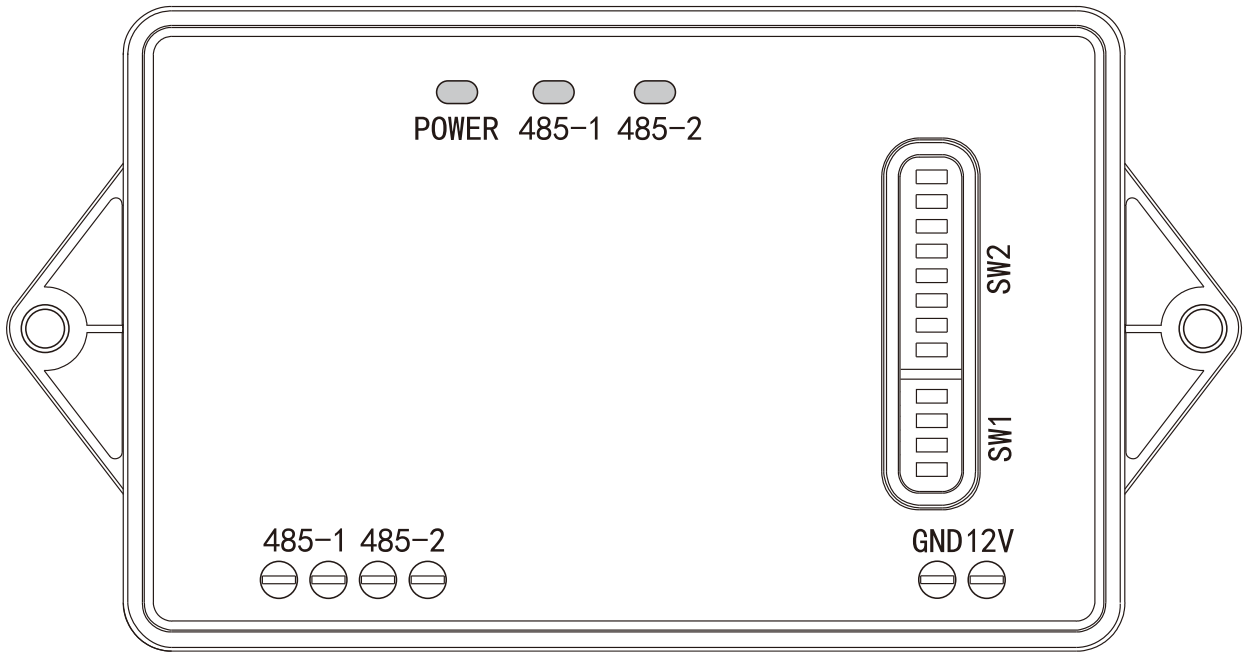
印刷说明(此页不制作)				
序	维度		要求	备注
1	封面封底	材质	铜版纸	
		颜色	黑白	
2	内部印刷	材质	双胶纸	
		颜色	黑白	红色为更改点，实物印刷黑色
3	来料尺寸		129*105	
4	张数		64张(128页)	
更改记录				
序	更改时间		涉及页码	备注
1	240228		英文58、62、67、68、69 中文45、49、52、53	增加协议
2				

Gateway Instructions

- Installation should be done by professional personnel.
- For the purpose of easy operation, please read this manual carefully and follow its instructions.
- Please keep the manual carefully for reference.



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Safety instructions

This manual is used to guide users to install and use this product. Before installation, please read this manual carefully and follow the instructions in this manual.

⚠ Warning

- Dangerous operation may cause threat to personal safety, please operate with caution;
- This product should be protected from installation and use by minors to avoid personal injury.

- Local distributors or outlets should be entrusted to arrange professional installers to perform the installation. Users are strictly prohibited from installing by themselves.
  During installation, there are risks of product failure, water leakage, electric shock, and fire.
- This product should be installed on a wall that can support the weight of the product.
  If the wall is not strong enough, the product may fall and be damaged.
- After the product is installed, it should be connected to a standard power source.
  Failure to install a standard power supply may cause fire or damage to the product.

- After installation of this product, do not try to move or disassemble.
  It may cause fire or damage the product. If repair is required, please contact a qualified installer or service provider.
- Make sure this product is installed in accordance with the requirements of this manual.
  If it is not installed in accordance with this manual, there may be a risk of electric shock or fire.
- Ensure that the wiring of this product complies with local standards and the standards of this manual, and that the work is performed by professionals.
  If the installation work is performed by non-professionals, there may be risks of product failure, electric shock, and fire.

Installation instructions

- This product cannot be installed in the place where flammable gas leaks.
- This product cannot be installed in a salt mist environment.
- This product must not be exposed to water.
- The wiring of this product must not generate tension, so as to avoid the electric leakage caused by the broken wire.
- This product should be installed in an indoor electrical control cabinet with a temperature range of -20℃ to 60℃ and a humidity range of ⩽85% (except for condensation), and avoid direct sunlight, rain and snow.
- Make sure the power input specifications meet the requirements, otherwise the gateway will not work properly or even be damaged.
- Make sure the dialing code is in place according to the actual use situation, otherwise the gateway cannot work normally.
- Do not connect the power cable to the communication cable interface.
- Strong and weak communication cables must be routed separately and at a distance of more than 15cm, and avoid lightning protection networks, otherwise communication will be affected.
- If the product is installed in a hospital or other environment, make sure that the product does not interfere with other products.
- All pictures in this manual are for illustration only.
- Reserve the right to upgrade without notice.

Product Overview

Features

- Max 64 indoor units (1 system) can be controlled through a gateway.
- Modbus RTU protocol can be supported, can be used to BMS system.
- Can be used to as a central control gateway.
- Max 255 gateways can be connected to a group (1~255 IP address).
- Can be used to ARV, LCAC, Modular chiller, FCU, Heat pump

Parameters

Content	Technical parameter
Dimension(Body)	127㎜×65. 8㎜×20. 8㎜
Installation	Screw(Double hole)
Material	ABS
Operation range(T)	−20℃～60℃
Operation range(H)	≤85%

Package list

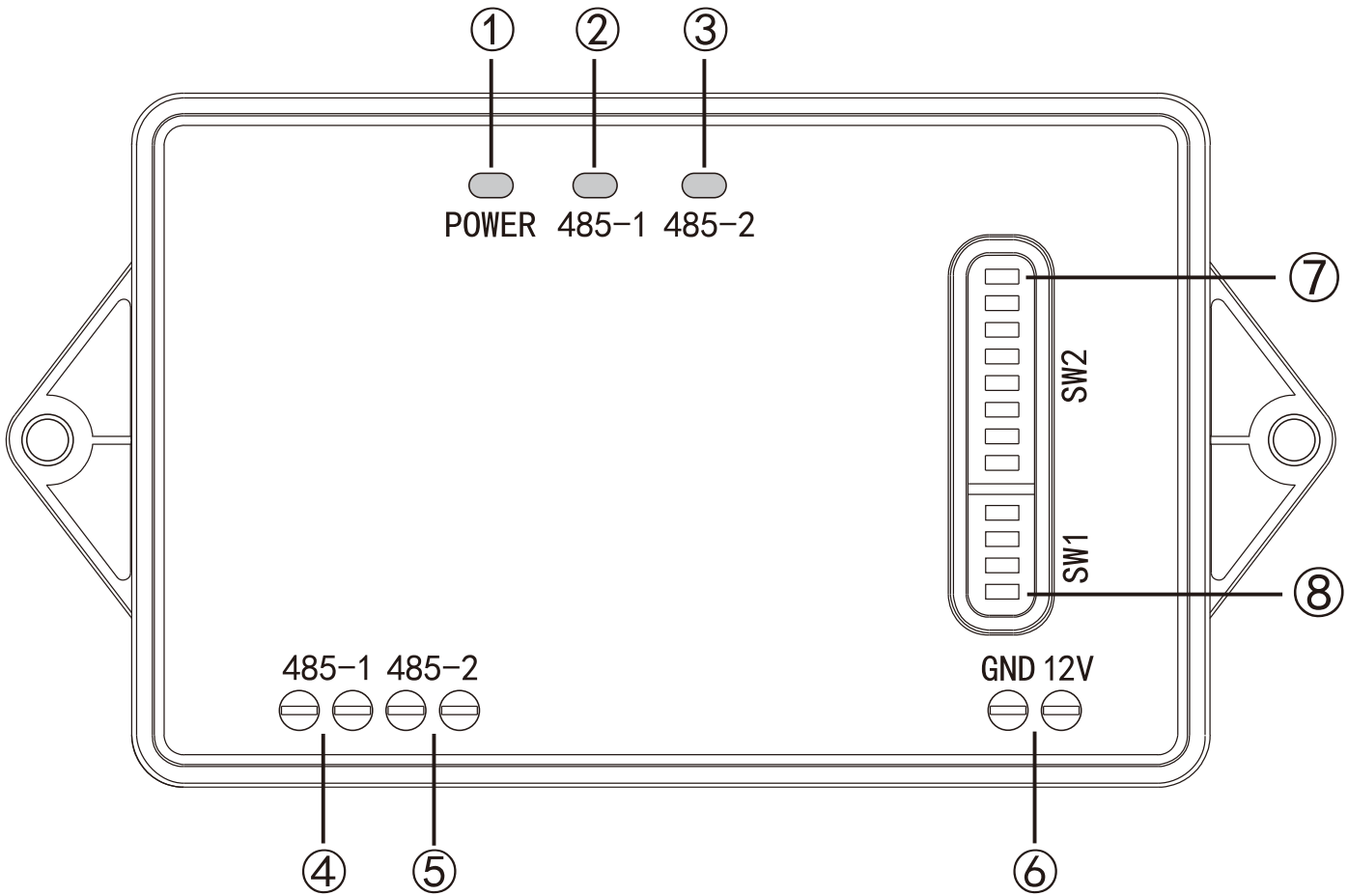
Content	Gateway	Instruction manual	Screw
Quantity	1	1	2

Note

Max 1 million control order can be send to a indoor unit through the gateway, please make sure no exceed this limit.

Detailed description

Connect port introduction



① Pilot lamp power
② Pilot lamp 485-1
③ Pilot lamp 485-2
④ Signal to AC
⑤ Signal to BMS/Central controller
⑥ DC 12V power supply
⑦ Address dial switch(8 bits)
⑧ Function dial switch(4 bits)

Power supply port

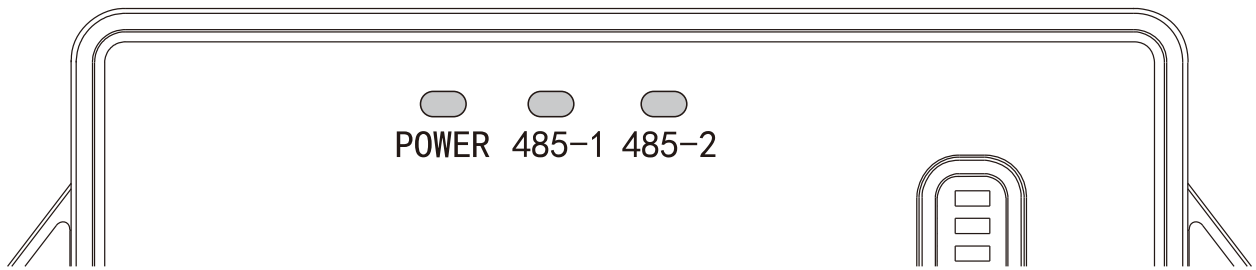
Customer should prepare a power adapter(DC 12V output, ⩾300mA) before installation.

Signal port

- RS485-1 signal port: 2 core signal wiring(Shielding) be connected to gateway's RS485-1 and Air conditioner's RS485 port (A,B terminal), support for non-polarity.
- RS485-2 signal port: 2 core signal wiring(Shielding) be connected to gateway's RS485-2 and central controller or BMS system.

  Note: The power cable and communication cable of the gateway must be routed separately. Otherwise, the gateway may be damaged.

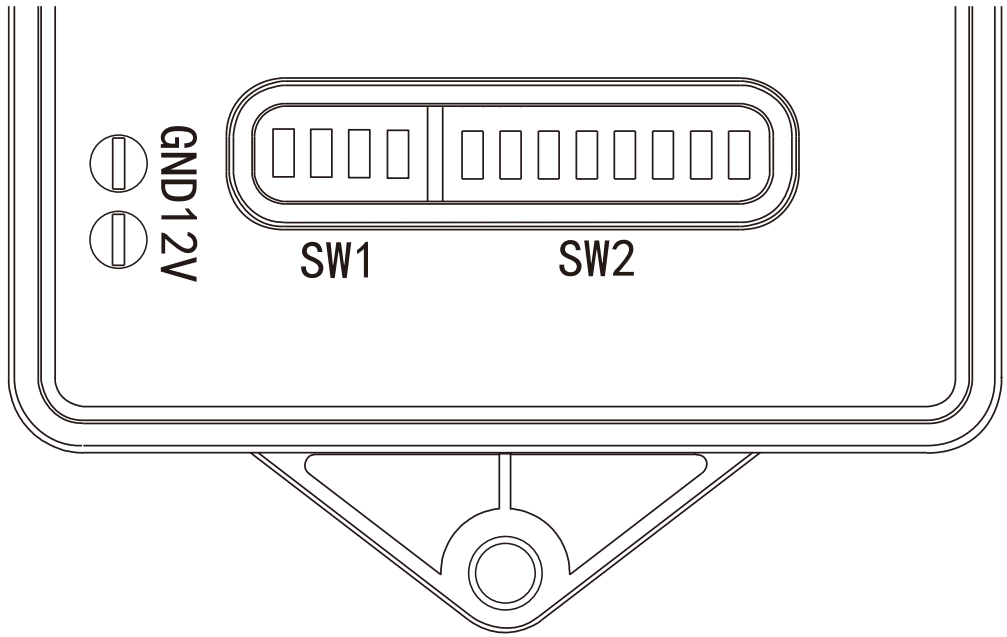
Pilot lamp



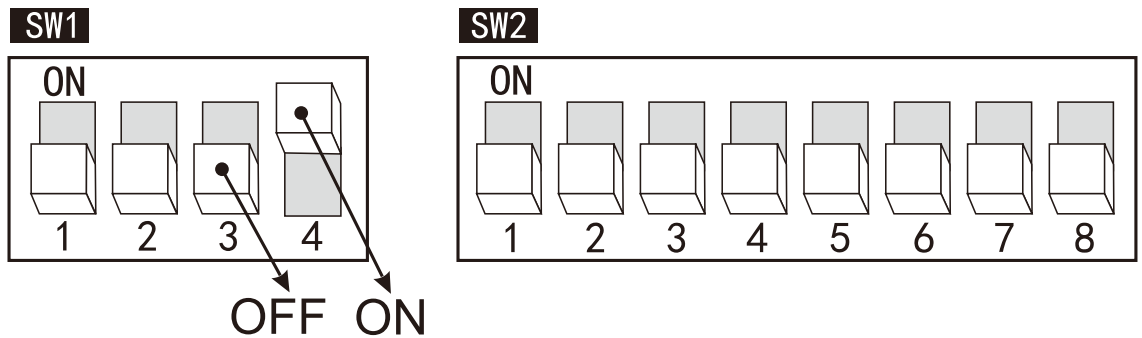
485-1：Light will flicker after normal communication between gateway and AC.
485-2：Light will flicker after normal communication between gateway and central controller or BMS system.
POWER：Light will keep on after power supply.

Dial switch setting

Note: Dial switch should be set according project before installation . it is valid after power reset.



Note: Do not use sharp tools when dialing, with moderate strength, to avoid damaging the dialing, and ensure that the dialing rod is in place.



Function Dial switch

Address Dial switch

SW1 introduction

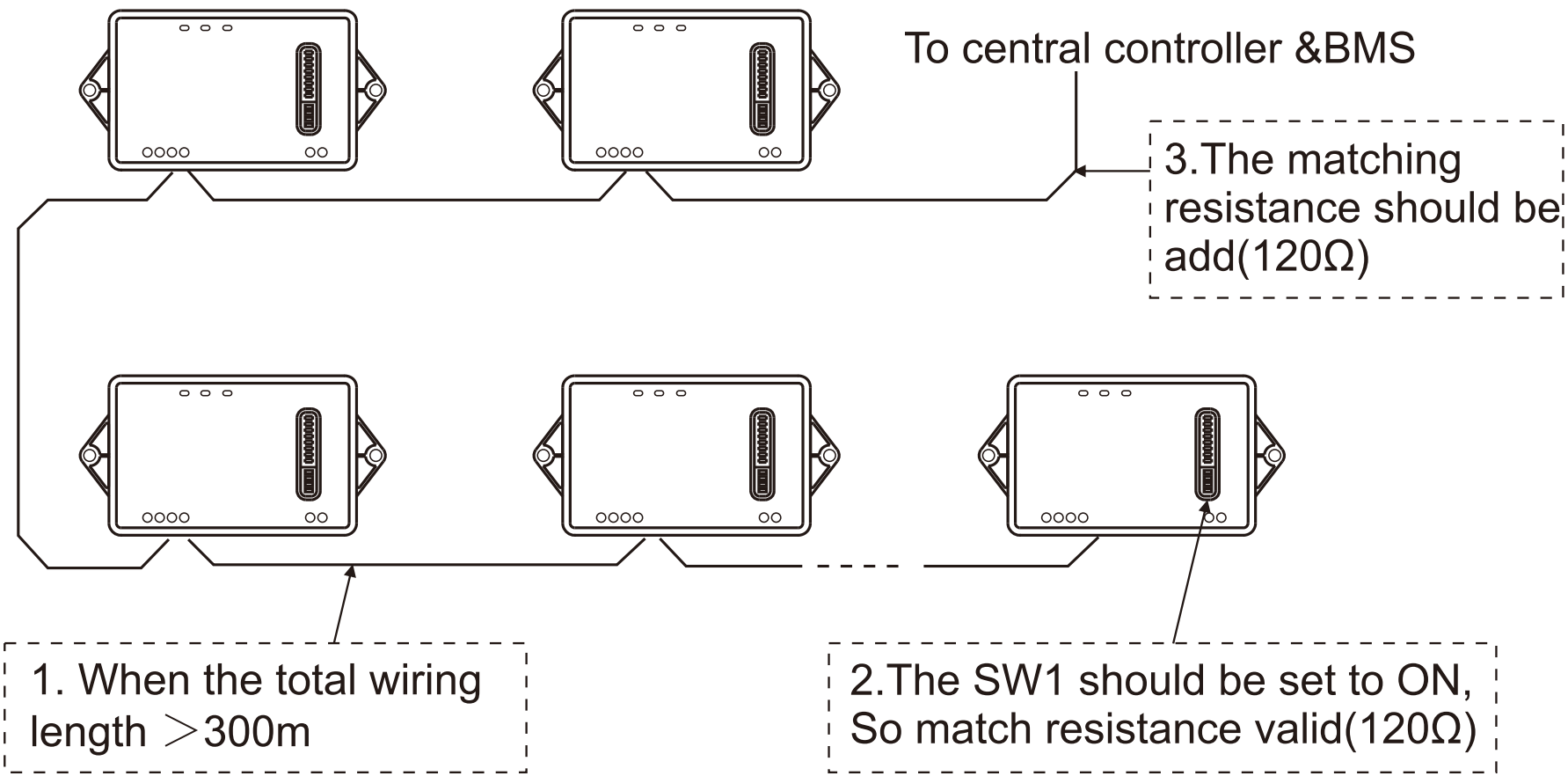
- SW1 definition:

SW1-1	Definition
0	Anti-jamming - The matching resistor is not connected
1	Anti-jamming - The matching resistor is connected

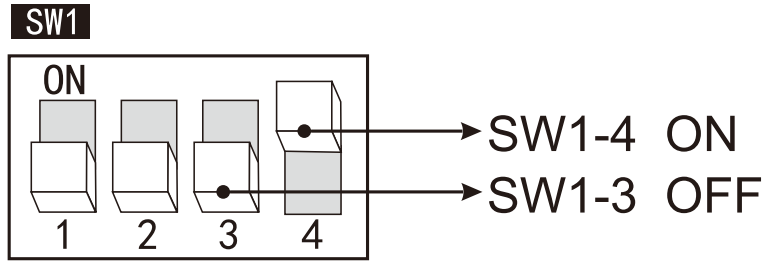
SW1-2	SW1-3	SW1-4	Definition
OFF	OFF	OFF	Central control(ARV,LCAC,FCU)
OFF	OFF	ON	Modbus(ARV,LCAC,FCU)
OFF	ON	OFF	Modbus(Chiller)
OFF	ON	ON	Extension network
ON	OFF	OFF	Modbus(Heat pump)

SW1-1(Anti-interference -Matching resistance setting): In order to eliminate the signal reflection caused by impedance mismatch or discontinuity in long-distance communication, when the communication distance exceeds 300m, a terminal matching resistance must be configured, that is, the matching resistance should be add on the both ends of the RS485 communication, so network is effectively connected. (The matching resistance of this device belongs to RS485-2)

Eg1: SW1-1 Matching resistance be used

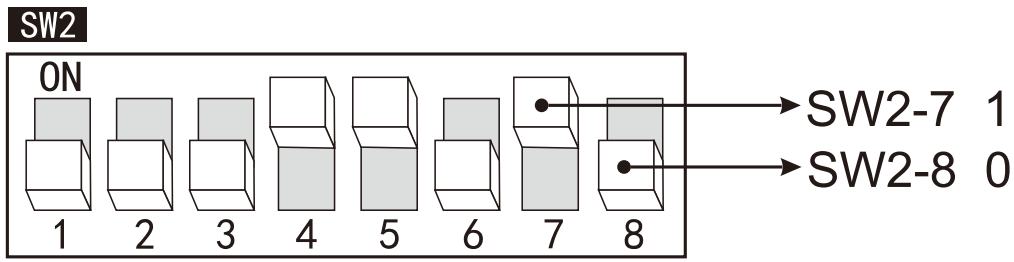


Eg2: SW1-3,4 Modbus(ARV product),the dial-switch setting as below.



SW2 introduction

- The DIP switch is used to set the gateway address. Before using the gateway, IP Address setting of the gateway, ensure that the IP of each gateway which in the same communication bus will not repeated,Otherwise, the communication fails.
- For central control system address range of the gateway is 1~64, for modbus address range of the gateway is 1~255. More details see attachment.
- Eg: address 26 setting as below.



The corresponding dial code value of address 26 is shown in the table below.

1	2	3	4	5	6	7	8	Addr
0	0	0	1	1	0	1	0	26

MODBUS introduction

- Connection port setting
  Baudrate: 9600, Stop-Bit. Even Parity bit.
- Transmission mode
  RTU(remote)
  Note: Rs485-2 supports unlimited communication. Polarity identification needs time. It needs to keep the upper computer sending data continuously. After sending more than 300 bytes or 5 frames continuously, the communication module will automatically switch to the correct polarity.
- Data type
  The following data types are supported as MODBUS functions.

Date type	Length
coil	1 bit
Holding Registers	16 bit

- Function code
  The following function codes are supported. If the function code outside this table is received, it will be regarded as illegal function code and abnormal code will be fed back.

Function code	Definition	Broadcast
0x01(01)	Read coil	/
0x03(03)	Read holding register	/
0x05(05)	Preset single coil	support
0x06(06)	Preset single holding register	support
0x0F(15)	Preset multiple coils	support
0x10(16)	Preset multiple holding register	support

Note: The heat pump unit only supports the function codes 0x03 (03), 0x06 (06) and 0x10 (16).

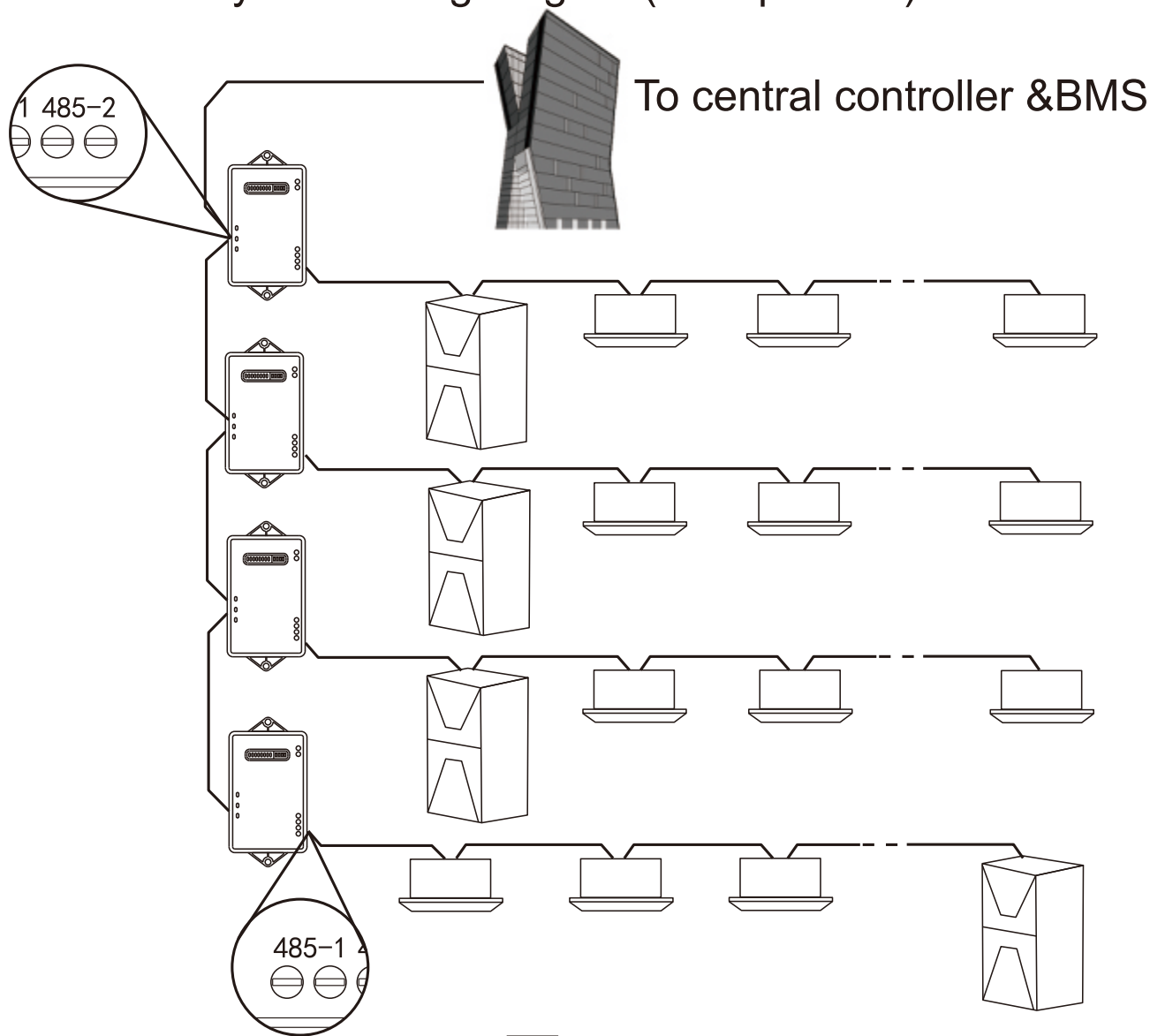
- Protocal

  See “schedule 2” for details of Modbus protocol data.

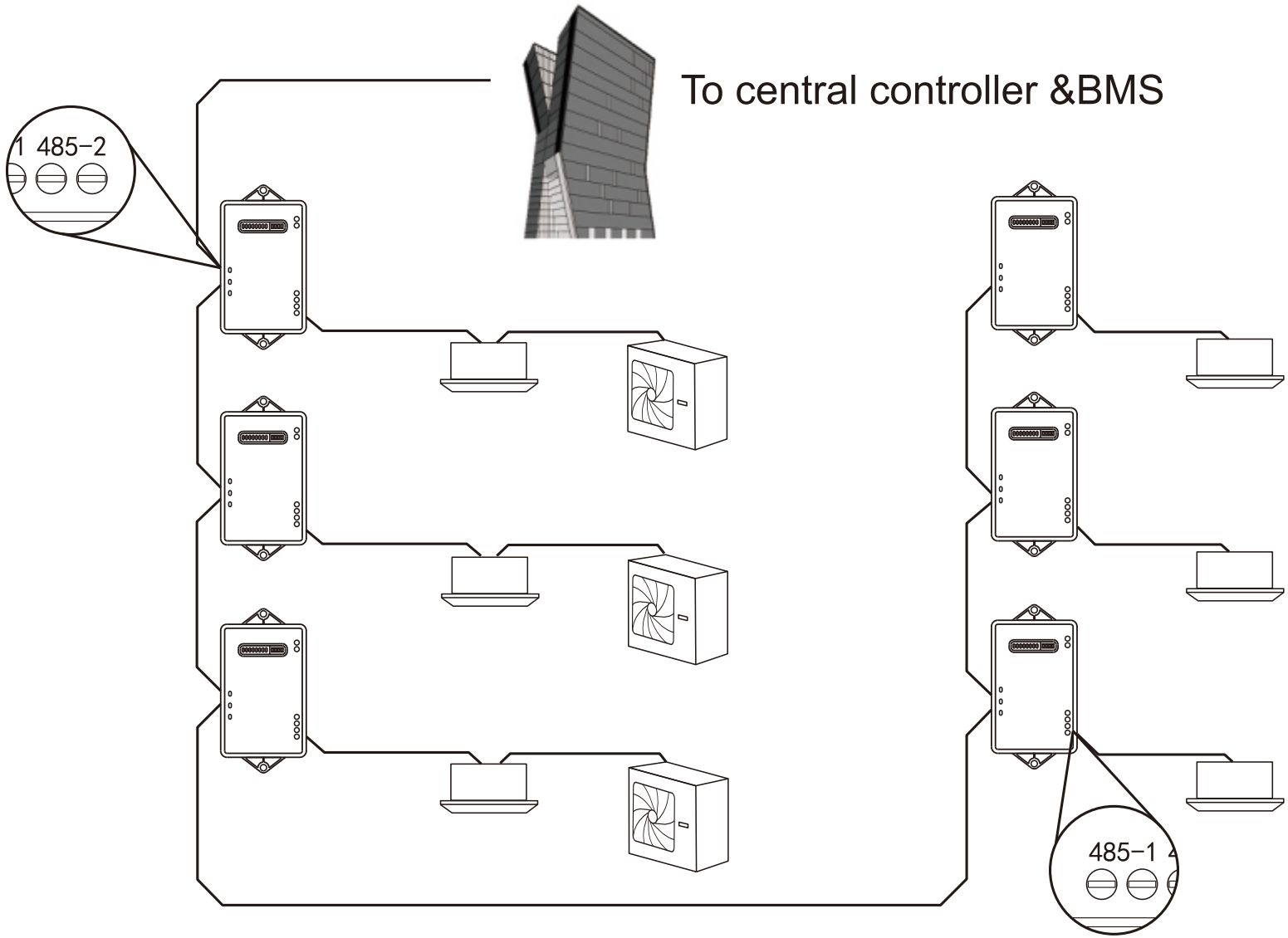
Wiring

Please select the corresponding connection method according to the specific use function scenarios of this gateway.

- BMS, central control system wiring diagram(ARV product)

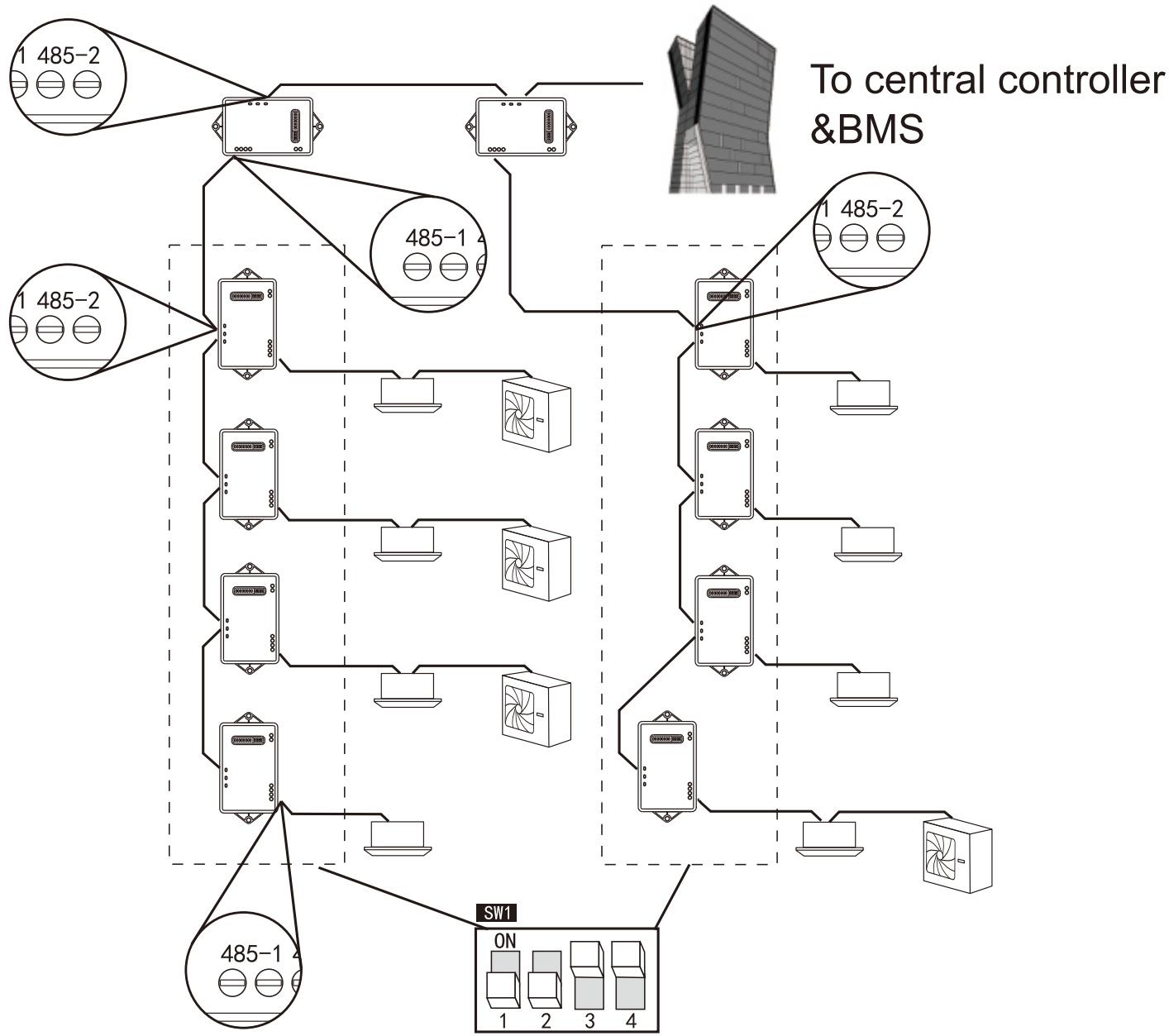


- BMS, central control system wiring diagram(LCAC, FCU product)



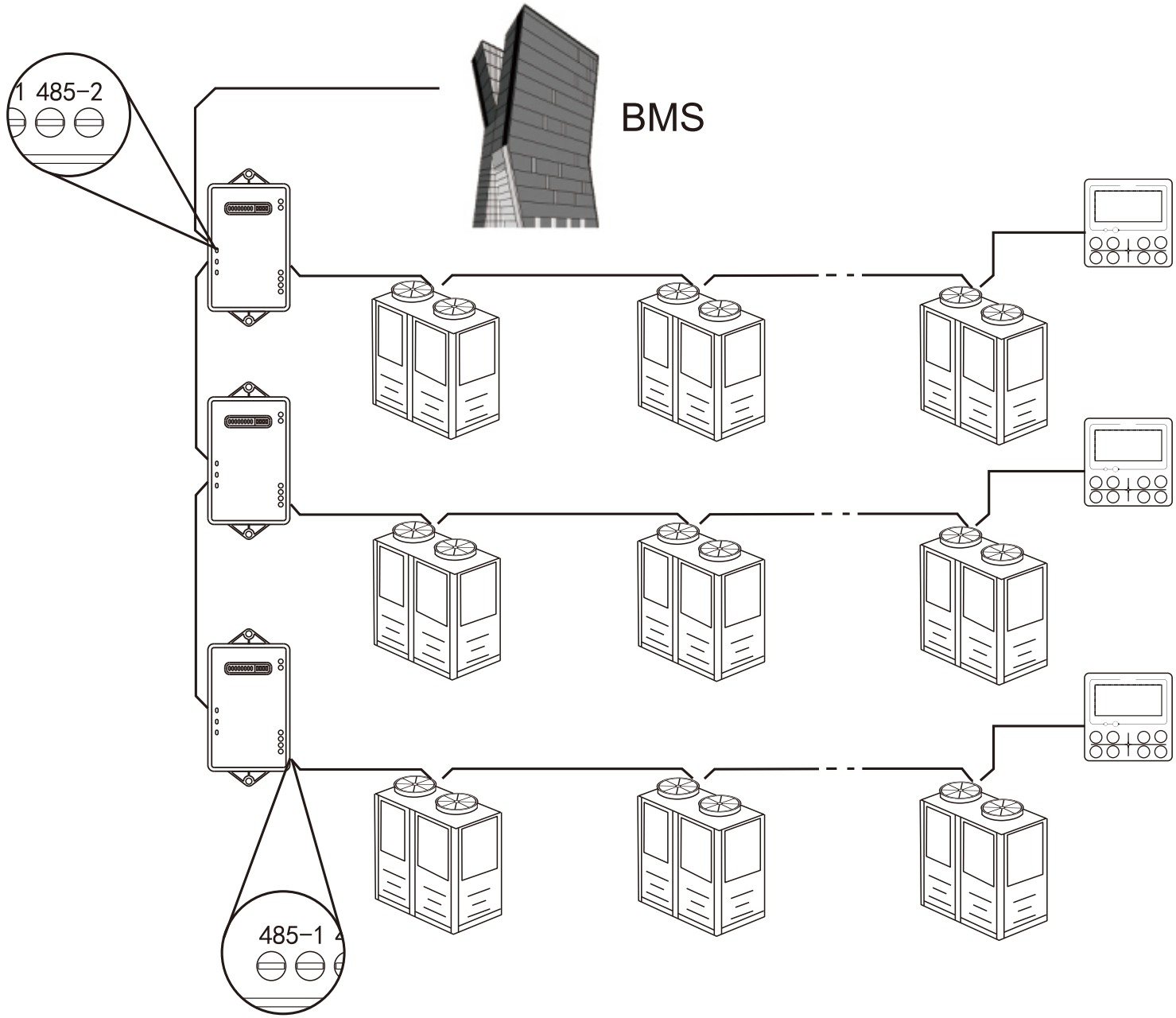
Note: Connection from indoor unit's RS485 port to 485-1 port of the gateway (LCAC, FCU product); ARV, LCAC, FCU products can be connect to the same BMS/central control system.

- Extension network system wiring diagram(LCAC, FCU product)

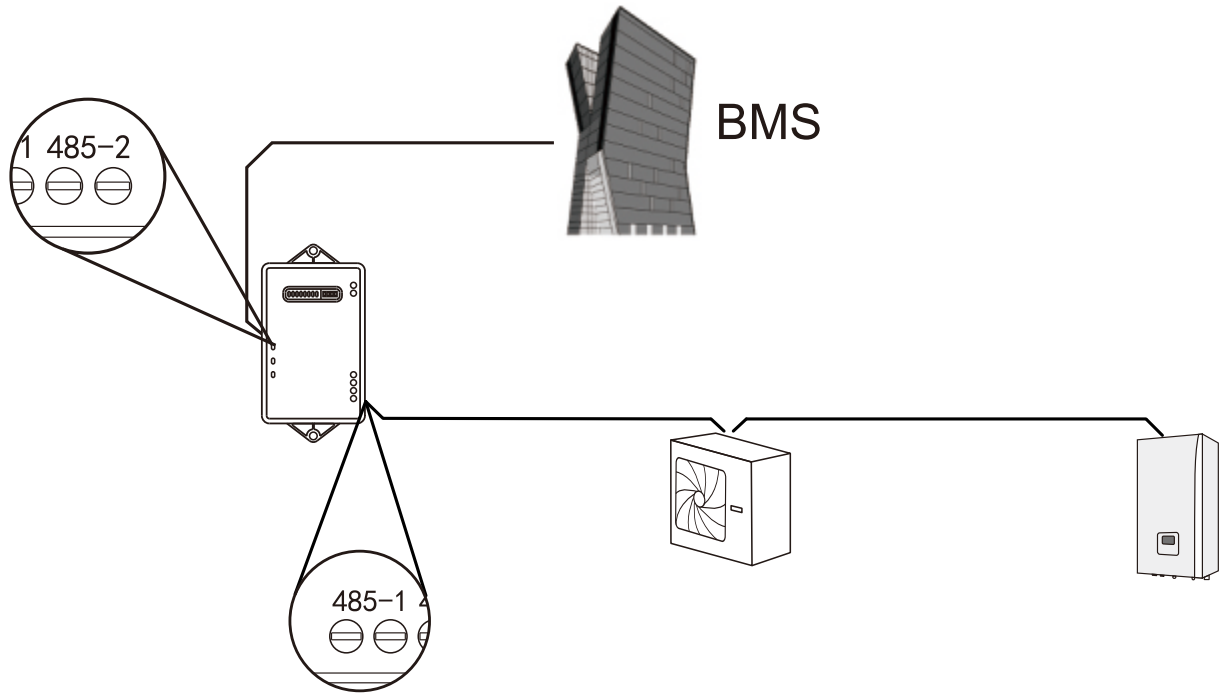


Note:
1.Connection from indoor unit's RS485 port to 485-1 port of the gateway(LCAC, FCU product).
2.One of the Extension network gateway must be set to address 1.
3.Each gateway SW1-3,4 should be set to ON ON, means extension network.
4.Extension network gateway SW1-3,4 setting according use Case【OFF,OFF central control ; OFF,ON Modbus(ARV,LCAC,FCU); ON,OFF Modbus(Chiller)】

- BMS system wiring diagram(chiller product)

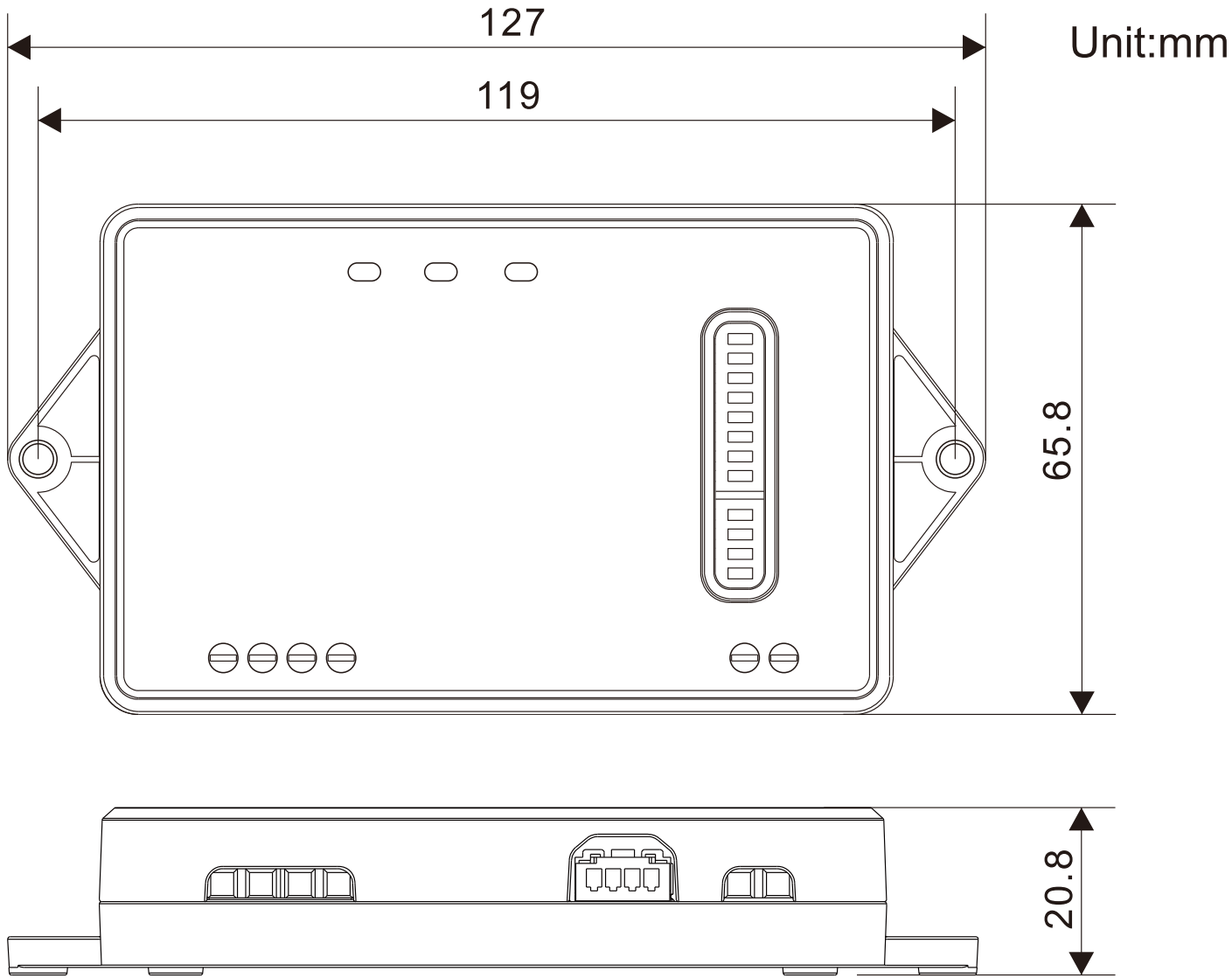


- BMS systen wiring diagram (Heat pump product)



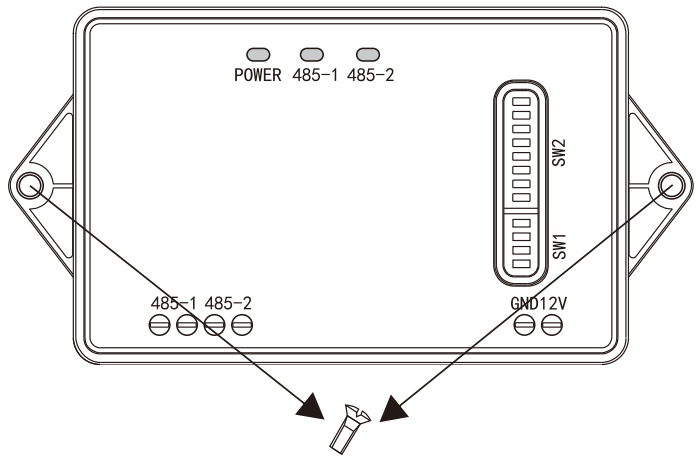
Note: When this product is connected to the heat pump product, ensure that the unit is connected to the heat pump wire controller .

Dimension

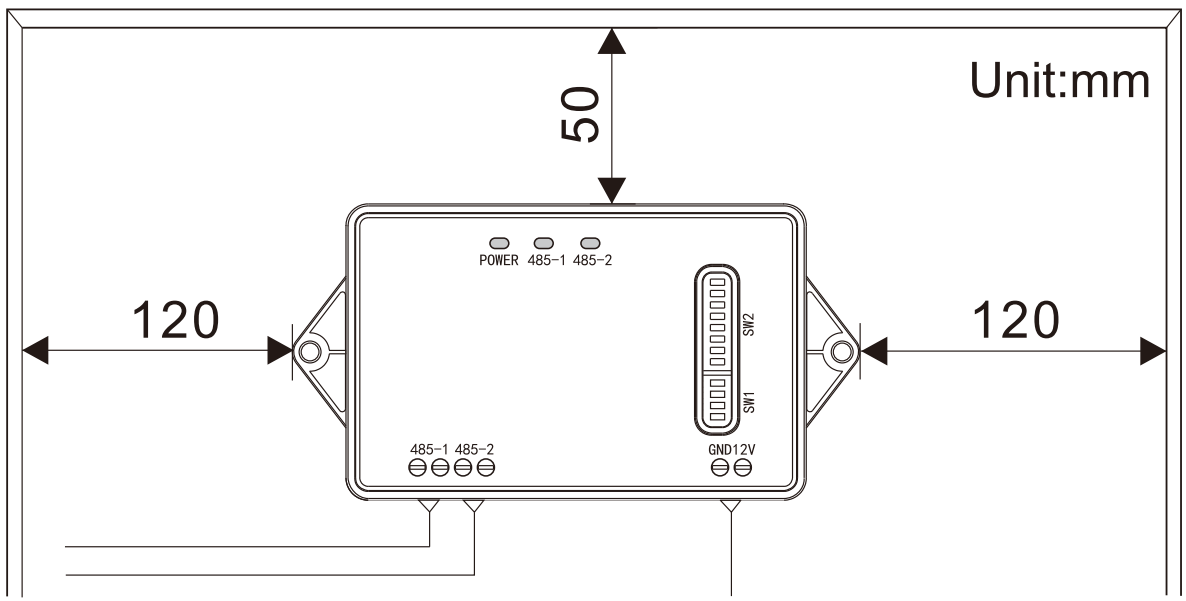


Installation

- The gateway shall be installed in the electric control cabinet with the front facing outward, the terminal facing downward, horizontally fixed and fixed with 2 screws.



- The installation space is shown as below (for reference).



Communication wiring

Gateway communication includes two channels of RS485 communication, RS485-1 is the communication with air conditioning unit, RS485-2 is the communication with centralized control system or BMS system.

- Wiring requirements

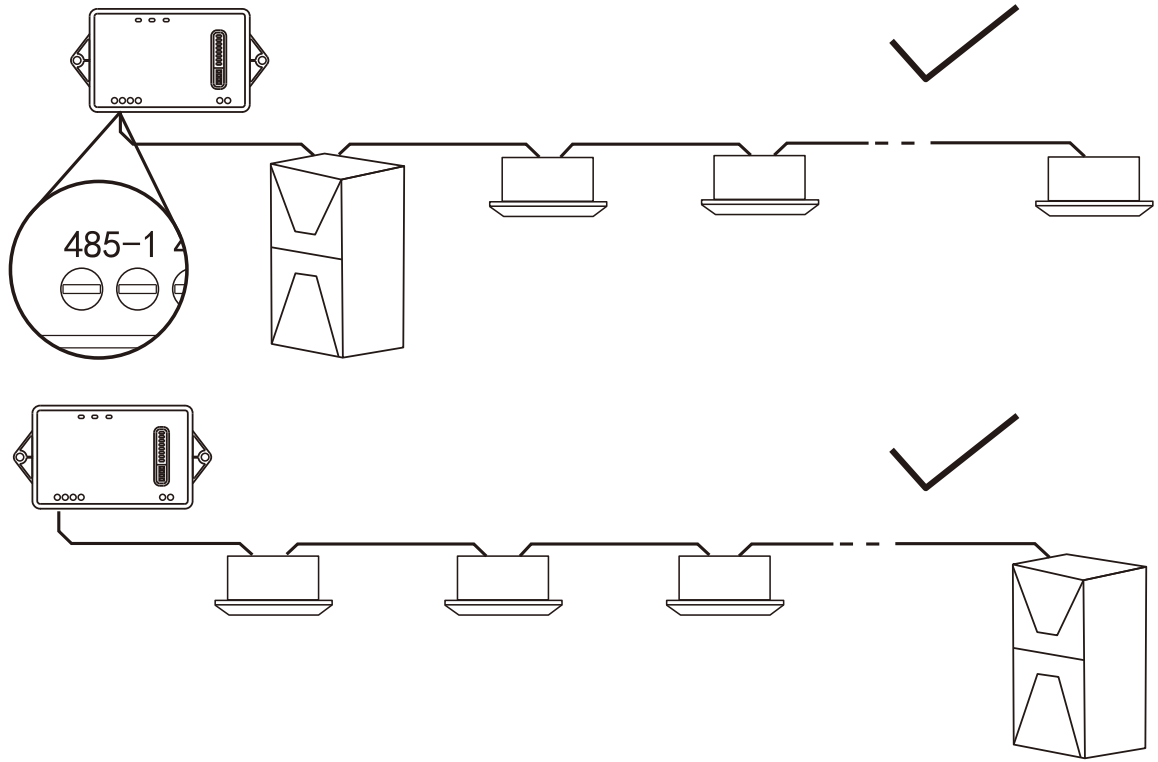
	Wiring between AC and gateway	Wiring between central controller &BMS system
Material	Shielded light / ordinary PVC sheathed twisted pair copper cord (RVVSP)	Shielded light / ordinary PVC sheathed twisted pair copper cord (RVVSP)
Length	⩽800m	⩽800m
Diameter	⩾2×0.75mm²	⩾2×0.75mm²
Standard	GB/T 5023.5-2008	GB/T 5023.5-2008
Remark	Total length shoud less than 800m(Length contain the communication wiring between indoor units and outdoor units)	When total length over than 800m or total quantity of gateway over than 30 or unstably signal, the repeater need to be added

Wiring diagram

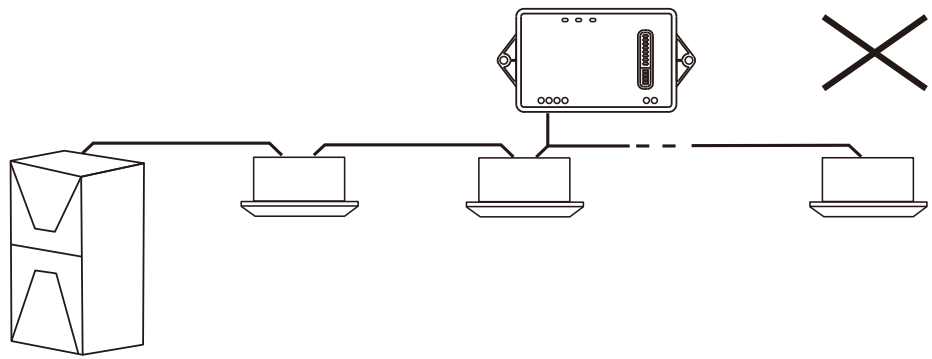
Note: Gateway should be connected hand in hand. forbidden connection such as star type and Y type.

(1) Wiring between AC and gateway

- Normal wiring:

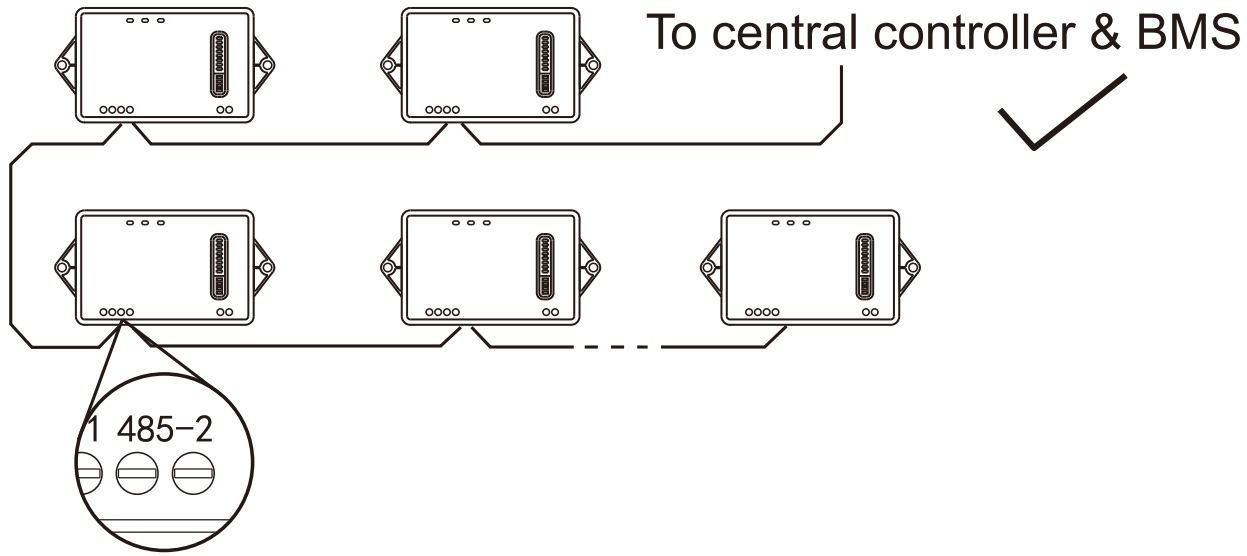


- Wrong wiring:

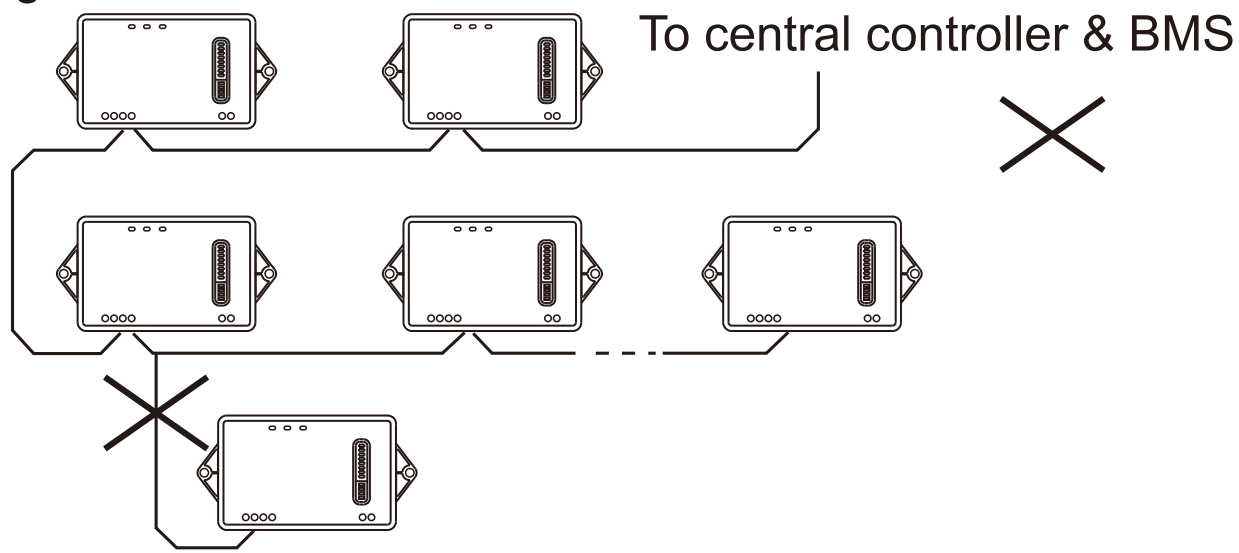


(2) Wiring between gateway and central controller & BMS system

- Normal wiring:



- Wrong wiring:



Configuration step

1.Confirm the first gateway which connect to the central controller & BMS system, and connect the wiring from 485-2 port of the gateway to the BMS system.
2.Connect wiring from 485-2 port of the first gateway to 485-2 port of the next gateway,and And connect to other gateways hand in hand.
3.Connect wiring from 485-1 port of each gateway to 485 port of the matched Air conditioner .
4.Dial-switch setting (refer to 2.2)
Note: When total length over than 800m or total quantity of gateway over than 30 or unstably signal, the repeater need to be added.

Troubleshooting table of common problems

No	Issues	Possible Reasons
1	The pilot lamp (Power)not work after power on	1.Abnormal main power supply 2.No connection wiring to 12V port 3.Reverse connection wiring of the 12V power supply 4.Abnormal gateway

No	Issues	Possible Reasons
2	The pilot lamp (485-1)not work after connect to AC	1.Wrong setting of SW1 2.AC no power 3.Wrong connection wiring port between AC and gateway 4.Poor connection wiring 5.Abnormal gateway
3	The pilot lamp (485-2)not work after connect to central controller/BMS system	1.Wrong setting of SW1 or SW2 2.Central controller or BMS system no power 3.Wrong connection wiring port between central controller/BMS system and gateway 4.Poor connection wiring 5.Abnormal gateway
4	No AC list on central controller or BMS system	1.AC no power 2.Repeat address of gateways
5	Communication abnormal between central controller/BMS system and gateway	1.Check dial-switch setting of SW1 2.Check connection port setting(refer to 2.3.1) 3.Please wait for a period of time during the polarity identification cycle 4.Refer to above No.3 issue

Schedule 1: address dial (SW2) table

1	2	3	4	5	6	7	8	Address		1	2	3	4	5	6	7	8	Address
0	0	0	0	0	0	0	0	/		1	0	0	0	0	0	0	0	128
0	0	0	0	0	0	0	1	1		1	0	0	0	0	0	0	1	129
0	0	0	0	0	0	1	0	2		1	0	0	0	0	0	1	0	130
0	0	0	0	0	0	1	1	3		1	0	0	0	0	0	1	1	131
0	0	0	0	0	1	0	0	4		1	0	0	0	0	1	0	0	132
0	0	0	0	0	1	0	1	5		1	0	0	0	0	1	0	1	133
0	0	0	0	0	1	1	0	6		1	0	0	0	0	1	1	0	134
0	0	0	0	0	1	1	1	7		1	0	0	0	0	1	1	1	135
0	0	0	0	1	0	0	0	8		1	0	0	0	1	0	0	0	136
0	0	0	0	1	0	0	1	9		1	0	0	0	1	0	0	1	137
0	0	0	0	1	0	1	0	10		1	0	0	0	1	0	1	0	138
0	0	0	0	1	0	1	1	11		1	0	0	0	1	0	1	1	139
0	0	0	0	1	1	0	0	12		1	0	0	0	1	1	0	0	140
0	0	0	0	1	1	0	1	13		1	0	0	0	1	1	0	1	141
0	0	0	0	1	1	1	0	14		1	0	0	0	1	1	1	0	142
0	0	0	0	1	1	1	1	15		1	0	0	0	1	1	1	1	143
0	0	0	1	0	0	0	0	16		1	0	0	1	0	0	0	0	144
0	0	0	1	0	0	0	1	17		1	0	0	1	0	0	0	1	145
0	0	0	1	0	0	1	0	18		1	0	0	1	0	0	1	0	146
0	0	0	1	0	0	1	1	19		1	0	0	1	0	0	1	1	147
0	0	0	1	0	1	0	0	20		1	0	0	1	0	1	0	0	148
0	0	0	1	0	1	0	1	21		1	0	0	1	0	1	0	1	149
0	0	0	1	0	1	1	0	22		1	0	0	1	0	1	1	0	150
0	0	0	1	0	1	1	1	23		1	0	0	1	0	1	1	1	151

1	2	3	4	5	6	7	8	Address
0	0	0	1	1	0	0	0	24
0	0	0	1	1	0	0	1	25
0	0	0	1	1	0	1	0	26
0	0	0	1	1	0	1	1	27
0	0	0	1	1	1	0	0	28
0	0	0	1	1	1	0	1	29
0	0	0	1	1	1	1	0	30
0	0	0	1	1	1	1	1	31
0	0	1	0	0	0	0	0	32
0	0	1	0	0	0	0	1	33
0	0	1	0	0	0	1	0	34
0	0	1	0	0	0	1	1	35
0	0	1	0	0	1	0	0	36
0	0	1	0	0	1	0	1	37
0	0	1	0	0	1	1	0	38
0	0	1	0	0	1	1	1	39
0	0	1	0	1	0	0	0	40
0	0	1	0	1	0	0	1	41
0	0	1	0	1	0	1	0	42
0	0	1	0	1	0	1	1	43
0	0	1	0	1	1	0	0	44
0	0	1	0	1	1	0	1	45
0	0	1	0	1	1	1	0	46
0	0	1	0	1	1	1	1	47
0	0	1	1	0	0	0	0	48

1	2	3	4	5	6	7	8	Address
1	0	0	1	1	0	0	0	152
1	0	0	1	1	0	0	1	153
1	0	0	1	1	0	1	0	154
1	0	0	1	1	0	1	1	155
1	0	0	1	1	1	0	0	156
1	0	0	1	1	1	0	1	157
1	0	0	1	1	1	1	0	158
1	0	0	1	1	1	1	1	159
1	0	1	0	0	0	0	0	160
1	0	1	0	0	0	0	1	161
1	0	1	0	0	0	1	0	162
1	0	1	0	0	0	1	1	163
1	0	1	0	0	1	0	0	164
1	0	1	0	0	1	0	1	165
1	0	1	0	0	1	1	0	166
1	0	1	0	0	1	1	1	167
1	0	1	0	1	0	0	0	168
1	0	1	0	1	0	0	1	169
1	0	1	0	1	0	1	0	170
1	0	1	0	1	0	1	1	171
1	0	1	0	1	1	0	0	172
1	0	1	0	1	1	0	1	173
1	0	1	0	1	1	1	0	174
1	0	1	0	1	1	1	1	175
1	0	1	1	0	0	0	0	176

1	2	3	4	5	6	7	8	Address
0	0	1	1	0	0	0	1	49
0	0	1	1	0	0	1	0	50
0	0	1	1	0	0	1	1	51
0	0	1	1	0	1	0	0	52
0	0	1	1	0	1	0	1	53
0	0	1	1	0	1	1	0	54
0	0	1	1	0	1	1	1	55
0	0	1	1	1	0	0	0	56
0	0	1	1	1	0	0	1	57
0	0	1	1	1	0	1	0	58
0	0	1	1	1	0	1	1	59
0	0	1	1	1	1	0	0	60
0	0	1	1	1	1	0	1	61
0	0	1	1	1	1	1	0	62
0	0	1	1	1	1	1	1	63
0	1	0	0	0	0	0	0	64
0	1	0	0	0	0	0	1	65
0	1	0	0	0	0	1	0	66
0	1	0	0	0	0	1	1	67
0	1	0	0	0	1	0	0	68
0	1	0	0	0	1	0	1	69
0	1	0	0	0	1	1	0	70
0	1	0	0	0	1	1	1	71
0	1	0	0	1	0	0	0	72
0	1	0	0	1	0	0	1	73

1	2	3	4	5	6	7	8	Address
1	0	1	1	0	0	0	1	177
1	0	1	1	0	0	1	0	178
1	0	1	1	0	0	1	1	179
1	0	1	1	0	1	0	0	180
1	0	1	1	0	1	0	1	181
1	0	1	1	0	1	1	0	182
1	0	1	1	0	1	1	1	183
1	0	1	1	1	0	0	0	184
1	0	1	1	1	0	0	1	185
1	0	1	1	1	0	1	0	186
1	0	1	1	1	0	1	1	187
1	0	1	1	1	1	0	0	188
1	0	1	1	1	1	0	1	189
1	0	1	1	1	1	1	0	190
1	0	1	1	1	1	1	1	191
1	1	0	0	0	0	0	0	192
1	1	0	0	0	0	0	1	193
1	1	0	0	0	0	1	0	194
1	1	0	0	0	0	1	1	195
1	1	0	0	0	1	0	0	196
1	1	0	0	0	1	0	1	197
1	1	0	0	0	1	1	0	198
1	1	0	0	0	1	1	1	199
1	1	0	0	1	0	0	0	200
1	1	0	0	1	0	0	1	201

1	2	3	4	5	6	7	8	Address
0	1	0	0	1	0	1	0	74
0	1	0	0	1	0	1	1	75
0	1	0	0	1	1	0	0	76
0	1	0	0	1	1	0	1	77
0	1	0	0	1	1	1	0	78
0	1	0	0	1	1	1	1	79
0	1	0	1	0	0	0	0	80
0	1	0	1	0	0	0	1	81
0	1	0	1	0	0	1	0	82
0	1	0	1	0	0	1	1	83
0	1	0	1	0	1	0	0	84
0	1	0	1	0	1	0	1	85
0	1	0	1	0	1	1	0	86
0	1	0	1	0	1	1	1	87
0	1	0	1	1	0	0	0	88
0	1	0	1	1	0	0	1	89
0	1	0	1	1	0	1	0	90
0	1	0	1	1	0	1	1	91
0	1	0	1	1	1	0	0	92
0	1	0	1	1	1	0	1	93
0	1	0	1	1	1	1	0	94
0	1	0	1	1	1	1	1	95
0	1	1	0	0	0	0	0	96
0	1	1	0	0	0	0	1	97
0	1	1	0	0	0	1	0	98

1	2	3	4	5	6	7	8	Address
1	1	0	0	1	0	1	0	202
1	1	0	0	1	0	1	1	203
1	1	0	0	1	1	0	0	204
1	1	0	0	1	1	0	1	205
1	1	0	0	1	1	1	0	206
1	1	0	0	1	1	1	1	207
1	1	0	1	0	0	0	0	208
1	1	0	1	0	0	0	1	209
1	1	0	1	0	0	1	0	210
1	1	0	1	0	0	1	1	211
1	1	0	1	0	1	0	0	212
1	1	0	1	0	1	0	1	213
1	1	0	1	0	1	1	0	214
1	1	0	1	0	1	1	1	215
1	1	0	1	1	0	0	0	216
1	1	0	1	1	0	0	1	217
1	1	0	1	1	0	1	0	218
1	1	0	1	1	0	1	1	219
1	1	0	1	1	1	0	0	220
1	1	0	1	1	1	0	1	221
1	1	0	1	1	1	1	0	222
1	1	0	1	1	1	1	1	223
1	1	1	0	0	0	0	0	224
1	1	1	0	0	0	0	1	225
1	1	1	0	0	0	1	0	226

1	2	3	4	5	6	7	8	Address
0	1	1	0	0	0	1	1	99
0	1	1	0	0	1	0	0	100
0	1	1	0	0	1	0	1	101
0	1	1	0	0	1	1	0	102
0	1	1	0	0	1	1	1	103
0	1	1	0	1	0	0	0	104
0	1	1	0	1	0	0	1	105
0	1	1	0	1	0	1	0	106
0	1	1	0	1	0	1	1	107
0	1	1	0	1	1	0	0	108
0	1	1	0	1	1	0	1	109
0	1	1	0	1	1	1	0	110
0	1	1	0	1	1	1	1	111
0	1	1	1	0	0	0	0	112
0	1	1	1	0	0	0	1	113
0	1	1	1	0	0	1	0	114
0	1	1	1	0	0	1	1	115
0	1	1	1	0	1	0	0	116
0	1	1	1	0	1	0	1	117
0	1	1	1	0	1	1	0	118
0	1	1	1	0	1	1	1	119
0	1	1	1	1	0	0	0	120
0	1	1	1	1	0	0	1	121
0	1	1	1	1	0	1	0	122
0	1	1	1	1	0	1	1	123

1	2	3	4	5	6	7	8	Address
1	1	1	0	0	0	1	1	227
1	1	1	0	0	1	0	0	228
1	1	1	0	0	1	0	1	229
1	1	1	0	0	1	1	0	230
1	1	1	0	0	1	1	1	231
1	1	1	0	1	0	0	0	232
1	1	1	0	1	0	0	1	233
1	1	1	0	1	0	1	0	234
1	1	1	0	1	0	1	1	235
1	1	1	0	1	1	0	0	236
1	1	1	0	1	1	0	1	237
1	1	1	0	1	1	1	0	238
1	1	1	0	1	1	1	1	239
1	1	1	1	0	0	0	0	240
1	1	1	1	0	0	0	1	241
1	1	1	1	0	0	1	0	242
1	1	1	1	0	0	1	1	243
1	1	1	1	0	1	0	0	244
1	1	1	1	0	1	0	1	245
1	1	1	1	0	1	1	0	246
1	1	1	1	0	1	1	1	247
1	1	1	1	1	0	0	0	248
1	1	1	1	1	0	0	1	249
1	1	1	1	1	0	1	0	250
1	1	1	1	1	0	1	1	251

1	2	3	4	5	6	7	8	Address		1	2	3	4	5	6	7	8	Address
0	1	1	1	1	1	0	0	124		1	1	1	1	1	1	0	0	252
0	1	1	1	1	1	0	1	125		1	1	1	1	1	1	0	1	253
0	1	1	1	1	1	1	0	126		1	1	1	1	1	1	1	0	254
0	1	1	1	1	1	1	1	127		1	1	1	1	1	1	1	1	255

Schedule 2: Modbus protocol data sheet

(1) ARV/LCAC/FCU

- Coil

Address	Content	Access type (W/R)	Definition
0	1# indoor unit existence or not	R	0：Non-existent， 1：existence
1	1# indoor unit ON/OFF state	W/R	0：OFF，1：ON
2	1# indoor unit UP/DOWN swing	W/R	0：stop，1：swing
3	1# indoor un it Left/Right swing	R	0：stop，1：swing
4	1# indoor unit sleeping mode	W/R	0：OFF，1：ON
5	1# indoor unit electric heater mode	W/R	0：OFF，1：ON
6	1#indoor unit cleaning reminder	W/R	0：no need， 1：cleaning reminder

Address	Content	Access type (W/R)	Definition
7	1# indoor unit ON/OFF lock	W/R	0：unlock，1：lock
8	1# indoor unit running mode lock	W/R	0：unlock，1：lock
9	1# indoor unit setting temperature lock	W/R	0：unlock，1：lock
10	1# indoor unit fan speed lock	W/R	0：unlock，1：lock
11~19	1# indoor unit reserve	R	0
20*(n-1)+0	n# indoor unit existence or not	R	0：Non-existent， 1：existence
20*(n-1)+1	n# indoor unit ON/OFF state	W/R	0：OFF，1：ON
20*(n-1)+2	n# indoor unit UP/DOWN swing	W/R	0：stop，1：swing
20*(n-1)+3	n# indoor unit Left/Right swing	R	0：stop，1：swing
20*(n-1)+4	n# indoor unit sleeping mode	W/R	0：OFF，1：ON
20*(n-1)+5	n# indoor unit electric heater mode	W/R	0：OFF，1：ON
20*(n-1)+6	n#indoor unit cleaning reminder	W/R	0：no need， 1：cleaning reminder

Address	Content	Access type (W/R)	Definition
20*(n-1)+7	n# indoor unit ON/OFF lock	W/R	0：unlock，1：lock
20*(n-1)+8	n# indoor unit running mode lock	W/R	0：unlock，1：lock
20*(n-1)+9	n# indoor unit setting temperature lock	W/R	0：unlock，1：lock
20*(n-1)+10	n# indoor unit fan speed lock	W/R	0：unlock，1：lock
20*(n-1)+11~ 20*(n-1)+19	n# indoor unit reserve	R	0
1281	All indoor unit ON/OFF state	W/R	0：OFF，1：ON
1282	All indoor unit UP/DOWN swing	W/R	0：stop，1：swing
1283	All indoor unit Left/Right swing	R	0：stop，1：swing
1284	All indoor unit sleeping mode	W/R	0：OFF，1：ON
1285	All indoor unit electric heater mode	W/R	0：OFF，1：ON
1286	All indoor unit cleaning reminder	W/R	0：no need， 1：cleaning reminder

Address	Content	Access type (W/R)	Definition
1287	All indoor unit ON/OFF lock	W/R	0：unlock，1：lock
1288	All indoor unit running mode lock	W/R	0：unlock，1：lock
1289	All indoor unit setting temperature lock	W/R	0：unlock，1：lock
1290	All indoor unit fan speed lock	W/R	0：unlock，1：lock
1291~1297	Reserve	R	0
1298	Error code of outdoor unit	R	0：no error，1：error
1299	Compressor ON/OFF state	R	0：stop，1：run

*n maximum is 64.

- Holding registers

Address	Content	Access type (W/R)	Definition	Type	Unit
0	1# indoor unit model type	R		Unsigned Word	
1	1# indoor unit cooling capacity	R		Unsigned Word	HP
2	1# indoor unit running mode	W/R	0: Auto, 1: Cooling, 2: Dry, 3: Healthy, 4: Heating, 6: Fan	Unsigned Word	/
3	1# indoor unit setting temperature	W/R	[16,32]	Signed Word	0.1℃
4	1# indoor unit setting fan speed	W/R	1: High, 2: Medium, 3: Low , 4: Breeze, 5: Auto	Unsigned Word	/
5	1# indoor unit actual fan speed	R	0: Stop, 1: High, 2: Medium, 3: Low,	Unsigned Word	/
6	1# indoor unit present error code	R	[0, 255]. Eg: 0xA1 means A1 error code	Unsigned Word	/
7	1# indoor unit room temperature	R	0	Signed Word	0.1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
8	1# indoor unit inlet coil temperature	R	0	Signed Word	0.1℃
9	1# indoor unit mid coil temperature	R	0	Signed Word	0.1℃
10	1# indoor unit outlet coil temperature	R	0	Signed Word	0.1℃
11~19	1# indoor unit reserve	R	0		
20*(n-1)+0	n# indoor unti model type	R		Unsigned Word	
20*(n-1)+1	n# indoor unit cooling capacity	R		Unsigned Word	HP
20*(n-1)+2	n# indoor unit running mode	W/R	0: Auto, 1: Cooling, 2: Dry, 3: Healthy, 4: Heating, 6: Fan	Unsigned Word	/
20*(n-1)+3	n# indoor unit setting temperature	W/R	[16,32]	Signed Word	0.1℃
20*(n-1)+4	n# indoor unit setting fan speed	W/R	1: High, 2: Medium, 3: Low, 4: Breeze, 5: Auto	Unsigned Word	/
20*(n-1)+5	n# indoor unit actual fan speed	R	0: Stop, 1: High, 2: Medium, 3: Low,	Unsigned Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
20*(n-1)+6	n# indoor unit present error code	R	[0, 255]. Eg: 0xA1 means A1 error code	Unsigned Word	/
20*(n-1)+7	n# indoor unit room temperature	R	0	Signed Word	0.1℃
20*(n-1)+8	n# indoor unit inlet coil temperature	R	0	Signed Word	0.1℃
20*(n-1)+9	n# indoor unit mid coil temperature	R	0	Signed Word	0.1℃
20*(n-1)+10	n# indoor unit outlet coil temperature	R	0	Signed Word	0.1℃
20*(n-1)+11~ 20*(n-1)+19	n# indoor unit reserve	R	0		
1280	All indoor units running mode	W/R	0: Auto, 1: Cooling, 2: Dry, 3: Healthy, 4: Heating, 6: Fan	Unsigned Word	/
1281	All indoor units setting temperature	W/R	[16,32]	Signed Word	0.1℃
1282	All indoor units setting fan speed	W/R	1: High, 2: Medium, 3: Low, 4: Breeze, 5: Auto	Unsigned Word	/
1283~1294	reserve	R			

Address	Content	Access type (W/R)	Definition	Type	Unit
1295	Parity bit	W/R	0:Even parity bit. 1:Odd parity bit. 2:No parity bit.	Unsigned Word	/
1296	Total quantity of indoor units	R	0	Unsigned Word	/
1297	Total quantity of working indoor units	R	0	Unsigned Word	/
1298	Outside temperature	R	0	Signed Word	0.1℃
1299	ERROR code of Outdoor unit	R	0	Unsigned Word	/

*n maximum is 64.

NOTE:

[Parity bit (register address 1295)] is a late upgrade function, the function needs to be re–powered to take effect after setting, and the production batch of the gateway does not support this function before October 1, 2023.

(2) Chiller

- Coil

Address	Content	Access Type (W/R)	Definition
0	1# Chiller 1# compressor	R	0-stop , 1-running
1	1# Chiller 2# compressor	R	0-stop , 1-running
2	1# Chiller 3# compressor	R	0-stop , 1-running
3	1# Chiller 4# compressor	R	0-stop , 1-running
4	1# Chiller 1# heating belt	R	0-stop , 1-running
5	1# Chiller 2# heating belt	R	0-stop , 1-running
6	1# Chiller 1# four-way value A	R	0-stop , 1-running
7	1# Chiller 2# four-way value A	R	0-stop , 1-running
8	1# Chiller Electric heating of shell and tube heat exchanger(hot water)	R	0-stop , 1-running
9	1# Chiller water pumb of shell and tube heat exchanger(hot water)	R	0-stop , 1-running
10	1# Chiller 1# Fan motor	R	0-stop , 1-running
11	1# Chiller 2# Fan motor	R	0-stop , 1-running
12	1# Chiller Electric heating of shell and tube heat exchanger(cooling)	R	0-stop , 1-running

Address	Content	Access Type (W/R)	Definition
13	1# Chiller water pumb of shell and tube heat exchanger(cooling)	R	0-stop , 1-running
14	1# Chiller 1# four-way value B	R	0-stop , 1-running
15	1# Chiller 2# four-way value B	R	0-stop , 1-running
16	1# Chiller target flow switch of shell and tube heat exchanger(cooling)	R	0-cut off , 1-connected
17	1# Chiller target flow switch of shell and tube heat exchanger(hot water)	R	0- cut off , 1-connected
18~29	1# Chiller (Reserve)	R	
30*(n-1)+0	n# Chiller 1# compressor	R	0-stop , 1-running
30*(n-1)+1	n# Chiller 2# compressor	R	0-stop , 1-running
30*(n-1)+2	n# Chiller 3# compressor	R	0-stop , 1-running
30*(n-1)+3	n# Chiller 4# compressor	R	0-stop , 1-running
30*(n-1)+4	n# Chiller 1# heating belt	R	0-stop , 1-running
30*(n-1)+5	n# Chiller 2# heating belt	R	0-stop , 1-running
30*(n-1)+6	n# Chiller 1# four-way value A	R	0-stop , 1-running
30*(n-1)+7	n# Chiller 2# four-way value A	R	0-stop , 1-running

Address	Content	Access Type (W/R)	Definition
30*(n-1)+8	n# Chiller Electric heating of shell and tube heat exchanger(hot water)	R	0-stop , 1-running
30*(n-1)+9	n# Chiller Electric heating of shell and tube heat exchanger(hot water)	R	0-stop , 1-running
30*(n-1)+10	n# Chiller 1# Fan motor	R	0-stop , 1-running
30*(n-1)+11	n# Chiller 2# Fan motor	R	0-stop , 1-running
30*(n-1)+12	n# Chiller Electric heating of shell and tube heat exchanger(cooling)	R	0-stop , 1-running
30*(n-1)+13	n# Chiller water pumb of shell and tube heat exchanger(cooling)	R	0-stop , 1-running
30*(n-1)+14	n# Chiller 1# four-way value B	R	0-stop , 1-running
30*(n-1)+15	n# Chiller 2# four-way value B	R	0-stop , 1-running
30*(n-1)+16	n# Chiller target flow switch of shell and tube heat exchanger(cooling)	R	0-cut off , 1-connected
30*(n-1)+17	n# Chiller target flow switch of shell and tube heat exchanger(hot water)	R	0-cut off , 1-connected
30*(n-1)+18~ 30*(n-1)+29	n# Chiller (Reserve)	R	

*n maximum is 16.

- Holding Register

Address	Content	Access type (W/R)	Definition	Type	Unit
0	ON/OFF setting	W/R	0-OFF，1-ON	Unsigned Word	/
1	Operation mode setting	W/R	1-Hot water, 2-Cooling, 3-Coolign & hot water, 4-Heating, 5-Heating & hot water	Unsigned Word	/
2	Priority setting	W/R	0-Coolign & heating, 1-Hot water	Unsigned Word	/
3	Return/inlet Water(to air conditioner) temperature setting	W/R	Cooling mode [10, 20] ℃, Heating mode [30, 45] ℃	Signed Word	0.1℃
4	Outlet water(hot water)temperature setting	W/R	[30, 50] ℃	Signed Word	0.1℃
5	FCU Linkage switch state	R	0-open，1-colse	Unsigned Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
6	Operation mode	R	0-Cooling, 1-Heating, 2-Cooling & hot water, 3-Heating & hot water, 4-Hot water, 5-Anti freezing	Unsigned Word	
7	On/Off-line ODU	R	Bit15: means 16# modular, Bit0: means 1# modular, 1-on line, 0-off line	Unsigned Word	
8	Reserve	R		Unsigned Word	
9	Reserve	R		Unsigned Word	
10	1# machine type	R		Unsigned Word	
11	1# machine 1# system operation mode	R	0-Cooling, 1-Heating, 2-Hot water, 3-Cooling & hot water,	Unsigned Word	
12	1# machine 2# system operation mode	R	0-Cooling, 1-Heating, 2-Hot water, 3-Cooling & hot water,	Unsigned Word	

Address	Content	Access type (W/R)	Definition	Type	Unit
13	1# machine error code	R	[0, 255]. Eg: 0x25 means E25 error code	Unsigned Word	
14	1# machine outside temperature	R		Signed Word	0.1℃
15	1# machine outlet water temperature	R		Signed Word	0.1℃
16	1# machine inlet water temperature	R		Signed Word	0.1℃
17	1# machine 1# compressor exchaust temperature	R		Signed Word	0.1℃
18	1# machine 2# compressor exchaust temperature	R		Signed Word	0.1℃
19	1# machine 1# compressor suction temperature	R		Signed Word	0.1℃
20	1# machine 2# compressor suction temperature	R		Signed Word	0.1℃
21	1# machine 1# compressor oil temperature	R		Signed Word	0.1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
22	1# machine 2# compressor oil temperature	R		Signed Word	0.1℃
23	1# machine 1# condenser outlet temperature	R		Signed Word	0.1℃
24	1# machine 2# condenser outlet temperature	R		Signed Word	0.1℃
25	1# machine 1# evaporator temperature	R		Signed Word	0.1℃
26	1# machine 2# evaporator temperature	R		Signed Word	0.1℃
27	1# machine inlet hot water temperature	R		Signed Word	0.1℃
28	1# machine outlet hot water temperature	R		Signed Word	0.1℃
29	1# machine Water tank temperature	R		Signed Word	0.1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
30	1# machine 1# condenser mid temperature	R		Signed Word	0.1℃
31	1# machine 2# condenser mid temperature	R		Signed Word	0.1℃
32	1# machine PMV1 pulse	R		Unsigned Word	1pls
33	1# machine PMV2 pulse	R		Unsigned Word	1pls
34	1# machine PMV3 pulse	R		Unsigned Word	1pls
35	1# machine PMV4 pulse	R		Unsigned Word	1pls
36	1# machine PMV5 pulse	R		Unsigned Word	1pls
37	1# machine PMV6 pulse	R		Unsigned Word	1pls
38	1# machine 1# compressor current	R		Unsigned Word	0.1A
39	1# machine 2# compressor current	R		Unsigned Word	0.1A
40	1# machine 3# compressor current	R		Unsigned Word	0.1A

Address	Content	Access type (W/R)	Definition	Type	Unit
41	1# machine 4# compressor current	R		Unsigned Word	0.1A
42~49	1# machine (reserve)	R		Unsigned Word	
40*(n-1)+10	n# machine type	R		Unsigned Word	
40*(n-1)+11	n# machine 1# system operation mode	R	0-Cooling, 1-Heating, 2-Hot water, 3-Cooling & hot water	Unsigned Word	
40*(n-1)+12	n# machine 2# system operation mode	R	0-Cooling, 1-Heating, 2-Hot water, 3-Cooling & hot water	Unsigned Word	
40*(n-1)+13	n# machine error code	R	[0, 255]. Eg: 0x25 means E25 error code	Unsigned Word	
40*(n-1)+14	n# machine outside temperature	R		Signed Word	0.1℃
40*(n-1)+15	n# machine outlet water temperature	R		Signed Word	0.1℃
40*(n-1)+16	n# machine inlet water temperature	R		Signed Word	0.1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
40*(n-1)+17	n# machine 1# compressor exchaust temperature	R		Signed Word	0.1℃
40*(n-1)+18	n# machine 2# compressor exchaust temperature	R		Signed Word	0.1℃
40*(n-1)+19	n# machine 1# compressor suction temperature	R		Signed Word	0.1℃
40*(n-1)+20	n# machine 2# compressor suction temperature	R		Signed Word	0.1℃
40*(n-1)+21	n# machine 1# compressor oil temperature	R		Signed Word	0.1℃
40*(n-1)+22	n# machine 2# compressor oil temperature	R		Signed Word	0.1℃
40*(n-1)+23	n# machine 1# condenser outlet temperature	R		Signed Word	0.1℃
40*(n-1)+24	n# machine 2# condenser outlet temperature	R		Signed Word	0.1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
40*(n-1)+25	n# machine 1# evaporator temperature	R		Signed Word	0.1℃
40*(n-1)+26	n# machine 2# evaporator temperature	R		Signed Word	0.1℃
40*(n-1)+27	n# machine inlet hot water temperature	R		Signed Word	0.1℃
40*(n-1)+28	n# machine outlet hot water temperature	R		Signed Word	0.1℃
40*(n-1)+29	n# machine Water tank temperature	R		Signed Word	0.1℃
40*(n-1)+30	n# machine 1# condenser mid temperature	R		Signed Word	0.1℃
40*(n-1)+31	n# machine 2# condenser mid temperature	R		Signed Word	0.1℃
40*(n-1)+32	n# machine PMV1 pulse	R		Unsigned Word	1pls
40*(n-1)+33	n# machine PMV2 pulse	R		Unsigned Word	1pls
40*(n-1)+34	n# machine PMV3 pulse	R		Unsigned Word	1pls
40*(n-1)+35	n# machine PMV4 pulse	R		Unsigned Word	1pls
40*(n-1)+36	n# machine PMV5 pulse	R		Unsigned Word	1pls
40*(n-1)+37	n# machine PMV6 pulse	R		Unsigned Word	1pls

Address	Content	Access type (W/R)	Definition	Type	Unit
40*(n-1)+38	n# machine 1# compressor current	R		Unsigned Word	0.1A
40*(n-1)+39	n# machine 2# compressor current	R		Unsigned Word	0.1A
40*(n-1)+40	n# machine 3# compressor current	R		Unsigned Word	0.1A
40*(n-1)+41	n# machine 4# compressor current	R		Unsigned Word	0.1A
40*(n-1)+42~ 40*(n-1)+49	n# machine (reserve)	R		Unsigned Word	
1295	Parity bit	W/R	0:Even par -ity bit. 1:Odd pari -ty bit. 2:No parity bit.	Unsigned Word	/

*n maximum is 16.

NOTE:

[Parity bit (register address 1295)] is a late upgrade function, the function needs to be re–powered to take effect after setting, and the production batch of the gateway does not support this function before October 1, 2023.

(3)Heat pump

● Holding Register

Address	Content	Access type (W/R)	Definition	Type	Unit
0	indoor unit ON/OFF setting	W/R	0-OFF，1-ON	Signed Word	/
1	indoor unit running mode	W/R	0：Auto，1：cooling 4：heating	Signed Word	/
2	indoor unit setting temperature	W/R	cooling：[5，25]℃ heating：[25，65]℃	Signed Word	0.1℃
3	hot water ON/OFF setting	W/R	0-OFF，1-ON	Signed Word	/
4	hot water setting temperature	W/R	[30，60]℃	Signed Word	0.1℃
5	ECO MODE	W/R	0：Cancel ECO 1：ECO mode 1 … 8：ECO mode 8	Signed Word	/
6	WEATHER TEMP	W/R	0：Cancel automatic water temperature 1：Automatic water temperature mode 1 … 9：Automatic water temperature mode 9	Signed Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
7	DHW PUMP	W/R	1：ON（After opening, the water module automatically closes）	Signed Word	/
8	FAST DHW	W/R	0-OFF，1-ON	Signed Word	/
9	DISINFECT	W/R	1：ON（After opening, the water module automatically closes）	Signed Word	/
10	AIR PURGE	W/R	0-OFF，1-ON	Signed Word	/
11	FLOOR DRYING	W/R	0-OFF，1-ON	Signed Word	/
12	FLOOR PREHEAT	W/R	0-OFF，1-ON	Signed Word	/
13	SILENT MODE	W/R	0：OFF，1：type-1 2：type-2	Signed Word	/
14	MAIN ZONE ROOM TEMP SET	W/R	cooling/heating：[16，32]℃	Signed Word	0.1℃
15	SECOND ZONE HEAT MODE ON/OFF	W/R	0-OFF，1-ON	Signed Word	/

Address	Content	Access type (W/R	Definition	Type	Unit
16	SECOND ZONE HEATING TARGET WATER PEMP SET	W/R	[25，45]℃	Signed Word	0.1℃
17	SECOND ZONE ECO	W/R	0：Cancel ECO 1：ECO mode1 … 8：ECO mode8	Signed Word	/
40	OUD CAP	R		Signed Word	100W
41	OUD OPERATE MODE	R	0：stop，1：cooling 2：heating， 3：hot water	Signed Word	/
42	COMP FREQENCY	R		Signed Word	
43	FAN SPEED	R		Signed Word	
44	EXPANSION VALVE	R		Signed Word	
45	COMP CURRENT	R		Signed Word	
46	TARGET FREQENCY	R		Signed Word	
47	DC BUS VOLTAGE	R		Signed Word	
48	INV INPUT CURRENT	R		Signed Word	

Address	Content	Access type (W/R)	Definition	Type	Unit
49	INV MODULE TEMP	R		Signed Word	
50	SUCTION TEMP	R		Signed Word	
51	DISCHARGE TEMP	R		Signed Word	0.1℃
52	EXCHARGE TEMP	R		Signed Word	0.1℃
53	OUTDOOR TEMP	R		Signed Word	0.1℃
54	COMP PRESSURE	R		Signed Word	1kpa
55	MV1_1	R	0-OFF , 1-ON	Signed Word	/
56	MV1_2	R	0-OFF , 1-ON	Signed Word	/
57	MV2	R	0-OFF , 1-ON	Signed Word	/
58	PUMP_I	R	0-OFF , 1-ON	Signed Word	/
59	PUMP_O	R	0-OFF , 1-ON	Signed Word	/
60	PUMP_D	R	0-OFF , 1-ON	Signed Word	/
61	PIPE BACKUP HEATE	R	0-OFF , 1-ON	Signed Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
62	TANK BACKUP HEATER	R	0-OFF , 1-ON	Signed Word	/
63	Two_B	R		Signed Word	0.1℃
64	PLATE W-IN TEMP	R		Signed Word	0.1℃
65	PLATE W-OUT TEMP	R		Signed Word	0.1℃
66	WATER TANK TEMP	R		Signed Word	0.1℃
67	PLATE F-OUT TEMP	R		Signed Word	0.1℃
68	PLATE F-IN TEMP	R	0-OFF , 1-ON	Signed Word	/
69	ROOM TEMP	R	0-OFF , 1-ON	Signed Word	/
70	ODU ERROR CODE	R	[0, 255] For example, 0xA1 indicates that A1 is faulty. Communication data B corresponds to display character H, communication data D corresponds to display character J	Signed Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
71	IDU ERROR CODE	R		Signed Word	/
72	ODU SOFTWARE	R	BCD code, 0x10 indicates V1.0	Signed Word	/
73	IDU SOFTWARE	R		Signed Word	/
74	MV3_1	R	0-OFF , 1-ON	Signed Word	/
75	MV3_2	R	0-OFF , 1-ON	Signed Word	/
76	PUMP_S	R	0-OFF , 1-ON	Signed Word	/
77	PUMP_FLH	R	0-OFF , 1-ON	Signed Word	/
78	PLATE E-HEATER	R	0-OFF , 1-ON	Signed Word	/
79	ET E-HEATER	R	0-OFF , 1-ON	Signed Word	/
80	GAS	R	0-OFF , 1-ON	Signed Word	/
81	TARGET WATER TEMP	R	MAIN ZONE CURRENT TARGET WATER TEMP	Signed Word	0. 1℃
82	SECOND ZONE TARGET WATER TEMP	R	SECOND ZONE CURRENT TARGET WATER TEMP	Signed Word	0. 1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
83	BUFFER TANK TEMP	R	CURREENT BUFFER TANK TEMP	Signed Word	0.1℃
84	UNDER FLOOR HEATING INLET WATER TEMP	R	CURRENT UNDER FLOOR HEATING INLET WATER TEMP	Signed Word	0.1℃
85	SOLAR TEMP	R	CURRENT SOLAR TEMP	Signed Word	0.1℃
86	WATER FLOW	R	CURRENT WATER FLOW	Signed Word	0.01m³/h
87	TOTAL POWER CONSUM OF TODAY	R	TOTAL POWER CONSOM OF TODAY	Unsigned Word	1 KWh
88	DEFROST	R	0: NON-DEFROST, 1: DEFROSTING	Signed Word	/
89	CHASSIS HEATER	R	0-OFF , 1-ON	Signed Word	/
90	Wired Controller Software	R	Current Version	Signed Word	/
91	UNIT CAPACITY	R	Current UNIT CAPACITY	Unsigned Word	0.01kW

Address	Content	Access type (W/R)	Definition	Type	Unit
92	AVERAGE UNIT CAPACITY OF 1h	R	Current AVERAGE UNIT CAPACITY OF 1h	Unsigned Word	0.01kW
93	POWER	R	Current POWER	Unsigned Word	0.01kW
94	AVERAGE POWER OF 1h	R	Current AVERAGE POWER OF 1h	Unsigned Word	0.01kW
95	COP	R	Current COP	Unsigned Word	0.01
96	AVERAGE COP OF 1h	R	Current AVERAGE COP OF 1h	Unsigned Word	0.01
101	PIPE BACKUP HEATER 1	R	0-OFF , 1-ON	Signed Word	/
102	PIPE BACKUP HEATER 2	R	0-OFF , 1-ON	Signed Word	/
200	DHW MODE	W/R	0-OFF , 1-ON	Signed Word	/
201	DISINFECT	W/R	0-OFF , 1-ON	Signed Word	/
202	DHW PRIORITY	W/R	0-OFF , 1-ON	Signed Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
203	DHW PUMP	W/R	0-OFF , 1-ON	Signed Word	/
204	Tao_DHWMAX	W/R	[35 , 43]℃	Signed Word	1℃
205	Tao_DHWMIN	W/R	[-25 , 5]℃	Signed Word	1℃
206	Twt_DI	W/R	[60 , 70]℃	Signed Word	1℃
207	t_TBH_DELAY	W/R	[0 , 240]mim	Signed Word	1min
208	t_DI_HIGHTEMP	W/R	[5 , 60]min	Signed Word	1min
209	t_DI_MAX	W/R	[90 , 300]min	Signed Word	10min
210	t_DHWHP_RESTRICT	W/R	[10 , 600]min	Signed Word	10min
211	t_DHWHP_MAX	W/R	[10 , 600]min	Signed Word	10min
212	DHW PUMP RUN TIME	W/R	[5 , 120]min	Signed Word	5min
213	COOL MODE	W/R	0-OFF , 1-ON	Signed Word	/
214	Tao_CMAX	W/R	[35, 60]℃	Signed Word	1℃
215	Tao_CMIN	W/R	[-5 , 25]℃	Signed Word	1℃
216	TsetAC_C1	W/R	[5 , 25]℃	Signed Word	1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
217	TsetAC_C2	W/R	[5 , 25]℃	Signed Word	1℃
218	Tao_C1	W/R	[-5 , 46]℃	Signed Word	1℃
219	Tao_C2	W/R	[-5 , 46]℃	Signed Word	1℃
220	dTSC-OFF	W/R	[2 , 10]℃	Signed Word	1℃
221	dTSC-ON	W/R	[2 , 10]℃	Signed Word	1℃
222	dTSC-ON	W/R	1 : RAD , 2 : FLH , 3 : FCU	Signed Word	/
223	ZONE2 C_EMISSION	W/R	1 : RAD , 2 : FLH , 3 : FCU	Signed Word	/
224	HEAT MODE	W/R	0-OFF , 1-ON	Signed Word	/
225	Tao_HMAX	W/R	[20 , 35]℃	Signed Word	1℃
226	Tao_HMIN	W/R	[-25 , 15]℃	Signed Word	1℃
227	TsetAC_H1	W/R	[25 , 60]℃	Signed Word	1℃
228	TsetAC_H2	W/R	[25 , 60]℃	Signed Word	1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
229	Tao_H1	W/R	[-25，35]℃	Signed Word	1℃
230	Tao_H2	W/R	[-25，35]℃	Signed Word	1℃
231	dTSH-OFF	W/R	[2，10]℃	Signed Word	1℃
232	dTSH-ON	W/R	[0，10]℃	Signed Word	1℃
233	ZONE1 H_EMISSION	W/R	1：RAD，2：FLH，3：FCU	Signed Word	/
234	ZONE2 H_EMISSION	W/R	1：RAD，2：FLH，3：FCU	Signed Word	/
235	Tao_AUTOCMIN	W/R	[20,35]℃	Signed Word	1℃
236	Tao_AUTOHMAX	W/R	[10，17]℃	Signed Word	1℃
237	WATER FLOW TEMP	W/R	0-OFF，1-ON	Signed Word	/
238	ROOM TEMP	W/R	0-OFF，1-ON	Signed Word	/
239	DOUBLE ZONE	W/R	0-OFF，1-ON	Signed Word	/
240	ROOM THERMOSTAT	W/R	0-OFF，1-ON	Signed Word	/
241	INNER BACKUP HEATER	W/R	0-OFF，1-ON	Signed Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
242	dTSDHW_ON	W/R	[2 , 10]℃	Signed Word	1℃
243	Tao_IBH_ON	W/R	[-15 , 10]℃	Signed Word	1℃
244	Tao_TBS_ON	W/R	[-5 , 20]℃	Signed Word	1℃
245	Tao_AHS_ON	W/R	[-25 , 10]℃	Signed Word	1℃
246	t_IBH_DELAY	W/R	[15 , 120]min	Signed Word	5min
247	t_AHS_DELAY	W/R	[5 , 120]min	Signed Word	5min
248	dTwi_FLH_ON	W/R	[2,10]℃	Signed Word	1℃
249	dTwi_FLH_OFF	W/R	[−10,−2]℃	Signed Word	1℃
250	dTRH_IBH	W/R	[-5 , 0]℃	Signed Word	1℃
251	Two_H_H.A	W/R	[25 , 35]℃	Signed Word	1℃
252	Twt_DHW_H.A	W/R	[30 , 35]℃	Signed Word	1℃
253	Tset_B_PREHEATING	W/R	[30 , 45]℃	Signed Word	1℃
254	t_fristFH	W/R	[24 , 72]Hrs	Signed Word	1Hour

Address	Content	Access type (W/R)	Definition	Type	Unit
255	T_DRYPEAK	W/R	[35，45]℃	Signed Word	1℃
256	t_DRYUP	W/R	[2，8]days	Signed Word	1day
257	t_HIGHPEAK	W/R	[1，5]days	Signed Word	1day
258	t_DRYDOWN	W/R	[0，5]days	Signed Word	1day
259	Twi_FLH	W/R	0-OFF，1-ON	Signed Word	/
260	Twt_BT	W/R	0-OFF，1-ON	Signed Word	/
261	EXPANSION BOARD	W/R	0-OFF，1-ON	Signed Word	/
262	SMART GRID	W/R	0-OFF，1-ON	Signed Word	/
263	SOLAR INPUT	W/R	0：NON，1：Tsolar 2：SL1SL2	Signed Word	/
264	SMART GRID RUN TIME	W/R	[0，24]Hrs	Signed Word	1Hour
265	FLOOR PREHEAT	W/R	0：YES 1：NON	Signed Word	/
266	E-HEATER1 POWER	W/R	[0,40]kW	Signed Word	0.5KW

Address	Content	Access type (W/R)	Definition	Type	Unit
267	E-HEATER2 POWER	W/R	[0,40]kW	Signed Word	0. 5KW
268	TBH	W/R	0-OFF , 1-ON	Signed Word	/
269	TANK E-HEATER POWER	W/R	[0,40]kW	Signed Word	0. 5KW
270	MODE_PUMP_FLH	W/R	0:Mode1 1:Mode2	Signed Word	/
271	POWER INPUT LIMITATION	W/R	0%-90%	Signed Word	10%
272	TIME ADJUST	W/R	[1,60]min	Signed Word	1min
273	PER START	W/R	0-100%	Signed Word	20%
274	Tao_PUMP_ON	W/R	[-25,10]℃	Signed Word	1℃
275	WC_T_ROOM	W/R	0: IDU 1: WIRED CONTROLLER	Signed Word	/

Address	Content	Access type (W/R)	Definition	Type	Unit
276	MODE_PUMP_I	W/R	0：NORMAL， 1：EMERGENCY	Signed Word	/
277	TH_INITIAL_FLH	W/R	[25，40]℃	Signed Word	1℃
278	TH_INITIAL_RAD	W/R	[35，60]℃	Signed Word	1℃
279	TH_INITIAL_FCU	W/R	[30，50]℃	Signed Word	1℃
280	TC_INITIAL_FCU	W/R	[5，25]℃	Signed Word	1min
281	t_REFRESH	W/R	[1，30]min	Signed Word	1℃
282	TC_ADJUST_UP	W/R	[0，15]℃	Signed Word	1℃
283	TC_ADJUST_ DOWN	W/R	[-15，0]℃	Signed Word	1℃
284	TH_ADJUST_UP	W/R	[0，15]℃	Signed Word	1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
285	TH_ADJUST_DOWN	W/R	[-15, 0]℃	Signed Word	1℃
286	TH_MAX_FLH	W/R	[35, 60]℃	Signed Word	1℃
287	TH_MIN_FLH	W/R	[25, 35]℃	Signed Word	1℃
288	TH_MAX_RAD	W/R	[35, 60]℃	Signed Word	1℃
289	TH_MIN_RAD	W/R	[25, 35]℃	Signed Word	1℃
290	TH_MAX_FCU	W/R	[35, 60]℃	Signed Word	1℃
291	TH_MIN_FCU	W/R	[25, 35]℃	Signed Word	1℃
292	dTRC_OFF	W/R	[-5, 0]℃	Signed Word	0. 1℃
293	dTRC_ON	W/R	[0, 5]℃	Signed Word	0. 1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
294	dTRH_OFF	W/R	[0, 5]℃	Signed Word	0.1℃
295	dTRH_ON	W/R	[-5, 0]℃	Signed Word	0.1℃
296	t_PUMP_ON	W/R	[1, 10]min	Signed Word	1min
297	t_PUMP_OFF	W/R	[0, 30]min	Signed Word	1min
298	IBH POWER SELECTION	W/R	1: 3kW, 2: 6kW, 3: 9kW	Signed Word	3kW
299	TC_CORRECT	W/R	[-5, 5]℃	Signed Word	0.5℃
300	TH_CORRECT	W/R	[-5, 5]℃	Signed Word	0.5℃
301	TC_INTERVAL	W/R	[0.1, 3]℃	Signed Word	0.1℃
302	TH_INTERVAL	W/R	[0.1, 3]℃	Signed Word	0.1℃
303	TW_AV	W/R	[0.1, 3]℃	Signed Word	0.1℃

Address	Content	Access type (W/R)	Definition	Type	Unit
384	MODE_IBH	W/R	0:Normal, 1:Powerful	Signed Word	/
385	MODE_PUMP_0	W/R	0:Mode 1, 1:Mode 2	Signed Word	/

NOTE:

1.When using 0x10 (16) function code preset register 200~303, you can preset up to 5 registers at the same time.

2.Due to product upgrade, The IDU program(can check the program version through the wired controller),have limitations between using the following parameters or have differences between content in the table above:

(1)The IDU program version before V05.

①Preset register/ read register 15~17、78~79、82、88、89、268 is not supported.

②Maximum ambient temperature of cooling mode(register 214) preset range[35,52].

③Allow cooling mode operation temperature difference between set point and real temp (register 221) preset range[5,10].

④Minimum ambient temperature of cooling mode(register 235) preset range[20,29].
⑤dTwi_FLH_ON(register 248) preset range[5,10].
⑥dTwi_FLH_OFF(register 249) preset range[-10,-5].

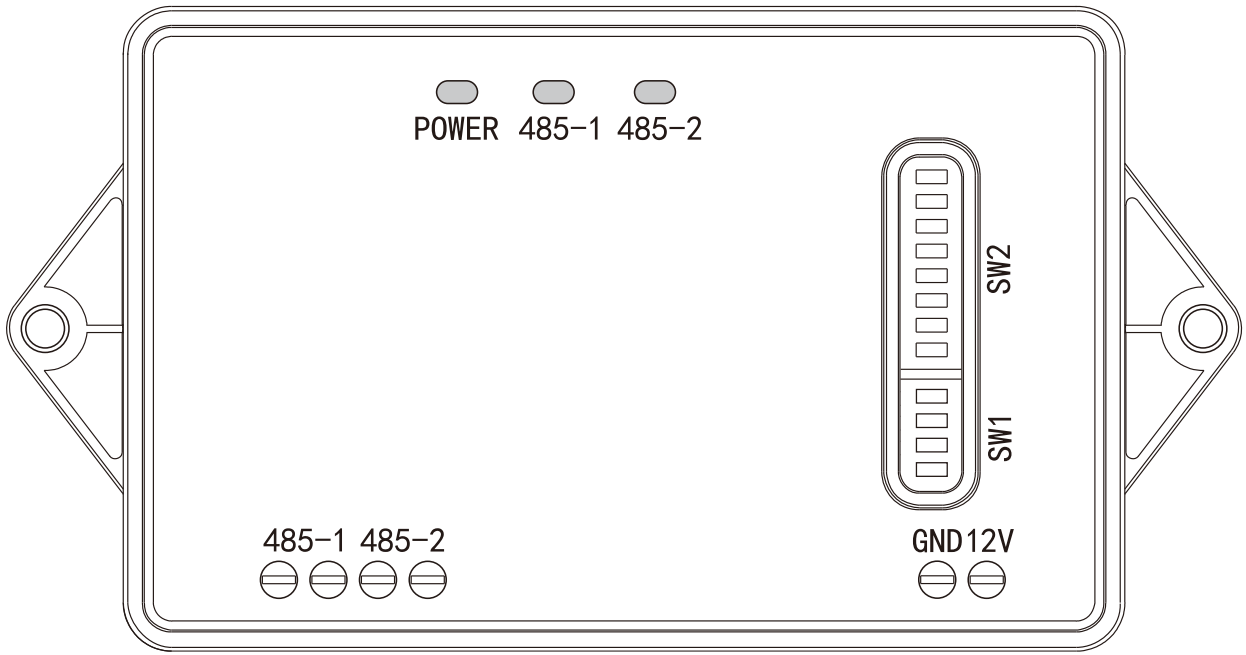
(2)The IDU program version before V07
①Preset register/ read register 276~298 is not supported.

(3)The IDU program version before V08
①Preset register/ read register 90~96、299~303 is not supported.
②Cooling room temperature turn off difference (register 292) can be preset within the range of [-5, -1].
③Registers 292-295 Unit: 1 ℃.
④When the 【Capacity/Energy Efficiency Display]】function on the wired controller is set to enabled, the 91-96 parameters on the register are specific values; When the 【Capacity/Energy Efficiency Display]】function on the wired controller is set to disenabled, the 91-96 parameters on the register is FF FF（unsigned number）.

(4)The IDU program version before V09
①Preset register/ read register 100~101、250、384~385 is not supported.
②t_PUMP_OFF(register 297) preset range[3,30].

中央空调网关说明书

- 安装工作宜由专业人员完成。
- 为方便您的使用，请仔细阅读此说明书，并按说明书的步骤操作。
- 请妥善保管说明书，以便查阅。



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安全须知

本手册用于指导用户安装与使用本产品。在安装前，请仔细阅读该手册并按照该手册的内容进行操作。

警告

- 危险的操作可能会对人身安全造成威胁，请谨慎操作；
- 该产品应避免未成年人进行安装与使用，以免造成人身伤害。

- 应委托当地经销商或网点安排专业安装人员进行安装，严禁用户自行安装。
  安装的过程中会有产品故障、漏水、触电、引起火灾等风险。
- 本产品应安装在能承受该产品重量的墙体上。
  如果墙体不够坚实，产品可能会掉落并损坏。
- 本产品安装完成后，应连接至标准的电源上。
  没有安装到标准电源可能会引起火灾或者损坏产品。
- 本产品安装完成后，不要试图去移动或者拆卸。
  可能会引起火灾或者损坏产品，如果需要维修，请联系有资质的安装人员或服务商。
- 确保本产品是按照本手册的要求进行安装。
  如果没有按照本手册进行安装，则可能存在触电或者火灾的风险。
- 确保本产品的布线遵守当地的标准以及本手册的标准，并由专业人员完成作业。
  如果安装工作由非专业人员完成，则可能存在产品故障、触电以及火灾等风险。

安装须知

- 本产品不能安装在易燃气体泄漏的地方。
- 本产品不能安装在盐雾大的环境中。
- 本产品不能进水。
- 本产品的接线不能产生拉力，以免线断了导致漏电。
- 本产品应安装在-20℃～60℃温度范围，≤85%（结露除外）湿度范围的室内电控柜内并避免阳光直射、雨雪等。
- 确保电源输入规格符合要求，否则网关将不能正常工作甚至被损坏。
- 确保拨码根据实际使用情况按要求拨到位，否则网关不能正常工作。
- 不要把电源线接到通讯线接口上。
- 强电与弱电通讯线走线必须分开，并相距大于15cm，并避开防雷网，否则影响通讯。
- 如果把该产品安装在医院或者其他环境中，需确保该产品不会与其他产品相互干扰。
- 本说明书中所有图片仅作示意。
- 保留产品升级时不另行通知的权利。

产品概要

产品功能

- 单通讯模块最多支持64台内机、1套系统；
- 支持接入BMS等第三方控制系统，提供标准Modbus RTU协议；
- 支持集中控制器（系统）；
- 支持255位地址选择；
- 兼容多种机组（多联机、单元机、模块机、风盘、热泵）。
  注：风盘需带控制器，热泵指热泵热水器。

产品参数

参数内容	数据	参数内容	数据
产品尺寸	127mm×65.8mm×20.8mm	使用温度	-20℃～60℃
安装方式	双孔螺钉	使用湿度	≤85%（结露除外）
外壳材质	ABS（面贴PC）		

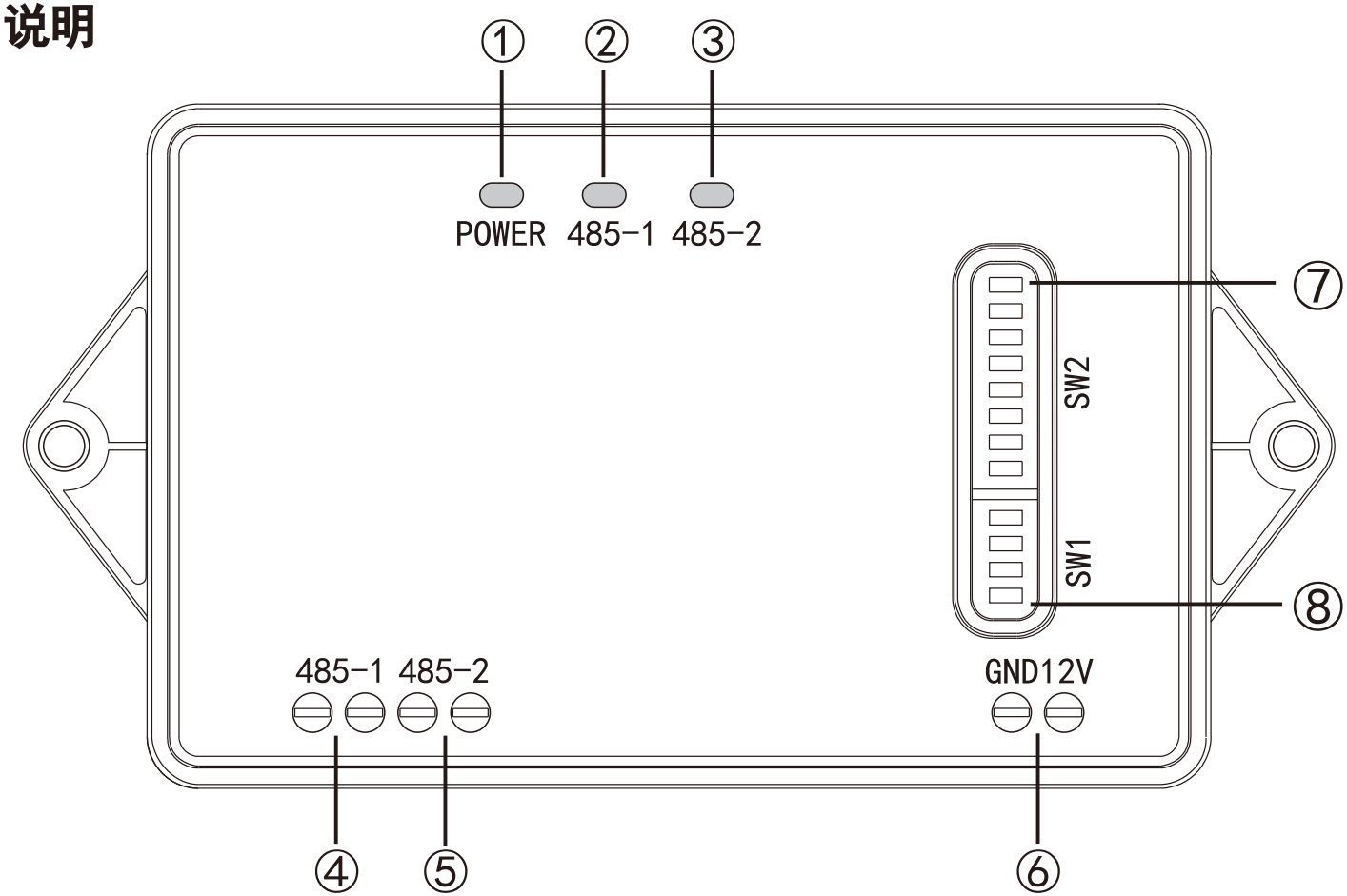
包装清单

物件	网关	安装使用说明书	螺钉
数量	1个	1份	2颗

注意事项

对一台室内机发送的控制指令总量不能超过100万次，如果使用自动控制程序来控制空调，请确保不要超过此限制。

接口说明



① 电源指示灯
② 与机组通讯指示灯
③ 与集控或BMS等通讯指示灯
④ 与机组485通讯接线口
⑤ 与集控或BMS等485通讯接线口
⑥ DC12V电源接口
⑦ 地址拨码（8位）
⑧ 功能选择拨码（4位）

电源接口

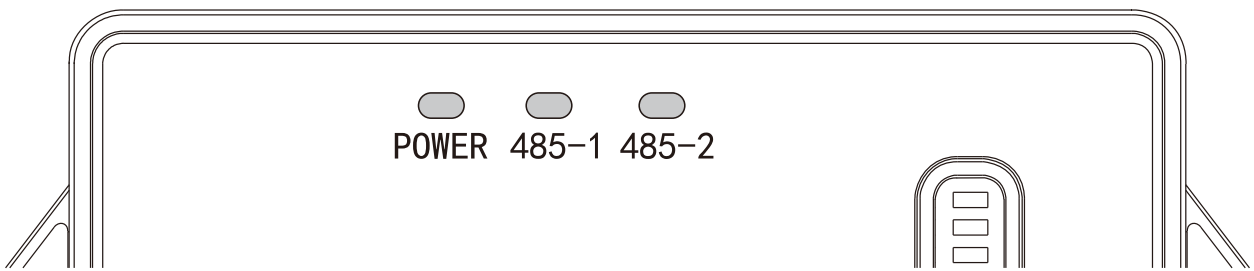
本产品需自配外接电源，输入电源规格为12V，≥300mA直流电源。

通讯接口

- RS485-1通讯接口：通过2芯RS485通讯线连接至空调机组RS485通讯接口，实现网关与空调机组之间的通讯，支持无极性。
- RS485-2通讯接口：通过2芯RS485通讯线连接至集中控制系统或BMS（楼宇管理系统），实现网关与集中控制系统、BMS或其他网关间的通讯连接。

注意：网关的电源线与通讯线必须分开走线，否则可能导致网关损坏！

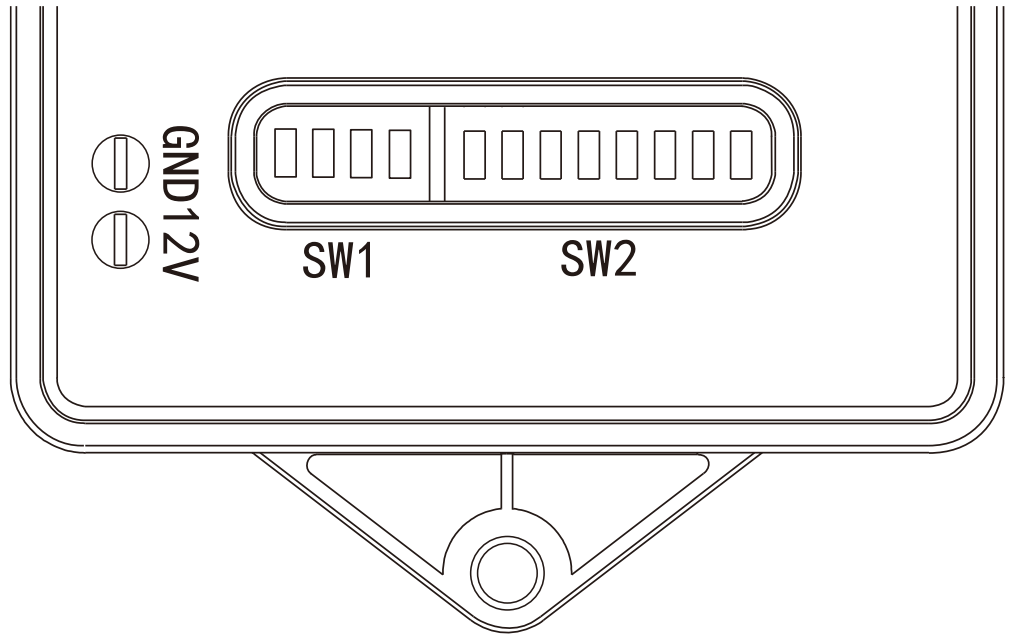
LED灯显示



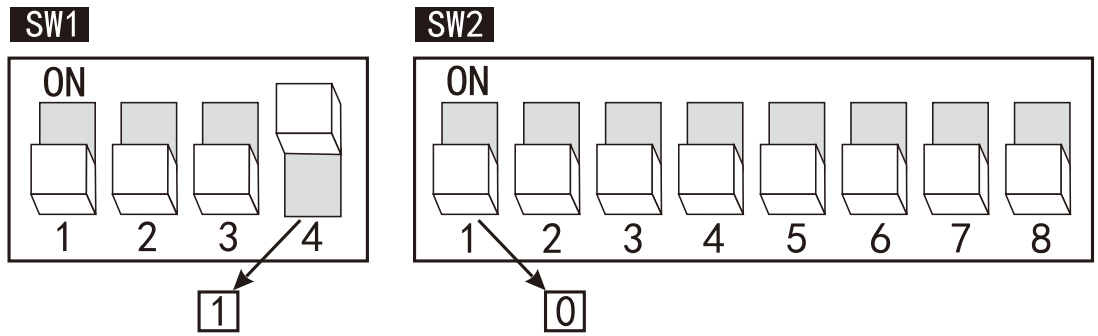
485-1：当网关接收到空调机组数据时闪烁；
485-2：当网关接收到集中控制系统或BMS数据时闪烁；
POWER：网关正常供电后常亮。

拨码

使用本产品前，需根据实际使用场景对其进行拨码设置，改变拨码后需重新上电才能生效，否则可能不能正常工作。



注：拨码时不要采用尖锐工具，力度适中，避免损坏拨码，确保拨码杆到位即可。



功能拨码　　地址拨码

功能拨码

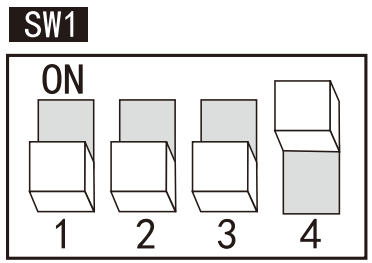
- 功能拨码定义如下表：

SW1-1	定义
0	匹配电阻不接入
1	匹配电阻接入

SW1-2	SW1-3	SW1-4	定义
0	0	0	集控功能（多联机、单元机、风盘）
0	0	1	Modbus（多联机、单元机、风盘）
0	1	0	Modbus（模块机）
0	1	1	拓网功能
1	0	0	Modbus（热泵）

- 匹配电阻：为消除长距离通讯因阻抗不匹配或不连续等导致的信号反射，当通讯距离超过300m时需配置终端匹配电阻，即将RS485通讯网络2端的设备的匹配电阻有效接入。（此设备的匹配电阻属于RS485-2）

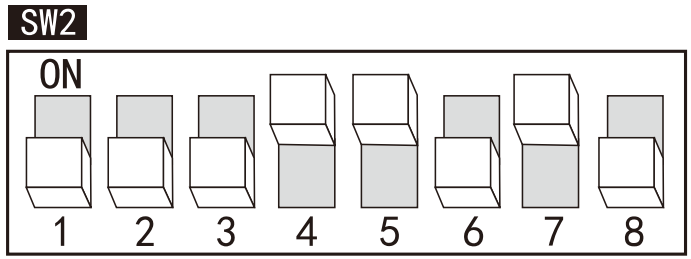
  例：作为Modbus（非模块机）（如，多联机）功能时拨码如下图所示



地址拨码

- 地址拨码用于设置网关的地址，在使用网关之前需对网关进行地址设置，并确保同一路通讯总线的网关地址不重复，否则不能正常通讯。
- 作为集中控制网关时设置地址范围是1～64，作为Modbus网关时设置地址范围是1-255。具体拨码值参见地址拨码附表。

例：地址26的设置如下图所示



地址26对应拨码值如下表

1	2	3	4	5	6	7	8	Addr
0	0	0	1	1	0	1	0	26

Modbus功能说明

作为modbus功能时使用相关说明如下。

- 接口设置

  波特率：9600，1停止位，偶检验。

- 传输模式

  使用的是RTU（远程终端单元）模式。

  注：RS485-2支持无极性通讯，极性识别需要时间，需保持上位机持续发送数据，连续发送超过300/5帧个字节后通讯模块会自动切换到正确极性。

- 数据类型

  作为modbus功能时支持以下数据类型

数据类型	长度
线圈	1位
保持寄存器	16位

- 功能代码

  支持以下功能代码，如果接收到此表之外的功能代码，则会被视为非法功能代码，且会反馈异常代码。

功能代码	含义	广播
0x01(01)	读线圈	否
0x03(03)	读保持寄存器	否
0x05(05)	预置单个线圈	是
0x06(06)	预置单个寄存器	是
0x0F(15)	预置多个线圈	是
0x10(16)	预置多个寄存器	是

注：热泵机组仅支持0x03（03）、0x06（06）、0x10（16)功能代码。

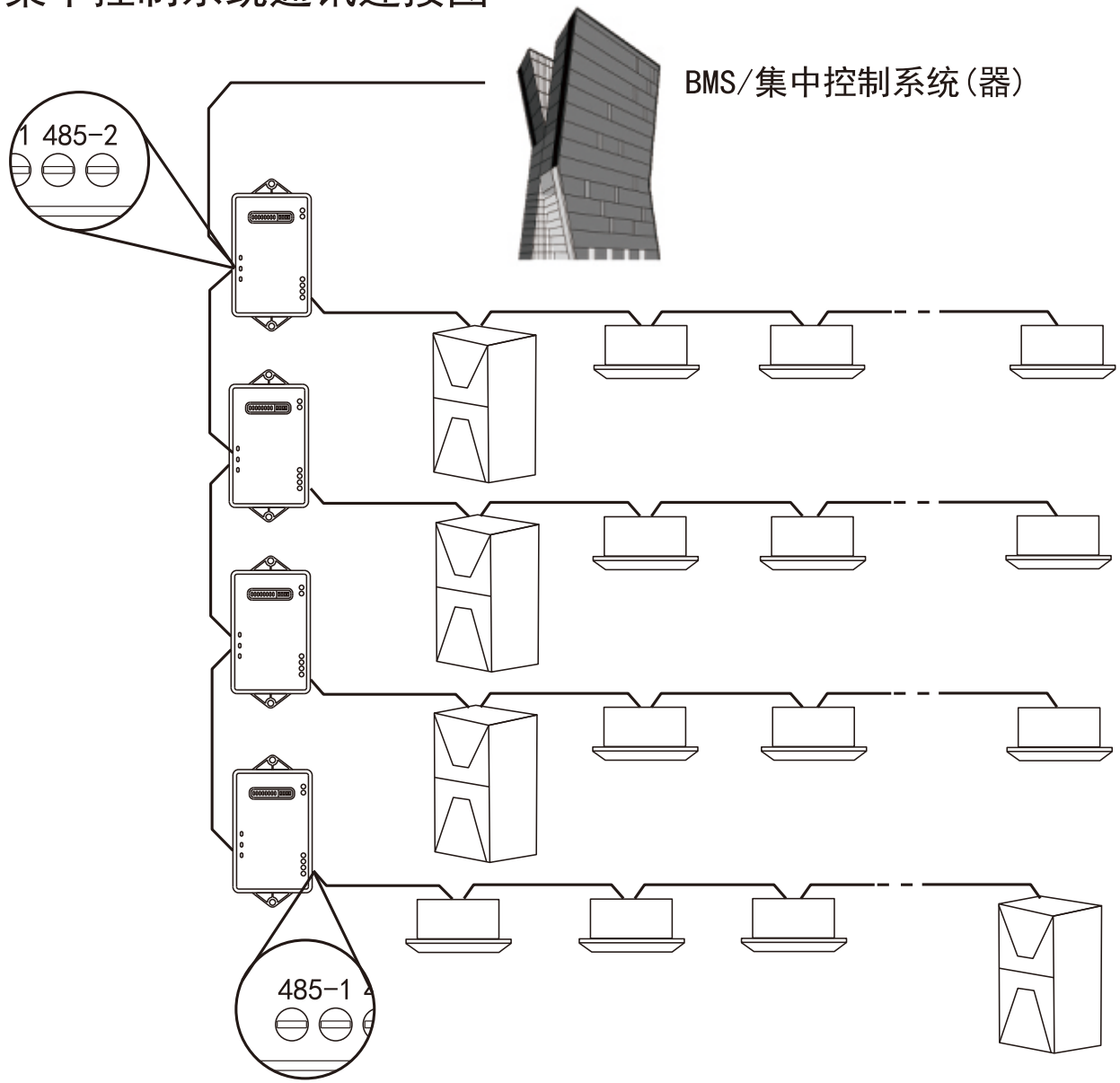
- 协议内容

  具体Modbus协议数据内容详见“附表2”。

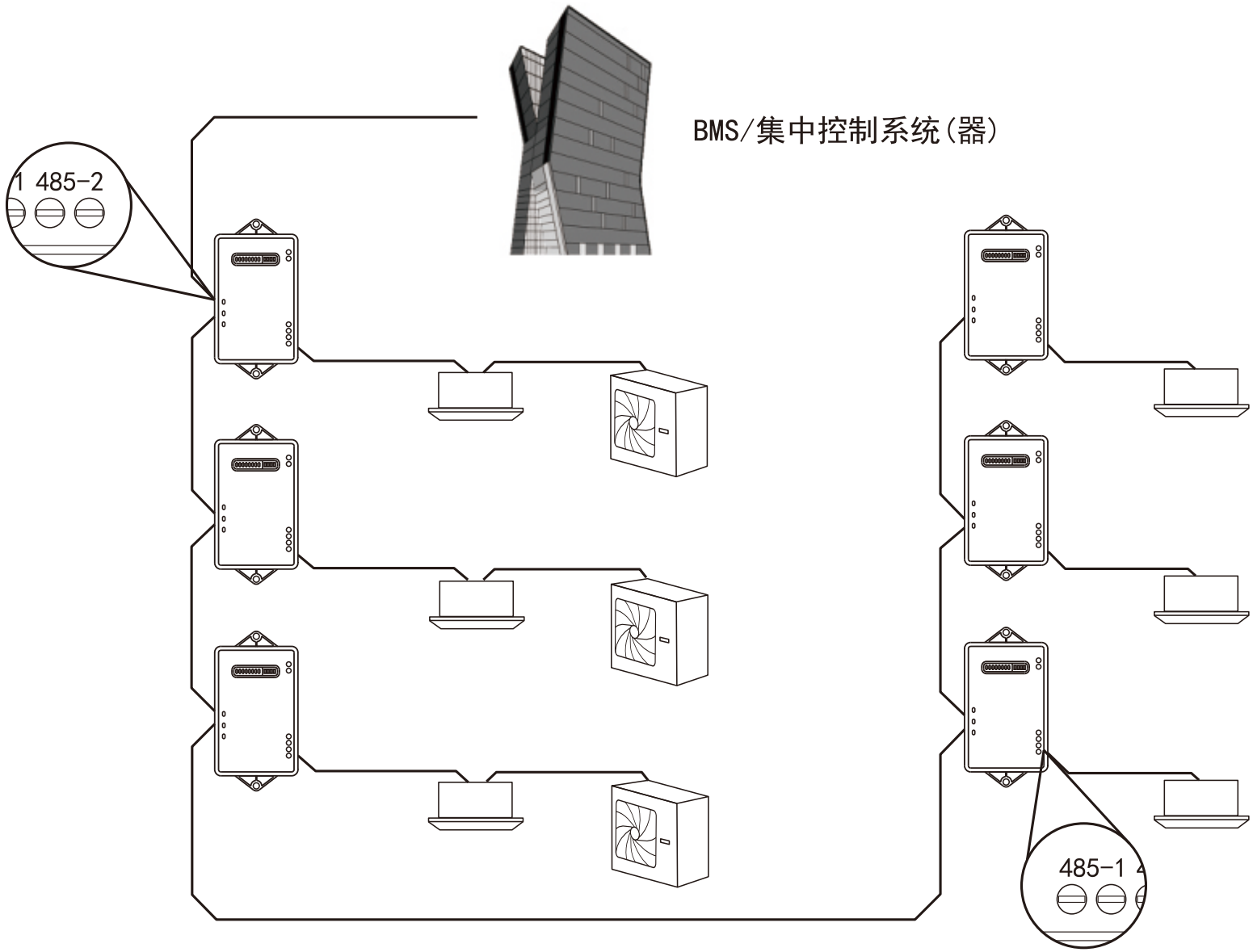
网络连接说明

请根据本网关的具体使用功能场景选择对应连接方式。

- 多联机BMS/集中控制系统通讯连接图

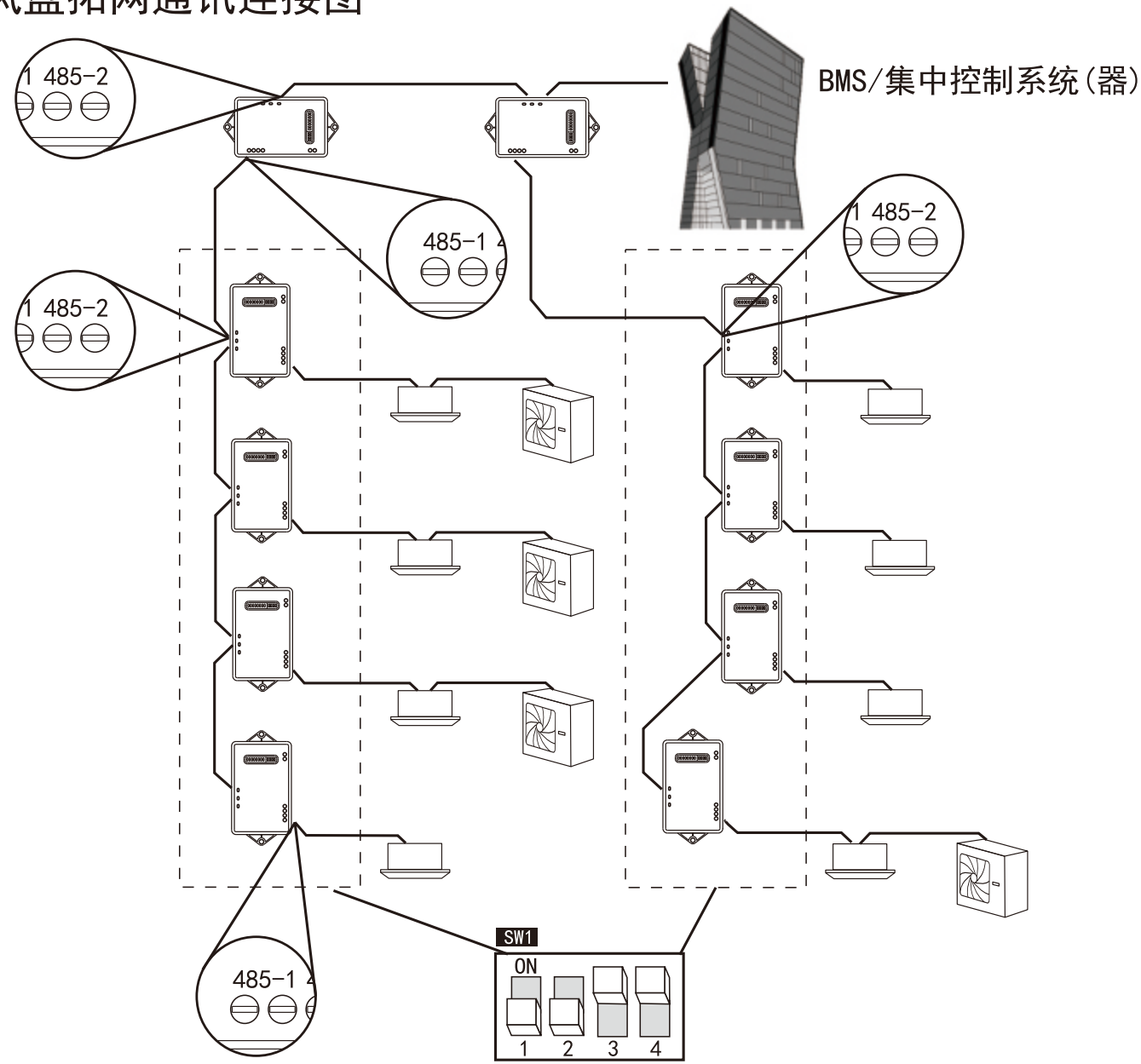


● 单元机或风盘BMS/集中控制通讯连接图



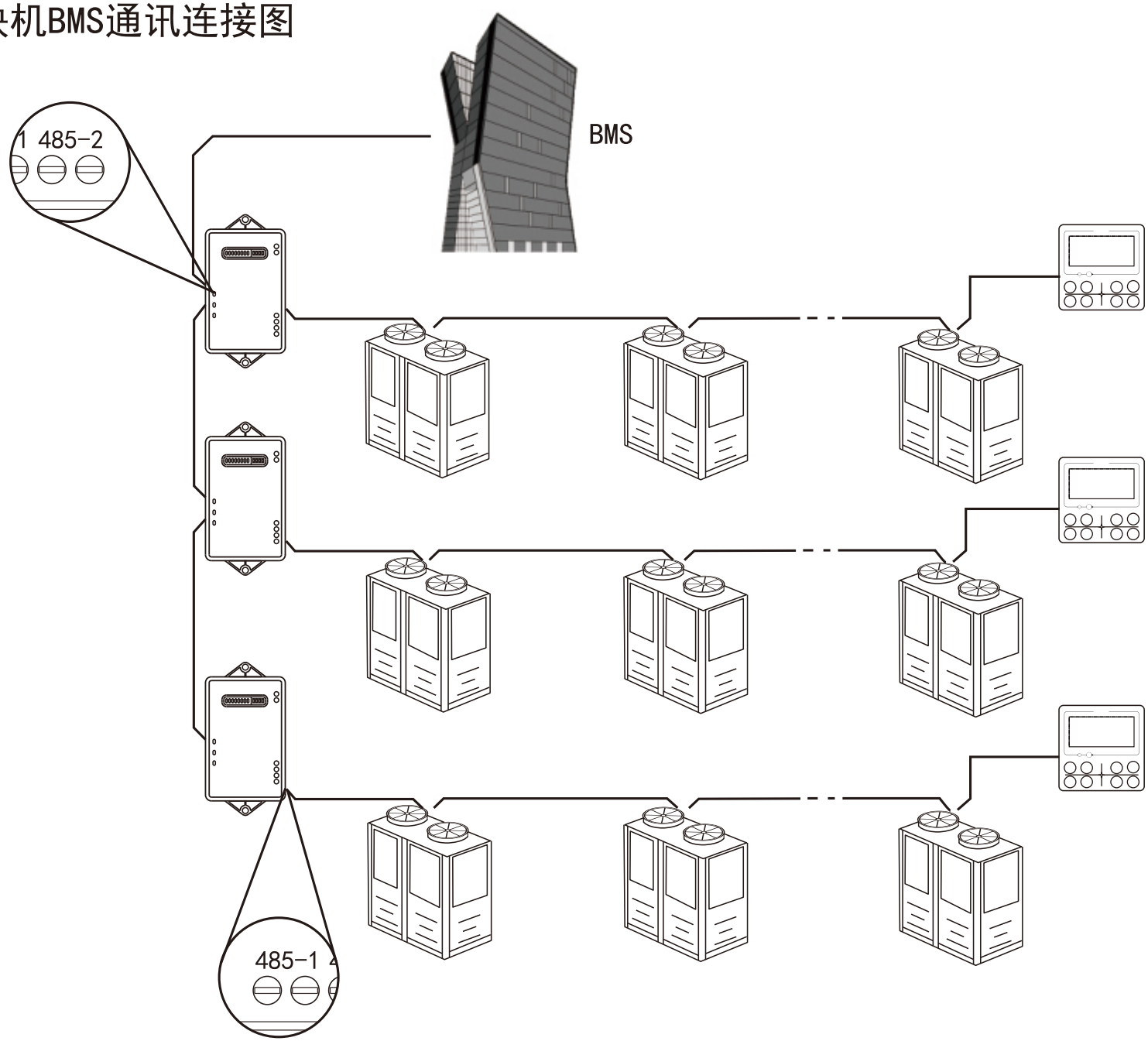
注：单元机或末端均从内机侧RS485接口连接网关。

● 单元机或风盘拓网通讯连接图

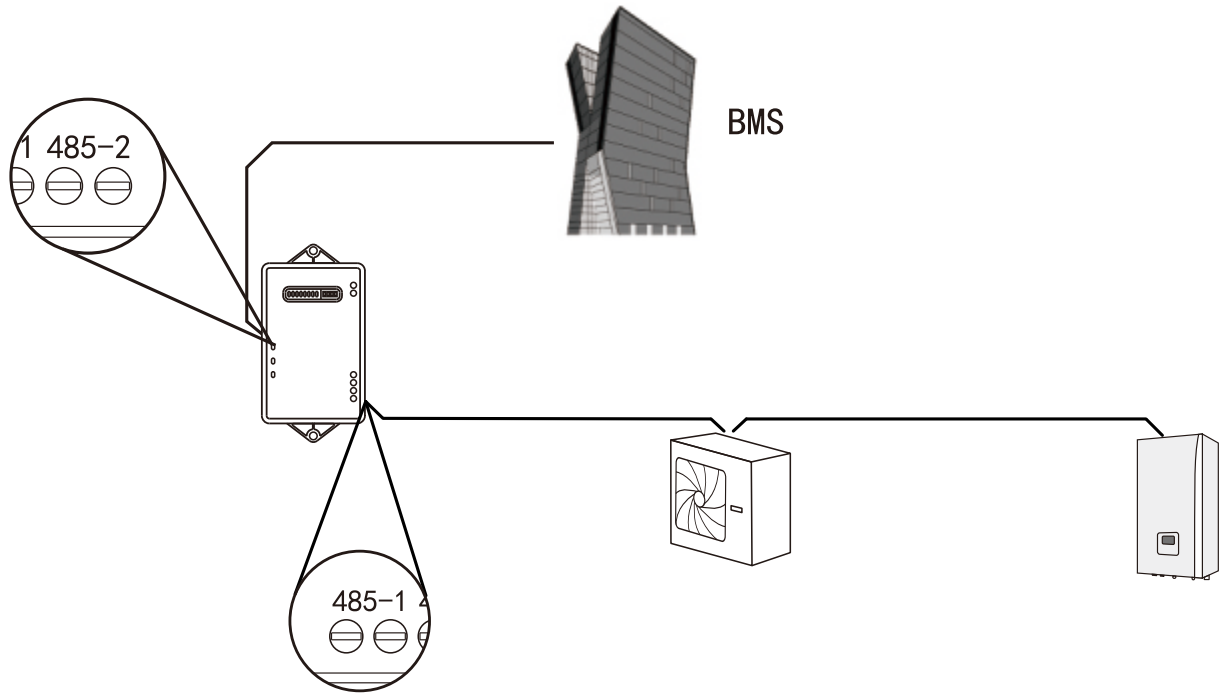


注：1. 单元机或末端均从内机侧RS485接口连接网关；
2. 此时必须存在地址为“1”的拓网网关，否则无法正常通讯。

● 模块机BMS通讯连接图

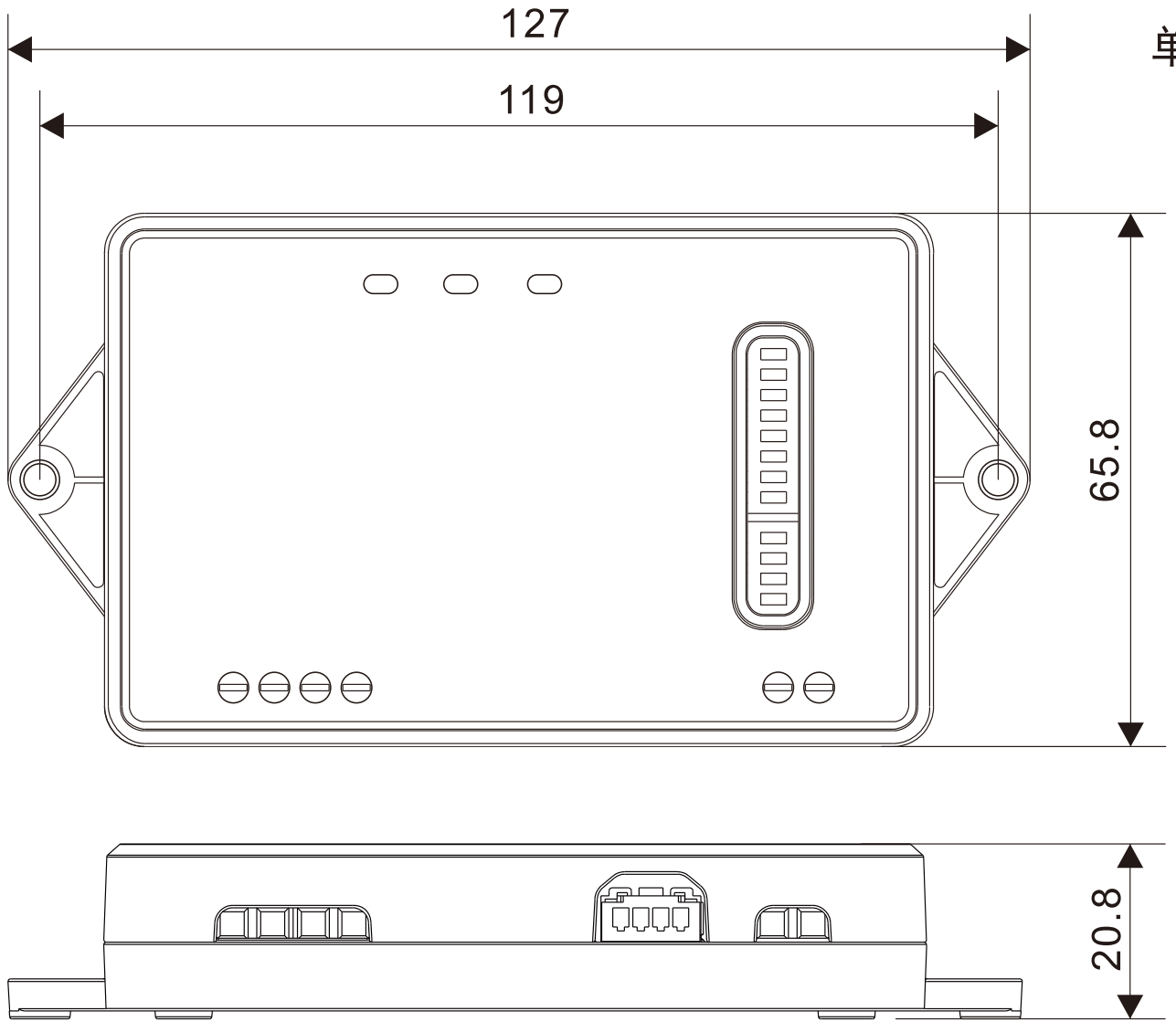


● 热泵BMS通讯连接图



注：本产品接入热泵机组时，必须保证机组已连接热泵线控器 。

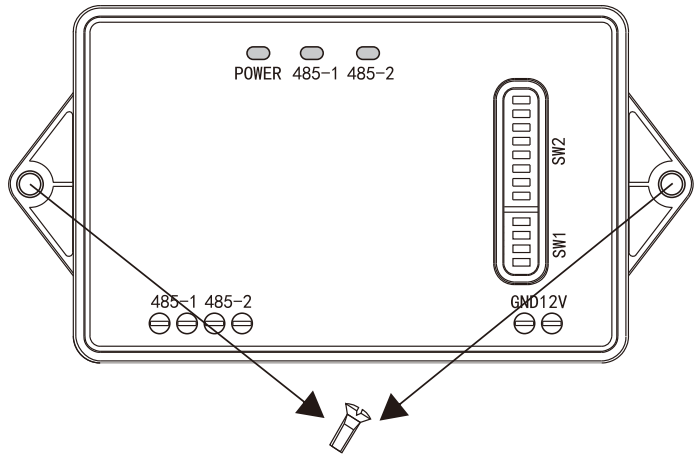
产品尺寸



单位：mm

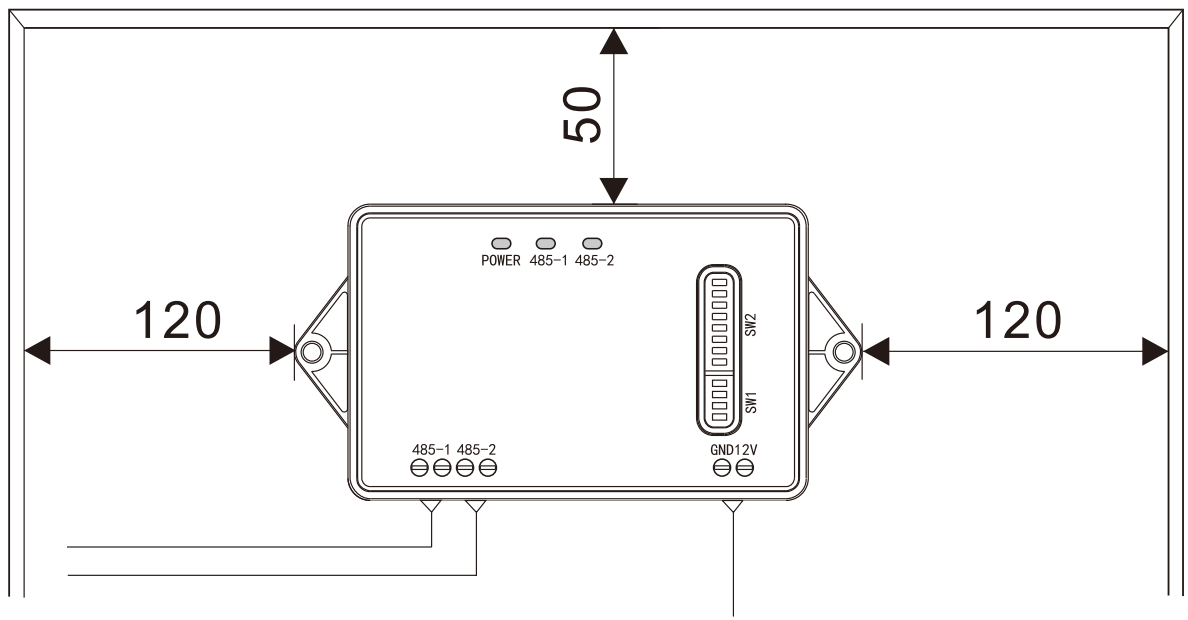
安装空间及要求

- 网关需安装在电控柜中，正面朝外，接线口朝下，水平固定安装，用2个螺钉固定。



- 安装空间如下图所示（供参考）。

单位：mm



通讯连接

网关通讯包括2路RS485通讯，RS485-1为与空调机组之间的通讯，RS485-2为与集中控制系统或BMS系统之间的通讯。

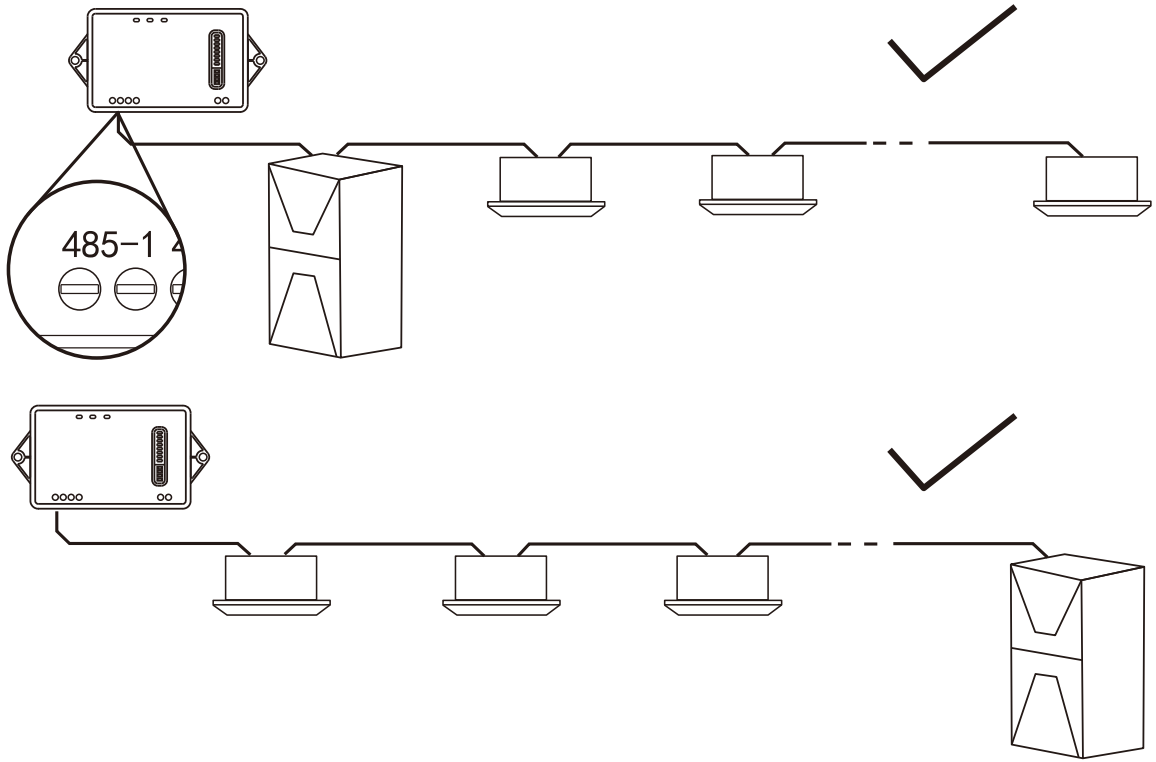
	网关与空调机组通讯	网关与集中控制系统或BMS系统通讯
线材	屏蔽轻型/普通聚氯乙烯护套双绞铜芯软线(RVVSP)	屏蔽轻型/普通聚氯乙烯护套双绞铜芯软线(RVVSP)
线长	≤800m	≤800m
线径	≥2×0.75mm²	≥2×0.75mm²
标准	GB/T 5023.5-2008	GB/T 5023.5-2008
备注	总长度不超过800m（含空调内外机之间通讯线长度）	当通讯距离超过800m或设备节点数较多以及出现通讯不稳定情况时，需增加光电隔离中继器

通讯连接方式

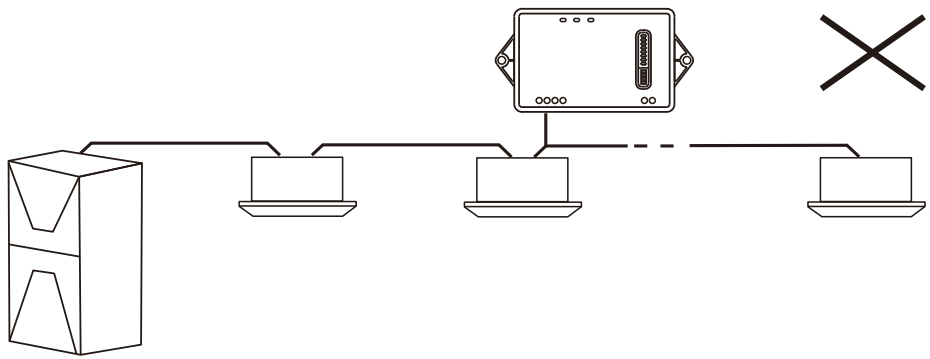
注意：网关的所有通讯连接必须采用手拉手串行连接，不能形成星型、Y型等异常连接。

(1)网关与空调机组通讯连接

- 正确连接：

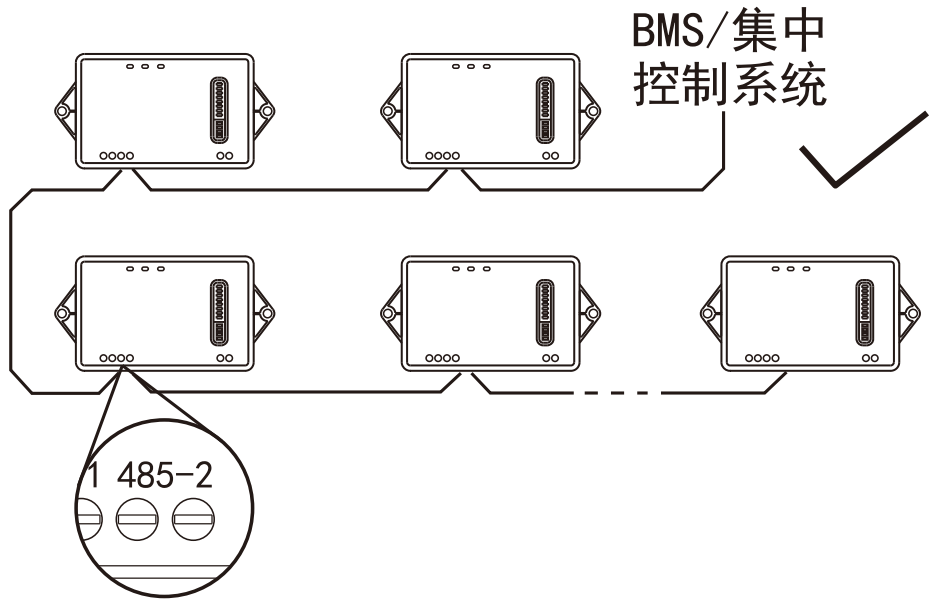


- 错误连接：

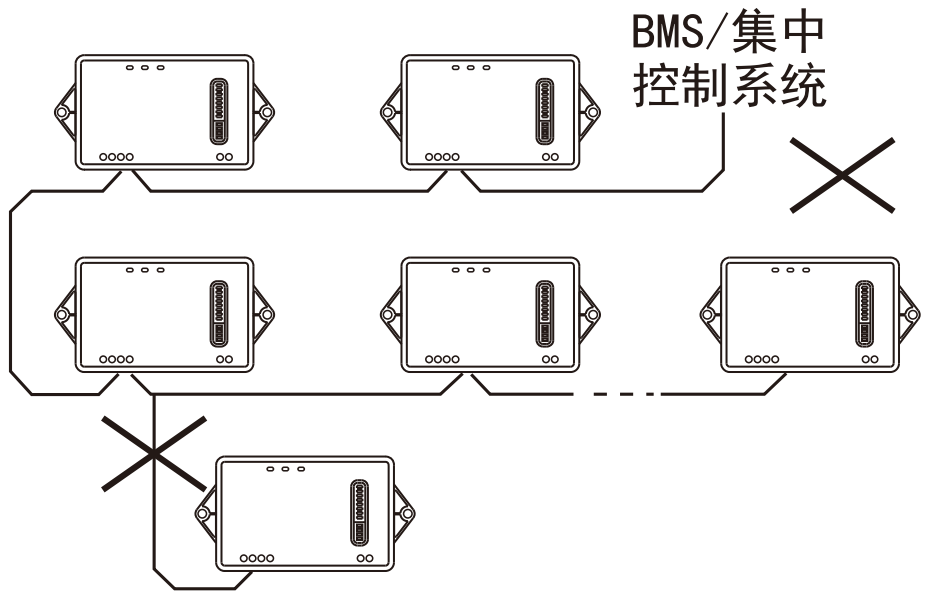


(2)网关与集中控制系统或BMS系统通讯连接

- 正确连接：



- 错误连接：



通讯连接配置步骤

- 第一步：确定连接BMS/集中控制系统的第一个网关，并将此网关的485-2通讯接口连接至BMS端。
- 第二步：将第一个网关与第二个网关的485-2通讯接口相连，并依次手拉手串行连接其他网关。
- 第三步：将每个网关的485-1通讯接口与机组的485通讯接口相连。
- 第四步：根据每个网关对应机型及功能对SW1进行拨码；对每个网关进行地址拨码，范围1-255。

  注：BMS/集中控制网络总线中当接入网关数量超过30个或通讯距离超过800m时，需接入一个光电隔离中继器。

常见问题排查表

序号	问题描述	可能原因
1	上电后电源灯(POWER)不亮	1. 主电源未供电 2. 通讯模块未接12V电源 3. 12V电源线序接反 4. 通讯模块坏
2	连接机组后通讯灯(485-1)不闪烁	1. 功能拨码未拨对 2. 机组未上电 3. 机组或通讯模块端通讯端口连接错误 4. 通讯线接线不良 5. 通讯模块坏

序号	问题描述	可能原因
3	连接集控/BMS后通讯灯(485-2)不闪烁	1. 功能或地址拨码未拨对 2. 集控/BMS未上电工作 3. 集控/BMS或通讯模块端通讯连接错误 4. 通讯线或接线不良 5. 通讯模块坏
4	设备找不全	1. 部分设备未供电 2. 同一网络下的各通讯模块地址拨码重复
5	与BMS(或第三方控制)通讯不上	1. 拨码是否选择对应机型modbus功能 2. 通讯参数是否匹配（波特率、奇偶校验、功能码、从机地址等） 3. 在极性识别周期内，请等待一段时间 4. 其他参考第3条

附表1：地址拨码(SW2)表

1	2	3	4	5	6	7	8	地址		1	2	3	4	5	6	7	8	地址
0	0	0	0	0	0	0	0	/		1	0	0	0	0	0	0	0	128
0	0	0	0	0	0	0	1	1		1	0	0	0	0	0	0	1	129
0	0	0	0	0	0	1	0	2		1	0	0	0	0	0	1	0	130
0	0	0	0	0	0	1	1	3		1	0	0	0	0	0	1	1	131
0	0	0	0	0	1	0	0	4		1	0	0	0	0	1	0	0	132
0	0	0	0	0	1	0	1	5		1	0	0	0	0	1	0	1	133
0	0	0	0	0	1	1	0	6		1	0	0	0	0	1	1	0	134

1	2	3	4	5	6	7	8	地址		1	2	3	4	5	6	7	8	地址
0	0	0	0	0	1	1	1	7		1	0	0	0	0	1	1	1	135
0	0	0	0	1	0	0	0	8		1	0	0	0	1	0	0	0	136
0	0	0	0	1	0	0	1	9		1	0	0	0	1	0	0	1	137
0	0	0	0	1	0	1	0	10		1	0	0	0	1	0	1	0	138
0	0	0	0	1	0	1	1	11		1	0	0	0	1	0	1	1	139
0	0	0	0	1	1	0	0	12		1	0	0	0	1	1	0	0	140
0	0	0	0	1	1	0	1	13		1	0	0	0	1	1	0	1	141
0	0	0	0	1	1	1	0	14		1	0	0	0	1	1	1	0	142
0	0	0	0	1	1	1	1	15		1	0	0	0	1	1	1	1	143
0	0	0	1	0	0	0	0	16		1	0	0	1	0	0	0	0	144
0	0	0	1	0	0	0	1	17		1	0	0	1	0	0	0	1	145
0	0	0	1	0	0	1	0	18		1	0	0	1	0	0	1	0	146
0	0	0	1	0	0	1	1	19		1	0	0	1	0	0	1	1	147
0	0	0	1	0	1	0	0	20		1	0	0	1	0	1	0	0	148
0	0	0	1	0	1	0	1	21		1	0	0	1	0	1	0	1	149
0	0	0	1	0	1	1	0	22		1	0	0	1	0	1	1	0	150
0	0	0	1	0	1	1	1	23		1	0	0	1	0	1	1	1	151
0	0	0	1	1	0	0	0	24		1	0	0	1	1	0	0	0	152
0	0	0	1	1	0	0	1	25		1	0	0	1	1	0	0	1	153
0	0	0	1	1	0	1	0	26		1	0	0	1	1	0	1	0	154
0	0	0	1	1	0	1	1	27		1	0	0	1	1	0	1	1	155
0	0	0	1	1	1	0	0	28		1	0	0	1	1	1	0	0	156
0	0	0	1	1	1	0	1	29		1	0	0	1	1	1	0	1	157
0	0	0	1	1	1	1	0	30		1	0	0	1	1	1	1	0	158
0	0	0	1	1	1	1	1	31		1	0	0	1	1	1	1	1	159

1	2	3	4	5	6	7	8	地址		1	2	3	4	5	6	7	8	地址
0	0	1	0	0	0	0	0	32		1	0	1	0	0	0	0	0	160
0	0	1	0	0	0	0	1	33		1	0	1	0	0	0	0	1	161
0	0	1	0	0	0	1	0	34		1	0	1	0	0	0	1	0	162
0	0	1	0	0	0	1	1	35		1	0	1	0	0	0	1	1	163
0	0	1	0	0	1	0	0	36		1	0	1	0	0	1	0	0	164
0	0	1	0	0	1	0	1	37		1	0	1	0	0	1	0	1	165
0	0	1	0	0	1	1	0	38		1	0	1	0	0	1	1	0	166
0	0	1	0	0	1	1	1	39		1	0	1	0	0	1	1	1	167
0	0	1	0	1	0	0	0	40		1	0	1	0	1	0	0	0	168
0	0	1	0	1	0	0	1	41		1	0	1	0	1	0	0	1	169
0	0	1	0	1	0	1	0	42		1	0	1	0	1	0	1	0	170
0	0	1	0	1	0	1	1	43		1	0	1	0	1	0	1	1	171
0	0	1	0	1	1	0	0	44		1	0	1	0	1	1	0	0	172
0	0	1	0	1	1	0	1	45		1	0	1	0	1	1	0	1	173
0	0	1	0	1	1	1	0	46		1	0	1	0	1	1	1	0	174
0	0	1	0	1	1	1	1	47		1	0	1	0	1	1	1	1	175
0	0	1	1	0	0	0	0	48		1	0	1	1	0	0	0	0	176
0	0	1	1	0	0	0	1	49		1	0	1	1	0	0	0	1	177
0	0	1	1	0	0	1	0	50		1	0	1	1	0	0	1	0	178
0	0	1	1	0	0	1	1	51		1	0	1	1	0	0	1	1	179
0	0	1	1	0	1	0	0	52		1	0	1	1	0	1	0	0	180
0	0	1	1	0	1	0	1	53		1	0	1	1	0	1	0	1	181
0	0	1	1	0	1	1	0	54		1	0	1	1	0	1	1	0	182
0	0	1	1	0	1	1	1	55		1	0	1	1	0	1	1	1	183
0	0	1	1	1	0	0	0	56		1	0	1	1	1	0	0	0	184

1	2	3	4	5	6	7	8	地址		1	2	3	4	5	6	7	8	地址
0	0	1	1	1	0	0	1	57		1	0	1	1	1	0	0	1	185
0	0	1	1	1	0	1	0	58		1	0	1	1	1	0	1	0	186
0	0	1	1	1	0	1	1	59		1	0	1	1	1	0	1	1	187
0	0	1	1	1	1	0	0	60		1	0	1	1	1	1	0	0	188
0	0	1	1	1	1	0	1	61		1	0	1	1	1	1	0	1	189
0	0	1	1	1	1	1	0	62		1	0	1	1	1	1	1	0	190
0	0	1	1	1	1	1	1	63		1	0	1	1	1	1	1	1	191
0	1	0	0	0	0	0	0	64		1	1	0	0	0	0	0	0	192
0	1	0	0	0	0	0	1	65		1	1	0	0	0	0	0	1	193
0	1	0	0	0	0	1	0	66		1	1	0	0	0	0	1	0	194
0	1	0	0	0	0	1	1	67		1	1	0	0	0	0	1	1	195
0	1	0	0	0	1	0	0	68		1	1	0	0	0	1	0	0	196
0	1	0	0	0	1	0	1	69		1	1	0	0	0	1	0	1	197
0	1	0	0	0	1	1	0	70		1	1	0	0	0	1	1	0	198
0	1	0	0	0	1	1	1	71		1	1	0	0	0	1	1	1	199
0	1	0	0	1	0	0	0	72		1	1	0	0	1	0	0	0	200
0	1	0	0	1	0	0	1	73		1	1	0	0	1	0	0	1	201
0	1	0	0	1	0	1	0	74		1	1	0	0	1	0	1	0	202
0	1	0	0	1	0	1	1	75		1	1	0	0	1	0	1	1	203
0	1	0	0	1	1	0	0	76		1	1	0	0	1	1	0	0	204
0	1	0	0	1	1	0	1	77		1	1	0	0	1	1	0	1	205
0	1	0	0	1	1	1	0	78		1	1	0	0	1	1	1	0	206
0	1	0	0	1	1	1	1	79		1	1	0	0	1	1	1	1	207
0	1	0	1	0	0	0	0	80		1	1	0	1	0	0	0	0	208
0	1	0	1	0	0	0	1	81		1	1	0	1	0	0	0	1	209

1	2	3	4	5	6	7	8	地址		1	2	3	4	5	6	7	8	地址
0	1	0	1	0	0	1	0	82		1	1	0	1	0	0	1	0	210
0	1	0	1	0	0	1	1	83		1	1	0	1	0	0	1	1	211
0	1	0	1	0	1	0	0	84		1	1	0	1	0	1	0	0	212
0	1	0	1	0	1	0	1	85		1	1	0	1	0	1	0	1	213
0	1	0	1	0	1	1	0	86		1	1	0	1	0	1	1	0	214
0	1	0	1	0	1	1	1	87		1	1	0	1	0	1	1	1	215
0	1	0	1	1	0	0	0	88		1	1	0	1	1	0	0	0	216
0	1	0	1	1	0	0	1	89		1	1	0	1	1	0	0	1	217
0	1	0	1	1	0	1	0	90		1	1	0	1	1	0	1	0	218
0	1	0	1	1	0	1	1	91		1	1	0	1	1	0	1	1	219
0	1	0	1	1	1	0	0	92		1	1	0	1	1	1	0	0	220
0	1	0	1	1	1	0	1	93		1	1	0	1	1	1	0	1	221
0	1	0	1	1	1	1	0	94		1	1	0	1	1	1	1	0	222
0	1	0	1	1	1	1	1	95		1	1	0	1	1	1	1	1	223
0	1	1	0	0	0	0	0	96		1	1	1	0	0	0	0	0	224
0	1	1	0	0	0	0	1	97		1	1	1	0	0	0	0	1	225
0	1	1	0	0	0	1	0	98		1	1	1	0	0	0	1	0	226
0	1	1	0	0	0	1	1	99		1	1	1	0	0	0	1	1	227
0	1	1	0	0	1	0	0	100		1	1	1	0	0	1	0	0	228
0	1	1	0	0	1	0	1	101		1	1	1	0	0	1	0	1	229
0	1	1	0	0	1	1	0	102		1	1	1	0	0	1	1	0	230
0	1	1	0	0	1	1	1	103		1	1	1	0	0	1	1	1	231
0	1	1	0	1	0	0	0	104		1	1	1	0	1	0	0	0	232
0	1	1	0	1	0	0	1	105		1	1	1	0	1	0	0	1	233
0	1	1	0	1	0	1	0	106		1	1	1	0	1	0	1	0	234

1	2	3	4	5	6	7	8	地址		1	2	3	4	5	6	7	8	地址
0	1	1	0	1	0	1	1	107		1	1	1	0	1	0	1	1	235
0	1	1	0	1	1	0	0	108		1	1	1	0	1	1	0	0	236
0	1	1	0	1	1	0	1	109		1	1	1	0	1	1	0	1	237
0	1	1	0	1	1	1	0	110		1	1	1	0	1	1	1	0	238
0	1	1	0	1	1	1	1	111		1	1	1	0	1	1	1	1	239
0	1	1	1	0	0	0	0	112		1	1	1	1	0	0	0	0	240
0	1	1	1	0	0	0	1	113		1	1	1	1	0	0	0	1	241
0	1	1	1	0	0	1	0	114		1	1	1	1	0	0	1	0	242
0	1	1	1	0	0	1	1	115		1	1	1	1	0	0	1	1	243
0	1	1	1	0	1	0	0	116		1	1	1	1	0	1	0	0	244
0	1	1	1	0	1	0	1	117		1	1	1	1	0	1	0	1	245
0	1	1	1	0	1	1	0	118		1	1	1	1	0	1	1	0	246
0	1	1	1	0	1	1	1	119		1	1	1	1	0	1	1	1	247
0	1	1	1	1	0	0	0	120		1	1	1	1	1	0	0	0	248
0	1	1	1	1	0	0	1	121		1	1	1	1	1	0	0	1	249
0	1	1	1	1	0	1	0	122		1	1	1	1	1	0	1	0	250
0	1	1	1	1	0	1	1	123		1	1	1	1	1	0	1	1	251
0	1	1	1	1	1	0	0	124		1	1	1	1	1	1	0	0	252
0	1	1	1	1	1	0	1	125		1	1	1	1	1	1	0	1	253
0	1	1	1	1	1	1	0	126		1	1	1	1	1	1	1	0	254
0	1	1	1	1	1	1	1	127		1	1	1	1	1	1	1	1	255

附表2：Modbus协议数据表

一、非模块机

● 线圈

地址	寄存器内容	访问类型（W/R）	定义
0	1#内机是否存在	R	0：不存在，1：存在
1	1#内机开关机	W/R	0：关机，1：开机
2	1#内机上下摆风	W/R	0：不摆，1：摆动
3	1#内机左右摆风	R	0：不摆，1：摆动
4	1#内机睡眠	W/R	0：关闭，1：开启
5	1#内机设定辅热	W/R	0：关，1：允许开
6	1#内机滤网清洗	W/R	0：不需清洗，1：需清洗； 写入1表示清除清洗提醒
7	1#内机开关机锁定	W/R	0：不锁定，1：锁定
8	1#内机模式设定锁定	W/R	0：不锁定，1：锁定
9	1#内机温度设定锁定	W/R	0：不锁定，1：锁定
10	1#内机风速设定锁定	W/R	0：不锁定，1：锁定
11~19	1#内机预留	R	
20*(n-1)+0	n#内机是否存在	R	
20*(n-1)+1	n#内机开关机	W/R	
20*(n-1)+2	n#内机上下摆风	W/R	
20*(n-1)+3	n#内机左右摆风	R	

地址	寄存器内容	访问类型（W/R）	定义
20*(n-1)+4	n#内机睡眠	W/R	
20*(n-1)+5	n#内机设定辅热	W/R	
20*(n-1)+6	n#内机滤网清洗	W/R	
20*(n-1)+7	n#内机开关机锁定	W/R	
20*(n-1)+8	n#内机模式设定锁定	W/R	
20*(n-1)+9	n#内机温度设定锁定	W/R	
20*(n-1)+10	n#内机风速设定锁定	W/R	
20*(n-1)+11～ 20*(n-1)+19	n#内机预留	R	
1281	全部内机开关机	W	
1282	全部内机上下摆风	W	
1283	全部内机左右摆风	R	
1284	全部内机睡眠	W	
1285	全部内机设定辅热	W	
1286	全部内机滤网清洗	W	
1287	全部内机开关机锁定	W	
1288	全部内机模式设定锁定	W	
1289	全部内机温度设定锁定	W	
1290	全部内机风速设定锁定	W	

地址	寄存器内容	访问类型(W/R)	定义
1291~1297	预留	R	
1298	外机故障	R	0：无故障，1：有故障
1299	压缩机状态	R	0：停止，1：运行

*n最大值为64，需根据实际机组情况而定。

- 保持寄存器

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
0	1#内机机型	R		Unsigned Word	
1	1#内机容量	R		Unsigned Word	HP
2	1#内机设定模式	W/R	0：自动，1：制冷，2：除湿，3：健康除湿，4：制热，5：干衣，6：送风	Unsigned Word	/
3	1#内机设定温度	W/R	[16，32]	Signed Word	0.1℃
4	1#内机设定风速	W/R	1：高风，2：中风，3：低风，4：微风，5：自动	Unsigned Word	/
5	1#内机实际风速	R	0：停止，1：高风，2：中风，3：低风	Unsigned Word	/
6	1#内机当前故障代码	R	[0，255]。例：0xA1表示A1故障	Unsigned Word	/
7	1#内机当前室内温度	R		Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
8	1#内机当前入口温度	R		Signed Word	0.1℃
9	1#内机当前中部温度	R		Signed Word	0.1℃
10	1#内机当前出口温度	R		Signed Word	0.1℃
11~19	1#内机预留	R			
20*(n-1)+0	n#内机机型	R		Unsigned Word	
20*(n-1)+1	n#内机容量	R		Unsigned Word	HP
20*(n-1)+2	n#内机设定模式	W/R		Unsigned Word	/
20*(n-1)+3	n#内机设定温度	W/R		Signed Word	0.1℃
20*(n-1)+4	n#内机设定风速	W/R		Unsigned Word	/
20*(n-1)+5	n#内机实际风速	R		Unsigned Word	/
20*(n-1)+6	n#内机当前故障代码	R		Unsigned Word	/
20*(n-1)+7	n#内机当前室内温度	R		Signed Word	0.1℃
20*(n-1)+8	n#内机当前入口温度	R		Signed Word	0.1℃
20*(n-1)+9	n#内机当前中部温度	R		Signed Word	0.1℃
20*(n-1)+10	n#内机当前出口温度	R		Signed Word	0.1℃
20*(n-1)+11~ 20*(n-1)+19	n#内机预留	R			
1280	全部内机设定模式	W		Unsigned Word	/
1281	全部内机设定温度	W		Signed Word	0.1℃
1282	全部内机设定风速	W		Unsigned Word	/
1283~1294	预留	R			

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
1295	校验位	W/R	0:偶校验. 1:奇校验. 2:无校验.	Unsigned Word	/
1296	在线内机总数	R		Unsigned Word	/
1297	内机开机数量	R		Unsigned Word	/
1298	室外环境温度	R		Signed Word	0.1℃
1299	外机故障代码	R		Unsigned Word	/

*n最大值为64，需根据实际机组情况而定。

注

【校验位（寄存器地址1295）】属后期升级功能，该功能设置后需重新供电生效，网关生产批次在2023年10月1日之前不支持该功能。

二、模块机

● 线圈

地址	寄存器内容	访问类型（W/R）	定义
0	1#模块 1#压机	R	0-停止，1-运行
1	1#模块 2#压机	R	0-停止，1-运行
2	1#模块 3#压机	R	0-停止，1-运行
3	1#模块 4#压机	R	0-停止，1-运行
4	1#模块 1#加热带	R	0-停止，1-运行
5	1#模块 2#加热带	R	0-停止，1-运行
6	1#模块 1#四通阀A	R	0-停止，1-运行
7	1#模块 2#四通阀A	R	0-停止，1-运行
8	1#模块热水侧辅热	R	0-停止，1-运行
9	1#模块热水侧水泵	R	0-停止，1-运行

地址	寄存器内容	访问类型（W/R）	定义
10	1#模块1#风机	R	0-停止，1-运行
11	1#模块2#风机	R	0-停止，1-运行
12	1#模块空调侧辅热	R	0-停止，1-运行
13	1#模块空调侧水泵	R	0-停止，1-运行
14	1#模块1#四通阀B	R	0-停止，1-运行
15	1#模块2#四通阀B	R	0-停止，1-运行
16	1#模块空调靶流	R	0-断开，1-闭合
17	1#模块热水靶流	R	0-断开，1-闭合
18~29	1#模块（预留）	R	
30*(n-1)+0	n#模块1#压机	R	0-停止，1-运行
30*(n-1)+1	n#模块2#压机	R	0-停止，1-运行
30*(n-1)+2	n#模块3#压机	R	0-停止，1-运行
30*(n-1)+3	n#模块4#压机	R	0-停止，1-运行
30*(n-1)+4	n#模块1#加热带	R	0-停止，1-运行
30*(n-1)+5	n#模块2#加热带	R	0-停止，1-运行
30*(n-1)+6	n#模块1#四通阀A	R	0-停止，1-运行
30*(n-1)+7	n#模块2#四通阀A	R	0-停止，1-运行
30*(n-1)+8	n#模块热水侧辅热	R	0-停止，1-运行
30*(n-1)+9	n#模块热水侧水泵	R	0-停止，1-运行
30*(n-1)+10	n#模块1#风机	R	0-停止，1-运行

地址	寄存器内容	访问类型（W/R）	定义
30*(n-1)+11	n#模块2#风机	R	0-停止，1-运行
30*(n-1)+12	n#模块空调侧辅热	R	0-停止，1-运行
30*(n-1)+13	n#模块空调侧水泵	R	0-停止，1-运行
30*(n-1)+14	n#模块1#四通阀B	R	0-停止，1-运行
30*(n-1)+15	n#模块2#四通阀B	R	0-停止，1-运行
30*(n-1)+16	n#模块空调靶流	R	0-停止，1-运行
30*(n-1)+17	n#模块热水靶流	R	0-停止，1-运行
30*(n-1)+18~ 30*(n-1)+29	n#模块（预留）	R	

*n最大值为16，需根据实际机组情况而定。

- 保持寄存器

地址	寄存器内容	访问类型（W/R）	定义	类型	单位
0	开关机	W/R	0-关机，1-开机	Unsigned Word	/
1	设定工作模式	W/R	1-制热水，2-制冷，3-制冷制热水，4-制热，5-制热制热水	Unsigned Word	/
2	优先模式设定	W/R	0-空调优先， 1-热水优先	Unsigned Word	/
3	设定空调温度	W/R	制冷 [10，20]℃， 制热 [30，45]℃	Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	定义	类型	单位
4	设定热水温度	W/R	[30，50] ℃	Signed Word	0.1℃
5	联动开关状态	R	0-断开，1-闭合	Unsigned Word	/
6	系统模式	R	0-制冷，1-制热，2-制冷制热水，3-制热制热水，4-制热水，5-冬季防冻	Unsigned Word	
7	在线模块信息	R	bit15-16号模块，bit0-1号模块；1-在线，0-离线	Unsigned Word	
8	预留	R		Unsigned Word	
9	预留	R		Unsigned Word	
10	1#模块机型	R		Unsigned Word	
11	1#模块1#系统工作模式	R	0-制冷，1-制热，2-制热水，3-制冷+热水	Unsigned Word	
12	1#模块2#系统工作模式	R	0-制冷，1-制热，2-制热水，3-制冷+热水	Unsigned Word	
13	1#模块故障代码	R	[0，255]。例：0x25表示E26故障	Unsigned Word	
14	1#模块外环温度	R		Signed Word	0.1℃
15	1#模块出水温度	R		Signed Word	0.1℃
16	1#模块回水温度	R		Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	定义	类型	单位
17	1#模块1#压机排气温度	R		Signed Word	0.1℃
18	1#模块2#压机排气温度	R		Signed Word	0.1℃
19	1#模块1#压机回气温度	R		Signed Word	0.1℃
20	1#模块2#压机回气温度	R		Signed Word	0.1℃
21	1#模块1#压机油温温度	R		Signed Word	0.1℃
22	1#模块2#压机油温温度	R		Signed Word	0.1℃
23	1#模块1#冷底温度	R		Signed Word	0.1℃
24	1#模块2#冷底温度	R		Signed Word	0.1℃
25	1#模块1#蒸发温度	R		Signed Word	0.1℃
26	1#模块2#蒸发温度	R		Signed Word	0.1℃
27	1#模块热水回水温度	R		Signed Word	0.1℃
28	1#模块热水出水温度	R		Signed Word	0.1℃
29	1#模块水箱温度	R		Signed Word	0.1℃
30	1#模块1#冷中温度	R		Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	定义	类型	单位
31	1#模块2#冷中温度	R		Signed Word	0.1℃
32	1#模块PMV1开度	R		Unsigned Word	1pls
33	1#模块PMV2开度	R		Unsigned Word	1pls
34	1#模块PMV3开度	R		Unsigned Word	1pls
35	1#模块PMV4开度	R		Unsigned Word	1pls
36	1#模块PMV5开度	R		Unsigned Word	1pls
37	1#模块PMV6开度	R		Unsigned Word	1pls
38	1#模块1#压机电流	R		Unsigned Word	0.1A
39	1#模块2#压机电流	R		Unsigned Word	0.1A
40	1#模块3#压机电流	R		Unsigned Word	0.1A
41	1#模块4#压机电流	R		Unsigned Word	0.1A
42~49	1#模块（预留）	R		Unsigned Word	
40*(n-1)+10	n#模块机型	R		Unsigned Word	
40*(n-1)+11	n#模块1#系统工作模式	R		Unsigned Word	
40*(n-1)+12	n#模块2#系统工作模式	R		Unsigned Word	
40*(n-1)+13	n#模块故障	R		Unsigned Word	
40*(n-1)+14	n#模块外环温度	R		Signed Word	0.1℃
40*(n-1)+15	n#模块出水温度	R		Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	定义	类型	单位
40*(n-1)+16	n#模块回水温度	R		Signed Word	0.1℃
40*(n-1)+17	n#模块1#压机排气温度	R		Signed Word	0.1℃
40*(n-1)+18	n#模块2#压机排气温度	R		Signed Word	0.1℃
40*(n-1)+19	n#模块1#压机回气温度	R		Signed Word	0.1℃
40*(n-1)+20	n#模块2#压机回气温度	R		Signed Word	0.1℃
40*(n-1)+21	n#模块1#压机油温温度	R		Signed Word	0.1℃
40*(n-1)+22	n#模块2#压机油温温度	R		Signed Word	0.1℃
40*(n-1)+23	n#模块1#冷底温度	R		Signed Word	0.1℃
40*(n-1)+24	n#模块2#冷底温度	R		Signed Word	0.1℃
40*(n-1)+25	n#模块1#蒸发温度	R		Signed Word	0.1℃
40*(n-1)+26	n#模块2#蒸发温度	R		Signed Word	0.1℃
40*(n-1)+27	n#模块热水回水温度	R		Signed Word	0.1℃
40*(n-1)+28	n#模块热水出水温度	R		Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	定义	类型	单位
40*(n-1)+29	n#模块水箱温度	R		Signed Word	0.1℃
40*(n-1)+30	n#模块1#冷中温度	R		Signed Word	0.1℃
40*(n-1)+31	n#模块2#冷中温度	R		Signed Word	0.1℃
40*(n-1)+32	n#模块PMV1开度	R		Unsigned Word	1pls
40*(n-1)+33	n#模块PMV2开度	R		Unsigned Word	1pls
40*(n-1)+34	n#模块PMV3开度	R		Unsigned Word	1pls
40*(n-1)+35	n#模块PMV4开度	R		Unsigned Word	1pls
40*(n-1)+36	n#模块PMV5开度	R		Unsigned Word	1pls
40*(n-1)+37	n#模块PMV6开度	R		Unsigned Word	1pls
40*(n-1)+38	n#模块1#压机电流	R		Unsigned Word	0.1A
40*(n-1)+39	n#模块2#压机电流	R		Unsigned Word	0.1A
40*(n-1)+40	n#模块3#压机电流	R		Unsigned Word	0.1A
40*(n-1)+41	n#模块4#压机电流	R		Unsigned Word	0.1A
40*(n-1)+42~ 40*(n-1)+49	n#模块（预留）	R		Unsigned Word	
1295	校验位	W/R	0:偶校验.1:奇校验. 2:无校验.	Unsigned Word	/

*n最大值为16，需根据实际机组而定。

注

【校验位（寄存器地址1295）】属后期升级功能，该功能设置后需重新供电生效，网关生产批次在2023年10月1日之前不支持该功能。

三、热泵

●保持寄存器

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
0	空调开关机	W/R	0：关机，1：开机	Signed Word	/
1	空调模式	W/R	0：自动，1：制冷，4：制热	Signed Word	/
2	空调设定温度	W/R	制冷：[5，25]℃，制热：[25，65]℃	Signed Word	0.1℃
3	热水开关机	W/R	0：关机，1：开机	Signed Word	/
4	热水设定温度	W/R	[30，60]℃	Signed Word	0.1℃
5	ECO设定	W/R	0：取消ECO 1：ECO模式1 … 8：ECO模式8	Signed Word	0.1℃
6	自动水温设定	W/R	0：取消自动水温 1：自动水温模式1 … 9：自动水温模式9	Signed Word	/
7	循环热水	W/R	1：开启（开启后由水模块自行关闭）	Signed Word	/
8	快速热水	W/R	0：关机，1：开机	Signed Word	/
9	水箱消毒	W/R	1：开启（开启后由水模块自行关闭	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
10	自动排气	W/R	0：关闭，1：开机	Signed Word	/
11	地板干燥	W/R	0：关闭，1：开机	Signed Word	/
12	地板预热	W/R	0：关闭，1：开机	Signed Word	/
13	静音模式	W/R	0：关闭静音 1：静音模式1 2：静音模式2	Signed Word	/
14	主区域室温设置	W/R	制冷/制热： [16，32]℃	Signed Word	0.1℃
15	制热副区域开关机	W/R	0：关闭，1：开机	Signed Word	/
16	制热副区域温度设置	W/R	[25，45]℃	Signed Word	0.1℃
17	地暖ECO	W/R	0：取消 ECO 1：ECO模式1 … 8：ECO模式8	Signed Word	/
40	外机容量	R		Signed Word	100W
41	机组运行模式	R	0：停止，1：制冷 2：制热，3：制热水	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
42	压缩机频率	R		Signed Word	0.1rps
43	风机转速	R		Signed Word	1rpm
44	电子膨胀阀开度	R		Signed Word	1pls
45	压缩机电流	R		Signed Word	0.1A
46	目标频率	R		Signed Word	0.1rps
47	直流母线电压	R		Signed Word	1V
48	输入电流	R		Signed Word	0.1A
49	模块温度	R		Signed Word	0.1℃
50	压缩机回气温度	R		Signed Word	0.1℃
51	压缩机排气温度	R		Signed Word	0.1℃
52	外机盘管温度	R		Signed Word	0.1℃
53	外机环境温度	R		Signed Word	0.1℃
54	冷媒压力	R		Signed Word	1kpa
55	三通阀1_1	R	0：关闭，1：开机	Signed Word	/
56	三通阀1_2	R	0：关闭，1：开机	Signed Word	/
57	二通阀	R	0：关闭，1：开机	Signed Word	/
58	水泵-I(内置循环泵)	R	0：关闭，1：开机	Signed Word	/
59	水泵-O(外部循环泵)	R	0：关闭，1：开机	Signed Word	/
60	水泵-D(DHW水泵)	R	0：关闭，1：开机	Signed Word	/
61	水模块电加热状态	R	0：关闭，1：开机	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
62	水箱电加热状态	R	0：关闭，1：开机	Signed Word	/
63	出水温度	R		Signed Word	0.1℃
64	回水温度	R		Signed Word	0.1℃
65	板换出水温度	R		Signed Word	0.1℃
66	水箱温度Twt	R		Signed Word	0.1℃
67	板换气管温度Tico	R		Signed Word	0.1℃
68	板换液管温度Tici	R		Signed Word	0.1℃
69	房间温度	R		Signed Word	0.1℃
70	外机故障代码	R	[0，255]。例：0xA1表示A1故障；通讯数据B对应显示字符H，通讯数据D对应显示字符J	Signed Word	0.1℃
71	水模块故障代码	R		Signed Word	/
72	外机控制板固件版本	R	BCD码，0x10表示V1.0	Signed Word	/
73	水模块控制板固件版本	R		Signed Word	/
74	混水三通阀3_1	R	0：关闭，1：开启	Signed Word	/
75	混水三通阀3_2	R	0：关闭，1：开启	Signed Word	/
76	地暖混水泵	R	0：关闭，1：开启	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
77	太阳能水泵	R	0：关闭，1：开启	Signed Word	/
78	板换加热带	R	0：关闭，1：开启	Signed Word	/
79	膨胀罐加热带	R	0：关闭，1：开启	Signed Word	/
80	燃气锅炉	R	0：关闭，1：开启	Signed Word	/
81	目标水温（主区域）	R	主区域当前目标水温	Signed Word	0.1℃
82	目标水温(副区域)	R	副区域当前目标水温	Signed Word	0.1℃
83	平衡水箱温度	R	当前温度	Signed Word	0.1℃
84	地暖水进口温度	R	当前温度	Signed Word	0.1℃
85	太阳能板温度	R	当前温度	Signed Word	0.1℃
86	水流量	R	当前水流量	Signed Word	0.01m³/h
87	当日累计耗电量	R	当日累计耗电量	Signed Word	1KWh
88	外机除霜状态	R	0：非化霜， 1：化霜中	Signed Word	/
89	外机底盘加热带	R	0：关闭， 1：开启	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
90	线控器软件版本号	R	当前版本号	Signed Word	/
91	机组能力	R	当前能力值	Unsigned Word	0.01kW
92	1h平均能力值	R	当前1h平均能力值	Unsigned Word	0.01kW
93	消耗功率	R	当前功率	Unsigned Word	0.01kW
94	1h平均功率	R	当前1h平均功率	Unsigned Word	0.01kW
95	能效比	R	当前能效比	Unsigned Word	0.01
96	1h平均能效比	R	当前1h平均能效比	Unsigned Word	0.01
101	水模块电加热1状态	R	0：关闭，1：开机	Signed Word	/
102	水模块电加热2状态	R	0：关闭，1：开机	Signed Word	/
200	热水模式是否启用	W/R	0：关闭，1：开机	Signed Word	/
201	消毒是否启用	W/R	0：关闭，1：开机	Signed Word	/
202	生活热水优先权是否启用	W/R	0：关闭，1：开机	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
203	DHW泵是否启用	W/R	0：关闭，1：开机	Signed Word	/
204	热泵运行最大环温	W/R	[35，43]℃	Signed Word	1℃
205	热泵运行最小环温	W/R	[-25，5]℃	Signed Word	1℃
206	消毒水温	W/R	[60，70]℃	Signed Word	1℃
207	水箱电加热启动延迟时间(相对压缩机的启动)	W/R	[0，240]分钟	Signed Word	1分钟
208	消毒持续时间	W/R	[5，60]分钟	Signed Word	1分钟
209	消毒最长时间	W/R	[90，300]分钟	Signed Word	10分钟
210	热泵制热/制冷限制时间	W/R	[10，600]分钟	Signed Word	10分钟
211	热泵制热水运行最大时间	W/R	[10，600]分钟	Signed Word	10分钟
212	DHW泵运行时间	W/R	[5，120]分钟	Signed Word	5分钟
213	制冷模式是否启用	W/R	0：关闭，1：开机	Signed Word	/
214	制冷最高环温	W/R	[35，60]℃	Signed Word	1℃
215	制冷最低环温	W/R	[-5，25]℃	Signed Word	1℃
216	制冷节能模式设置水温1	W/R	[5，25]℃	Signed Word	1℃
217	制冷节能模式设置水温2	W/R	[5，25]℃	Signed Word	1℃

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
218	制冷节能模式设置环温1	W/R	[-5，46]℃	Signed Word	1℃
219	制冷节能模式设置环温2	W/R	[-5，46]℃	Signed Word	1℃
220	制冷模式停机回差	W/R	[2，10]℃	Signed Word	1℃
221	制冷模式开启回差	W/R	[2，10]℃	Signed Word	1℃
222	制冷1区末端类型选择(主)	W/R	1：暖气片，2：地暖 3：风机盘管	Signed Word	/
223	制冷2区末端类型选择(副)	W/R	1：暖气片，2：地暖 3：风机盘管	Signed Word	/
224	制热模式是否启用	W/R	0：关闭，1：开机	Signed Word	1℃
225	制热最高环温	W/R	[20，35]℃	Signed Word	1℃
226	制热最低环温	W/R	[-25，15]℃	Signed Word	1℃
227	制热节能模式设置水温1	W/R	[25，60]℃	Signed Word	1℃
228	制热节能模式设置水温2	W/R	[25，60]℃	Signed Word	1℃
229	制热节能模式设置水温1	W/R	[-25，35]℃	Signed Word	1℃
230	制热节能模式设置环温2	W/R	[-25，35]℃	Signed Word	1℃
231	制热模式停机回差	W/R	[2，10]℃	Signed Word	1℃

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
232	制热模式开启回差	W/R	[0，10]℃	Signed Word	1℃
233	制热1区末端类型选择(主)	W/R	1：暖气片，2：地暖 3：风机盘管	Signed Word	/
234	制热2区末端类型选择(副)	W/R	1：暖气片，2：地暖 3：风机盘管	Signed Word	/
235	制冷最小温度	W/R	[20，35]℃	Signed Word	1℃
236	制热最大温度	W/R	[10，17]℃	Signed Word	1℃
237	出水温度控制	W/R	0：关闭，1：开机	Signed Word	/
238	室温	W/R	0：关闭，1：开机	Signed Word	/
239	双温	W/R	0：关闭，1：开机	Signed Word	/
240	房间恒温器	W/R	0：关闭，1：开机	Signed Word	/
241	后备电加热是否启用	W/R	0：关闭，1：开机	Signed Word	/
242	制热水开启回差	W/R	[2，10]℃	Signed Word	1℃
243	电加热允许启动环温	W/R	[-15，10]℃	Signed Word	1℃
244	水箱电加热允许启动环温	W/R	[-5，20]℃	Signed Word	1℃
245	燃气允许启动环温	W/R	[-25，10]℃	Signed Word	1℃
246	后备电加热启动较压缩机启动延迟时间	W/R	[15，120]分钟	Signed Word	5分钟

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
247	其他热源启动较压缩机启动延迟时间	W/R	[5，120]分钟	Signed Word	5分钟
248	地暖混水泵开启温差（地暖进水温度-目标地暖水温）	W/R	[2,10]℃	Signed Word	1℃
249	地暖混水泵关闭温差（地暖进水温度-目标地暖水温）	W/R	[-10,-2]℃	Signed Word	1℃
250	电加热换挡回差	W/R	[-5，0]℃	Signed Word	1℃
251	制热出水温度	W/R	[25，35]℃	Signed Word	1℃
252	制热水水箱温度	W/R	[30，35]℃	Signed Word	1℃
253	预热模式下出水温度设定值	W/R	[30，45]℃	Signed Word	1℃
254	预热模式持续时间	W/R	[24，72]小时	Signed Word	1小时
255	干燥最高水温	W/R	[35，45]℃	Signed Word	1℃
256	升温周期	W/R	[2，8]天	Signed Word	1天
257	保持周期	W/R	[1，5]天	Signed Word	1天
258	降温周期	W/R	[0，5]天	Signed Word	1天
259	地暖水进口温度	W/R	0：关闭，1：开机	Signed Word	/
260	平衡水箱温度	W/R	0：关闭，1：开机	Signed Word	/
261	拓展板是否有效	W/R	0：关闭，1：开机	Signed Word	/
262	智能电网	W/R	0：关闭，1：开机	Signed Word	/

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
263	太阳能输入	W/R	0：无太阳能输入 1：温度传感器输入 2：开关量输入	Signed Word	/
264	智能电网运行时间	W/R	[0，24]小时	Signed Word	1小时
265	掉电记忆	W/R	0：有；1：无	Signed Word	/
266	水模块电加热1功率	W/R	[0,40]kW	Signed Word	0.5KW
267	水模块电加热2功率	W/R	[0,40]kW	Signed Word	0.5KW
268	水箱电加热是否启用	W/R	0：关闭，1：开启	Signed Word	/
269	水箱电加热功率	W/R	[0,40]kW	Signed Word	0.5KW
270	混水泵运行模式选择	W/R	0：Mode1， 1：Mode2	Signed Word	/
271	输入功率限制	W/R	0-90%	Signed Word	10%
272	双温调整周期	W/R	[1,60]min	Signed Word	1min
273	开启占比	W/R	0-100%	Signed Word	20%
274	制热水水泵启动环温	W/R	[-25,10]℃	Signed Word	1℃
275	室内机传感器	W/R	0：内机 1：线控器	Signed Word	/
276	循环水泵类型	W/R	0：常规 1：应急	Signed Word	/
277	制热地暖(FLH) 初始目标水温	W/R	[25，40]℃	Signed Word	1℃
278	制热暖气片(RAD) 初始目标水温	W/R	[35，60]℃	Signed Word	1℃

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
279	制热风机盘管(FCU)初始目标水温	W/R	[30, 50]℃	Signed Word	1℃
280	制冷风机盘管(FCU)初始目标水温	W/R	[5, 25]℃	Signed Word	1℃
281	水温修正周期	W/R	[1, 30]min	Signed Word	1min
282	制冷水温上限修正值	W/R	[0, 15]℃	Signed Word	1℃
283	制冷水温下限修正值	W/R	[-15, 0]℃	Signed Word	1℃
284	制热水温上限修正值	W/R	[0, 15]℃	Signed Word	1℃
285	制热水温下限修正值	W/R	[-15, 0]℃	Signed Word	1℃
286	制热地暖(FLH)水温最大值	W/R	[35, 60]℃	Signed Word	1℃
287	制热地暖(FLH)水温最小值	W/R	[25, 35]℃	Signed Word	1℃
288	制热暖气片(RAD)水温最大值	W/R	[35, 60]℃	Signed Word	1℃
289	制热暖气片(RAD)水温最小值	W/R	[25, 35]℃	Signed Word	1℃
290	制热风机盘管(FCU)水温最大值	W/R	[35, 60]℃	Signed Word	1℃

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
291	制热风机盘管(FCU)水温最小值	W/R	[25，35]℃	Signed Word	1℃
292	制冷室温停机回差	W/R	[-5，0]℃	Signed Word	0.1℃
293	制冷室温开机回差	W/R	[0，5]℃	Signed Word	0.1℃
294	制热室温停机回差	W/R	[0，5]℃	Signed Word	0.1℃
295	制热室温开机回差	W/R	[-5，0]℃	Signed Word	0.1℃
296	水泵运行时间	W/R	[1，10]min	Signed Word	1min
297	水泵停止时间	W/R	[0，30]min	Signed Word	1min
298	电加热档位选择	W/R	1：3kW，2：6kW，3：9kW	Signed Word	3kW
299	制冷室温补偿值	W/R	[-5，5]℃	Signed Word	0.5℃
300	制热室温补偿值	W/R	[-5，5]℃	Signed Word	0.5℃
301	制冷室温调节区间值	W/R	[0.1，3]℃	Signed Word	0.1℃
302	制热室温调节区间值	W/R	[0.1，3]℃	Signed Word	0.1℃
303	水温修正值	W/R	[0.1，3]℃	Signed Word	0.1℃

地址	寄存器内容	访问类型(W/R)	范围	类型	单位
384	电加热模式选择	W/R	0：正常， 1：强力	Signed Word	/
385	外水泵运行 模式选择	W/R	0：模式1， 1：模式2	Signed Word	/

注

1、在使用0x10(16)功能码预置寄存器200~303时，一次最多可以预置5个寄存器。

2、因产品升级，水模块产品的控制板程序（可通过线控器查询）存以下参数使用限制或与上表内容的差异：

（1）水模块控制板程序低于V05版本

①不支持寄存器预置/读取寄存器15~17、78~79、82、88、89、268。

②制冷最高环温（寄存器214）可预置范围[35,52]。

③制冷模式开启回差（寄存器221）可预置范围[5,10]。

④制冷最小温度（寄存器235）可预置范围[20,29]。

（2）水模块控制板程序低于V07版本

①不支持寄存器预置/读取寄存器276~298。

（3）水模块控制板程序低于V08版本

①不支持寄存器预置/读取寄存器90~96、299~303。

②制冷室温停机回差（寄存器292）可预置范围[-5,-1]。

③寄存器292~295单位：1℃。

④线控器【能力/能效显示】设为启用时，寄存器91~96参数为具体数值；设为不启用时，寄存器91~96参数为FF FF(无符号数)。

（4）水模块控制板程序低于V09版本

①不支持寄存器预置/读取寄存器100~101、250、384~385。

②水泵停止时间（寄存器297）可预置范围[3,30]。

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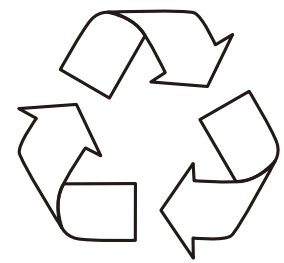

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