Communication Protocol of

Master Controller and Wire Controller of Solareast

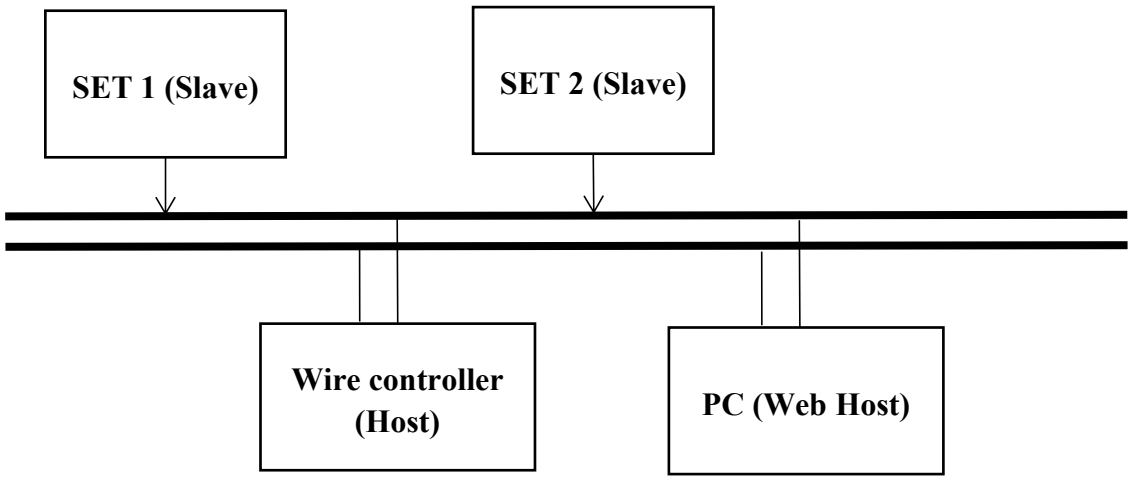
Update Record

Protocol Version	Changer	Modify Date	Modification Explanation
1.0.0	Senming Wu	2021-08-11	first edition
1.0.1	Senming Wu	2021-08-12	Reducing the use of address space
1.0.2	Senming Wu	2021-08-14	Add the read-only parameter for the temperature of the upper and lower limits
1.0.3	Senming Wu	2021-08-14	Add the selection parameters of ambient temperature Modify the description of high-pressure switch and low-pressure switch
1.0.4	Senming Wu	2021-08-26	Add control command of domestic heat pump Add save command of factory parameters Add relevant parameters of water supply Add model setting parameters
1.0.5	Senming Wu	2021-08-27	Add the operating state parameters of the frequency conversion compressor
1.0.6	Senming Wu	2021-08-27	Add upper and lower limit parameters' addresses and descriptions
1.0.7	Senming Wu	2021-08-28	Add system parameter and operation parameter flag bit selection
1.0.8	Senming Wu	2020-08-30	Adjust the address of upper and lower limits of temperature setting Adjust the mode to select the address, and put it to the model group address
1.0.9	Senming Wu	2021-09-09	Redefine the data according to the protocol architecture Add the L parameter group correspondence
1.1.0	Senming Wu	2021-09-22	Add 0x0025 Address: Current mode set temperature Add 0x0026 Address: Hot water’s default set temperature
1.1.1	Senming Wu	2021-09-22	Add address 0x0366 to select the temperature displayed at the main interface
1.1.2	Senming Wu	2021-09-27	Add the water pump feedback fault mark
1.1.3	Senming Wu	2021-09-29	Change the location of 0x0036 and 0x0035 addresses Add address 0x0800-0x08FF
1.1.4	Senming Wu	2021-10-08	Add the switching of ground heating + hot water mode
1.1.5	Senming Wu	2021-10-22	Add low water flow protection
1.1.6	Senming Wu	2021-11-02	Optimize domestic mode
1.1.7	Senming Wu	2021-11-16	Add the automatic mode temperature settings,lower refrigeration limit for lower limit value,upper heating limit for upper limit value,add the setting address of the unit assembly number
1.1.8	Senming Wu	2021-12-04	Add the temperature curve selection
1.1.9	Senming Wu	2021-12-11	Add manual water return/water replenishing/water supply
1.2.0	Senming Wu	2022-07-04	Distinguish of temp.unit,and add the address:0x364
1.2.1	Senming Wu	2022-08-26	Add:1.total water out temp.failures 2. parameters
1.2.2	Senming Wu	2022-10-11	Add 3 address Add the RW command for each coil
1.2.3	Senming Wu	2022-10-12	Add heating curves

1.2.4	Senming Wu	2022-11-28	Add content of the double sytstem Add parameters of defrost opening anti-freeze invertal time
V1.2.5	Senming Wu	2022-12-24	Modify notes of some parameters
V1.2.6	Senming Wu	2022-12-26	Modify the curve
V1.2.7	Senming Wu	2022-12-28	Modify and add some addresses
V1.2.8	Senming Wu	2023-02-14	Add parameter of pipe electricity heating
V1.2.9	Senming Wu	2023-04-11	Add some parameters

1.1 Communication Mode

Wire Controller, PC and external machine are connected by RS485 bus. Wire Controller, PC is the communication host,external machine is the communication slave.Here is the Communication topology:



Address agreement: range 1-255

Address 0: broadcast address, use the broadcast command to send data, all units receive the data, but do not reply

1.2 Communication timing

The communication adopts the master-slave response half duplex asynchronous serial communication mode, and the external machine works in the slave state. After receiving the host command from the machine, wait for 100ms after the communication to proceed with the next transmission, with less than 100 addresses for each visit. Since PC and Wire Controller are both the hosts, the communication time must be staggered and alternate transmission can be adopted;

1.3 Communication Protocol Description

1、The communication adopts RS485 bus, asynchronous serial signal 1 start bit, 8 data bits, 1 end bit, no parity check, Baud rate 9600.

2、Compliant with standard MODBUS RTU protocol, 16 bit data structure, 16 bit CRC verification, low byte in front and high byte in back.

~~**3、he state temperature and the set temperature are all X10 treated, such as 255, representing 25.5**~~

4、Three commands are used for the host-slave communication:

4.1、Command 03H (query for 1 or more registers)

Send Command: [device address] + [Command No. 03h] + [high 8 bits of start register address] + [low 8 bits] + [high 8 bits of read registers] + [low 8 bits] + [low 8 bits of CRC check] + [high 8 bits of CRC check]

Device Response: [device address] + [Command No.03H] + [number of bytes returned] + [data 1 high 8 bits] + [data 1 high and low bits] +... + [data n] + [low 8 bits of CRC check] + [high 8 bits of CRC check]

4.2、Command 06H (Modify a single register)

Send Command: [device address] + [Command No.06H] + [high 8 bits of register address to be modified] + [low 8 bits] + [High 8 bits of modified data] + [low 8 bits] + [Low 8 bits of CRC check] + [High 8 bits of CRC check]

Device Response: If the command sent by the computer is successfully returned as it is, otherwise it does not respond

4.3、Command 10H (Modify multiple registers)

Send Command: [device address] + [Command No.10H] + [start register address 8 bits high] + [low 8 bits] + [register number high 8 bits] + [low 8 bits] + [register bytes] + [data 1 high 8 bits] + [low 8 bits] +.. + [data N high 8 bits] + [low 8 bits] + [CRC check low 8 bits] + [CRC check high 8 bits]

Device Response: [device address] + [Command No.10H] + [High 8 bits of Start register address] + [low 8 bits] + [High 8 bits of register number] + [low 8 bits] + [low 8 bits of CRC check] + [high 8 bits of CRC check]

4.4 Command 01H (query 1 or more coils) (communication protocol ≥ 130 valid)

Send command: [Device address]+[Command number 01H]+[high 8 bits of Start coil address]+[Low 8 bits]+[High 8 bits of Read coil number]+[Low 8 bits]+ [Low 8 bits of CRC check]+[High 8 bits of CRC check]

Device response: [Device address]+[Command number 01H]+[Number of bytes returned]+[Data 1]+[Data 2]+…+ [Data n]+[Low 8 bits of CRC check]+[High 8 bits of CRC check]

Note: Single data contains values for 8 coils

4.5 command 05H (modify a single coil) (communication protocol ≥ 130 is valid) Send command: [device address] + [command number 05H] + [high 8 bits of coil address to be modified] + [low 8 bits] + [High 8 bits of modified data] + [low 8 bits] + [Low 8 bits of CRC check] + [High 8 bits of CRC check] Device response: If the command sent by the computer is successfully returned as it is, otherwise it will not respond

Note: if the modified data is zero, the coil is set to zero; if the lower data is not 0, the coil is set to 1;

4.6、Sending other Commands is invalid and does not respond to the data

No	Command Name	Address Range	Type	Note
1	Real-time status and fault	0x0000～0x003F	Read-Only	64-bit
2	Real-time data	0x0040～0x00FF	Read-Only	192-bit
3	Unit system parameters P	0x0100～0x02FF	Read-Write	512-bit
4	User parameters	0x0300～0x032F	Read-Write	48-bit

5	User orders	0x0330～0x035F	Read-Write	48-bit
6	Version information	0x0360～0x036F	Read-Only	16-bit
7	Unit System Parameter L	0x0800-0x083F	Read-Write	64-bit
8	Bit Operation Instruction	0x1000～0x10FF	Read-Write	256-bit

1.Real-time data 0x0000～0x03F

Including: switch port, electric relay, dial switch, fault and other data

Address	Parameter Name	Range	Default	Type	Note
0x0000	Running Status 1	Standard Bits		Read-Only	
0x0001	Running Status 2	Standard Bits		Read-Only	
0x0002	Fault State 1	Standard Bits		Read-Only	
0x0003	Fault State 2	Standard Bits		Read-Only	
0x0004	Fault State 3	Standard Bits		Read-Only	
0x0005	System 1 Fault State 1	Standard Bits		Read-Only	
0x0006	System 1 Fault State 2	Standard Bits		Read-Only	
0x0007	System 1 Drive Fault State 1	Standard Bits		Read-Only	
0x0008	System 1 Drive Fault State 2	Standard Bits		Read-Only	
0x0009	System 1 Drive Fault State 3	Standard Bits		Read-Only	
0x000A	System 2 Fault State 1	Standard Bits		Read-Only	Refer to 0x0005
0x000B	System 2 Fault State 2	Standard Bits		Read-Only	Refer to 0x0006
0x000C	System 2 Drive Fault State 1	Standard Bits		Read-Only	Refer to 0x0007
0x000D	System 2 Drive Fault State 2	Standard Bits		Read-Only	Refer to 0x0008
0x000E	System 2 Drive Fault State 3	Standard Bits		Read-Only	Refer to 0x0009
0x000F		Standard Bits		Read-Only	Refer to 0x0005
0x0010		Standard Bits		Read-Only	Refer to 0x0006
0x0011		Standard Bits		Read-Only	Refer to 0x0007
0x0012		Standard Bits		Read-Only	Refer to 0x0008
0x0013		Standard Bits		Read-Only	Refer to 0x0009
0x0014		Standard Bits		Read-Only	Refer to 0x0005
0x0015		Standard Bits		Read-Only	Refer to 0x0006
0x0016		Standard Bits		Read-Only	Refer to

					0x0007
0x0017		Standard Bits		Read-Only	Refer to 0x0008
0x0018		Standard Bits		Read-Only	Refer to 0x0009
0x0019	Relay output status 1	Standard Bits		Read-Only	
0x001A	Relay output status 2	Standard Bits		Read-Only	
0x001B	Relay output status 3	Standard Bits		Read-Only	
0x001C	Relay output status 4	Standard Bits		Read-Only	
0x001D	Switch Port State 1	Standard Bits		Read-Only	
0x001E	Switch Port State 2	Standard Bits		Read-Only	
0x001F	Switch Port State 3	Standard Bits		Read-Only	
0x0020	Switch Port State 4	Standard Bits		Read-Only	
0x0021		Actual Value		Read-Only	
0x0022		Actual Value		Read-Only	
0x0023		Actual Value		Read-Only	
0x0024	Current unit tooling No	Actual Value		Read-Only	
0x0025		Actual Value		Read-Only	
0x0026		Actual Value		Read-Only	
0x0027	Compressor 1 Target frequency	Actual Value		Read-Only	
0x0028	Compressor 2 Target frequency	Actual Value		Read-Only	
.....					
0x003F	State Reserved				

2.Real-time data 0x0040～0x00FF

Including: temperature, voltage, pressure, expansion valve opening degree and other data

Address	Parameter Name	Range	Default	Type	Note
0x0040	Compressor operating frequency	Measured Value	Measured Value	Read-Only	
0x0041	Fan operating frequency / rotational speed	Measured Value	Measured Value	Read-Only	
0x0042	Electronic expansion valve steps count	Measured Value	Measured Value	Read-Only	
0x0043	Number of EVI valve steps	Measured Value	Measured Value	Read-Only	
0x0044	AC Input Voltage	Measured Value	Measured Value	Read-Only	
0x0045	AC Input Current	Measured Value	Measured Value	Read-Only	Display= Measured/ 10
0x0046	Compressor Phase Current	Measured Value	Measured Value	Read-Only	Display= Measured/ 10

0x0047	Compressor IPM Temperature	Measured Value	Measured Value	Read-Only	
0x0048	High pressure saturation temperature	Measured Value	Measured Value	Read-Only	
0x0049	Low pressure saturation temperature	Measured Value	Measured Value	Read-Only	
0x004A	External ambient temperature T1	Measured Value	Measured Value	Read-Only	
0x004B	External coil tube (fin) T2	Measured Value	Measured Value	Read-Only	
0x004C	Internal coil tube (plate replacement) T3	Measured Value	Measured Value	Read-Only	
0x004D	Return air temperature T4	Measured Value	Measured Value	Read-Only	
0x004E	Exhaust temperature T5	Measured Value	Measured Value	Read-Only	
0x004F	Return water temperature T6	Measured Value	Measured Value	Read-Only	
0x0050	Water outlet temperature T7	Measured Value	Measured Value	Read-Only	
0x0051	Economizer inlet tube T8	Measured Value	Measured Value	Read-Only	
0x0052	Economizer outlet tube T9	Measured Value	Measured Value	Read-Only	
0x0053	Current device tooling No.	Measured Value	Measured Value	Read-Only	
0x0054	Water tank temperature	Measured Value	Measured Value	Read-Only	
0x0055	Fluorine outlet temperature of Plate Heat exchanger	Measured Value	Measured Value	Read-Only	
0x0056	Drive manufacturer	Measured Value	Measured Value	Read-Only	
0x0057	Pump speed PWM	Measured Value	Measured Value	Read-Only	
0x0058	Water flow	Measured Value	Measured Value	Read-Only	
0x0059	User return water temperature	Measured Value	Measured Value	Read-Only	
0x005A	Device input voltage	Measured Value	Measured Value	Read-Only	
0x005B	Device input current	Measured Value	Measured Value	Read-Only	
0x005C	Device input power/kw	Measured Value	Measured Value	Read-Only	
0x005D	Total unit electricity consumption/kwh	Measured Value	Measured Value	Read-Only	
0x005E	System 2 Compressor running	Measured	Measured Value	Read-Only	

	frequency	Value			
0x005F	System 2 Fan running frequency/ speed				
0x0060	System 2 Electronic Expansion Valve Steps				
0x0061	System 2 EVI valve Steps				
0x0062	System 2 AC Input voltage				
0x0063	System 2 AC Input Current				Display= Measured/ 10
0x0064	System 2 Compressor Phase Current				Display= Measured/ 10
0x0065	System 2 Compressor IPM Temperature				
0x0066	System 2 High pressure saturation temperature				
0x0067	System 2 Low pressure saturation temperature				
0x0068	System 2 Outer coil tube (fin)				
0x0069	System 2 Inner coil Tube (Plate Heat Exchanger)				
0x006A	System 2 Return air temperature				
0x006B	System 2 Exhaust Air Temperature				
0x006C	System 2 Economizer Inlet Temperature				
0x006D	System 2 Economizer Outlet temperature				
0x0072	Auxiliary Heating source Hot Water Temperature value	Measured Value	Measured Value	Read Only	
0x0073	Auxiliary Heating source Heating Temperature value	Measured Value	Measured Value	Read Only	
0x0074	Buffer Tank (for heating) Temperature Value	Measured Value	Measured Value	Read Only	
0x0075	Main Outlet Water Temperature Valuve	Measured Value	Measured Value	Read Only	
.....					
0x00F0	Water inlet temperature				
0x00F1	Water outlet temperature				
0x00F2	External environment temperature				

0x00F3					
0x00F4	Water tank temperature				
0x00F5					
0x00F6					
0x00F7					
0x00F8					
0x00F9					
0x00FA	Set the upper limit of floor heating / heating temperature	Measured Value	Measured Value	Read-Only	
0x00FB	Set the lower limit of floor heating / heating temperature	Measured Value	Measured Value	Read-Only	
0x00FC	Set the upper limit of hot water temperature	Measured Value	Measured Value	Read-Only	
0x00FD	Set the lower limit of hot water temperature	Measured Value	Measured Value	Read-Only	
0x00FE	Set the upper limit of refrigerating temperature	Measured Value	Measured Value	Read-Only	
0x00FF	Set the lower limit of refrigerating temperature	Measured Value	Measured Value	Read-Only	

Name	Bit	State		Name	Bit	State
Run State 1 (1: Function ON, 0: Function OFF)	Bit0	Refrigerator recycling		**Run State 2 (1: Function ON, 0: Function OFF)**	Bit0	High temperature Sterilization
	Bit1	First level anti-freezing			Bit1	High temperature Sterilization Heat Preservation
	Bit2	Second level anti-freezing			Bit2	
	Bit3	failure warning			Bit3	
	Bit4	System 1 return oil			Bit4	
	Bit5				Bit5	
	Bit6				Bit6	
	Bit7				Bit7	
	Bit8	System defrost			Bit8	
	Bit9				Bit9	
	Bit10				Bit10	Controller on / off
	Bit11				Bit11	
	Bit12	Constant temperature shutdown			Bit12	
	Bit13	Fault shutdown protection			Bit13	
	Bit14	Machine run			Bit14	
	Bit15	Machine wait to run			Bit15	

Name	Bit	State		Name	Bit	State
Fault State 1	Bit0	Wrong phase fault		**Fault State 2**	Bit0	Environmental low temperature protection
	Bit1	Lack of phase fault			Bit1	
	Bit2	Water flow fault			Bit2	
	Bit3	Communication fault			Bit3	
	Bit4	Emergency fault			Bit4	
	Bit5	Use time expired			Bit5	
	Bit6	Water tank (down) temperature fault			Bit6	Indoor environment humidity fault
	Bit7	Water inlet temperature fault			Bit7	
	Bit8	Indoor temperature fault			Bit8	
	Bit9	Environmental temperature fault			Bit9	
	Bit10	User backwater temperature fault			Bit10	
	Bit11	Cooling outlet water level is too low			Bit11	Phase order dial error
	Bit12	Water level switch fault			Bit12	
	Bit13	Water outlet temperature fault			Bit13	Water pump 1 feedback fault
	Bit14	heating outlet water level is too high			Bit14	Water pump 2 feedback fault
	Bit15	Protection against excessive water temperature difference between inlet and outlet			Bit15	Low water flow protection

Name	Bit	State				
Fault State 3	Bit0	Phase sequence disconnected				
	Bit1	Expansion board communication				
	Bit2	Plate Heat Exchanger temperature fault				
	Bit3	Fan motor 1 communication fault				
	Bit4	Fan motor 2 communication fault				
	Bit5	Online model not matching error				
	Bit6	Auxiliary Heating Source Hot Water				

		Sensor Error				
	Bit7	Auxiliary Heating Source Heating Sensor Error				
	Bit8	Buffer Tank Error				
	Bit9	Main Water Outlet Temperature Error				
	Bit10	Reserved				
	Bit11	Reserved				
	Bit12	Reserved				
	Bit13	Reserved				
	Bit14	Reserved				
	Bit15	Reserved				

Name	Bit	State		Name	Bit	State
System 1 Fault State 1	Bit0	high pressure switch protection		**System1 Fault State 2**	Bit0	High pressure sensor fault
	Bit1	Low pressure switch protection			Bit1	Low pressure sensor fault
	Bit2	High pressure over high protection			Bit2	Middle Pressure switch fault
	Bit3	Low pressure over low protection			Bit3	Coil Temperature over high
	Bit4	Exhaust over protection			Bit4	Compressor Drive Board communication fault
	Bit5	Current protection			Bit5	
	Bit6	Coil Temperature over protection			Bit6	
	Bit7	Coil temperature fault			Bit7	
	Bit8	Return air temperature fault			Bit8	
	Bit9	Exhaust temperature fault			Bit9	
	Bit10	Economizer Inlet temperature fault			Bit10	
	Bit11	Economizer Outlet temperature fault			Bit11	
	Bit12	Fan drive communication fault			Bit12	
	Bit13	DC fan fault			Bit13	
	Bit14	Refrigeration coil temperature fault			Bit14	
	Bit15	Reserved			Bit15	

Name	Bit	State		Name	Bit	State
System 1 Drive Fault State 1	Bit0	IPM overcurrent/IPM module protection		**System 1 Drive Fault State 2**	Bit0	Compressor overcurrent alarm
	Bit1	Compressor drive fault			Bit1	Compressor field weakening protection alarm
	Bit2	compressor overcurrent			Bit2	PIM overheat alarm
	Bit3	Input voltage phase loss			Bit3	PFC overheat alarm
	Bit4	IPM current sampling fault			Bit4	AC input overcurrent alarm
	Bit5	Overheating shutdown of power components			Bit5	EEPROM fault alarm
	Bit6	Precharge failed			Bit6	NA
	Bit7	DC bus overvoltage			Bit7	EEPROM refresh completed
	Bit8	DC bus undervoltage			Bit8	Temperature sensing fault frequency limit;
	Bit9	AC input undervoltage			Bit9	AC undervoltage and frequency limit protection alarm;
	Bit10	AC input overcurrent			Bit10	NA
	Bit11	Input voltage sampling fault			Bit11	NA
	Bit12	DSP and PFC communication fault			Bit12	NA
	Bit13	Radiator temperature sensor fault			Bit13	NA
	Bit14	Communication failure between DSP and communication board			Bit14	NA
	Bit15	Abnormal communication with the main control board			Bit15	NA

Name	Bit	State				
System1 Drive Fault State 3	Bit0	IPM module thermal shutdown				
	Bit1	Compressor phase loss				
	Bit2	compressor overload				
	Bit3	Input current sampling fault				

	Bit4	PIM supply voltage fault				
	Bit5	Precharge circuit voltage fault				
	Bit6	EEPROM fault				
	Bit7	AC input overvoltage fault				
	Bit8	Microelectronics fault				
	Bit9	Compressor model code fault				
	Bit10	Current sampling signal overcurrent				
	Bit11	NA				
	Bit12	NA				
	Bit13	NA				
	Bit14	NA				
	Bit15	NA				

Name	Bit	State		Name	Bit	State
System 2 Fault State 1	Bit0	high pressure switch 2 protection		**System 2 Fault State 2**	Bit0	High pressure sensor 2 fault
	Bit1	Low pressure switch 2 protection			Bit1	Low pressure sensor 2 fault
	Bit2	High pressure 2 over high protection			Bit2	Middle Pressure switch 2 fault
	Bit3	Low pressure 2 over low protection			Bit3	Coil Temperature 2 over high
	Bit4	Exhaust 2 over protection			Bit4	Compressor Drive Board 2 communication fault
	Bit5	Current 2 protection			Bit5	
	Bit6	Coil Temperature 2 over protection			Bit6	
	Bit7	Coil temperature 2 fault			Bit7	
	Bit8	Return air temperature 2 fault			Bit8	
	Bit9	Exhaust temperature 2 fault			Bit9	
	Bit10	Economizer Inlet temperature 2 fault			Bit10	
	Bit11	Economizer Outlet temperature 2 fault			Bit11	
	Bit12	Fan drive communication fault			Bit12	
	Bit13	DC fan 2 fault			Bit13	
	Bit14	Refrigeration coil temperature 2 fault			Bit14	
	Bit15	Reserved			Bit15	

Name	Bit	State		Name	Bit	State
System 2 Drive Fault State 1	Bit0	IPM overcurrent/IPM module protection		System 2 Drive Fault State 2	Bit0	Compressor overcurrent alarm
	Bit1	Compressor drive fault			Bit1	Compressor field weakening protection alarm
	Bit2	compressor overcurrent			Bit2	PIM overheat alarm
	Bit3	Input voltage phase loss			Bit3	PFC overheat alarm
	Bit4	IPM current sampling fault			Bit4	AC input overcurrent alarm
	Bit5	Overheating shutdown of power components			Bit5	EEPROM fault alarm
	Bit6	Precharge failed			Bit6	NA
	Bit7	DC bus overvoltage			Bit7	EEPROM refresh completed
	Bit8	DC bus undervoltage			Bit8	Temperature sensing fault frequency limit;
	Bit9	AC input undervoltage			Bit9	AC undervoltage and frequency limit protection alarm;
	Bit10	AC input overcurrent			Bit10	NA
	Bit11	Input voltage sampling fault			Bit11	NA
	Bit12	DSP and PFC communication fault			Bit12	NA
	Bit13	Radiator temperature sensor fault			Bit13	NA
	Bit14	Communication failure between DSP and communication board			Bit14	NA
	Bit15	Abnormal communication with the main control board			Bit15	NA

Name	Bit	State				
System 2 Drive Fault State 3	Bit0	IPM module thermal shutdown				
	Bit1	Compressor phase loss				
	Bit2	compressor overload				

	Bit3	Input current sampling fault				
	Bit4	PIM supply voltage fault				
	Bit5	Precharge circuit voltage fault				
	Bit6	EEPROM fault				
	Bit7	AC input overvoltage fault				
	Bit8	Microelectronics fault				
	Bit9	Compressor model code fault				
	Bit10	Current sampling signal overcurrent				
	Bit11	NA				
	Bit12	NA				
	Bit13	NA				
	Bit14	NA				
	Bit15	NA				

Name	Bit	State		Name	Bit	State
Electric relay state 1 0x0019	Bit0	Hot water electric heating		**Electric relay state 2 0x001A**	Bit0	Compressor 1
	Bit1	Fan high wind			Bit1	Liquid injection solenoid valve 1
	Bit2				Bit2	Enthalpy solenoid valve 1
	Bit3	Fan low wind			Bit3	Four-way valve 1
	Bit4	Air conditioner electric heating			Bit4	Throttle bypass valve 1
	Bit5	floor heating electric heating			Bit5	Fan motor 1
	Bit6	Main engine circulating water pump			Bit6	
	Bit7				Bit7	
	Bit8				Bit8	Auxiliary Heating Pump
	Bit9	Electric crankshaft heating			Bit9	
	Bit10	Chassis electric heating			Bit10	Compressor 2
	Bit11	Return valve/pump			Bit11	Spray solenoid valve 2
	Bit12				Bit12	Enthalpy increasing solenoid valve 2
	Bit13				Bit13	4-Way 2
	Bit14	Air conditioner solenoid valve/three-way valve			Bit14	
	Bit15	Floor heating solenoid valve / three-way valve			Bit15	

Name	Bit	State		Name	Bit	State
Electric relay state3	Bit0			**Electric relay state4**	Bit0	Pipeline electric heating 1
	Bit1				Bit1	Pipeline electric heating 2
	Bit2				Bit2	
	Bit3				Bit3	
	Bit4				Bit4	
	Bit5				Bit5	
	Bit6	Expansion Tank Heating Element			Bit6	
	Bit7	Auxiliary Heat Source Hot water Pump			Bit7	
	Bit8	Auxiliary Heat Source Heating Pump			Bit8	
	Bit9	Gas Output			Bit9	
	Bit10				Bit10	
	Bit11				Bit11	
	Bit12				Bit12	
	Bit13				Bit13	
	Bit14				Bit14	
	Bit15				Bit15	

Name	Bit	State		Name	Bit	State
Switch state 1	Bit0	SW1		**Switch state2**	Bit0	
	Bit1	SW2			Bit1	
	Bit2	SW3			Bit2	
	Bit3	SW4			Bit3	
	Bit4	SW5			Bit4	
	Bit5	SW6			Bit5	
	Bit6	SW7			Bit6	
	Bit7	SW8			Bit7	High Pressure 1 Switch
	Bit8	Water Flow Switch			Bit8	Low Pressure 1 switch
	Bit9				Bit9	Medium Pressure 1 switch
	Bit10	House Heating Linkage Switch			Bit10	High Pressure 2 Switch
	Bit11	Auxiliary Hot Water Linkage Switch			Bit11	Low Pressure 2 switch
	Bit12	Linkage switch			Bit12	Medium Pressure 2 switch
	Bit13	emergency switch			Bit13	
	Bit14				Bit14	

	Bit15				Bit15	

Name	Bit	State		Name	Bit	State
Switch state3	Bit0			Switch state4	Bit0	
	Bit1				Bit1	
	Bit2				Bit2	
	Bit3				Bit3	
	Bit4				Bit4	
	Bit5	Auxiliary Heating Linkage Switch			Bit5	
	Bit6				Bit6	
	Bit7				Bit7	
	Bit8				Bit8	
	Bit9				Bit9	
	Bit10				Bit10	
	Bit11				Bit11	
	Bit12				Bit12	
	Bit13				Bit13	
	Bit14				Bit14	
	Bit15				Bit15	

3.Unit system parameters 0x0200～0x03FF

Address	Parameter Name	Range	Type	Note
0x0100	T1 external ambient temperature sensor	0～10	RW	0: Enable,1: Disable
0x0101	High pressure switch settings	0～10	RW	0: Enable,1: Disable
0x0102	Low pressure switch settings	0～10	RW	0: Enable,1: Disable
0x0103	Water flow switch settings	0～10	RW	0: Enable,1: Disable
0x0104	Thermal overload protection switch settings	0～10	RW	0: Enable,1: Disable
0x0105	Linkage switch settings	0～10	RW	0: Enable,1: Disable 2: Constant Temperature,3: Heating Constant Temperature
0x0106	Fan motor type setting	0～10	RW	0: Enable,1: Disable
0x0107	High Pressure Protection Lockout Setting	0～10	RW	0: Enable,1: Disable
0x0108	Low Pressure Protection Lockout Setting	0～10	RW	0: Enable,1: Disable
0x0109	Exhaust Protection Lockout Setting	0～10	RW	0: Enable,1: Disable
0x010A	Water flow switch protection lock setting	0～10	RW	0: Enable,1: Disable
0x010B	High Pressure protection value	40～150	RW	℃

0x010C	High Pressure frequency limit value	40～150	RW	℃
0x010D	Low Pressure protection value	-50～-10	RW	℃
0x010E	Low Pressure frequency limit value	-50～-10	RW	℃
0x010F	Exhaust temperature protection value	100～130	RW	℃
0x0110	Exhaust temperature limit frequency	90～120	RW	℃
0x0111	Refrigeration fan speed increase value	0～60	RW	℃
0x0112	Cooling fan deceleration value	0～60	RW	℃
0x0113	Heating fan deceleration value	0～60	RW	℃
0x0114	Heating fan speed increase value	0～60	RW	℃
0x0115	The unit prohibits starting low temperature value	-40～-10	RW	℃
0x0116	Electric heating start ambient temperature value	-15～40	RW	℃
0x0117	The temperature difference between the inlet and outlet water exceeds the threshold value	10～30	RW	℃
0x0118	Return water temperature compensation value	-10～10℃	RW	℃
0x0119	Outlet water temperature compensation value	-10～10℃	RW	℃
0x011A	Air conditioner return difference	0～10℃	RW	℃
0x011B	Floor heating difference	0～10℃	RW	℃
0x011C	Pump control mode when the device reaching target temperature and shutdown	0～10	RW	0:Run/1:Stop/2:Cooling Run/3:Air Conditioning Run /4: Floor Heating Run
0x011D	Antifreeze water pump running time (every 10min)	0～10	RW	min
0x011E	Defrost mode selection	0～10	RW	0:Interlligent 1:Timer2: Fast 3: Dew Point
0x011F	Enter the defrost accumulated running time threshold value	0～120	RW	℃
0x0120	Enter the defrost coil temperature value	-30～0	RW	℃
0x0121	Enter defrost temperature difference 1	0～20	RW	℃
0x0122	Enter defrost temperature difference 2	0～20	RW	℃
0x0123	Max defrost time	0～30	RW	℃
0x0124	Exit defrost coil temperature	0～30	RW	℃
0x0125	Device reaching target temperature and shutdown mode	0～10	RW	0: intelligent shutdown, 1: reaching temperature shutdown, 2: intelligent Cooling
0x0126	Heating main valve initial opening constant	-999～999		
0x0127	Pressure sensor settings	0～10	RW	0: Enable,1: Disable
0x0128	Cooling target superheat correction value	-5～10	RW	℃
0x0129	Heating high pressure protection and frequency limit correction value	-10～10	RW	℃

0x012A	Heating target superheat correction value	-5～10	RW	℃
0x012B	Medium Pressure Switch Settings	0～10	RW	0: Disable,1: Enable
0x012C	Water flow switch failure detection settings	0～10	RW	0: Enable,1: Disable
0x012D	Communication address code	1～16	RW	
0x012E	The return difference of the opening of the liquid injection solenoid valve	0～15	RW	℃
0x012F	EVI target superheat constant	0～12	RW	
0x0130	Whether the tank temperature probe is enabled	0～10	RW	0: Disable,1: Enable
0x0131	Hot water frequency operating percentage	30～100	RW	%
0x0132	Cooling target frequency constant A, Y=9X/5+A	-100～100	RW	
0x0133	Cooling minimum frequency limit	15-60	RW	Hz
0x0134	Cooling target frequency upper limit	40-120	RW	Hz
0x0135	Cooling target frequency lower limit	15-120	RW	Hz
0x0136	Heating target frequency constant B,Y=B-X	-100～100	RW	
0x0137	Heating target frequency upper limit	50-120	RW	Hz
0x0138	Heating target frequency lower limit	20Hz-120	RW	Hz
0x0139	Heating minimum frequency 1	15-60Hz	RW	Hz
0x013A	Heating minimum frequency 2	15-60Hz	RW	Hz
0x013B	Heating minimum frequency 3	15-60Hz	RW	Hz
0x013C	Hot water target frequency constant B, Y=B-X	-100～100	RW	
0x013D	Hot water target frequency upper limit value Y=B-X	50-120	RW	Hz
0x013E	Hot water target frequency lower limit value Y=B-X	15-120	RW	Hz
0x013F	Hot water minimum frequency 1	15-60	RW	Hz
0x0140	Hot water minimum frequency 2	15-60	RW	Hz
0x0141	Hot water minimum frequency 3	15-60	RW	Hz
0x0142	DC fan initial frequency	20-60	RW	Hz
0x0143	DC fan heating minimum frequency	20-60	RW	Hz
0x0144	DC fan heating maximum frequency	20-80	RW	Hz
0x0145	DC fan cooling minimum frequency	20-60	RW	Hz
0x0146	DC fan cooling maximum frequency	20-80	RW	Hz
0x0147	Turn on enthalpy control frequency	20-80z	RW	H
0x0148	Stop enthalpy increase frequency	20-80	RW	Hz
0x0149	Refrigeration main valve initial opening 1	20～480	RW	P
0x014A	Refrigeration main valve initial opening 2	20～480	RW	P
0x014B	Refrigeration main valve initial opening 3	20～480	RW	P
0x014C	Minimum opening of refrigeration main valve	0～300	RW	P
0x014D	Minimum opening of heating main valve	0～300	RW	P
0x014E	Main valve maximum opening	100～500	RW	P
0x014F	Main valve initial opening constant c	20～300	RW	P
0x0150	Main valve initial opening coefficient a	-999～999	RW	
0x0151	Main valve initial opening coefficient b	-999～	RW	

		999		
0x0152	Auxiliary valve maximum opening	100～500	RW	P
0x0153	Auxiliary valve minimum opening	50～300	RW	P
0x0154	Main Valve Regulation Period	10-120	RW	S
0x0155	Auxiliary valve initial opening constant c	-200～900	RW	
0x0156	Auxiliary valve initial opening coefficient a	-999～999	RW	
0x0157	Auxiliary valve initial opening coefficient b	-999～999	RW	
0x0158	Silent mode compressor frequency	20-70	RW	Hz
0x0159	Quiet mode fan frequency	20-60Hz	RW	Hz
0x015A	Ambient temperature to enter EVI	0-45	RW	℃
0x015B	Time to forbit entering into EVI time	0-30	RW	min
0x015C	Temperature Difference to enter EVI	0-60	RW	℃
0x015D	Compressor continuous running time to enter EVI	0-20	RW	min
0x015E	Auxiliary valve adjustment cycle	10-120	RW	S
0x015F	Cascade water pump running mode	0-10	RW	0: Shared 1: Independent
0x0160	Hot water return difference	0～10	RW	℃
0x0161	Water tank temperature automatic compensation	0～10	RW	0: Enable,1: Disable
0x0162	Manual compensation value of water tank temperature	-10～10	RW	℃
0x0163	Pump speed control temperature difference	2～10	RW	℃
0x0164	PWM water pump minimum speed	20～80	RW	%
0x0165	Pump control mode	0～10	RW	0: AC,1:DC
0x0166	Four-way valve control mode	0～10	RW	0:Cooling Power On,1:Heating Power On
0x0167	Mode switching minimum runtime	0～10	RW	min
0x0168	Operating frequency percentage when switching modes	20-100	RW	%
0x0169	Cooling mode operating ambient temperature limit	10～60	RW	℃
0x016A	Heating mode operating ambient temperature limit	10～60	RW	℃
0x016B	Hot water mode operating ambient temperature limit	10～60	RW	℃
0x016C	Hot water setting temperature upper limit	30～80	RW	℃
0x016D	Hot water setting temperature lower limit	10～30	RW	℃
0x016E	Heating set temperature upper limit	30～80	RW	℃
0x016F	Heating set temperature lower limit	15～30	RW	℃
0x0170	Cooling set temperature upper limit	20～40	RW	℃
0x0171	Cooling set temperature lower limit	5～20	RW	℃
0x0172	Selection of the number of compressor	1～2	RW	
0x0173	Model selection	0～10	RW	0: Heating & Cooling,1: Heating & Cooling & DHW, Others reserved

0x0174	Unit temperature control method	0～10	RW	0:Return water, 1: Water Outlet
0x0175	Ambient temperature to enter Antifreeze Mode	0～10	RW	℃
0x0176	Antifreeze Inlet and Outlet Water Temperature	0～20	RW	℃
0x0177	Refrigerant type	0～20	RW	1:R410A，2:R32，3：R290
0x0178	Low temperature start limit	0～10	RW	0: Enable,1: Disable
0x0179	Heating frequency shield 1 stage low value	0-120	RW	Hz
0x017A	Heating frequency shield 1 stage high value	0-120	RW	Hz
0x017B	Heating frequency shield 2-stage low value	0-120	RW	Hz
0x017C	Heating frequency shield 2-stage high value	0-120	RW	Hz
0x017D	Heating frequency shield 3-stage low value	0-120	RW	Hz
0x017E	Heating frequency shield 3-stage high value	0-120	RW	Hz
0x017F	Cooling frequency shield 1 stage low value	0-120	RW	Hz
0x0180	Cooling frequency shield 1 stage high value	0-120	RW	Hz
0x0181	Cooling frequency shield 2-stage low value	0-120	RW	Hz
0x0182	Cooling frequency shield 2-stage high value	0-120	RW	Hz
0x0183	Cooling frequency shield 3-stage low value	0-120	RW	Hz
0x0184	Cooling frequency shield 3-stage high value	0-120	RW	Hz
0x0185	Fan module	0～10	RW	0:Integral Module, 1: Individual Module
0x0186	Water flow is too low protection value	0～100	RW	L/min
0x0187	Temperature difference to start Anti-condensation	0～50	RW	℃
0x0188	Ambient temperature to open Throttle bypass valve	-20～50	RW	℃
0x0189	Throttle Bypass Valve Delay Compressor	0～999	RW	S
0x018A	Defrost compressor frequency	40～120	RW	Hz
0x018B	Air conditioning electric heating options	0～10	RW	0: Enable,1: Disable, 2: Gas
0x018C	Hot water electric heating options	0～10	RW	0: Enable,1: Disable,2: Gas
0x018D	Dew point duration of defrost	0～60	RW	min
0x018E	Dew point constant of defrost	0～60	RW	
0x018F	Water Temperature to enter Defrost mode	0～60	RW	℃
0x0190	Ambient temperature to enter Defrost mode	-20～30	RW	℃
0x0191	Water outlet antifreeze protection value	-20～10	RW	℃
0x0192	Pump range setting value	0～100	RW	L/min
0x0193	Cooling Anti-Freeze Mode	0～10	RW	0：low pressure 1. temp. 2:low pressure +temp.
0x0194	Cooling Anti-Freeze Temperature Value	-30-10	RW	℃
0x0195	Water out of the high limit frequency value	40-80	RW	℃
0x0196	Secondary heating pump selection	0～10	RW	0:Power on，1：Turn on;2:When linkage switch is open，3：Temp control
0x0197	Hot water heat source return difference	0-40	RW	℃
0x0198	Heating heat source return difference	0-40	RW	℃

0x0199	Combined hot water heat source upper temperature limit	15-80	RW	℃
0x019A	Combined heating heat source upper temperature limit	15-80	RW	℃
0x019B	Compressor code (Function Reserved)	**0～9999**	RW	
0x019C	Auxiliary electronic expansion valve selection	0～10	RW	0: Enable,1: Disable
0x019D	Auxiliary electronic expansion valve to reduce the temperature difference	0～99	RW	℃
0x019E	Heating limit water temperature, start the ambient temperature	-45～30	RW	℃
0x019F	Limit temperature constant P159	0～150	RW	
0x01A0	Limit temperature coefficient P160	-500～500	RW	
0x01A1	Auxiliary pump selection	0～10	RW	0:Hot water/1:cooling/2:floor heating /3:cooling and floor heating /4:all mode
0x01A2	Anti-freezing interval for hot water pipes	**0～360**	RW	**min**
0x01A3	Minimum feedback of pump speed regulation	0～70	RW	%
0x01A4	Level control	0～10	RW	0: Enable/1. Only Hot water /2.Only Heating /3.Disable
0x01A5	Load return difference	1～15	RW	℃
0x01A6	Load shedding hysteresis	1～15	RW	℃
0x01A7	Emergency stop return difference	1～15	RW	℃
0x01A8	Hot water mode start ratio	1～100	RW	%
0x01A9	Non-hot water mode start ratio	1～100	RW	%
0x01AA	Loading cycle	3～60	RW	min
0x01AB	Shield low voltage switch ambient temperature	-50～0	RW	℃
0x01AC	Target frequency constant c of DC fan	40～70	RW	HZ
0x01AD	Target frequency of heating fan lower limit	20～65	RW	Hz
0x01AE	Defrost valve opening	0～480	RW	P
0x01AF	Constant temperature operation cycle	0～360	RW	min
0x01B0	Minimum defrosting time	0-999	RW	S
0x01B1	Defrost segmented water temperature setting value	0～80	RW	℃
0x01B2	High water temperature defrosting frequency	40～120Hz	RW	Hz
0x01B3	Strong mode frequency increase value	0～40Hz	RW	Hz
0x01B4	Powerful mode frequency cap increase value	0～40	RW	Hz
0x01B5	defrost mode	0～2	RW	0:Current /1:Heating /2: Hot Water
0x01B6	Pipe electric heating option	0～2	RW	0：full eletricity;1：3kW/2：6kW /3：disable
0x01B7	Parameter password setting	0～9999	RW	0：disable
0x01B8	35D working condition compressor frequency	0～120	RW	HZ

0x01B9	35C working condition compressor frequency	0～120	RW	HZ
0x01BA	35B working condition compressor frequency	0～120	RW	HZ
0x01BB	35A working condition compressor frequency	0～120	RW	HZ
0x01BC	35E working condition compressor frequency	0～120	RW	HZ
0x01BD	55D working condition compressor frequency	0～120	RW	HZ
0x01BE	55C working condition compressor frequency	0～120	RW	HZ
0x01BF	55B working condition compressor frequency	0～120	RW	HZ
0x01C0	55A working condition compressor frequency	0～120	RW	HZ
0x01C1	55E working condition compressor frequency	0～120	RW	HZ
0x01C2	35D working condition fan frequency	0～60	RW	HZ
0x01C3	35C working condition fan frequency	0～60	RW	HZ
0x01C4	35B working condition fan frequency	0～60	RW	HZ
0x01C5	35A working condition fan frequency	0～60	RW	HZ
0x01C6	35E working condition fan frequency	0～60	RW	HZ
0x01C7	55D working condition fan frequency	0～60	RW	HZ
0x01C8	55C working condition fan frequency	0～60	RW	HZ
0x01C9	55B working condition fan frequency	0～60	RW	HZ
0x01CA	55A working condition fan frequency	0～60	RW	HZ
0x01CB	55E working condition fan frequency	0～60	RW	HZ
0x01CC	35D operating condition main valve target superheat	-10～10	RW	℃
0x01CD	35C working condition main valve target superheat	-10～10	RW	℃
0x01CE	35B working condition main valve target superheat	-10～10	RW	℃
0x01CF	35A working condition main valve target superheat	-10～10	RW	℃
0x01D0	35E working condition main valve target superheat	-10～10	RW	℃
0x01D1	55D operating condition main valve target superheat	-10～10	RW	℃
0x01D2	55C operating condition main valve target superheat	-10～10	RW	℃
0x01D3	55B working condition main valve target superheat	-10～10	RW	℃
0x01D4	Target superheat of main valve in 55A working condition	-10～10	RW	℃
0x01D5	55E working condition main valve target superheat	-10～10	RW	℃
0x01D6	Initial opening of main valve in 35D working condition	0～500	RW	P
0x01D7	Initial opening of main valve in 35C working condition	0～500	RW	P
0x01D8	Initial opening of main valve in 35B working condition	0～500	RW	P
0x01D9	Initial opening of main valve in 35A working condition	0～500	RW	P
0x01DA	Initial opening of main valve in 35E working condition	0～500	RW	P
0x01DB	Initial opening of main valve in 55D working condition	0～500	RW	P
0x01DC	Initial opening of main valve in 55C working condition	0～500	RW	P
0x01DD	Initial opening of main valve in 55B working condition	0～500	RW	P
0x01DE	Initial opening of main valve in 55A working	0～500	RW	P

	condition			
0x01DF	Initial opening of main valve in 55E working condition	0～500	RW	P
0x01E0	35D operating condition auxiliary valve target superheat	-10～10	RW	℃
0x01E1	35C operating condition auxiliary valve target superheat	-10～10	RW	℃
0x01E2	35B operating condition auxiliary valve target superheat	-10～10	RW	℃
0x01E3	35A working condition auxiliary valve target superheat	-10～10	RW	℃
0x01E4	35E working condition auxiliary valve target superheat	-10～10	RW	℃
0x01E5	55D working condition auxiliary valve target superheat	-10～10	RW	℃
0x01E6	55C working condition auxiliary valve target superheat	-10～10	RW	℃
0x01E7	Auxiliary valve target superheat in 55B working condition	-10～10	RW	℃
0x01E8	Auxiliary valve target superheat in 55A working condition	-10～10	RW	℃
0x01E9	Auxiliary valve target superheat in 55E working condition	-10～10	RW	℃
0x01EA	Initial opening of auxiliary valve in 35D working condition	0～500	RW	P
0x01EB	Initial opening of auxiliary valve in 35C working condition	0～500	RW	P
0x01EC	Initial opening of auxiliary valve in 35B working condition	0～500	RW	P
0x01ED	Initial opening of auxiliary valve in 35A working condition	0～500	RW	P
0x01EE	Initial opening of auxiliary valve in 35E working condition	0～500	RW	P
0x01EF	Initial opening of auxiliary valve in 55D working condition	0～500	RW	P
0x01F0	Initial opening of auxiliary valve in 55C working condition	0～500	RW	P
0x01F1	Initial opening of auxiliary valve in 55B working condition	0～500	RW	P
0x01F2	Initial opening of auxiliary valve in 55A working condition	0～500	RW	P
0x01F3	Initial opening of auxiliary valve in 55E working condition	0～500	RW	P
0x01F4	Target water flow in 35 low water temperature condition	0～100	RW	L/min
0x01F5	Target water flow under 55 high water temperature conditions	0～100	RW	L/min
0x01F6	35 Low water temperature rated fan frequency	0～60	RW	Hz

0x01F7	Initial opening of main valve under 35 low water temperature rated condition	0～500	RW	P
0x01F8	Initial opening of main valve under 55 high water temperature rated condition	0～60	RW	Hz
0x01F9	Initial opening of main valve under 55 high water temperature rated condition	0～500	RW	P
0x01FA	Target superheat of main valve under 35 low water temperature rated condition	-10～10	RW	℃
0x01FB	PFC shutdown current	0～50	RW	A
0x01FC	Target superheat of main valve under 55 high water temperature rated condition	-10～10	RW	℃
0x01FD	PFC turn-on current	0～50	RW	A
0x01FE	heating medium	0～1	RW	0:water /1:antifreeze
0x01FF	Smart Grid Options	0～1	RW	0: enable,1: disable
0x0200	Peak grid running time	30～999	RW	min
0x0201	Dual temperature zone selection	0～2	RW	0:Auto /1：manual/2：Disable
0x0202	Mixed water regulating valve cycle	5～20	RW	min
0x0203	Mixing valve full cycle time	0～180	RW	S
0x0204	Max rotate speed of DC Water Pump	50～99	RW	%
0x0205	Rotate Speed of DC water pump under constant temperature	20～99	RW	%
0x0206	Floor heating test mode selection	0～1	RW	0: enable,1: disable

4. User parameters 0x0300～0x032F

Address	Parameter Name	Range	Default	Type	Note
0x0300	Cooling set temperature		12℃	Read-Write	
0x0301	Heating set temperature		55℃	Read-Write	
0x0302	Hot water set temperature		55℃	Read-Write	
0x0303	Floor heating set temperature		50℃	Read-Write	
0x0304	Set mode	0: cooling 1: heating 2: hot water 3: Floor heating 4: Hot water + cooling 5: Hot water + heating 6: Reserve 7: Hot water + floor heating		Read-Write	
0x0305	On/Off	0: Power off / 1: Power on		Read-Write	
0x0306	Indoor temperature set point			Read-Write	

0x0307	Frequency conversion mode	0:Standard mode 1: High power mode 2: Silent mode		Read-Write	
0x0308	reserved			Read-Write	
0x0309	reserved			Read-Write	
0x030A	functional mode	reserved		Read-Write	
0x030B				Read-Write	
0x030C	Heating/floor heating curve setting	Bit7-0 Heating Bit15-8 Floor Heating		Read-Write	
0x030D	Hot water/cooling curve settings	Bit7-0 Hot Water Bit15-8 Refrigeration		Read-Write	
0x030E	reserved parameters			Read-Write	
0x030F	reserved parameters			Read-Write	
0x0310	reserved parameters			Read-Write	
0x0311	reserved parameters			Read-Write	
0x0312	reserved parameters			Read-Write	
0x0313	Cooling curve setting	0-8 11-18	0	Read-Write	≥130 valid
0x0314	Heating curve setting	0-8 11-18	0	Read-Write	≥130 valid
0x0315	Hot water curve setting	0-4	0	Read-Write	≥130 valid
0x0316	Floor heating curve setting	0-8 11-18	0	Read-Write	≥130 valid

5.User Order 0x0330～0x035F

Forced control of the unit, frequency/speed of forced control

Address	Parameter Name	Range		Default	Type	Note
0x0330	Crew control	Bit0	0		Read-Write	
		Bit1	0			
		Bit2	Fast heat mode			
		Bit3	Force into defrost			
		Bit4	System Emptying mode			
		Bit5	Refrigerant recovery			
		Bit6	0			
		Bit7	0			
		Bit8	Forced to sterilizing			
		Bit9	0			
		Bit10	Allow backwater			
		Bit11	0			
		Bit12	0			
		Bit13	Restore factory defaults			
		Bit14	0			
		Bit15	0			

0x0331	Load forced control	Bit0	Compressor forced control		Read-Write	
		Bit1	EEV forced control			
		Bit2	EVI forced control			
		Bit3	Fan motor forced control			
		Bit4	0			
		Bit5	0			
		Bit6	0			
		Bit7	0			
		Bit8	0			
		Bit9	0			
		Bit10	0			
		Bit11	0			
		Bit12	0			
		Bit13	0			
		Bit14				
0x0332	Compressor 1 forced frequency	0-120Hz			Read-Write	
0x0333	Compressor 2 forced frequency	0-120Hz			Read-Write	
0x0334		0			Read-Write	
0x0335		0			Read-Write	
0x0336	EEV1 forced opening	0-500P			Read-Write	
0x0337	EEV2 forced opening	0-500P			Read-Write	
0x0338		0			Read-Write	
0x0339		0			Read-Write	
0x033A	EVI1 forced opening	0-500P			Read-Write	
0x033B	EVI2 forced opening	0-500P			Read-Write	
0x033C		0			Read-Write	
0x033D		0			Read-Write	
0x033E	Fan motor forced speed	0-80Hz			Read-Write	
0x033F		0			Read-Write	
0x0340		0			Read-Write	
0x0341		0			Read-Write	
0x0342		0			Read-Write	
0x0343	DC water pump control	0:auto 1: manual				
0x0344	DC water pump output	0-100%				
0x0345	PFC control	0: auto				

		1: off 2: on			
0x0346					

6.Version information 0x0360～0x036F (Product model, custom version, software version,)					
Address	**Parameter Name**	**Range**	**Default**	**Type**	**Note**
0x0360	Program Version	100		Read-Only	V1.0.
0x0361	product type	0		Read-Only	
0x0362	product type identification number	1		Read-Only	
0x0363	Protocol version	/		Read-Only	V1.0.0

Note:
Product type: 0: Inverter commercial machine/1: Fixed frequency domestic machine/2: Commercial fixed frequency machine
Product Type Identification Number:
0: Inverter commercial machine: 0: Commercial inverter dual supply 1: Commercial inverter triple supply
1: Fixed frequency domestic machine: 0: Domestic fixed frequency
2: Fixed frequency commercial machine: 0: Fixed frequency commercial machine

11.Unit System Parameter L 0x0800～0x083F				
The parameter serial number starts at the L11; the L0-L10 remains unchanged				
Address	**Parameter Name**	**Range**	**Type**	**Note**
0x0800	Pipe eletricity heating loading time	1～300min	RW	
0x0801	High temperature sterilization function	0～2	RW	
0x0802	Sterilization interval days	5～30 Day	RW	
0x0803	Sterilization start time	00:00-24:00	RW	
0x0804	Sterilization run time	0-50Min	RW	
0x0805	Sterilization temperature setting	50-80℃	RW	
0x0806			RW	
0x0807			RW	
0x0808			RW	
0x0809			RW	
0x080A			RW	
0x080B	Return water mode	0～10	RW	0: Disabled / 1 continuous water return / 2 cycle water return / 3 temperature difference water return
0x080C	Return water set	20～65℃	RW	

	temperature			
0x080D	Return water temperature return difference	1～15℃	RW	
0x080E	Return water cycle	**3**～90min	RW	
0x080F	Return water time	1～30min	RW	
0x0810				
0x0811				
0x0812				
0x0813				
0x0814				
0x0815				
0x0816				
0x0817				
0x0818				
0x0819				
0x081A				

11.Coils address0X1000-0X10FF
Access order 01H、05H

Address	Parameter Name	Range	Type	Note
0x1000	High power mode		RW	
0x1001	Silent mode		RW	
0x1002	Reserved parameter		RW	
0x1003	Reserved parameter		RW	
0x1004	Reserved parameter		RW	
0x1005	Reserved parameter		RW	
0x1006	Reserved parameter		RW	
0x1007	Reserved parameter		RW	
0x1008	Reserved parameter		RW	
0x1009	Reserved parameter		RW	
0x100A	Reserved parameter		RW	
0x100B	Reserved parameter		RW	
0x100C	Reserved parameter		RW	
0x100D	Reserved parameter		RW	
0x100E	Reserved parameter		RW	
0x100F	Reserved parameter		RW	
0x1010	Reserved parameter		RW	
0x1011	Reserved parameter		RW	
0x1012	Fast heating mode		RW	
0x1013	Forced into defrost		RW	
0x1014	System emptying mode		RW	
0x1015	Refrigerant recovery		RW	
0x1016	Reserved parameter		RW	
0x1017	Reserved parameter		RW	
0x1018	Forced into sterilizing		RW	
0x1019	Reserved parameter		RW	
0x101A	Allow water back		RW	
0x101B	Reserved parameter		RW	

0x101C	Reserved parameter		RW	
0x101D	Restore factory defaults		RW	
0x101E	Reserved parameter		RW	
0x101F	Reserved parameter		RW	
0x1020	Compressor forced to control		RW	
0x1021	EEV forced to control		RW	
0x1022	EVI forced to control		RW	
0x1023	Fan motor forced to control		RW	
0x1024				
0x1025				
0x1026				
0x1027				
0x1028				
0x1029				
0x102A				
0x102B				
0x102C				
0x102D				
0x102E				
0x102F				