DM16-01.01.11-03en

Mission Inverter Series

MULTI SERIES

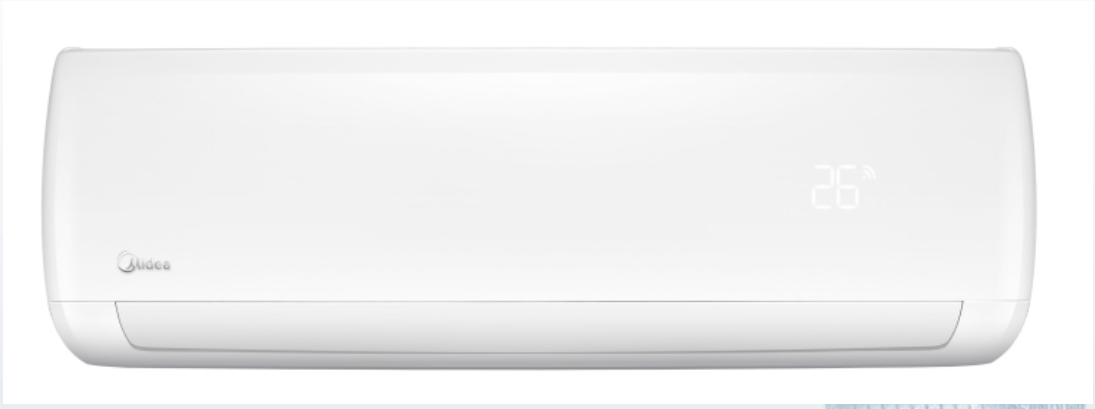
Service Manual

MSMBAU-09HRFN1-Q(BW)

MSMBBU-12HRFN1-Q(BW)

MSMBCU-18HRFN1-Q(BW)

MSMBDU-24HRFN1-Q(BW)



CONTENTS

1. Precaution

1.1 Safety Precaution

■ **To prevent injury to the user or other people and property damage, the following instructions must be followed.**

■ **Incorrect operation due to ignoring instruction will cause harm or damage.**

■ **Before service the unit, be sure to read this service manual at first.**

1.2 Warning

➢ Installation

■ **Do not use a defective or underrated circuit breaker. Use this appliance on a dedicated circuit.**

There is risk of fire or electric shock.

■ **For electrical work, contact the dealer, seller, a qualified electrician, or an authorized service center.**

Do not disassemble or repair the product, there is risk of fire or electric shock.

■ **Always ground the product.**

There is risk of fire or electric shock.

■ **Install the panel and the cover of control box securely.**

There is risk of fire of electric shock.

■ **Always install a dedicated circuit and breaker.**

Improper wiring or installation may cause fore or electric shock.

■ **Use the correctly rated breaker of fuse.**

There is risk of fire or electric shock.

■ **Do not modify or extend the power cable.**

There is risk of fire or electric shock.

■ **Do not install, remove, or reinstall the unit by yourself (customer).**

There is risk of fire, electric shock, explosion, or injury.

■ **Be caution when unpacking and installing the product.**

Sharp edges could cause injury, be especially careful of the case edges and the fins on the condenser and evaporator.

■ **For installation, always contact the dealer or an authorized service center.**

■ **Do not install the product on a defective installation stand.**

■ **Be sure the installation area does not deteriorate with age.**

If the base collapses, the air conditioner could fall with it, causing property damage, product failure, and personal injury.

■ **Do not let the air conditioner run for a long time when the humidity is very high and a door or a window is left open.**

■ **Take care to ensure that power cable could not be pulled out or damaged during operation.**

There is risk of fire or electric shock.

■ **Do not place anything on the power cable.**

There is risk of fire or electric shock.

- **Do not plug or unplug the power supply plug during operation.**

There is risk of fire or electric shock.

- **Do not touch (operation) the product with wet hands.**
- **Do not place a heater or other appliance near the power cable.**

There is risk of fire and electric shock.

- **Do not allow water to run into electrical parts.**

It may cause fire, failure of the product, or electric shock.

- **Do not store or use flammable gas or combustible near the product.**

There is risk of fire or failure of product.

- **Do not use the product in a tightly closed space for a long time.**

Oxygen deficiency could occur.

- **When flammable gas leaks, turn off the gas and open a window for ventilation before turn the product on.**
- **If strange sounds or smoke comes from product, turn the breaker off or disconnect the power supply cable.**

There is risk of electric shock or fire.

- **Stop operation and close the window in storm or hurricane. If possible, remove the product from the window before the hurricane arrives.**

There is risk of property damage, failure of product, or electric shock.

- **Do not open the inlet grill of the product during operation. (Do not touch the electrostatic filter, if the unit is so equipped.)**

There is risk of physical injury, electric shock, or product failure.

- **When the product is soaked, contact an authorized service center.**

There is risk of fire or electric shock.

- **Be caution that water could not enter the product.**

There is risk of fire, electric shock, or product damage.

- **Ventilate the product from time to time when operating it together with a stove etc.**

There is risk of fire or electric shock.

- **Turn the main power off when cleaning or maintaining the product.**

There is risk of electric shock.

- **When the product is not be used for a long time, disconnect the power supply plug or turn off the breaker.**

There is risk of product damage or failure, or unintended operation.

- **Take care to ensure that nobody could step on or fall onto the outdoor unit.**

This could result in personal injury and product damage.

➢ CAUTION

- **Always check for gas (refrigerant) leakage after installation or repair of product.**

Low refrigerant levels may cause failure of product.

- **Install the drain hose to ensure that water is drained away properly.**

A bad connection may cause water leakage.

- **Keep level even when installing the product.**

It can avoid vibration of water leakage.

- **Do not install the product where the noise or hot air from the outdoor unit could damage the neighborhoods.**

It may cause a problem for your neighbors.

- **Use two or more people to lift and transport the product.**
- **Do not install the product where it will be exposed to sea wind (salt spray) directly.**

It may cause corrosion on the product. Corrosion, particularly on the condenser and evaporator fins, could cause product malfunction or inefficient operation.

➢ Operational

- **Do not expose the skin directly to cool air for long time. (Do not sit in the draft).**
- **Do not use the product for special purposes, such as preserving foods, works of art etc. It is a consumer air conditioner, not a precision refrigerant system.**

There is risk of damage or loss of property.

- **Do not block the inlet or outlet of air flow.**
- **Use a soft cloth to clean. Do not use harsh detergents, solvents, etc.**

There is risk of fire, electric shock, or damage to the plastic parts of the product.

- **Do not touch the metal parts of the product when removing the air filter. They are very sharp.**
- **Do not step on or put anything on the product. (outdoor units)**
- **Always insert the filter securely. Clean the filter every two weeks or more often if necessary.**

A dirty filter reduces the efficiency of the air conditioner and could cause product malfunction or damage.

- **Do not insert hands or other objects through air inlet or outlet while the product is operated.**
- **Do not drink the water drained from the product.**
- **Use a firm stool or ladder when cleaning or maintaining the product.**

Be careful and avoid personal injury.

- **Replace the all batteries in the remote control with new ones of the same type. Do not mix old and new batteries or different types of batteries.**

There is risk of fire or explosion.

- **Do not recharge or disassemble the batteries. Do not dispose of batteries in a fire.**

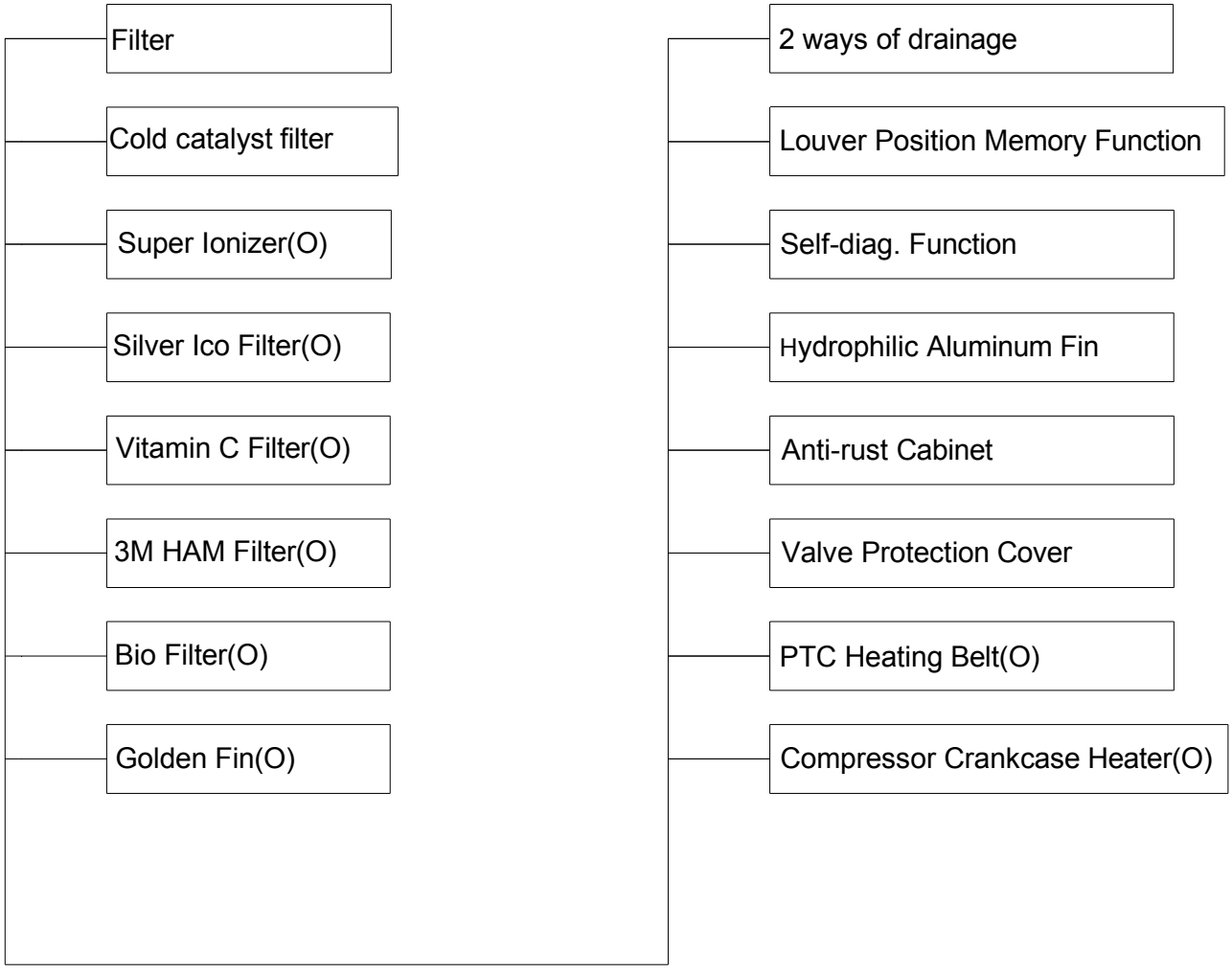
They may burn of explode.

- **If the liquid from the batteries gets onto your skin or clothes, wash it well with clean water. Do not use the remote of the batteries have leaked.**

2. Function

Model Names of Indoor Units

	Capacity	Indoor units
DC Inverter Multi Series	9k	MSMBAU-09HRFN1-Q(BW)
	12k	MSMBBU-12HRFN1-Q(BW)
	18k	MSMBCU-18HRFN1-Q(BW)
	24k	MSMBDU-24HRFN1-Q(BW)



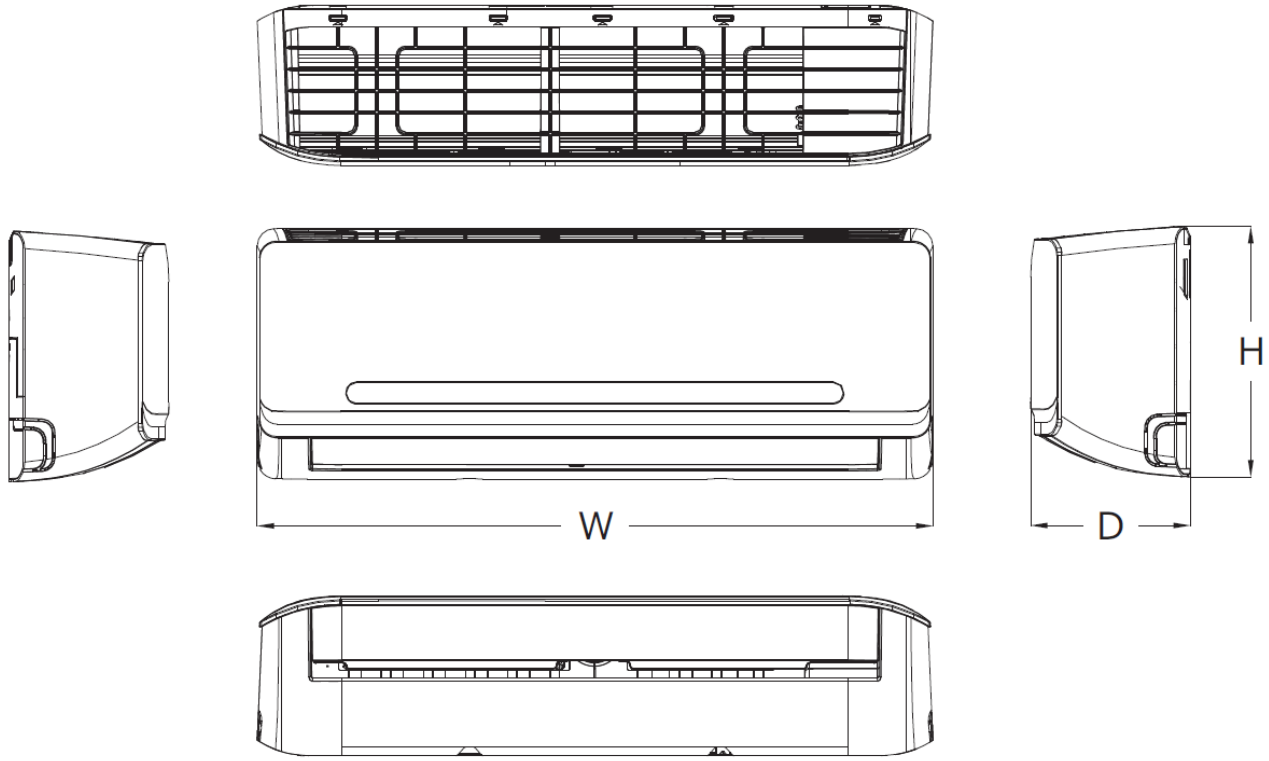
O:optional

3. Specification

Model			MSMBAU-09HRFN1-Q(BW)	MSMBBU-12HRFN1-Q(BW)
Power supply		Ph-V-Hz	220-240V~ 50Hz, 1Ph	220-240V~ 50Hz, 1Ph
Cooling	Capacity	Btu/h	9000	12000
	Input	W	24	24
	Rated current	A	0.11	0.11
Heating	Capacity	Btu/h	10000	13000
	Input	W	24	24
	Rated current	A	0.11	0.11
Indoor fan motor	Model		ZKFP-20-8-6	ZKFP-20-8-6
	Iutput	W	20(Output)	20(Output)
	Capacitor	uF	--	--
	Speed(Hi/Mi/Lo)	r/min	1050/850/700	1100/1000/700
Indoor coil	a.Number of rows		2	2
	b.Tube pitch(a)x row pitch(b)	mm	21x13.37	21x13.37
	c.Fin spacing	mm	1.3	1.3
	d.Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	e.Tube outside dia.and type	mm	Φ6,innergroove tube	Φ7,innergroove tube
	f.Coil length x height x width	mm	525x294x26.74	605x294x26.74
	g.Number of circuits		2	2
Indoor air flow (Hi/Mi/Lo)		m3/h	500/420/310	419/458/266
Indoor sound pressure level(Hi/Mi/Lo)		dB(A)	37/31/23	38/35/28
Indoor sound power level		dB(A)	53	51
Indoor unit	Dimension(W*D*H)	mm	730x198x293	810x200x300
	Packing (W*D*H)	mm	810x285x375	890x285x385
	Net/Gross weight	Kg	7.4/9.8	8.2/11.1
	Liquid side/ Gas side	mm(inch)	Φ6.35/Φ9.52(1/4"/3/8")	Φ6.35/Φ9.52(1/4"/3/8")
Thermostat type			RG58B/BGE	RG58B/BGE
Room temperature	Cooling	℃	17-32	17-32
	Heating	℃	0-30	0-30
Operation temperature		℃	17-30	17-30

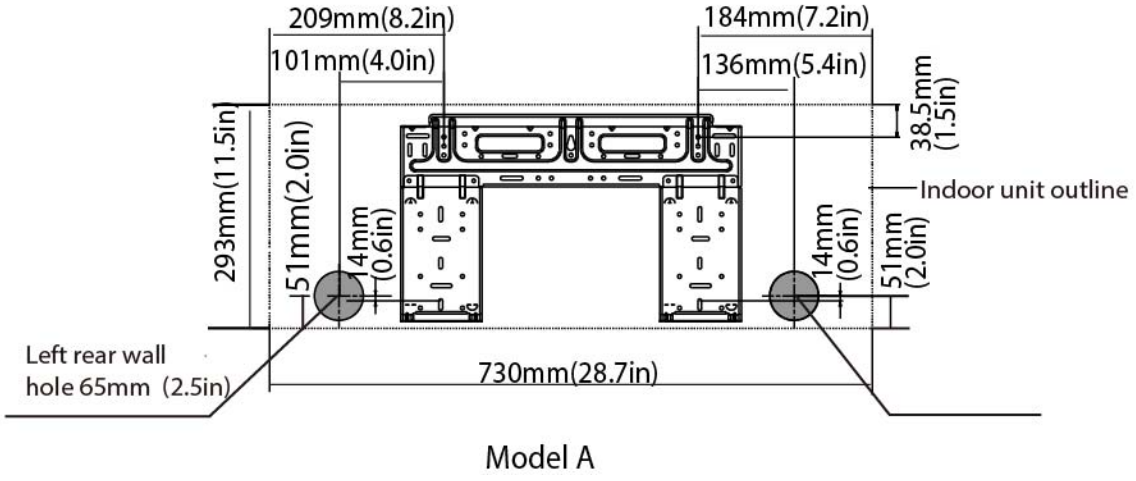
Model			MSMBCU-18HRFN1-Q(BW)	MSMBDU-24HRFN1-Q(BW)
Power supply		Ph-V-Hz	220-240V~ 50Hz, 1Ph	220-240V~ 50Hz, 1Ph
Cooling	Capacity	Btu/h	18000	24000
	Input	W	34	62
	Rated current	A	0.14	0.28
Heating	Capacity	Btu/h	19000	26000
	Input	W	34	62
	Rated current	A	0.14	0.28
Indoor fan motor	Model		ZKFP-30-8-3	ZKFP-58-8-1
	Iutput	W	30(Output)	58(Output)
	Capacitor	uF	--	--
	Speed(Hi/Mi/Lo)	r/min	1100/800/700	1100/900/700
Indoor coil	a.Number of rows		2	2
	b.Tube pitch(a)x row pitch(b)	mm	21x13.37	21x13.37
	c.Fin spacing	mm	1.2	1.3
	d.Fin type (code)		Hydrophilic aluminium	Hydrophilic aluminium
	e.Tube outside dia.and type	mm	Φ7,innergroove tube	Φ7,innergroove tube
	f.Coil length x height x width	mm	750x336x26.74	820x336x26.74
	g.Number of circuits		4	4
Indoor air flow (Hi/Mi/Lo)		m3/h	725/530/460	1055/850/670
Indoor sound pressure level(Hi/Mi/Lo)		dB(A)	42/37/33/	46/40/30
Indoor sound power level		dB(A)	55	60
Indoor unit	Dimension(W*D*H)	mm	980x225x325	1090x235x338
	Packing (W*D*H)	mm	1055x305x405	1165x420x315
	Net/Gross weight	Kg	10.5/13.5	12.9/16.5
	Liquid side/ Gas side	mm(inch)	Φ6.35/Φ12.7(1/4"/1/2")	Φ9.52/Φ15.9(3/8"/5/8")
Thermostat type			RG58B/BGE	RG58B/BGE
Room temperature	Cooling	℃	17-32	17-32
	Heating	℃	0-30	0-30
Operation temperature		℃	17-30	17-30

4. Dimension



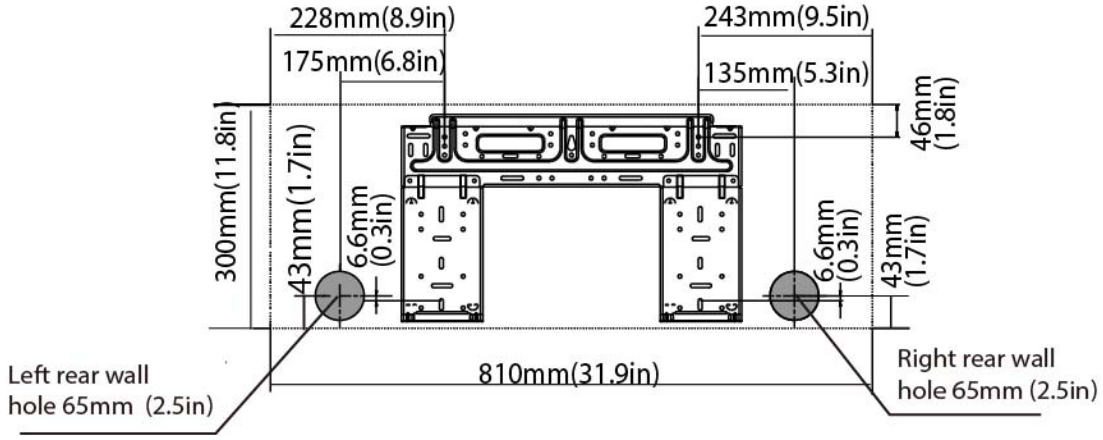
Model	W	D	H
MSMBAU-09HRFN1-Q(BW)	730	198	293
MSMBBU-12HRFN1-Q(BW)	810	200	300
MSMBCU-18HRFN1-Q(BW)	980	225	325
MSMBDU-24HRFN1-Q(BW)	1090	235	338

For MSMBAU-09HRFN1-Q(BW),



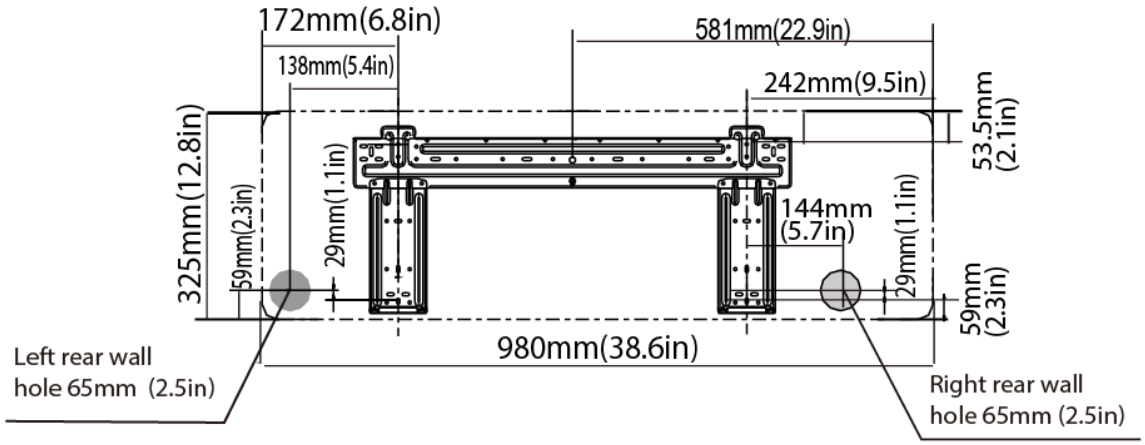
Model A

For MSMBBU-12HRFN1-Q(BW),



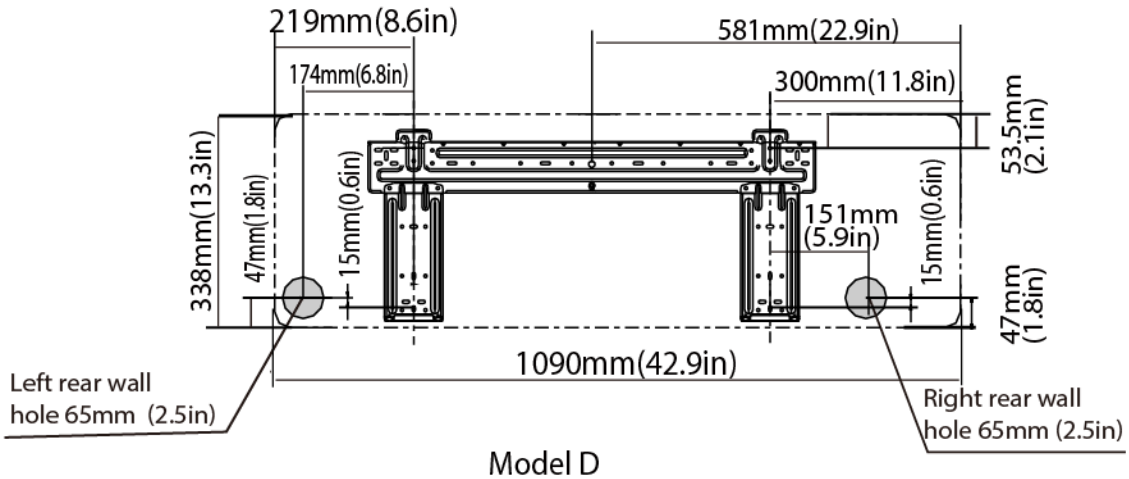
Model B

For MSMBCU-18HRFN1-Q(BW),



Model C

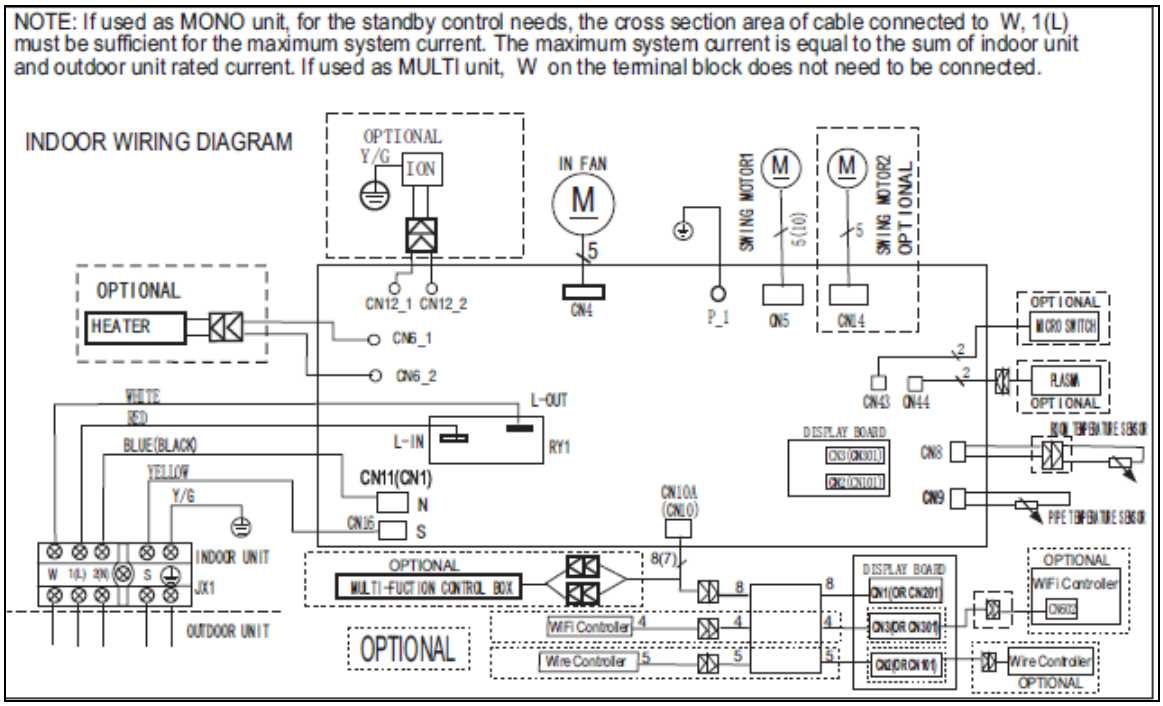
For MSMBDU-24HRFN1-Q(BW),



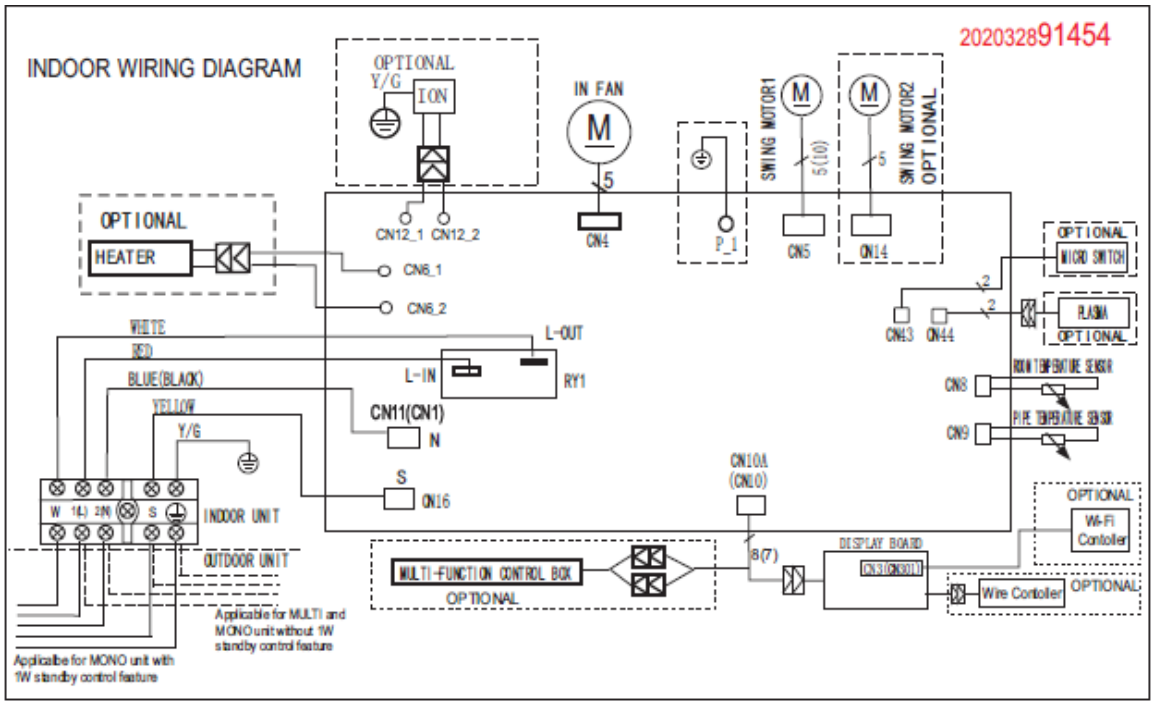
Model D

5. Wiring Diagram

MSMBAU-09HRFN1-Q(BW), MSMBBU-12HRFN1-Q(BW), MSMBCU-18HRFN1-Q(BW)



MSMBDU-24HRFN1-Q(BW)



6. Operation Characteristics

Mode / Temperature	Cooling operation	Heating operation	Drying operation
Room temperature	17℃~32℃	0℃~30℃	10℃~32℃
Outdoor temperature	0℃~50℃	-15℃~30℃	0℃~50℃
	-15℃~50℃ (For the models with low temperature cooling system)		

CAUTION:

1. If the air conditioner is used beyond the above conditions, certain safety protection features may come into operation and cause the unit to operate abnormally.

2. The room relative humidity should be less than 80%. If the air conditioner operates beyond this figure, the surface of the air conditioner may attract condensation. Please set the vertical air flow louver to its maximum angle (vertically to the floor), and set HIGH fan mode.

3. The optimum performance will be achieved during this operating temperature zone.

7. Electronic function

7.1 Abbreviation

T1: Indoor room temperature

T2: Coil temperature of evaporator

T3: Coil temperature of condenser

T4: Outdoor ambient temperature

T5: Compressor discharge temperature

7.2 Display function

7.2.1 Icon explanation on indoor display board.

Digital display:

Displays the temperature settings when the air conditioner is operational.

Displays the room temperature in FAN mode.

Displays the self-diagnostic codes.

Dispalys ‘ON’ for three seconds when Timer ON, Fresh, Swing, Turbo or Silence feature is activated.

Dispalys ‘OF’ for three seconds when Timer OFF is set. Fresh, Swing, Turbo or Silence feature is cancelled.

Dispalys ‘dF’ under deforsting operation.

Dispalys ‘cF’ when anti-cold air feature is activated under heating mode.

Dispalys ‘SC’ during self clean operation (if aplicable).

Dispalys ‘FP’ under 8℃ heating operation.

When ECO function(optional) is actived,the “88” illuminates gradually one by one as E→C→0→set temperature→E ....

In one second interval.

WIFI control display

Displays when the WIFI control feature is activated.

NOTE:

A guide on using the infrared remote is not included in this literature package..

7.3 Main Protection

7.3.1 Three minutes delay at restart for compressor

7.3.2 Fan speed is out of control

When indoor fan speed keeps too low (300RPM) for certain time, the unit will stop and the LED will display the failure

7.3.3 Inverter module protection

The Inverter module has a protection function about current, voltage and temperature. If these protections happen, the corresponding code will display on indoor unit and the unit will stop working.

7.3.4 Indoor fan delayed open function

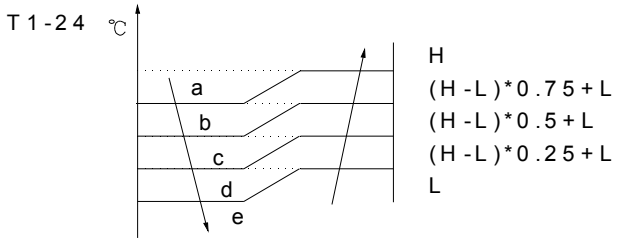
When the unit starts up, the louver will be active immediately and the indoor fan will open 7s later.
If the unit runs in heating mode, the indoor fan will be also controlled by anti-cold wind function.

7.3.5 Sensor protection at open circuit and breaking disconnection.

7.4 Operation Modes and Functions

7.4.1 Fan mode

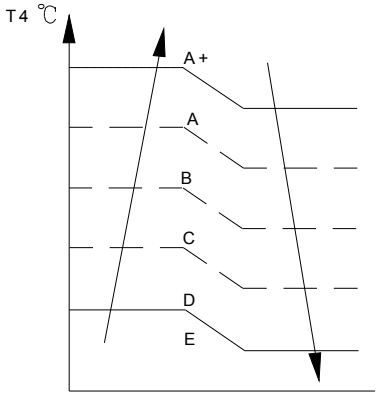
(1) Outdoor fan and compressor stop.
(2) Temperature setting function is disabled, and no setting temperature is displayed.
(3) Indoor fan can be set to high/med/low/auto.
(4) The louver operates same as in cooling mode.
(5) Auto fan:



7.4.2 Cooling Mode

7.4.2.1 Outdoor fan running rules

The outdoor unit will be run at different fan speed according to T4.
For different outdoor units, the fan speeds are different.



While A,B,C…means different fan speed of outdoor unit.

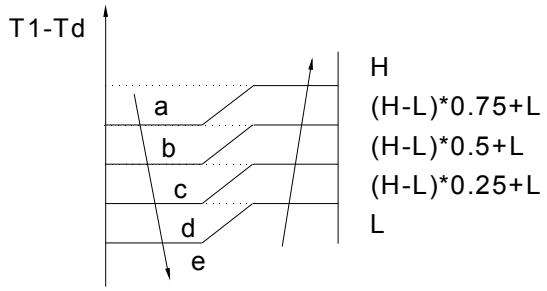
7.4.2.2 Indoor fan running rules

In cooling mode, indoor fan runs all the time and the speed can be selected as high, medium, low and auto.

The indoor fan is controlled as below:

Setting fan speed	T1-Td ℃(°F)		Actual fan speed
H		A	H+(H+=H+G)
			H (=H)
		B	
		C	H-（H-=H-G)
M		D	M+(M+=M+Z)
			M(M=M)
		E	
		F	M-(M-=M-Z)
L		G	L+(L+=L+D)
			L(L=L)
		H	
		I	L-(L-=L-D)

The auto fan acts as below rules:



7.4.2.3 Evaporator temperature protection

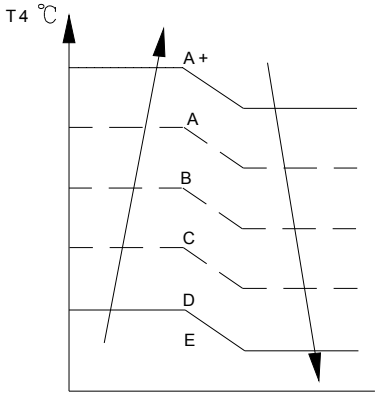
T2<4°C for 250s or T2<0°C , the indoor has no capacity demand and resume till T2>8°C

7.4.3 Heating Mode

7.4.3.1 Outdoor fan running rules

The outdoor unit will be run at different fan speed according to T4.

For different outdoor units, the fan speeds are different.



While A,B,C…means different fan speed of outdoor unit.

7.4.3.2 Indoor fan running rules

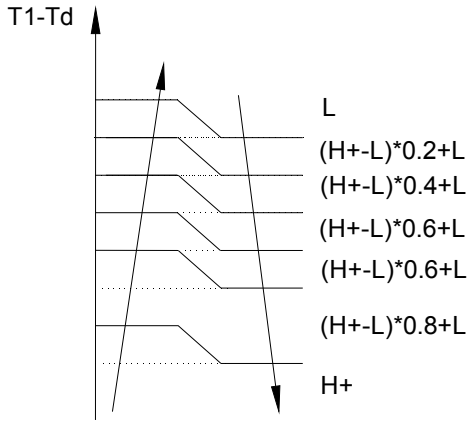
When the compressor is on, the indoor fan can be set to high/med/low/auto. And the anti-cold wind

function has the priority.

The indoor fan is controlled as below:

Setting fan speed	T1-Td ℃(℉)		Actual fan speed
H		A	H+(H+=H+G)
			H (=H)
		B	
		C	H- (H-=H-G)
M		D	M+(M+=M+Z)
			M(M=M)
		E	
		F	M-(M-=M-Z)
L		G	L+(L+=L+D)
			L(L=L)
		H	
		I	L-(L-=L-D)

Auto fan action in heating mode:



7.4.3.3 Defrosting mode

AC will enter the defrosting mode according to the value of temp. of T3 and the value range of temp. change of T3 and also the compressor running time.

During the defrosting mode, the compressor keep running, indoor and outdoor motor will stop, defrost lamp of the indoor unit will be lighted "dF." Will be displayed.

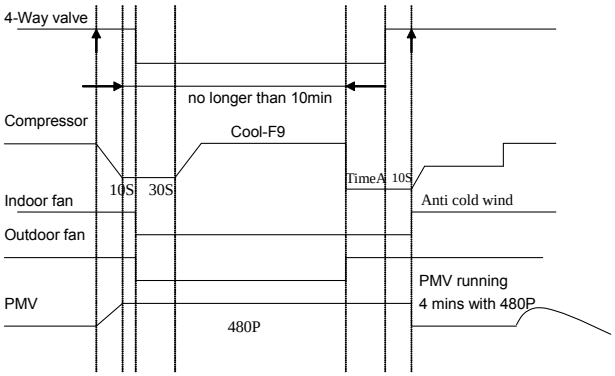
If any one of the following items is satisfied, the defrosting will finish and the machine will turn to normal heating mode.

----T3 rises to be higher than TCDE1℃.

----T3 keeps to be higher than TCDE2℃ for 80 seconds.

----The machine has run for 15 minutes in defrosting mode.

Defrosting action：



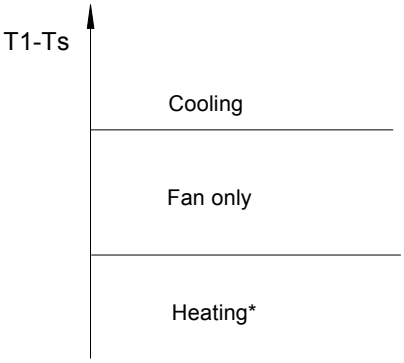
7.4.3.4 Evaporator coil temperature protection

If T2>63°C, the indoor unit has no capacity demand and resume till 48°C.

7.4.4 Auto-mode

This mode can be chosen with remote controller and the setting temperature can be changed between 17°C~30°C

In auto mode, the machine will choose cooling, heating or fan-only mode according to ΔT (ΔT =T1-Ts).



Indoor fan will run at auto fan of the relevant mode.

The louver operates same as in relevant mode.

If the machine switches mode between heating and cooling, the compressor will keep stopping for 15 minutes and then choose mode according to T1-Ts.

If the setting temperature is modified, the machine will choose running function again.

7.4.5 Drying mode

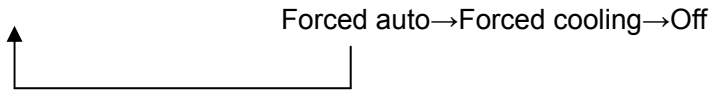
Indoor fan speed is fixed at breeze and can't be changed. The louver angle is the same as in cooling mode.

All protections are active and the same as that in cooling mode.

7.4.6 Forced operation function

7.4.6.1 Enter forced operation function:

Press the touch button continually, the AC will run as below sequence:



When the machine is off, pressing the touch button will carry the machine to forced auto mode, after this, if pressing the button once again, the machine will turn into forced cooling mode.

In forced cooling mode, pressing touch button will turn off the machine.

7.4.6.2 In forced operation mode, all general protections and remote control are available.

7.4.6.3 Operation rules:

Forced cooling mode:

Indoor fan runs as breeze. After running for 30 minutes. the machine will turn to auto mode as 24℃ setting temperature.

Forced auto mode:

The action of forced auto mode is the same as normal auto mode with 24℃ setting temperature.

7.4.6.4 When there's indoor unit running in forced cooling, it is the master forced cooling unit. Other indoor units will run at forced cooling mode too and they will be the slave forced cooling units. The slave forced cooling units can not quit forced cooling mode until the master forced cooling unit quit, and turn to cooling mode at low speed with 24℃ setting temperature.

7.4.6.5 The slave forced cooling units will not be controlled by other signals.

7.4.7 Timer function

7.4.7.1 Timing range is 24 hours.
7.4.7.2 Timer on. The machine will turn on automatically when reaching the setting time.
7.4.7.3 Timer off. The machine will turn off automatically when reaching the setting time.
7.4.7.4 Timer on/off. The machine will turn on automatically when reaching the setting "on" time, and then turn off automatically when reaching the setting "off" time.
7.4.7.5 Timer off/on. The machine will turn off automatically when reaching the setting "off" time, and then turn on automatically when reaching the setting "on" time.
7.4.7.6 The timer function will not change the AC current operation mode. Suppose AC is off now, it will not start up firstly after setting the "timer off" function. And when reaching the setting time, the timer LED will be off and the AC running mode has not been changed.
7.4.7.7 The setting time is relative time.
7.4.7.8 The AC will quit the timer function when it has malfunction.

7.4.8 Economy function

7.4.8.1 The sleep function is available in cooling, heating or auto mode.
7.4.8.2. Operation process in sleep mode is as follow:
When cooling, the setting temperature rises 1℃ (be lower than 30℃) every one hour, 2 hours later the setting temperature stops rising and the indoor fan is fixed at low speed.
When heating, the setting temperature decreases 1℃ (be higher than 17℃) every one hour, 2 hours later the setting temperature stops rising and indoor fan is fixed at low speed. (Anti-cold wind function has the priority).
7.4.8.3 Operation time in sleep mode is 7 hours. After 7 hours the AC quits this mode and turns off.
7.4.8.4 Timer setting is available

7.4.9 Auto-Restart function

The indoor unit is equipped with auto-restart function, which is carried out through an auto-restart module. In case of a sudden power failure, the module memorizes the setting conditions before the power failure. The unit will resume the previous operation setting (not including swing function) automatically after 3 minutes when power returns.

If the memorization condition is forced cooling mode, the unit will run in cooling mode for 30 minutes and turn to auto mode as 24℃ setting temp.

If AC is off before power off and AC is required to start up now, the compressor will have 1 minute delay when power on. Other conditions, the compressor will have 3 minutes delay when restarts.

7.4.10 Louver Position Memory Function

When starting the unit again after shutting down, its louver will restore to the angle originally set by the user, but the precondition is that the angle must be within the allowable range, if it exceeds, it will memorize the maximum angle of the louver. During operation, if the power fails or the end user shuts down the unit in the turbo mode, the louver will restore to the default angle.

7.4.11 8℃ Heating

In heating operation, the preset temperature of the air conditioner can be as lower as 8℃, which keeps the room temperature steady at 8℃ and prevents household things freezing when the house is unoccupied for a long time in severe cold weather.

7.4.12 Follow me

1) If the indoor PCB receives the signal which

results from pressing the FOLLOW ME button on remote controller, the buzzer will emit a sound and this indicates the follow me function is initiated. But when the indoor PCB receives signal which sent from remote controller every 3 minutes, the buzzer will not respond. When the unit is running with follow me function, the PCB will control the unit according to the temperature from follow me signal, and the temperature collection function of room temperature sensor will be shielded, but the error detective function of room temperature sensor will be still valid.

2) When the follow me function is available,

the PCB will control the unit according to the room temperature from the remote controller and the setting temperature.

3) The PCB will take action to the mode

change information from remote controller signal, but it will not affected by the setting temperature.

4) When the unit is running with follow me

function, if the PCB doesn't receive any signal from remote controller for 7 minutes or pressing FOLLOW ME button again, the follow me function will be turned off automatically, and the temperature will control the unit according to the room temperature detected from its own room temperature sensor and setting temperature.

7.4.13 Mode conflict

The indoor units can not work cooling mode and heating at same time.
Heating mode has a priority.
(1) Definition

	Cooling mode	Heating Mode	Fan	Off
Cooling mode	No	Yes	No	No
Heating Mode	Yes	No	Yes	No
Fan	No	Yes	No	No
Off	No	No	No	No

No: No mode conflict;

Yes: Mode conflict

(2) Unit action

- In case of one Indoor unit working in cooling mode or fan mode, and another indoor unit is set to heating mode, the indoor unit working in cooling mode or fan mode will change to off. The outdoor unit will change to heating mode after compressor stop 3 minutes. .
- In case of one Indoor unit working in heating mode, and another indoor unit is set to cooling mode or fan mode, the indoor unit setting to cooling mode or fan mode will change to stand by. The outdoor unit will continue working in heating mode.

If heating mode stops (not including the indoor unit in heating mode reaching the set temperature), 3 minutes after the outdoor unit restarts and works in cooling mode or fan-only mode.

7.4.14 Point check function

Press the LED DISPLAY or LED or MUTE button of the remote controller three times, and then press the AIR DIRECTION or SWING button three times in ten seconds, the buzzer will keep ring for two seconds. The air conditioner will enter into the information enquiry status. You can press the LED DISPLAY or AIR DIRECTION button to check the next or front item's information.

When the AC enter the "information enquiry" status, it will display the code name in 2 seconds, the details are as follows.

Enquiry information	Displaying code	Meaning
T1	T1	T1 temp.
T2	T2	T2 temp.
T3	T3	T3 temp.
T4	T4	T4 temp.
T2B	Tb	T2B temp.
TP	TP	TP temp.
TH	TH	TH temp.
Targeted Frequency	FT	Targeted Frequency
Actual Frequency	Fr	Actual Frequency
Indoor fan speed	IF	Indoor fan speed
Outdoor fan speed	OF	Outdoor fan speed
EXV opening angle	LA	EXV opening angle
Compressor continuous running time	CT	Compressor continuous running time
Causes of compressor stop.	ST	Causes of compressor stop.
Reserve	A0	
Reserve	A1	
Reserve	b0	
Reserve	b1	
Reserve	b2	
Reserve	b3	
Reserve	b4	
Reserve	b5	
Reserve	b6	
Reserve	dL	
Reserve	Ac	
Reserve	Uo	
Reserve	Td	

When the AC enter into the information enquiry status, it will display the code value in the next 25s, the details are as follows.

Enquiry information	Display value	Meaning	Remark
T1,T2,T3,T4, T2B,TP,TH, Targeted Frequency, Actual Frequency	-1F,-1E,-1d,-1c,-1b,-1A	-25,-24,-23,-22,-21,-20	1. All the displaying temperature is actual value. 2. All the temperature is °C no matter what kind of remote controller is used. 3. T1,T2,T3,T4,T2B display range:-25~70, TP display range:-20~130. 4. Frequency display range: 0~159HZ. 5. If the actual value exceeds the range, it will display the maximum value or minimum value.
	-19—99	-19—99	
	A0,A1,…A9	100,101,…109	
	b0,b1,…b9	110,111,…119	
	c0,c1,…c9	120,121,…129	
	d0,d1,…d9	130,131,…139	
	E0,E1,…E9	140,141,…149	
	F0,F1,…F9	150,151,…159	
Indoor fan speed /Outdoor fan speed	0	OFF	
	1,2,3,4	Low speed, Medium speed, High speed, Turbo	For some big capacity motors.
	14-FF	Actual fan speed=Display value turns to decimal value and then multiply 10. The unit is RPM.	For some small capacity motors, display value is from 14-FF(hexadecimal), the corresponding fan speed range is from 200-2550RPM.
EXV opening angle	0-FF	Actual EXV opening value=Display value turns to decimal value and then multiply 2.	
Compressor continuous running time	0-FF	0-255 minutes	If the actual value exceeds the range, it will display the maximum value or minimum value.
Causes of compressor stop.	0-99	For the detailed meaning, please consult with engineer	Decimal display
Reserve	0-FF		