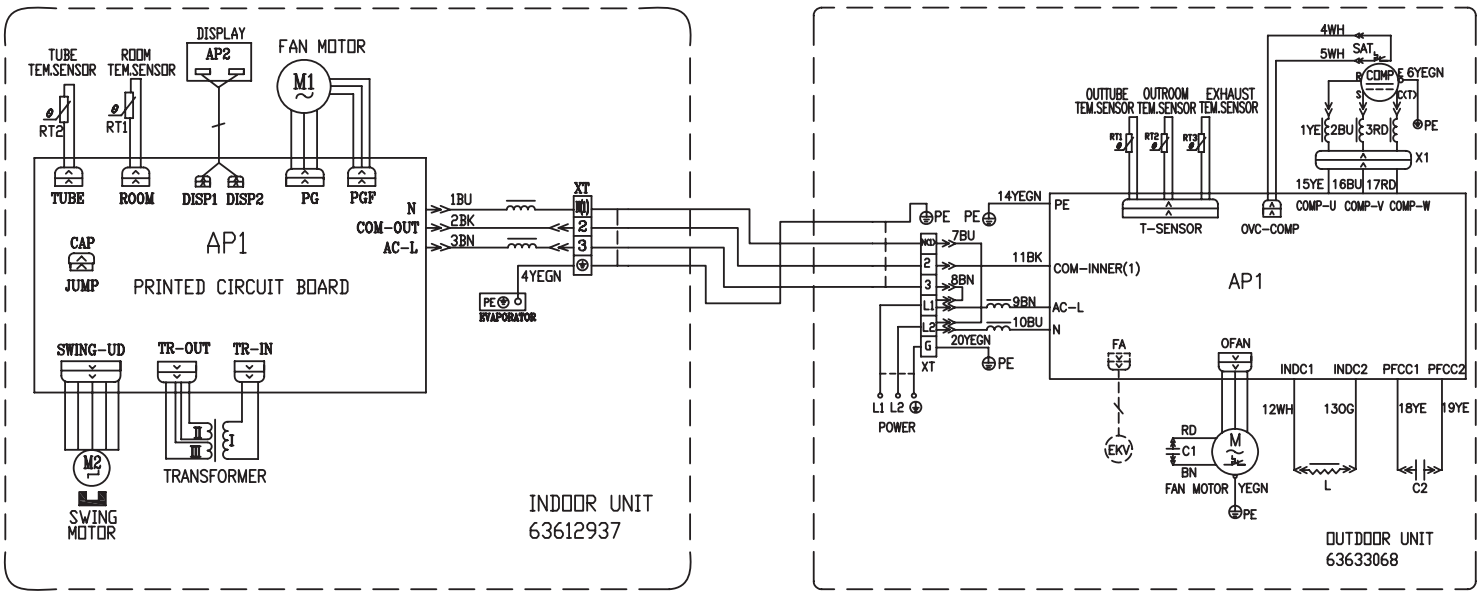


Figure 7. 4MXW8509A9 - 4TXK8509A9

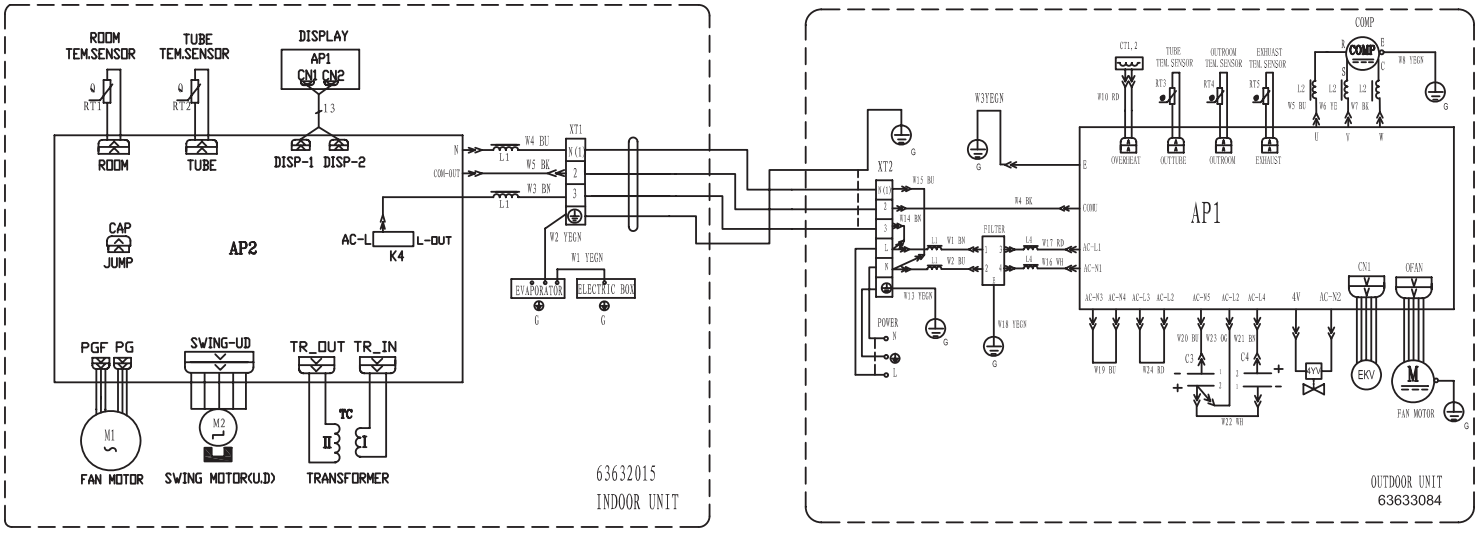


Figure 8. 4MXW8509A1 - 4TXK8509A1

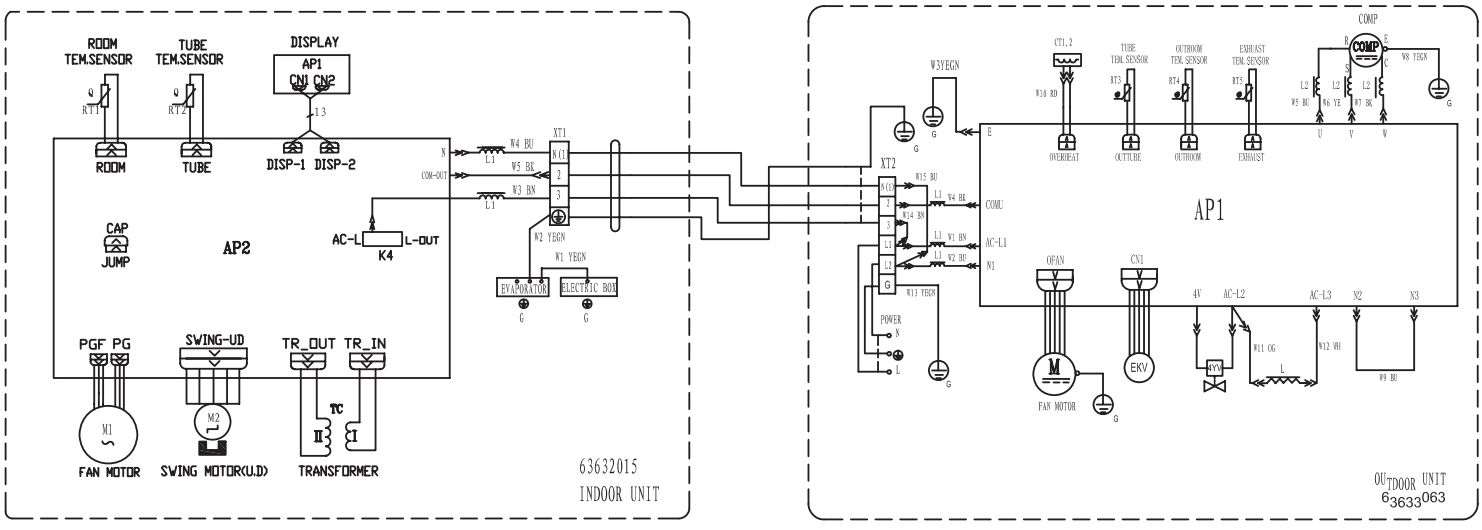


Figure 9. 4MXW8512A9 - 4TXK8512A9

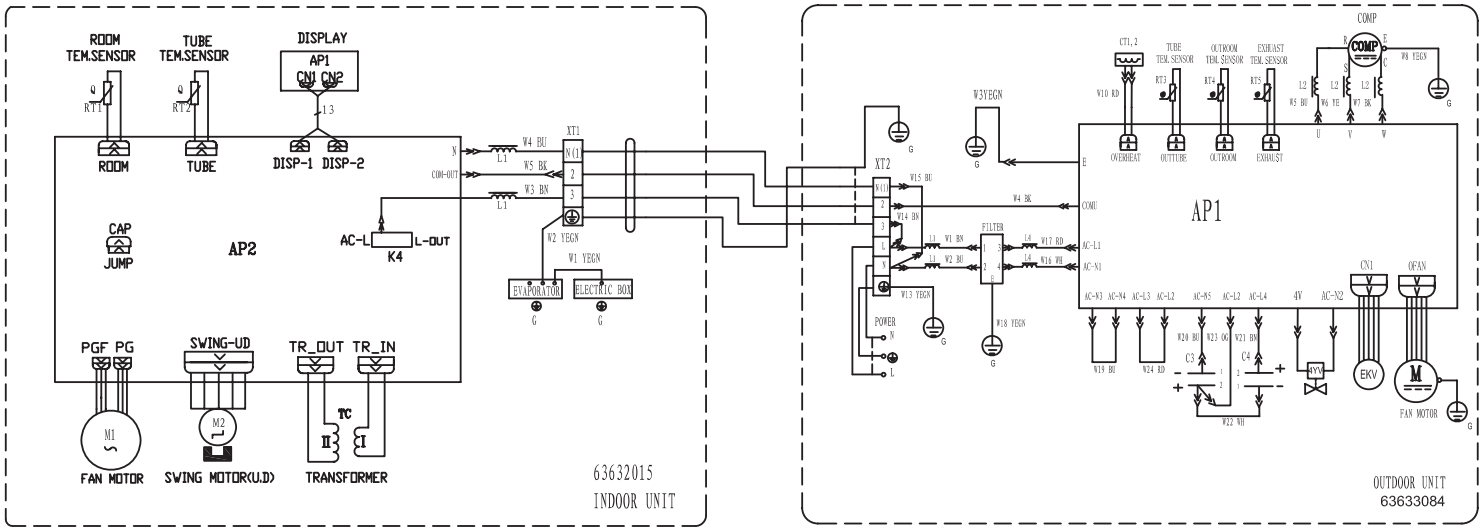


Figure 10. 4MXW8512A1 - 4TXK8512A1

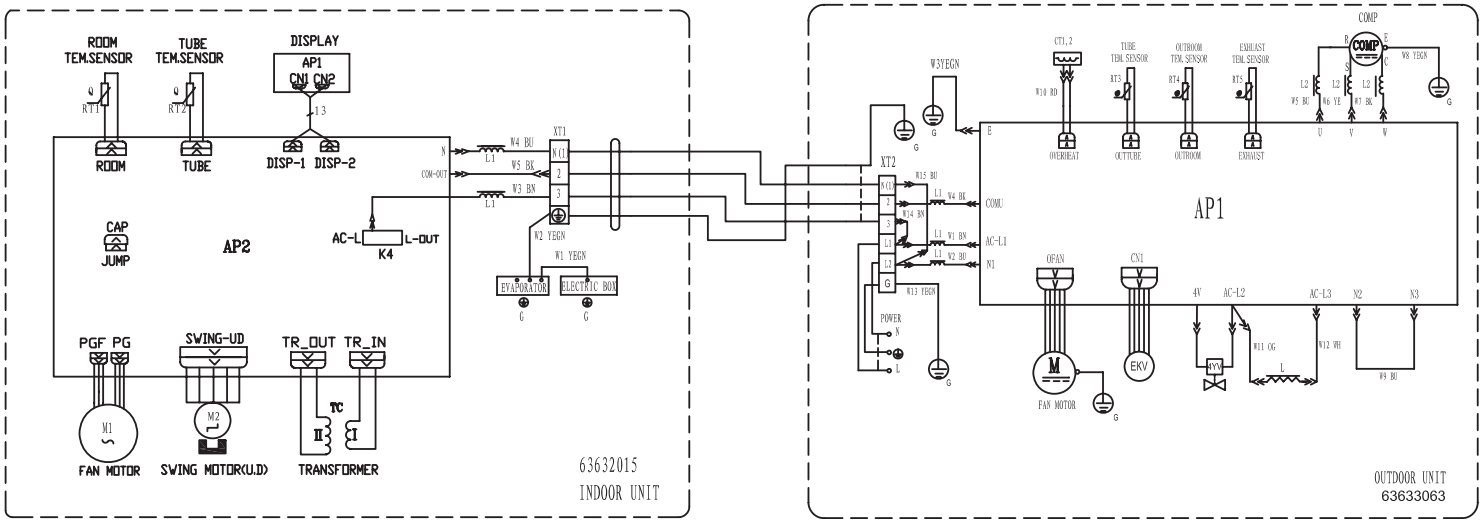


Figure 11. 4MXW8518A1 - 4TXK8518A1

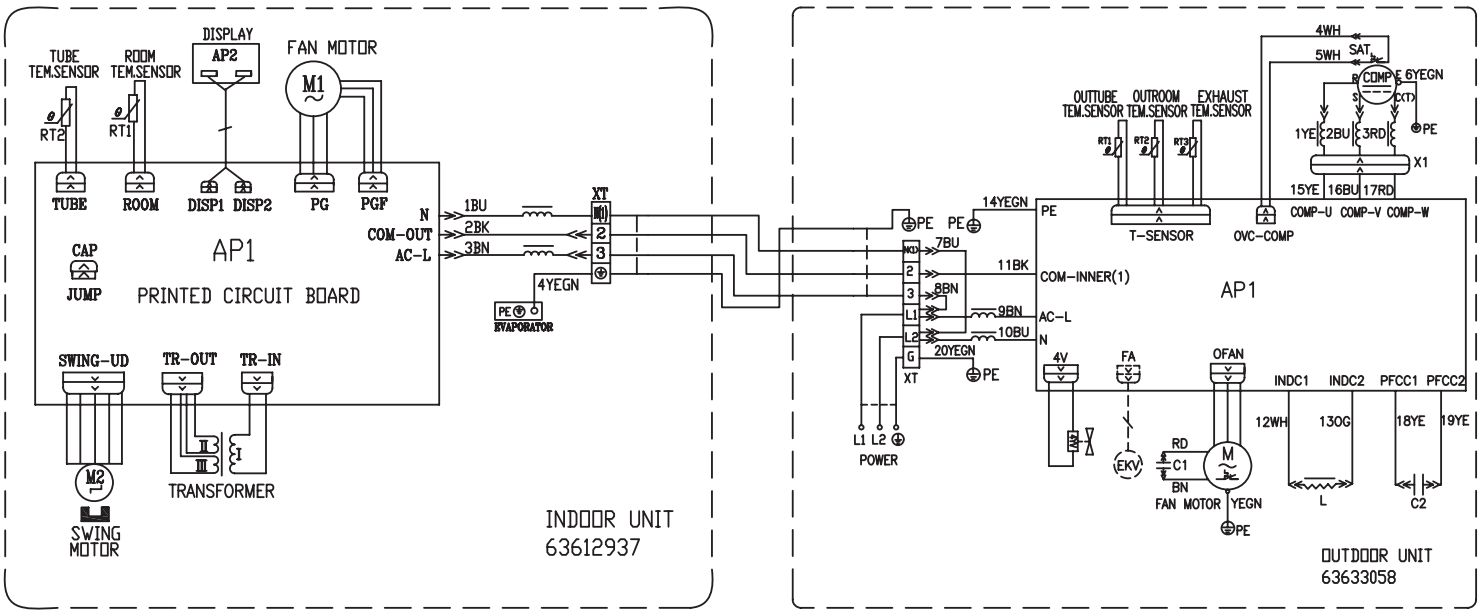
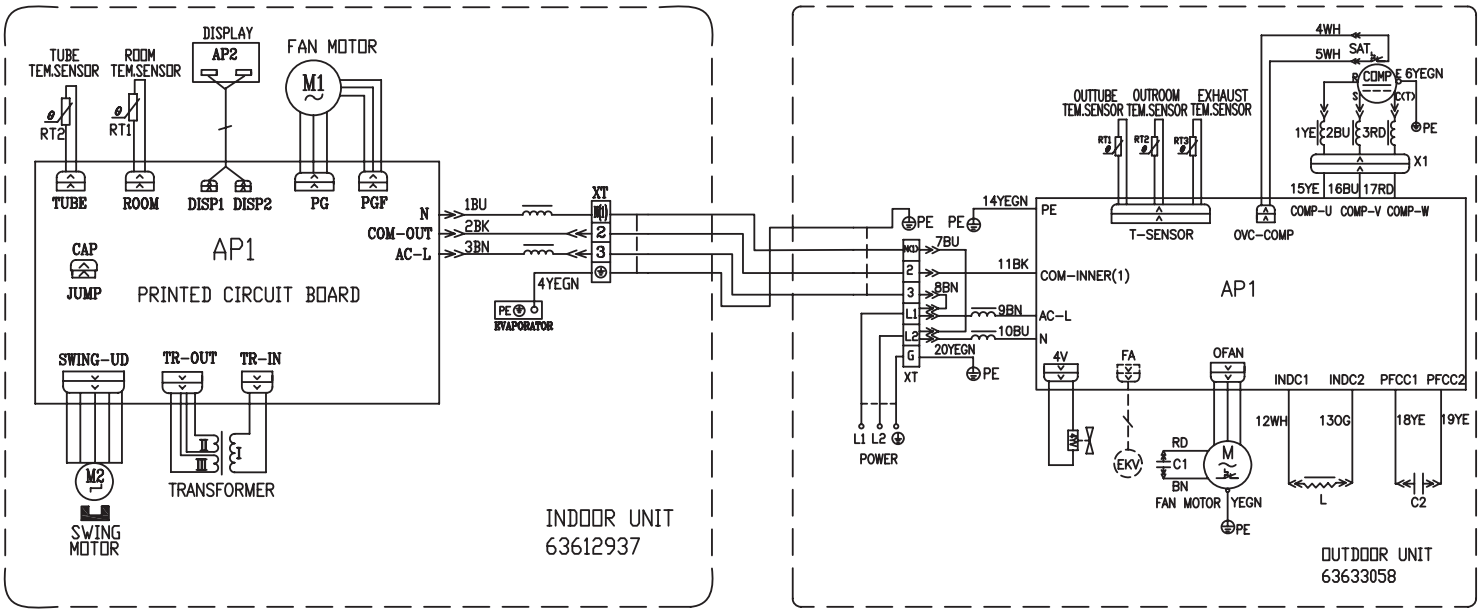
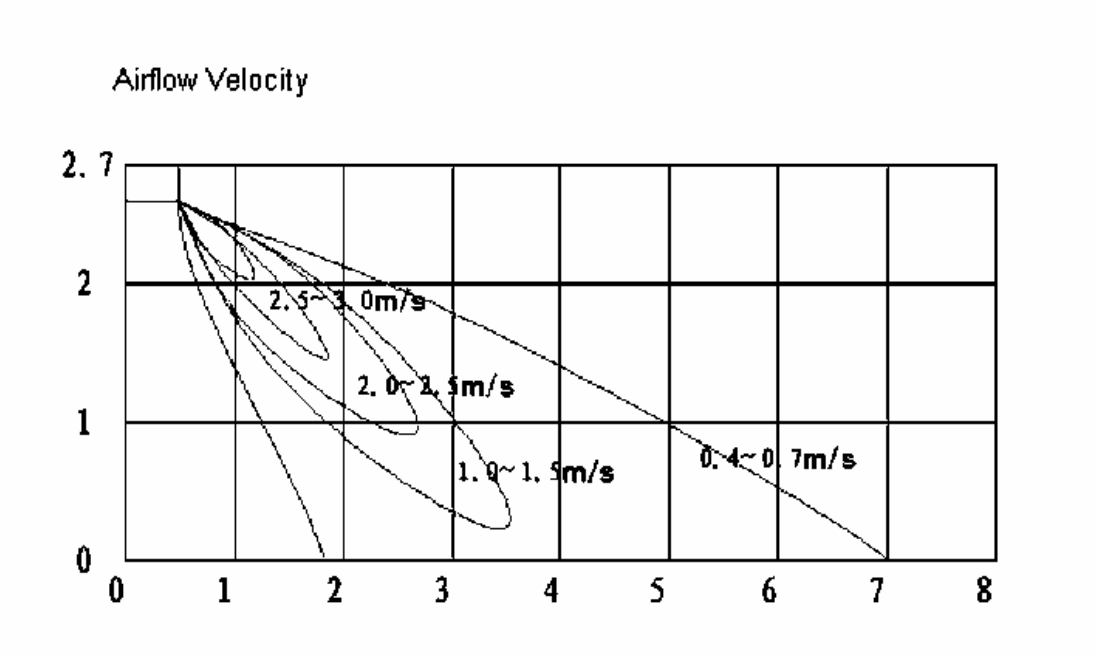


Figure 12. 4MXW8524A1 - 4TXK8524A1



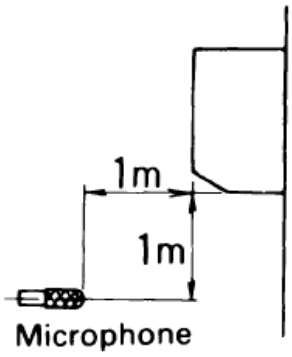
Air Velocity Distribution



Sound Level

Test condition

■ Wall Mounted Type



(V0477)

Test value

60Hz Models

Unit Number	Model		Indoor Sound Pressure level (dB(A))			
	Outdoor	Indoor	SH	H	M	L
1	4TYK8509A9	4MYW8509A9	38	34	30	26
2	4TYK8512A9	4MYW8512A9	40	36	32	26
3	4TYK8509A1	4MYW8509A1	38	34	30	26
4	4TYK8512A1	4MYW8512A1	40	36	32	26
5	4TYK8518A1	4MYW8518A1	46	44	40	35
6	4TYK8524A1	4MYW8524A1	48	44	40	35
7	4TXK8509A9	4MXW8509A9	38	34	30	26
8	4TXK8512A9	4MXW8512A9	40	36	32	26
9	4TXK8509A1	4MXW8509A1	38	34	30	26
10	4TXK8512A1	4MXW8512A1	40	36	32	26
11	4TXK8518A1	4MXW8518A1	46	44	40	35
12	4TXK8524A1	4MXW8524A1	48	44	40	35

50Hz Models

Unit Number	Model		Indoor Sound Pressure level (dB(A))			
	Outdoor	Indoor	SH	H	M	L
1	4TXK8509AB	4MXW8509AB	40	37	31	23
2	4TXK8512AB	4MXW8512AB	44	37	32	25
3	4TXK8518AB	4MXW8518AB	46	44	40	35
4	4TXK8524AB	4MXW8524AB	81	47	42	39

Operating Functions

Operation of remote controller

Temperature parameters

- Room set temperature (T set)
- Room ambient temperature (T amb)

Fundamental functions

After powered on, no matter when the compressor is started, the time interval between two startups cannot be less than 3 minutes.

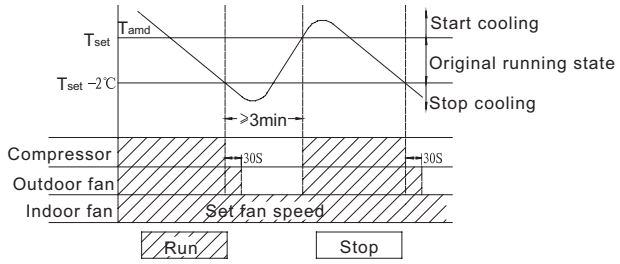
COOL mode

The condition and process of cooling

- If T amb is superior or equal T set, COOL mode will act, the compressor and outdoor fan will run, and the indoor fan will run at the set speed.
- If T amb is inferior or equal T set -2 ºC, the compressor will stop, the outdoor fan will delay 30 seconds to stop, and the indoor fan will run at the set speed.
- If T set -2ºC < T amb < Tset, the unit will keep running in the previous mode.

In this mode, the reversal valve will not be powered on and the temperature setting range is 16ºC~30ºC.

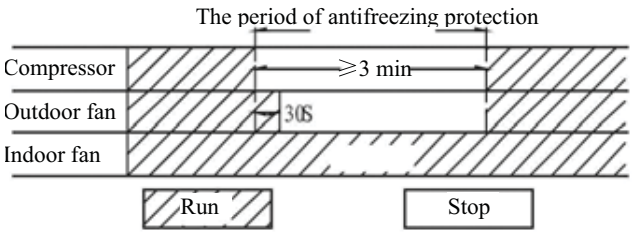
The unit will adjust the running frequency of the compressor automatically according to the change of ambient temperature.



Protection function

- Antifreezing protection

  Under cooling and drying mode, after the compressor run about 10 mins, when the pipe temp.of the evaporator is to low, the compressor will stop, the outdoor fan will stop after 30s, under cooling mode the indoor fan and swing motor will keep running in the original mode, under drying mode the indoor fan will run at low fan speed, the swing motor will run in the original mode. When antifreezing protection is eliminated and the compressor has stopped for 3 minutes, the unit will resume running in the original mode.



Overcurrent protection

If total current is high, the compressor will run in limited or dropped frequency. When total current goes on rising over the stated value, the compressor will stop, the outdoor fan will delay 30 seconds to stop.

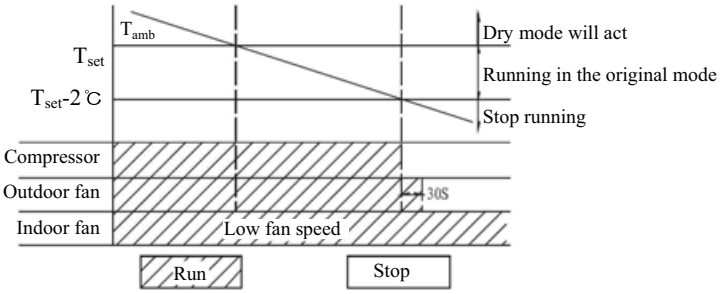
DRY mode

The condition and process of drying

- If T amb > T set, DRY mode will act, the indoor fan, outdoor fan and compressor will run, and indoor fan will run at low speed.
- If T set -2℃ inferior or equal T amb inferior or equal T set, the unit will keep running in the original mode.
- If T amb < T set -2℃, the compressor will stop running, the outdoor fan will delay 30 seconds to stop and the indoor fan will run at low speed.

In this mode, the reversal valve will not be powered on and the temperature setting range is 16℃~30℃.

The unit will adjust the running frequency of the compressor automatically according to the change of ambient temperature.



Protection

Protection is the same with that in COOL mode.

HEAT mode

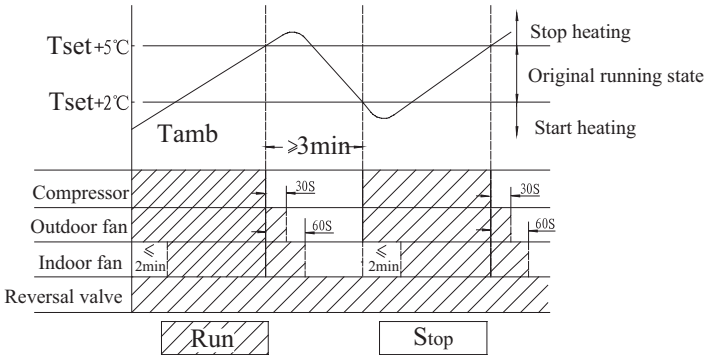
The condition and process of heating

- If T amb inferior or equal T set +2℃, HEAT mode will act, the compressor, outdoor fan and 4-way valve will run simultaneously, the indoor fan will delay at most for 2min to run.
- If T set +2℃ < Tamb < Tset +5℃, the unit will keep running in the original mode.
- If T amb superior or equal T set +5℃, the compressor will stop, the outdoor fan will delay 30 sec to stop and the indoor fan will blow for 60 sec at the original speed and then stop.

In this mode, the temperature setting range is 16℃~30℃.

The air conditioner will adjust the running frequency of the compressor automatically according to the change of ambient temperature.

When the unit is turned off in HEAT mode, or switched to other mode from HEAT mode, the four-way valve will be powered off 2min later after the compressor stops.



The condition and process of defrosting

When frost is detected in the condenser, the system will enter into defrosting state. When defrosting starts, the compressor and indoor fan will stop, and the outdoor fan and four-way valve will delay 30 seconds to stop. The compressor will start again after 30s and. When the compressor has run for 8mins, the compressor will stop.

After 30 seconds the four-way valve opens and after another 60 seconds, the compressor and outdoor fan resume running. The indoor fan will delay 2 minutes to run at the latest and temperature on the display panel shows H1.

Under heating mode,when the compressor is stopped by malfunction, the indoor fan will blow at low fan speed for 60s and then stop.

Protection

- Overcurrent protection

  If total current is high, the compressor will run in limited or dropped frequency. When total current go on rising over the stated value, the compressor will stop, the outdoor fan will delay 30 seconds to stop.

FAN mode

In this mode, the indoor fan will run the fan in High, Med, Low and Auto mode. The compressor, outdoor fan and four-way valve will stop.

In this mode, the temperature setting range is 16~30°C.

The unit will adjust the running frequency of the compressor automatically according to the change of ambient temperature.

AUTO mode

In this mode, the system selects COOL, HEAT and FAN mode automatically according to the change of ambient temperature. The protection function is the same with that of COOL/HEAT mode.

The unit will adjust the running frequency of the compressor automatically according to the change of ambient temperature.

Other control

ON / OFF

Each time the On/Off button of the remote controller is pressed, the On/Off state will switch once.

MODE selection

Press the MODE button on the remote controller to select and display the following modes: AUTO, COOL, DRY, FAN, and HEAT.

TEMP. setting button

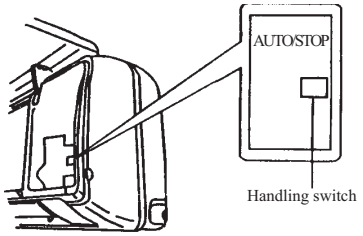
Each time TEMP + or TEMP - button is pressed, the set temperature will be increased or decreased by 1°C.

Adjusting range is 16~30°C . In AUTO mode, this button does not function.

AUTO key

When the unit is stop, press AUTO key, the unit will run under AUTO mode and the swing motor starts.

When the unit is running, press AUTO key, the unit will be stopped.

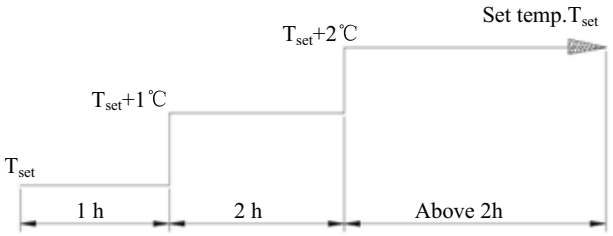


Timer control

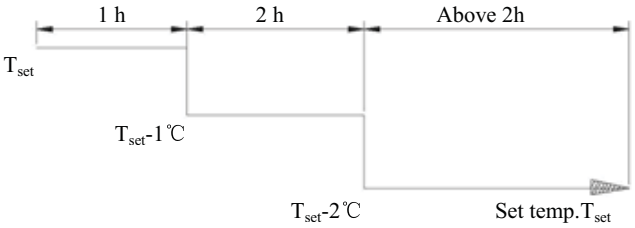
The unit is turned on or off according to the timer set by the remote controller.

Sleep control

When the air conditioner is in COOL or DRY mode, after Sleep mode has been set properly, the preset Tset will be increased by 1°C after the sleep program has run for 1 hour, and Tset will be increased by another 1°C after 2 hours. Tset has been increased by 2°C total in two hours. Then the unit will run at this set temperature and at the set speed.



When the air conditioner is in HEAT mode, after Sleep mode has been set properly, the preset Tset will be decreased by 1°C after the sleep program has run for 1 hour, and Tset will be decreased by another 1°C after 2 hours. Tset has been increased by 2°C totally in two hours. Then the unit will run at this set temperature and at the set speed.



In AUTO or FAN mode, the setting temp. will not change.

Indoor fan control

Use the remote controller to set the indoor fan running at HIGH, MED or LOW speed. At this time the fan will run at high, medium or low speed. It can also be set to AUTO and the indoor fan will select fan speed(HIGH, MED or LOW) automatically according to ambient temperature.

There are at least 3 mins and 30s delay for fan speed shift.

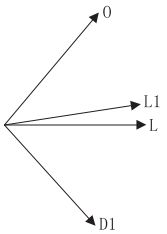
Power supply for outdoor unit

The power supply for outdoor unit is turned on in AUTO, COOL, HEAT and DRY mode under turn-on state.

The power supply for outdoor unit will delay 3 minutes to turn off under turn-off state or in the FAN mode under turn-on state.

Swing control

Use the SWING button of the wireless remote control to control SWING On and Off. Swing will only act when indoor fan is running. After power on, the swing motor turns back to 0 position and closes the air outlet vent; if it does not preset swing, after the unit is turned on, it will turn to the max. air outlet D1 position; then turn back to L position under COOL mode.Under HEAT mode, the guide louver stays at D1; when in swinging state, it will swing between L1 and D1 position. When the unit is turned off, it will turn back to 0 position.



Buzzer control

When the unit is power on or receives remote control signal or the auto key be pressed, the buzzer will give out a beep.

Power-off memory function

Contents of memory: Mode; Swing; Set fan speed, Set temperature, Timing etc.

Under turn-on state, when power off and power on, the power supply for outdoor unit will be turn on after 3 mins.

Under turn-off state, when power off and power on, the power supply for outdoor unit will be turn on immediately.

Delay Protection of Compressor

Under COOL; DRY; HEAT mode, before each time the compressor starts, there will be 3 mins delay.

Common protection function in each mode

Overload protection

Ttube: at cooling,it detects the temp. of outdoor heat exchanger,at heating,it detects the temp. of indoor heat exchanger.

When Ttube is detected high, the compressor will run in limited frequency. When Ttube goes on rising over the stated value, the compressor will stop; under AUTO HEAT or HEAT mode, indoor fan will blow 60s at low fan speed and then stop; under other mode, the indoor fan will run at set speed.

Compressor discharge temperature protection

When discharge temperature is too high to over the stated value, the compressor will stop, and When discharge temp. resume normal and the compressor has stopped for 3 minutes, the unit will resume its original operating status.

Communication malfunction

When not receiving correct signal for 3 minutes, the unit has communication malfunction and the outdoor unit stops, it is the same as normal stop when meeting the set temp.

Module protection

When module is in protection, the compressor will stop, after the compressor has stopped for 3 minutes, it will resume to running. During module protection period, the indoor unit displays malfunction and the whole unit stops.

Disassembly Procedures

Procedure

Indoor Units

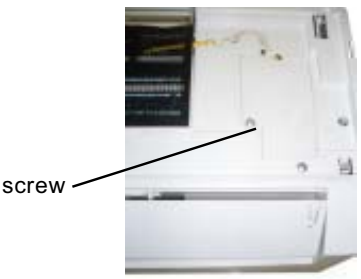
⚠ Warning **Be sure to wait 10 minutes or more after turning off all power supplies before disassembling work.**

Image shown here is indicative only. Actual product you receive may differ.

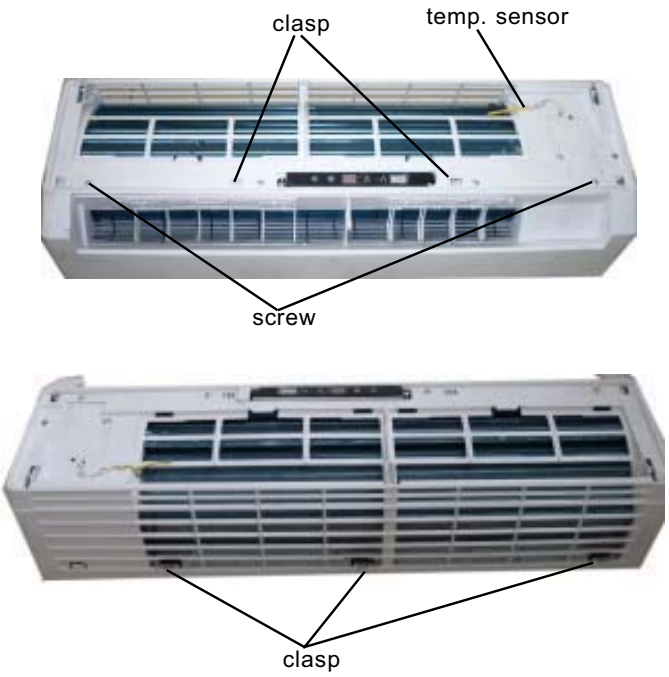
1. Remove front panel
Open the front panel and slightly pull it to remove it.

2. Remove guide louver
Push out the shaft sleeve and slightly bend the guide louver to remove it.

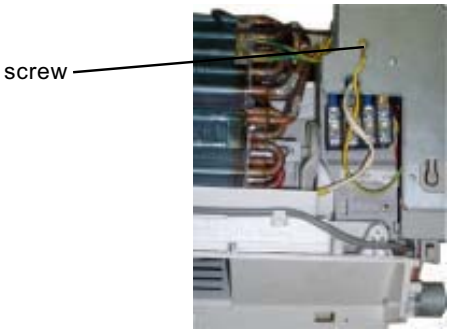
3. Remove electirc box cover
Unscrew the screw fixing the electric box cover to remove it.



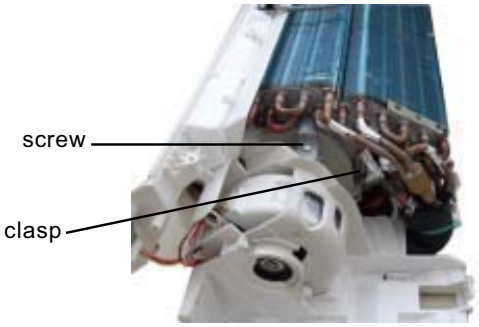
4. Remove front case
Unscrew the 6 tapping screws fixng the front panel and turn the front case backward to remove it.

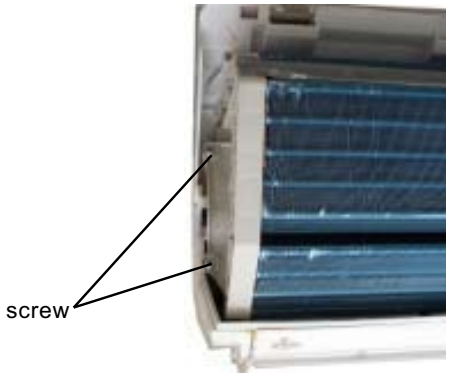


5. Remove electric box
Unscrew the 2 screws fixing the electric box
Pull out the wiring terminal of motor and then unscrew the 3 screws fixing electric box.Lift the electric box to remove it.

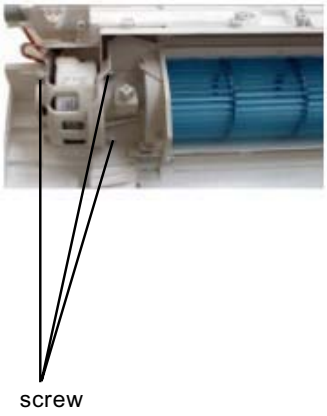


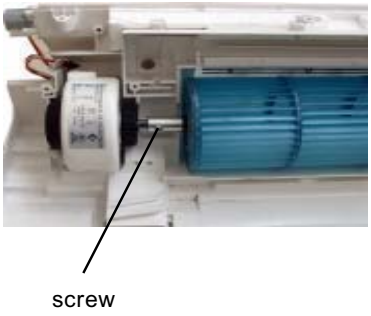
6. Remove evaporator
Unscrew the screws on the rear pipe cardplate and then remove the cardplate.





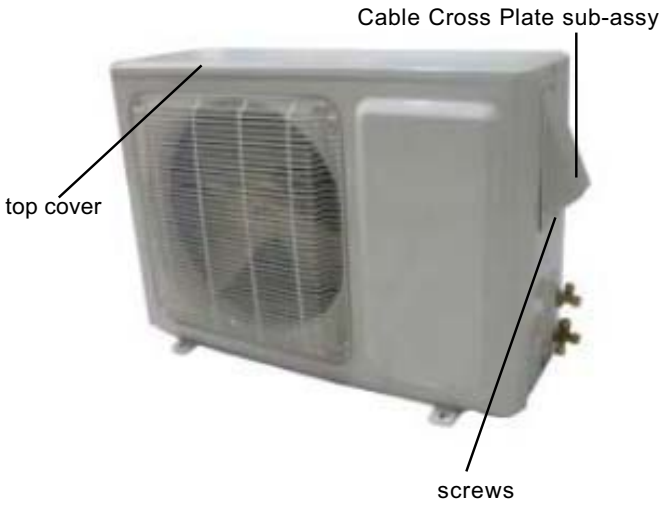
7. Remove motor and cross flow fan
Unscrew the screws fixing the motor press plate of motor and then the screws connecting the motor and cross flow fan to separate and remove them.



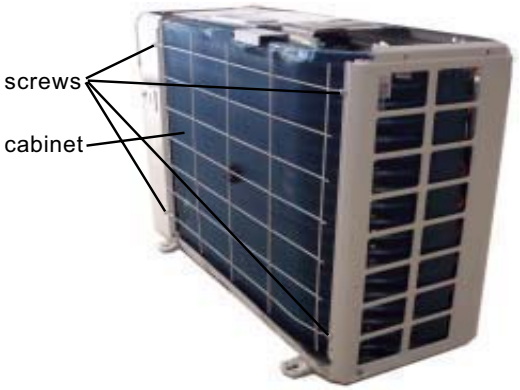


Removal Procedure of Outdoor Unit

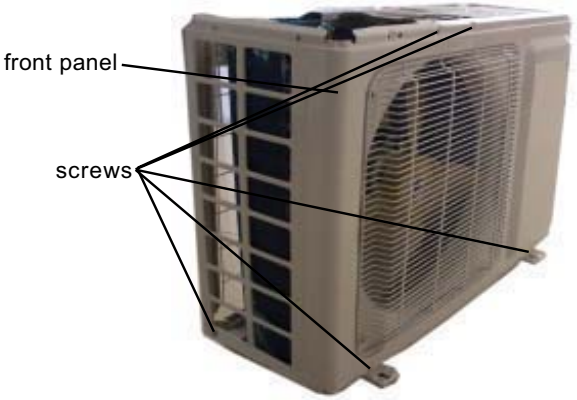
1. Remove top cover and the Cable Cross Plate sub-assy Unscrew the screw on the handle and pull the Cable Cross Plate sub-assy forcibly downwards to remove it. Unscrew the 3 screws fixing the top cover to remove it.



2. Remove cabinet
Unscrew the 4 screws fixing the cabinet to remove it.

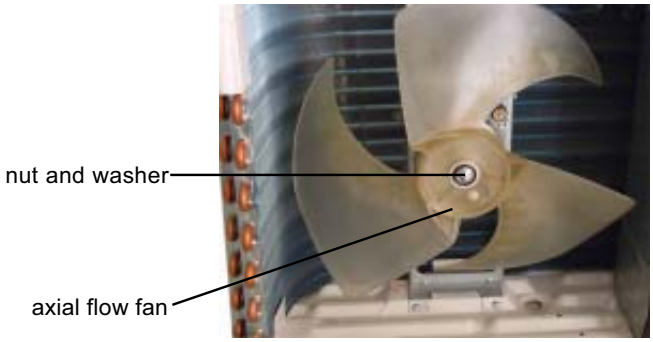


3. Remove front panel
Unscrew the 5 screws fixing the front panel and pull out the front panel to remove it.

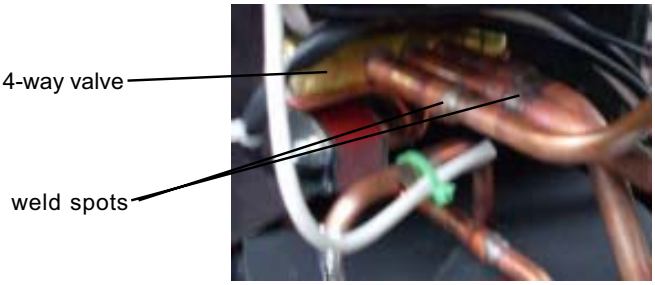


4. Remove electric box cover
Unscrew the 2 screws fixing the electiric box. Pull theelectric box upwards and unplug the plug-in line to remove the electric box.

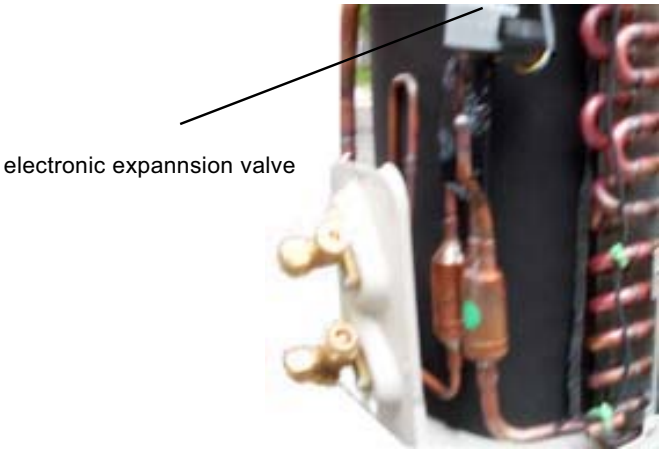
5. Remove axial flow fan
Unscrew the nut and remove the washer fixing the axial flow fan and then pull it out.



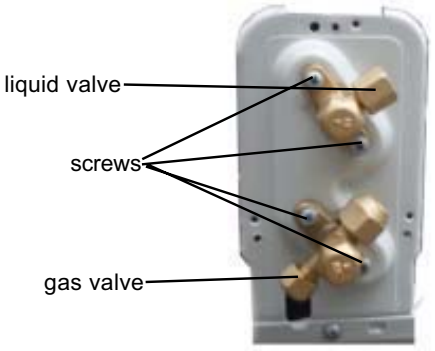
6.Remove 4-way valve
Wrap the 4-way valve with wet cloth and unsolder the 4 weld spots of the 4-way valve to remove it.



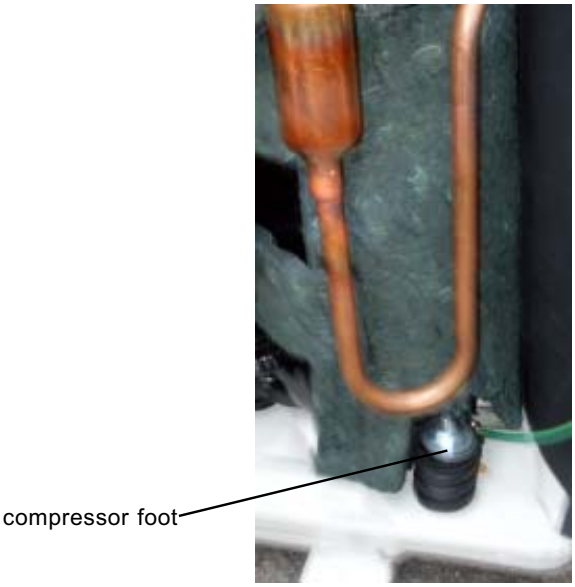
7. Remove electronic expannsion valve
Unsolder the weld spots of eletronic expansion valve connecting with other pipelines to remove it.



8. Remove gas valve and liquid valve
Unscrew the 2 screws fixing the gas valve and unsolder the weld spots of gas valve and suction pipe to remove the gas valve.
Unscrew the 2 screws fixing the liquid valve and unsolder the weld spots of liquid valve and suction pipe to remove the liquid valve.



9 . Remove compressor
Unsolder the 2 weld spots of the compressor and unscrew the 3 feet nuts and remove the washeres fixing the compressor to remove it.



Troubleshooting

⚠WARNING
Hazardous Service Procedures!

The maintenance and troubleshooting procedures recommended in this section of the manual could result in exposure to electrical, mechanical or other potential safety hazards. Always refer to the safety warnings provided throughout this manual concerning these procedures. Unless specified otherwise, disconnect all electrical power including remote disconnect and discharge all energy storing devices such as capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. When necessary to work with live electrical components, have a qualified licensed electrician or other individual who has been trained in handling live electrical components perform these tasks. Failure to follow all of the recommended safety warnings provided, could result in death or serious injury.

General Section

⚠WARNING
Hazardous Voltage!

Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized. Failure to disconnect power before servicing could result in death or serious injury.

Figure 1. Air conditioner cannot start up

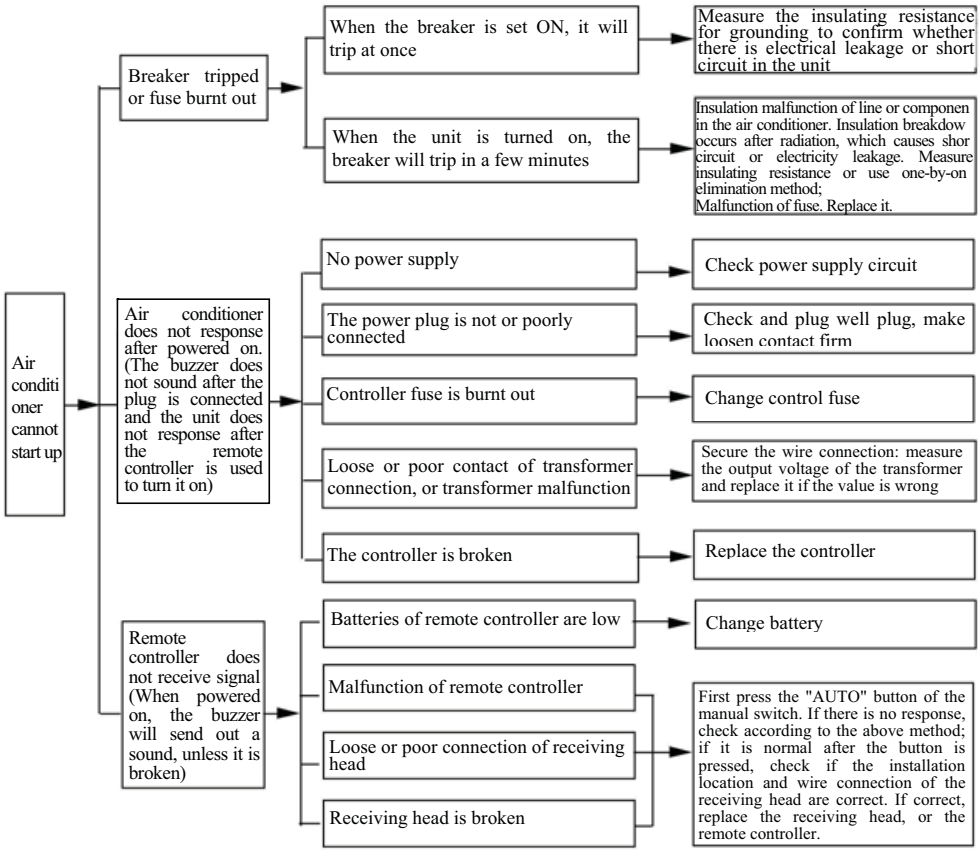


Figure 1. Troubleshooting chart

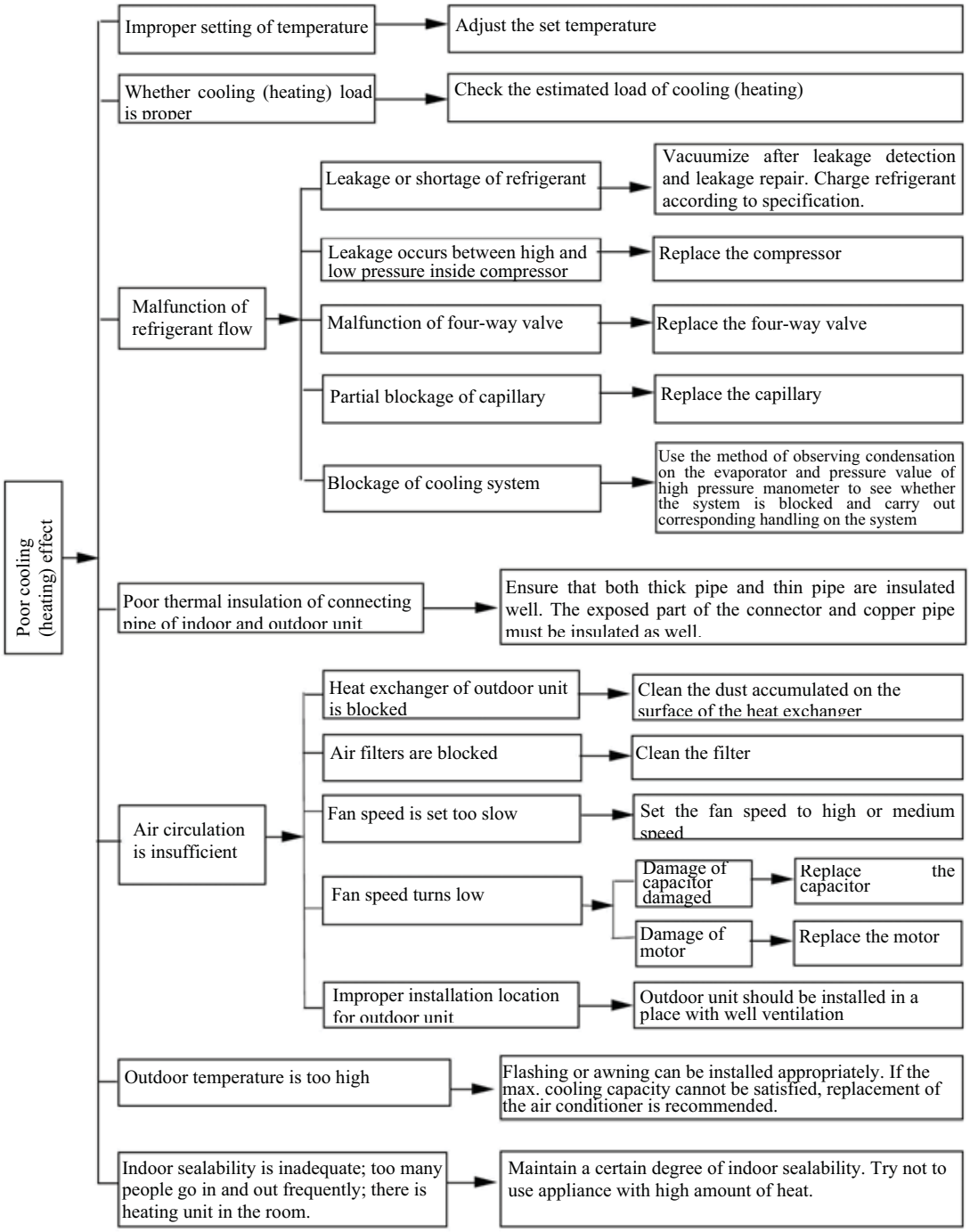


Figure 1. Troubleshooting chart

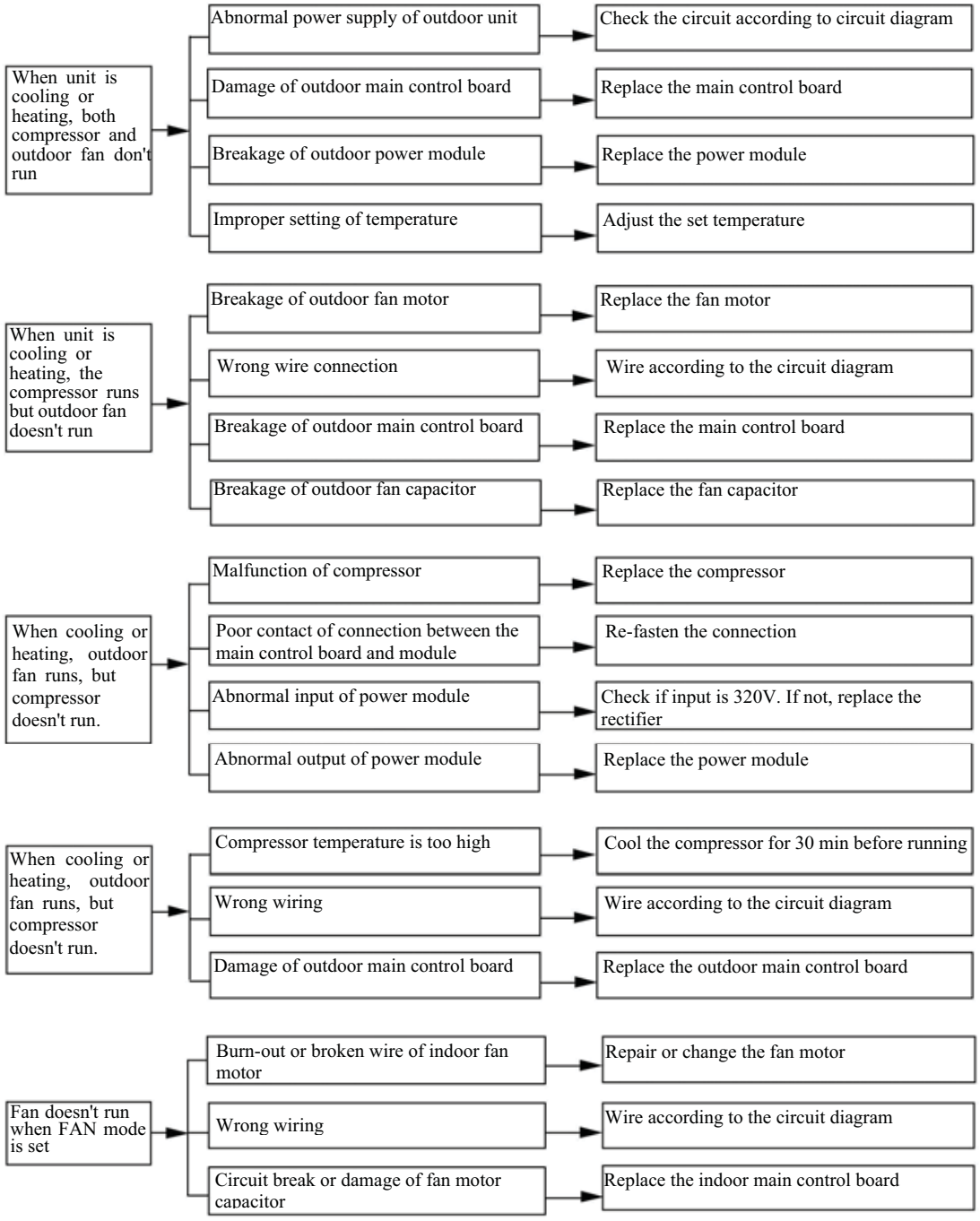
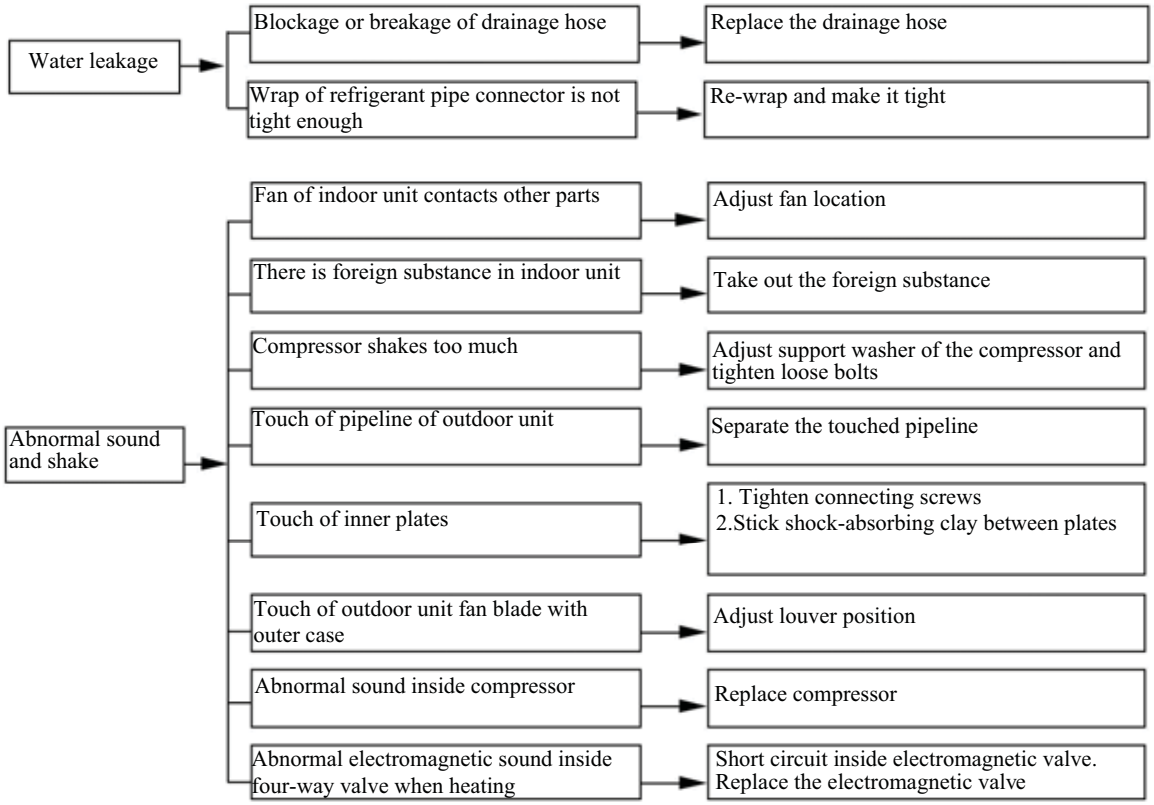
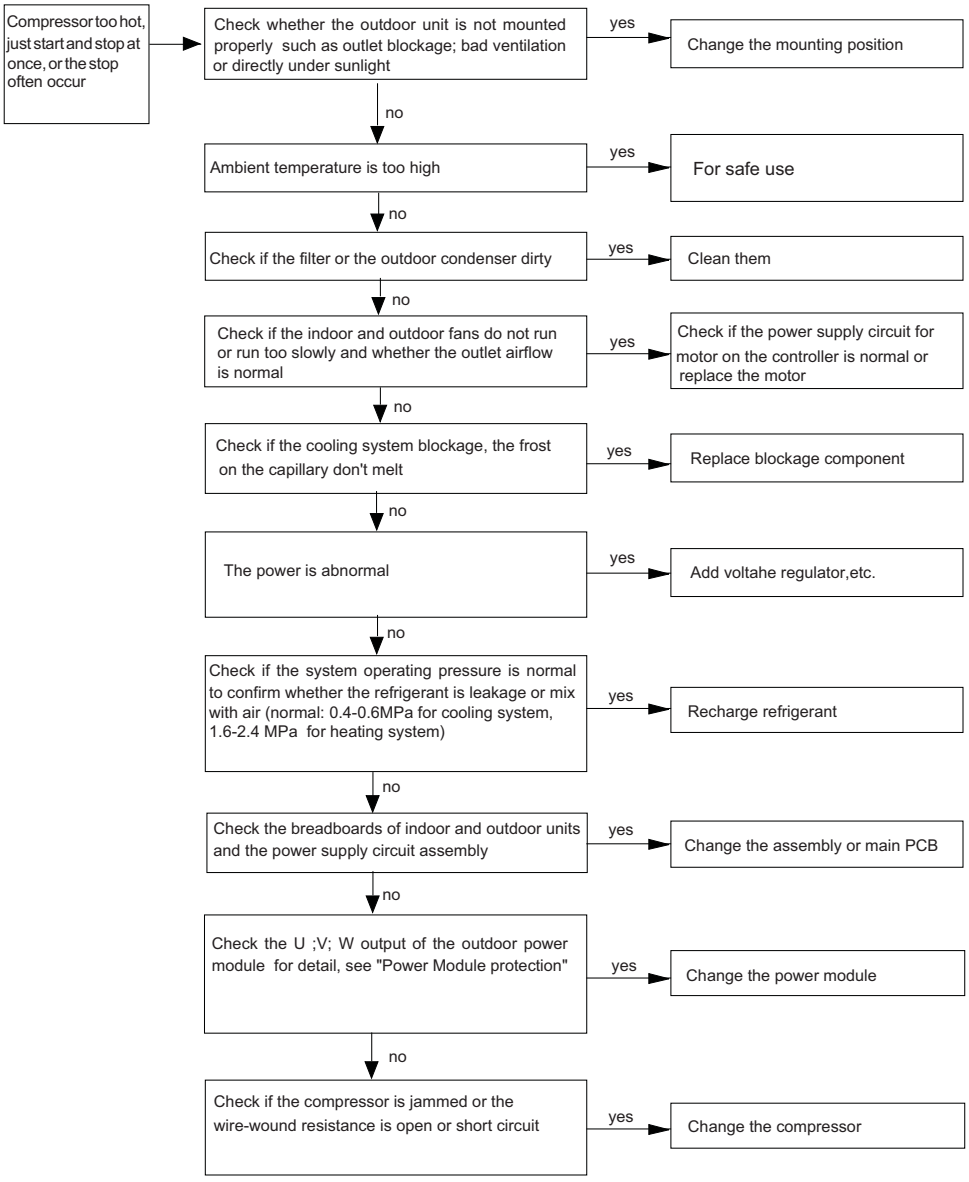


Figure 1. Troubleshooting chart



Note: *When replacing power module and rectifier, be sure to spread the radiating paste evenly.*

Figure 1. Compressor is too hot

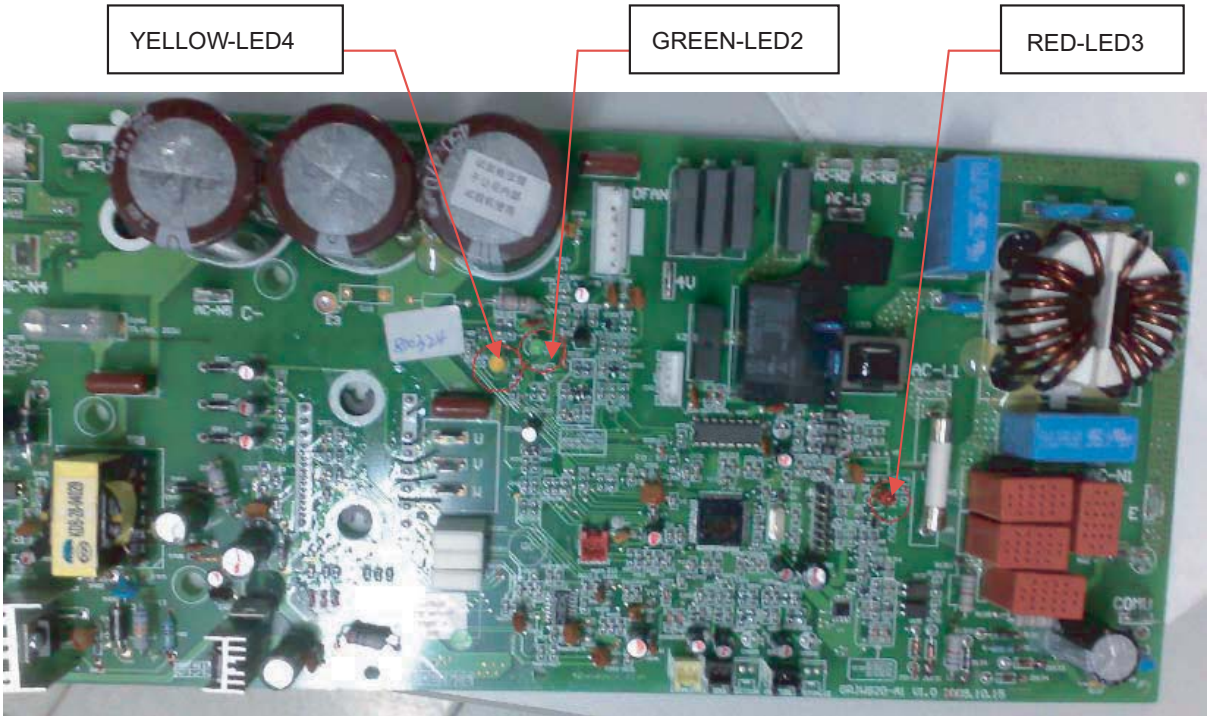


Malfunction Display Section

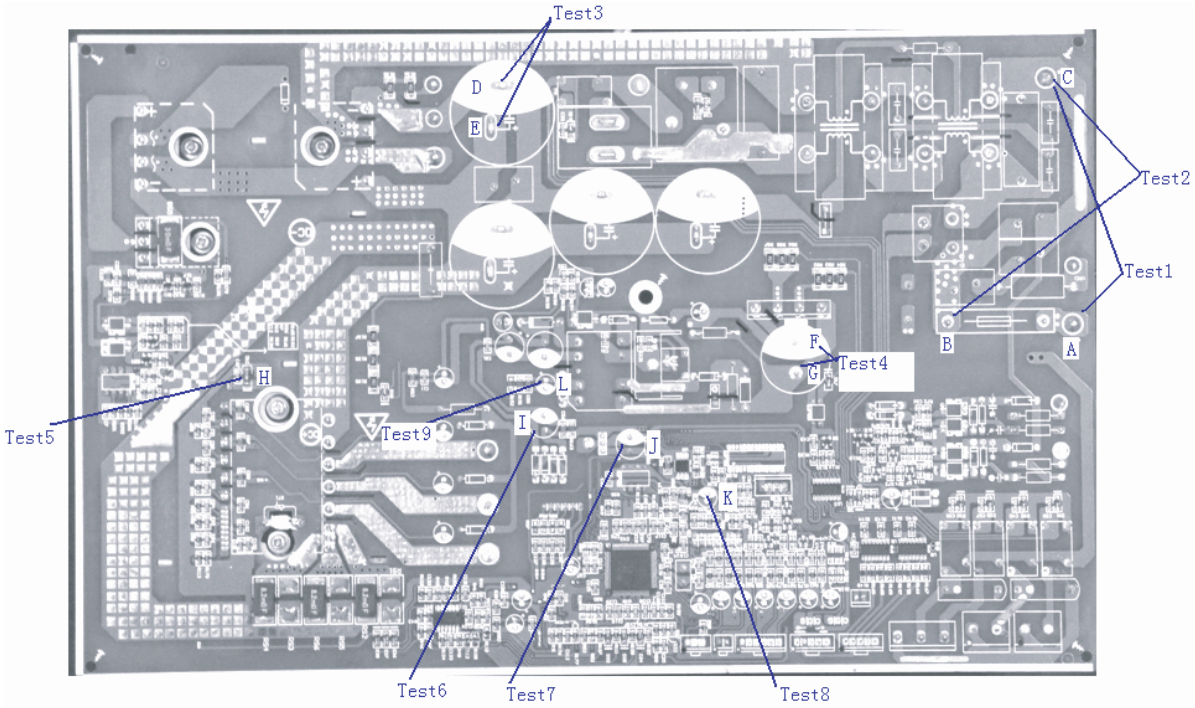
When malfunction or protection occurs in the air conditioner, corresponding code will be displayed on the screen of the indoor unit and the indicator of outdoor unit will blink accordingly as well. When protection or malfunction is eliminated, display will be back to normal.

9, 12 MBH - 60 and 50 Hz

	Name of running status	Yellow light	Red light	Green light	Indoor unit display
1	Compressor start	Blink once			
2	Defrosting	Blink twice			H1
3	Anti-freezing protection	Blink three times			E2
4	IPM protection	Blink four times			H5
5	Overcurrent protection	Blink five times			E5
6	System overload protection	Blink six times			H4
7	Air exhaust protection	Blink seven times			E4
8	Compressor Overload protection	Blink eight times			H3
9	Limited frequency (current)		Blink once		
10	Limited frequency (Air exhaust)		Blink twice		
11	Limited frequency (overload)		Blink three times		
12	Limited frequency (anti-freezing)		Blink four times		
13	Outdoor unit ambient sensor malfunction		Blink five times		F3
14	Outdoor unit tube temp. sensor malfunction		Blink six times		F4
15	Outdoor air exhaust sensor malfunction		Blink seven times		F5
16	Achieve the temperature of unitstartsup		Blink eight times		
17	Communication is normal			Blink continuously	
18	Communication malfunction			OFF	E6
19	Overload sensor malfunction		Blink nine times		H3
20	Low voltage protection	Blink twelve times			PL
21	High voltage protection	Blink thirteen times			PH
22	Indoor ambient sensor malfunction				F1
23	Indoor tube temperature sensormalfunction				F2
24	Normal cooling or norminal heating				P1
25	Max. cooling or max. heating				P2
26	Interim cooling or interim heating				P3
27	Min. cooling or Min. heating				P0


YELLOW-LED4
GREEN-LED2
RED-LED3

18, 24 MBH - 60 and 50 Hz



No.	Name of malfunction	Indoor unit displaying method				Outdoor unit display (LEDs have 3 status; □ Off ■ On ☆ Blinks				AC status	Malfunctions
		Double 8 code display	Indicator display (LED blinks 0.5s-ON/ 0.5s-OFF)								
			Running LED	Cooling LED	Heating LED	D40	D41	D42	D43		
1	System high pressure protection	E1	3s Off blink once			□	☆	☆	☆	cooling, dehumidifying, except the indoor fan motor is running, others will stop to run. heating; all stop running	High pressure of system, might be: 1.Refrigerant is too much; 2.Poor heating exchanging for units (including heat exchanger is dirty and unit heating radiating ambient is poor); 3.Ambient temp. is too high.
2	Anti-freezing protection	E2	3s Off blink twice			■	□	■	□	cooling, dehumidifying, compressor, outdoor fan motor will stop running, indoor fan motor will keep running.	1.Poor indoor unit air returning; 2.Indoor fan motor rotating speed abnormal; 3.Evaporator is dirty;
3	Compressor air exhaust high temp. protection	E4	3s Off blink four times			■	□	■	☆	cooling, dehumidifying, compressor, outdoor fan motor will stop running, indoor fan motor works. heating: all stop running.	Pls refer to trouble shoot (air exhaust protection, overload)

4	AC overload protection	E5	Off 3s blink 5 times			□	■	☆	□	Cooling, dehumidifying, compressor, outdoor fan motor will stop, indoor fan will work. heating; all will stop	1.Power supply is not stable, fluctuation is too much 2.Power supply is too low, overload is too much
5	Indoor and outdoor units communication malfunction	E6	Off 3s blink 6 times			□	□	□	☆	Cooling, compressor will stop, indoor fan motor works. Heating: all will stop.	Please refer to troubleshooting
6	Anti-high temp. protection	E8	Off 3s blink 8 times			■	□	■	■	Cooling, compressor will stop, indoor fan motor works. Heating: all will stop.	Please refer to troubleshooting
7	Indoor unit motor no feedback	H6	Off 3s blink 11 times							Whole unit will stop to run	1.Poor insert for GPF 2.Indoor control board AP1 malfunction 3.Indoor motor M1 malfunction
8	Jump wire cap malfunction protection	C5	Off 3s blink 15 times							Whole unit will stop to run	Indoor control board AP1 jump cap poor connected, please reinsert or replace the jump cap.
9	Indoor ambient sensor open circuit, short circuit	F1		Off 3s blink once						Cooling, dehumidifying: indoor fan motor is running, other overloads will stop; Heating, whole unit will stop to run.	1.Room temp. sensor is not connected with the control panel AP1 2.Room temp. sensor is damaged
10	Indoor evaporator sensor ciruit open, short circuit	F2		Off 3s blink twice						Cooling, dehumidifying; indoor fan motor running, other overload will stop; Heating, whole unit will stop.	1.Tube temp. sensor is not connected with the control panel AP1 2.Tube temp. sensor is damaged
11	Outdoor ambient sensor circuit open, circuit short	F3		Off 3s blink three times		□	□	☆	■	Cooling, dehumidifying; compressor will stop, indoor fan motor will work. Heat: all will stop	Outdoorroom temp. sensor hasn't connected well, or damaged, please refer to the sensor resistance value for checking.
12	Outdoor condensor sensor open circuit, short circuit	F4		Off 3s blink 18 times		□	□	☆	□	Cooling, dehumidifying; compressor will stop, indoor fan motor will work. Heat: all will stop	Outdoortub temp. sensor hasn't connected well, or damaged, please refer to the sensor resistance value for checking.
13	Outdoor air exhaust sensor open circuit, short circuit	F5		Off 3s blinks 5 times		□	□	☆	☆	Cooling, dehumidifying: after running for 3mins later, the compressor will stop to run, indoor fan motor will start to run. heating: after run 3 mins later, all will stop to run.	1.Exhaust temp sensor hasn't connected well, or damaged, please refer to the sensor resistance value for checking. 2.Sensor head hasn't insert into the copper tube.
14	Overload limit/ descending frequency	F6		Off 3s blink 6 times		■	□	☆	☆	Overload normal operation, compressor is running, frequency descending	Please refer to troubleshooting
15	Over current need frequency descending	F8		Off 3s blink 8 times		■	■	□	■	Overload normal operation, compressor is running, frequency descending	1.Input power supply is too low 2.System voltage is too high, overload is too much
16	Air exhaust over high need frequency descending	F9		Off 3s blink 9 times		■	■	□	□	Overload normal operation, compressor is running, frequency descending	1.Overload is too much, ambient temp. is too high 2.Refrigerant is short 3.Electric expansion malfunction
17	DC generatrix voltage	PH		Off 3s		□	■	□	☆	Cooling, dehumidifying, compressor stop running	1.Testing wire terminal L and N position

;	is too high			Blink 11 times						Fan motor works. Heating: all will stop	If higher than 265VAC, please cut off the power supply and restart until back to normal 2. If input voltage is normal, testing the voltage of electrolytic capacitor on AP1 after turn on the unit. There may be some problem and replace the AP1 if the electrolytic capacitor voltage range at 200-280V
18	Whole unit's current testing malfunction	U5		Off 3s blink 13 times		□	■	☆	■	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	The circuit on AP1 has malfunction, replace the outdoor unit AP1
19	Compressor current overcurrent protection	P5		Off 3s blink 15 times		□	☆	□	□	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Please refer to troubleshooting (IPM protection, compressor lose steps, compressor current overcurrent protection)
20	Defrosting	H1			Off 3s blink once					Under the heating mode, compressor running, indoor /outdoor fan motor stop working	It is normal function
21	Electrostatic dedust protection	H2			Off 3s blink twice						
22	Compressor overload protection	H3			Off 3s blink 3 times	□	☆	☆	□	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	1. Wire terminal OVC-COMP loosen or circuit, has problem, the resistance of SAT should be lower than 1 ohm. 2.Please refer to troubleshooting (exhaust/overload protection)
23	System Overload	H4			off 3s blink 4 times	■	□	■	■	cooling, drying: compressor will stop running, indoor fan is running.Heating: all will stop running	Refer to malfunction analysis (overload, , high temperature resistant)
24	IPM protection	H5			off 3s blink 5 times	□	☆	□	■	cooling, drying: compressor will stop running, indoor fan is running.Heating: all will stop running	Refer to malfunction analysis (IPM protection, compressor loses steps, compressor overcurrent protection)
25	PFC protection	HC			Off 3s blink 6 times	□	■	☆	☆	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Pls refer to troubleshooting
26	Compressor lose steps	H7			Off 3s blink 7 times	□	☆	■	☆	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Pls refer to troubleshooting
27	Heating, anti-high temp. declines	H0			Off 3s blink 10 times	■	□	☆	☆	Overload normal works, compressor running, frequency declines	Pls refer to troubleshooting
28	Startsup fail	Lc			Off 3s blink 11 times	□	☆	□	☆	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Pls refer to troubleshooting
29	Compressor current testing circuit malfunction	U1			Off 3s blink 13 times	□	☆	■	□		Replace the outdoor control board AP1
30	EEPROM malfunction	EE			Off 3s blink 15 times	□	□	□	■	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Replace the outdoor control board AP1
31	Capacitor charge malfunction	PU			Off 3s blink 17 times	□	■	□	■	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Pls refer to Part 3 capacitor charging fault of troubleshooting
32	Module sensor circuit diagram	P7			Off 3s blink 18 times	□	□	■	☆	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	Replace the outdoor control board AP1
33	Module temp. over high protection	P8			Off 3s blink 19 times	■	□	☆	■	Cooling, dehumidifying; compressor stops running, indoor fan motor works. Heating: all will stop running	To check whether the ambient Temp. of IPM is too high or the heat-sinhing of IPM is dirty else replace the outdoor baord AP1

34	DC Bus voltage dips	U3			Off 3s blink 20 times	□	■	■	■	Cooling, dehumidifying; compressor will stop, indoor fan motor works. Heating: all will stop	Power voltage is not staable
35	Low DC Bus voltage protection	PL			Off 3s blink 21 times	□	■	■	□	Cooling, dehumidifying; compressor will stop, indoor fan motor works. Heating: all will stop	1.Check the Input voltage if the Voltageis lower than 150VAC, restart the machine when the power supply is normal 2.Checking the reactor L connection
36	IPM temp. is too high limit/decrease frequency	EU				■	■	■	☆	Overload normal works, compressor running frequency declines	Whole unit break for 20mins and discharge,to check the outdoor control board AP1' s IPM module coolant whether is short, the radiator is tightened. If above phenomenon is not ok, please improve or replace the control board AP1
37	Four-way valve abnormal	U7				■	□	☆	□	This malfunction happened,only in heating mode, all will stop to run	1.Power supply voltage is lower than AC175V 2.Wire terminal 4V loosen or wire break 3.4V damaged, replace 4V
38	Outdoor unit zero-cross detecting error	U9				■	■	☆	□	Cooling: compressor will stop, indoor fan motor works. Heating: all will stop	Replace the outdoor control board AP1
39	Anti-freezing limit/decrease frequency	FH				■	■	■	□	All loadsworknormally but the running frequency limited or decrease	Indoor unit air return is poor or fan speed is too low

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