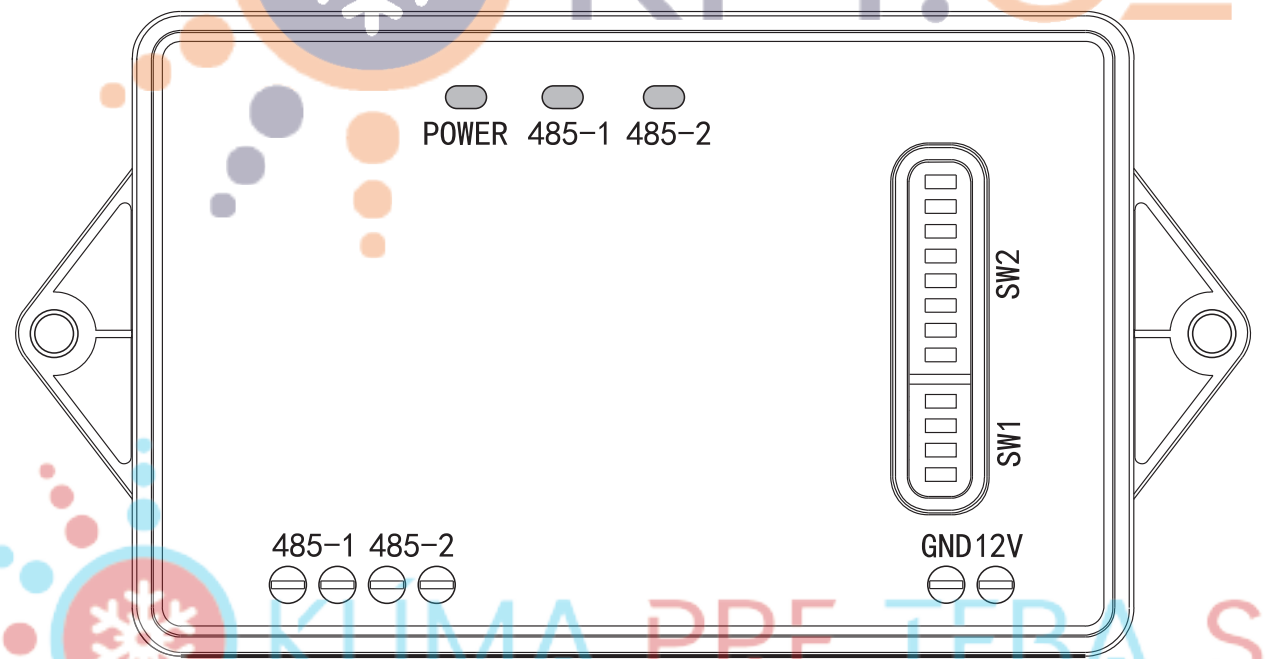
Gateway Instructions

- 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.



Contents

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)	127mm×65. 8mm×20. 8mm
Installation	Screw(Double hole)
Material	ABS
Operation range(T)	-20°C～60°C
Operation range(H)	≤85%

Package list

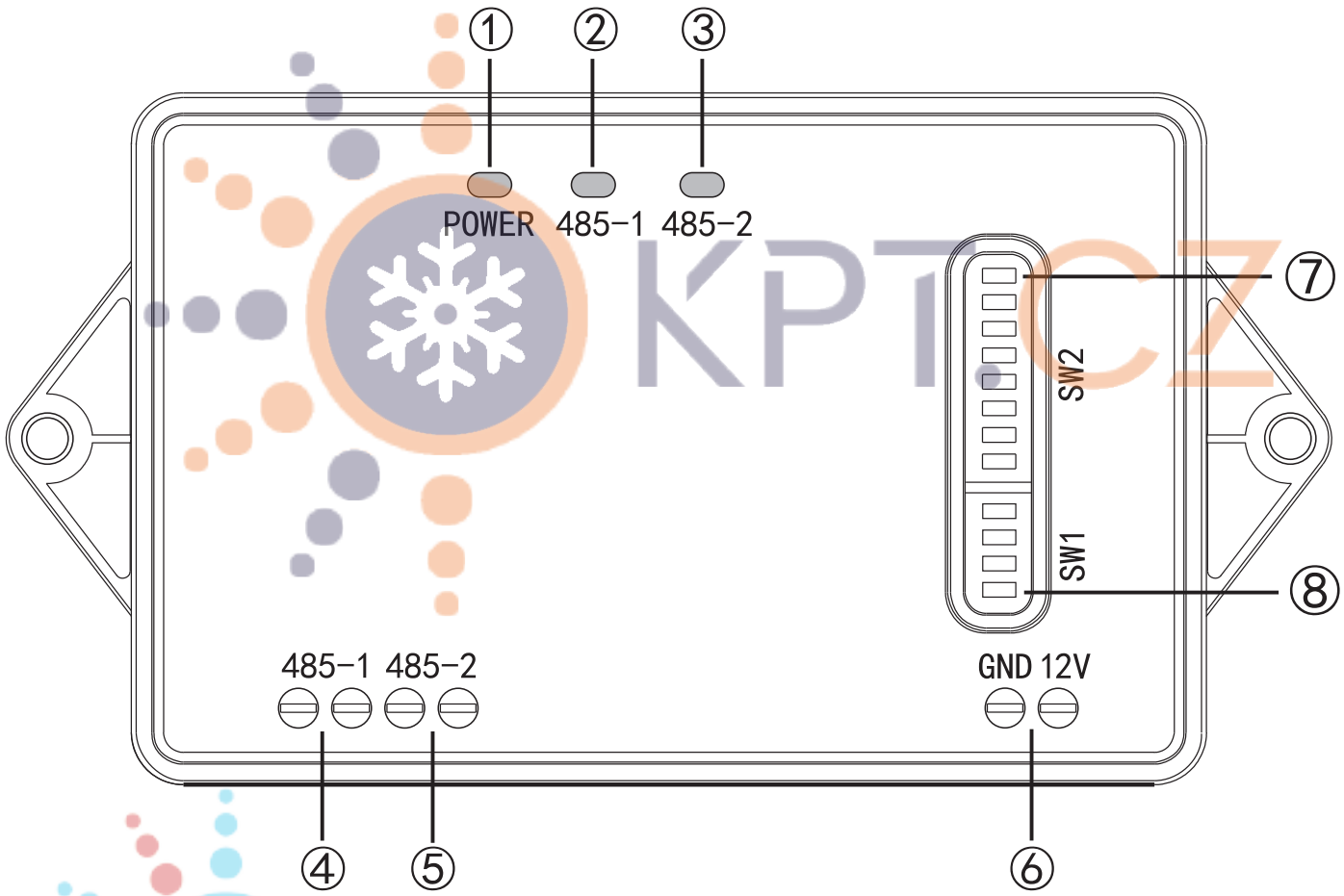
Content	Gateway	Instruction manual	Screw
Quantity	1	1	2

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)

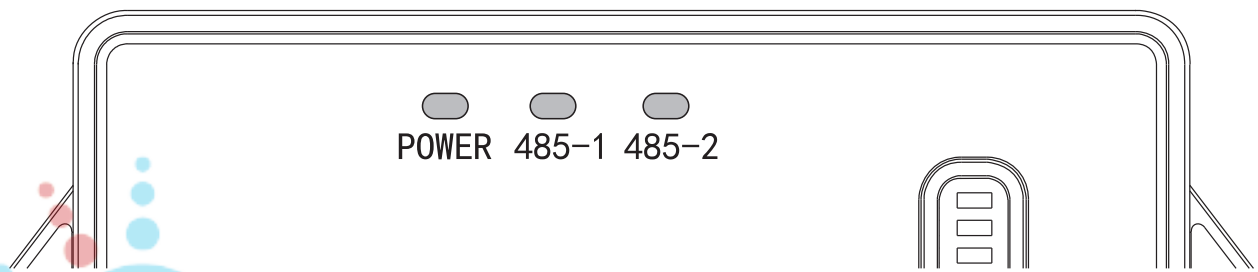
Power supply port

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.

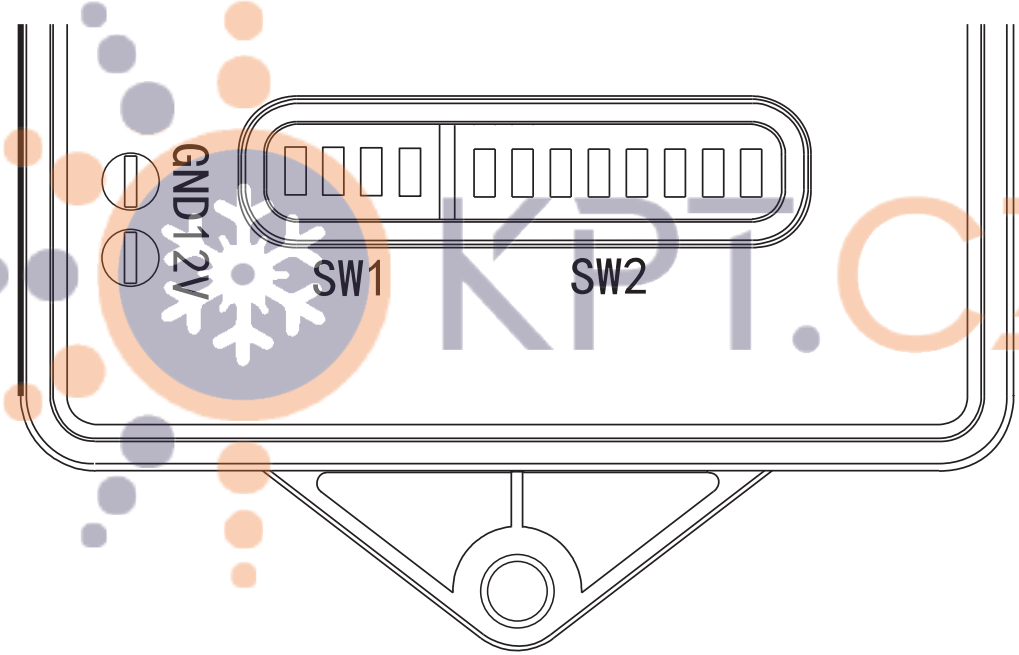
Pilot lamp



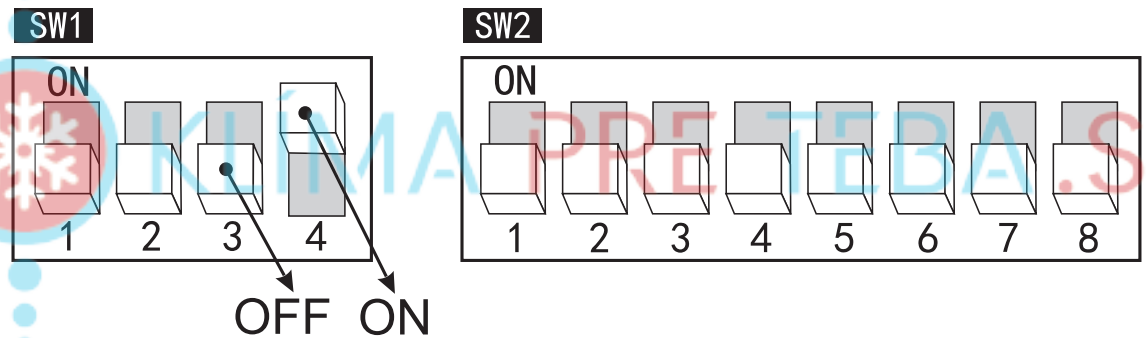
485-1：Light will flicker after normal communication between gateway and AC.
485-2：Light will flicker after normal communication between gateway and central controller or BMS system.
POWER：Light will keep on after power supply.

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

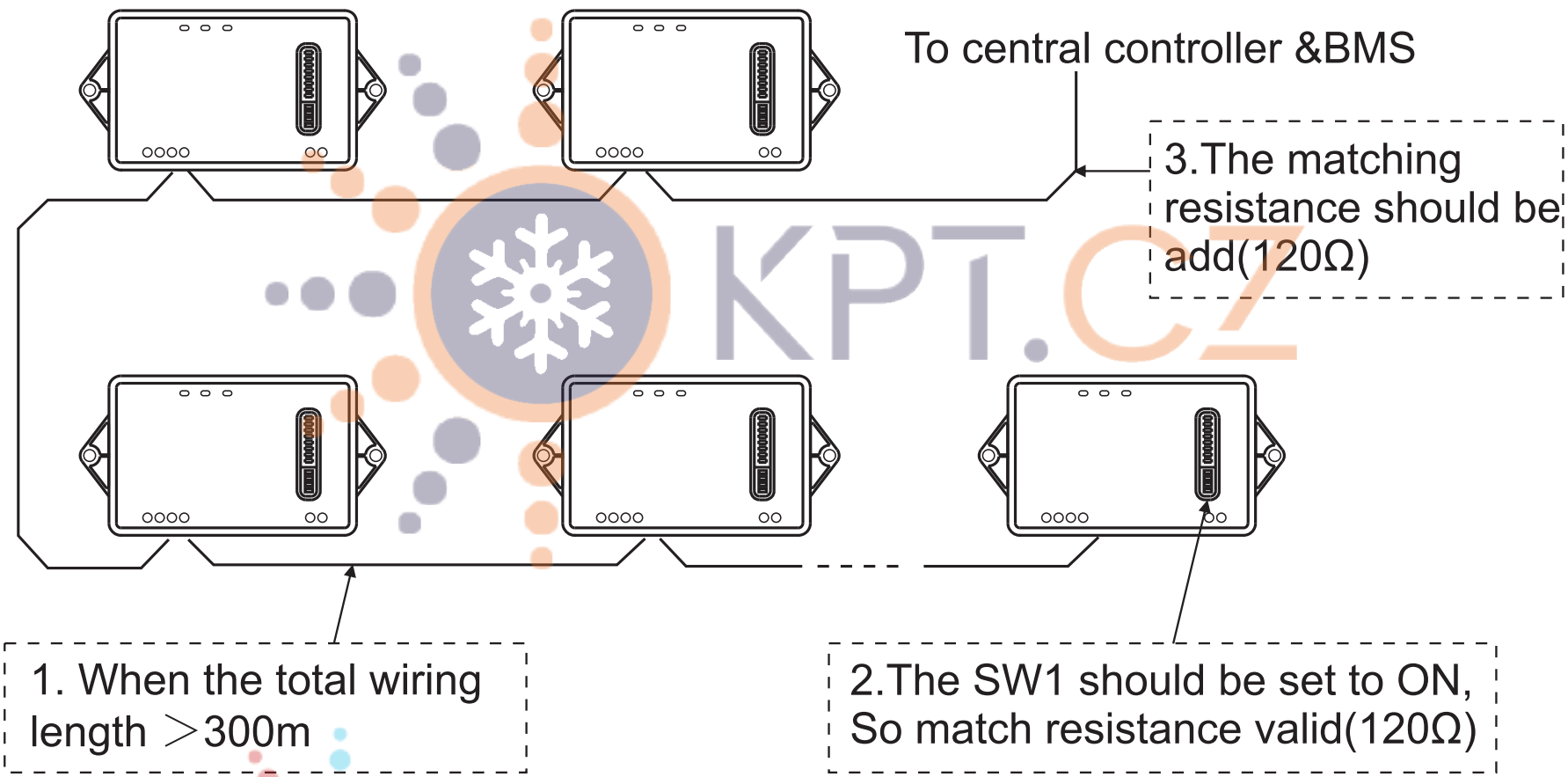
- SW1 definition:

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

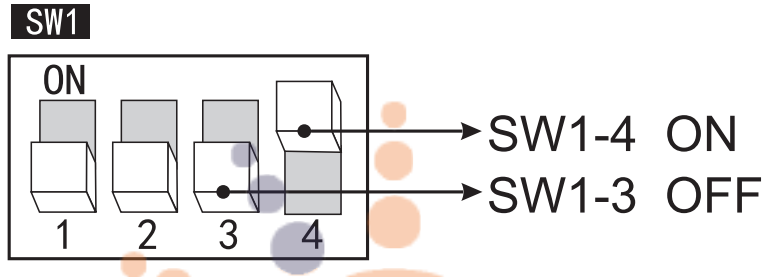
SW1-2	SW1-3	SW1-4	Definition
OFF	OFF	OFF	Central control(ARV,LCAC,FCU)
OFF	OFF	ON	Modbus(ARV,LCAC,FCU)
OFF	ON	OFF	Modbus(Chiller)
OFF	ON	ON	Extension network
ON	OFF	OFF	Modbus(Heat pump)

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

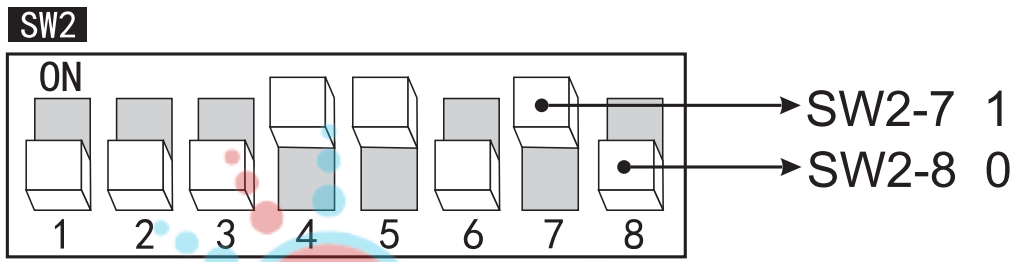


Eg2: SW1-3,4 Modbus(ARV product),the dial-switch setting as below.



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

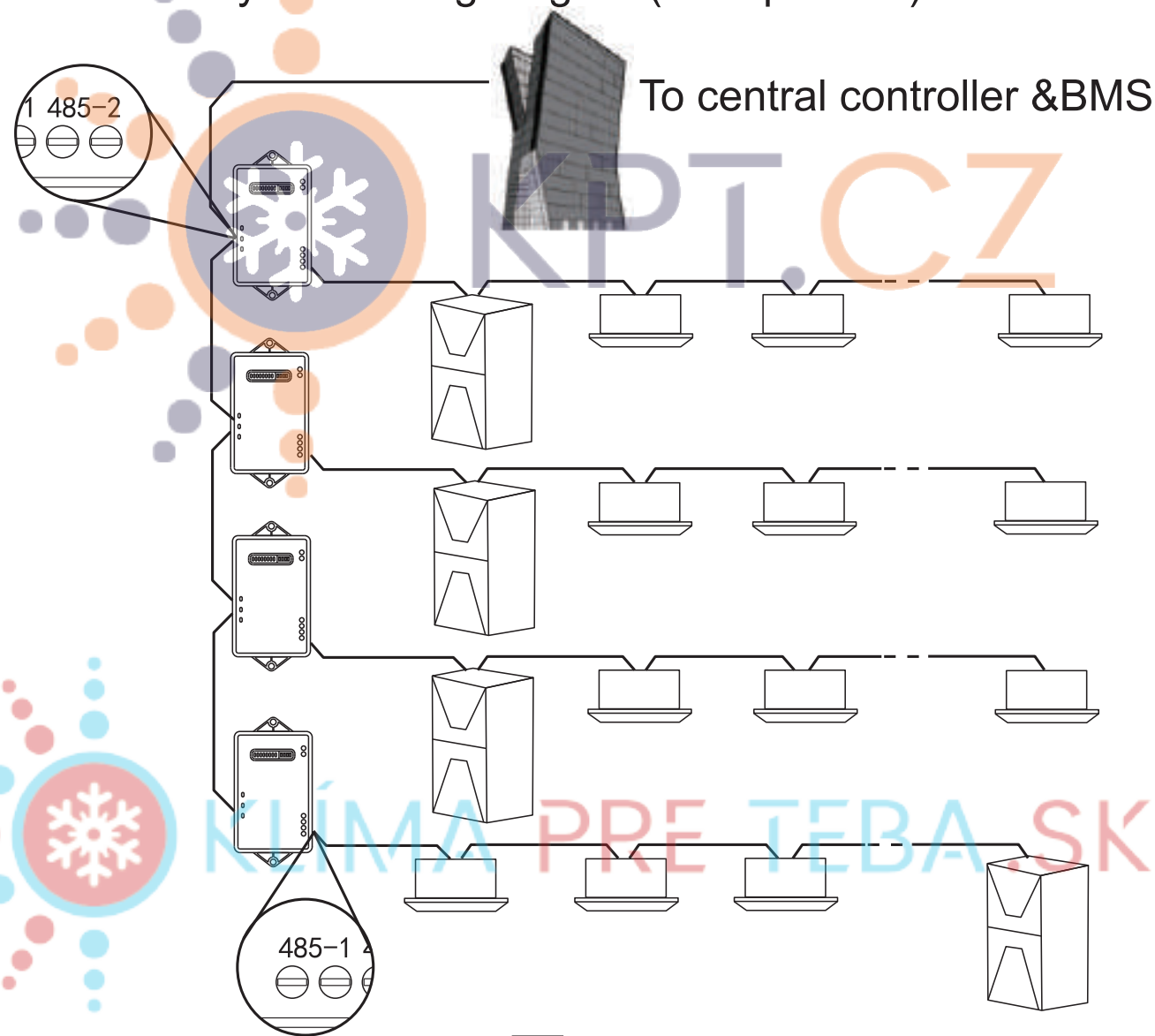
Note: The heat pump unit only supports the function codes 0x03 (03), 0x06 (06) and 0x10 (16).

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

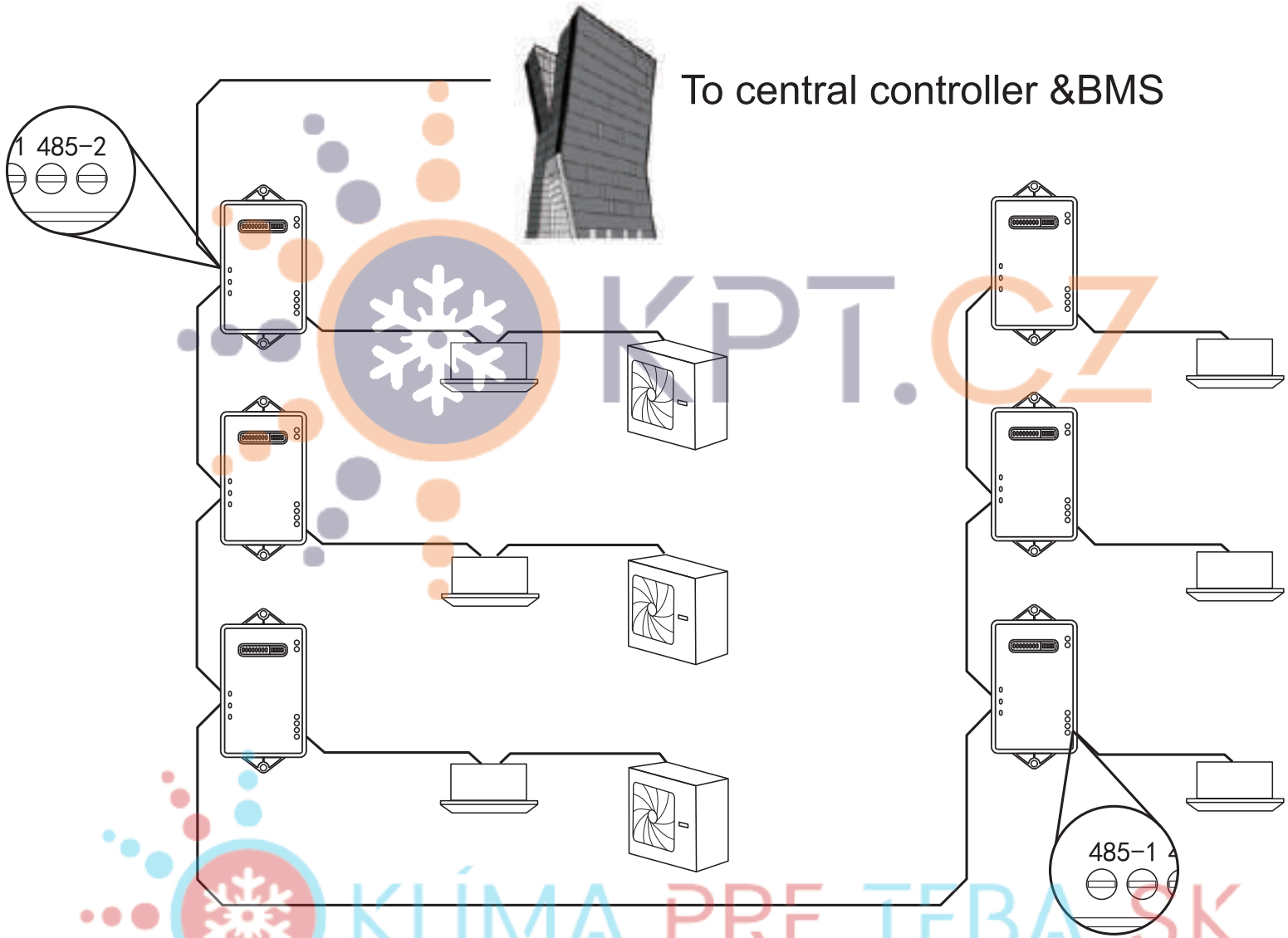
Wiring

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

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

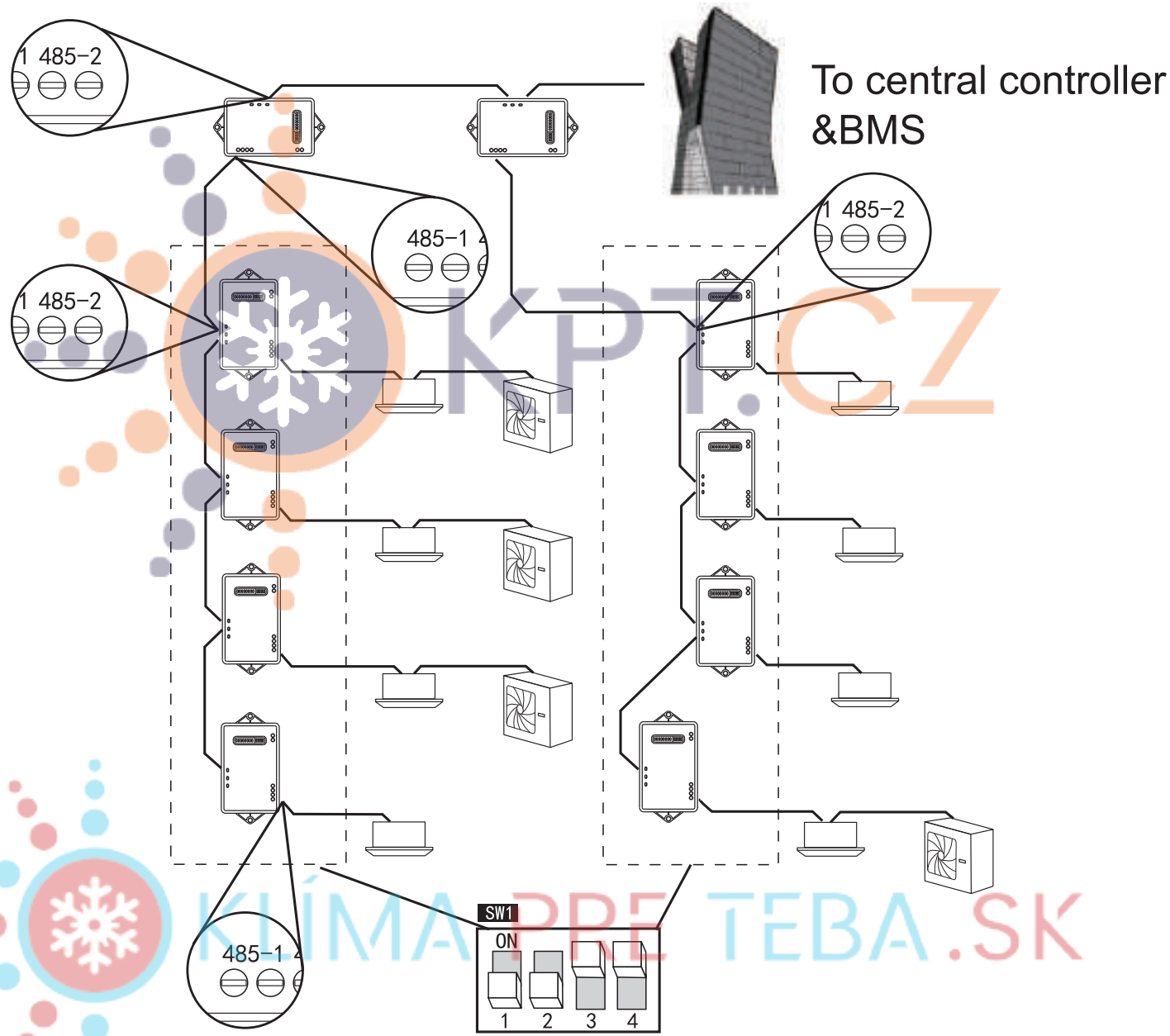


- BMS, central control system wiring diagram(LCAC, FCU product)



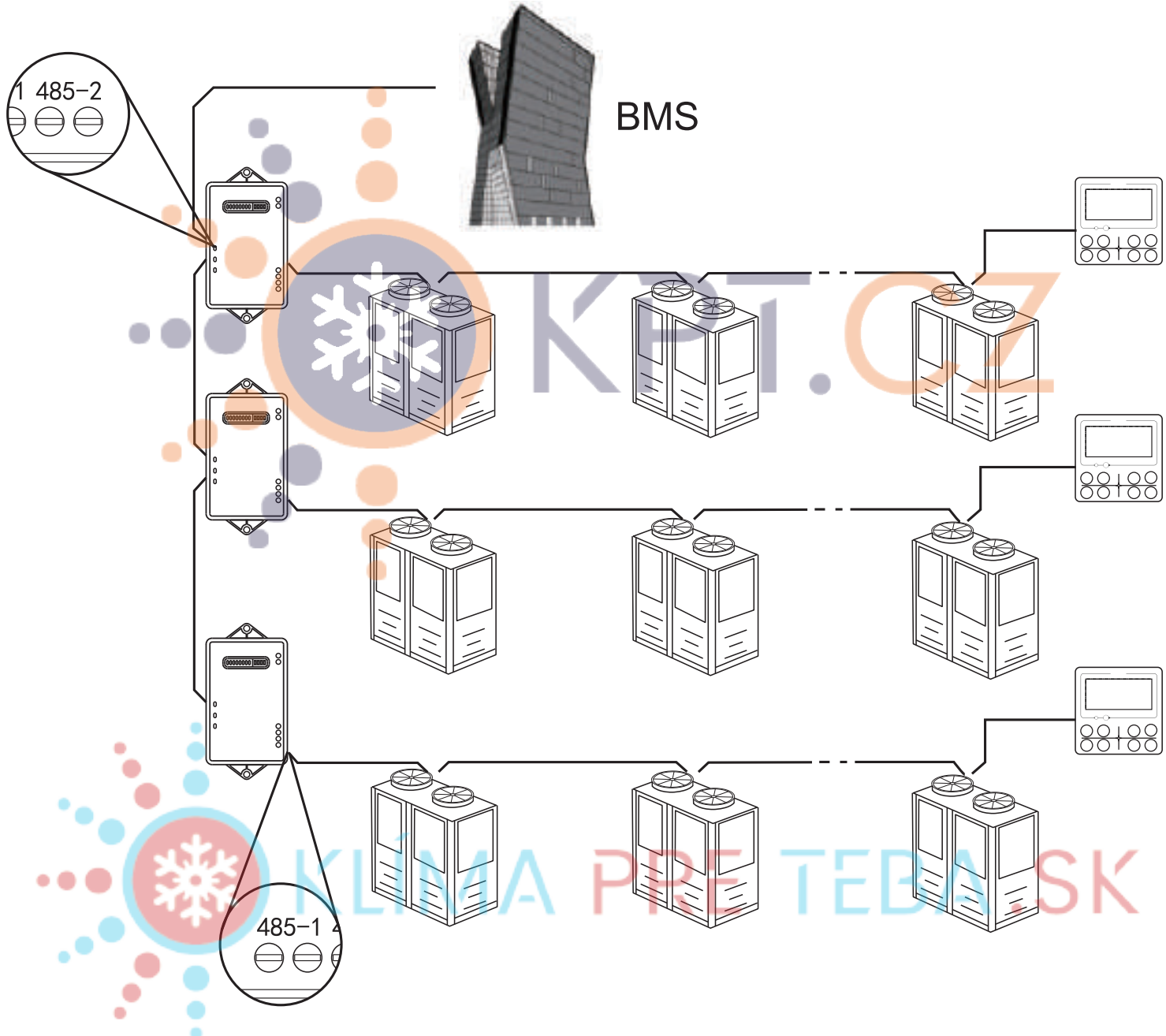
Note: Connection from indoor unit's RS485 port to 485-1 port of the gateway (LCAC, FCU product); ARV, LCAC, FCU products can be connect to the same BMS/central control system.

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

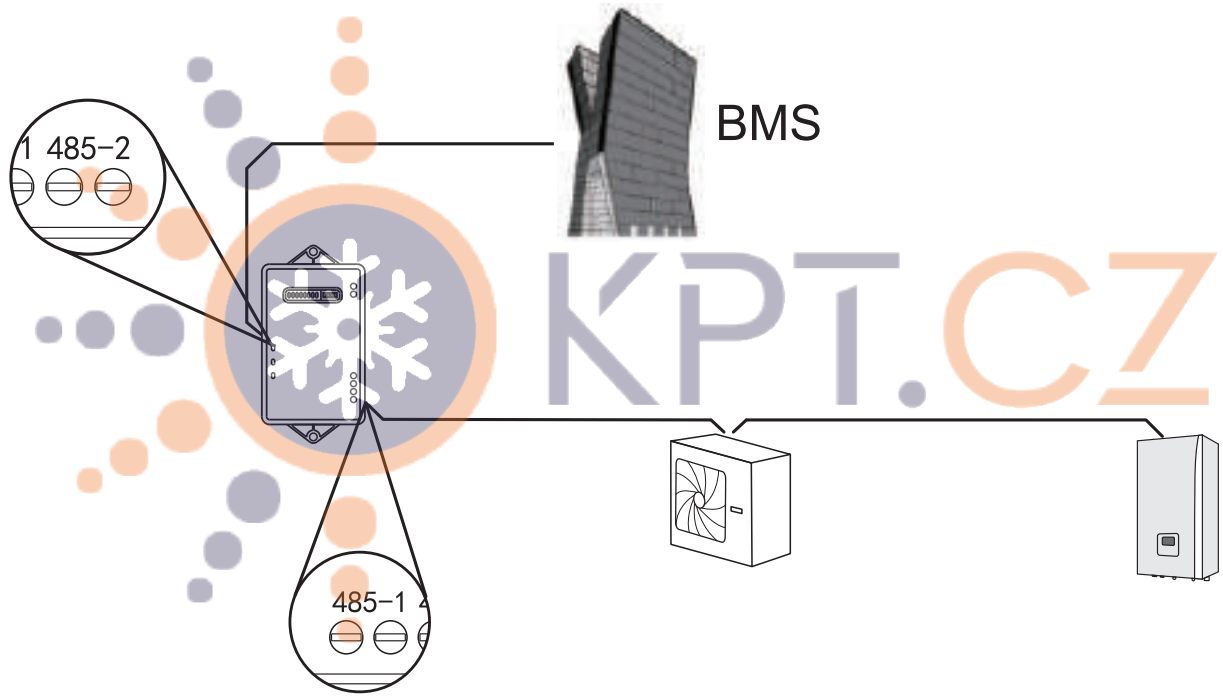


Note:
1.Connection from indoor unit's RS485 port to 485-1 port of the gateway(LCAC, FCU product).
2.One of the Extension network gateway must be set to address 1.
3.Each gateway SW1-3,4 should be set to ON ON, means extension network.
4.Extension network gateway SW1-3,4 setting according use Case【OFF,OFF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

- BMS system wiring diagram(chiller product)

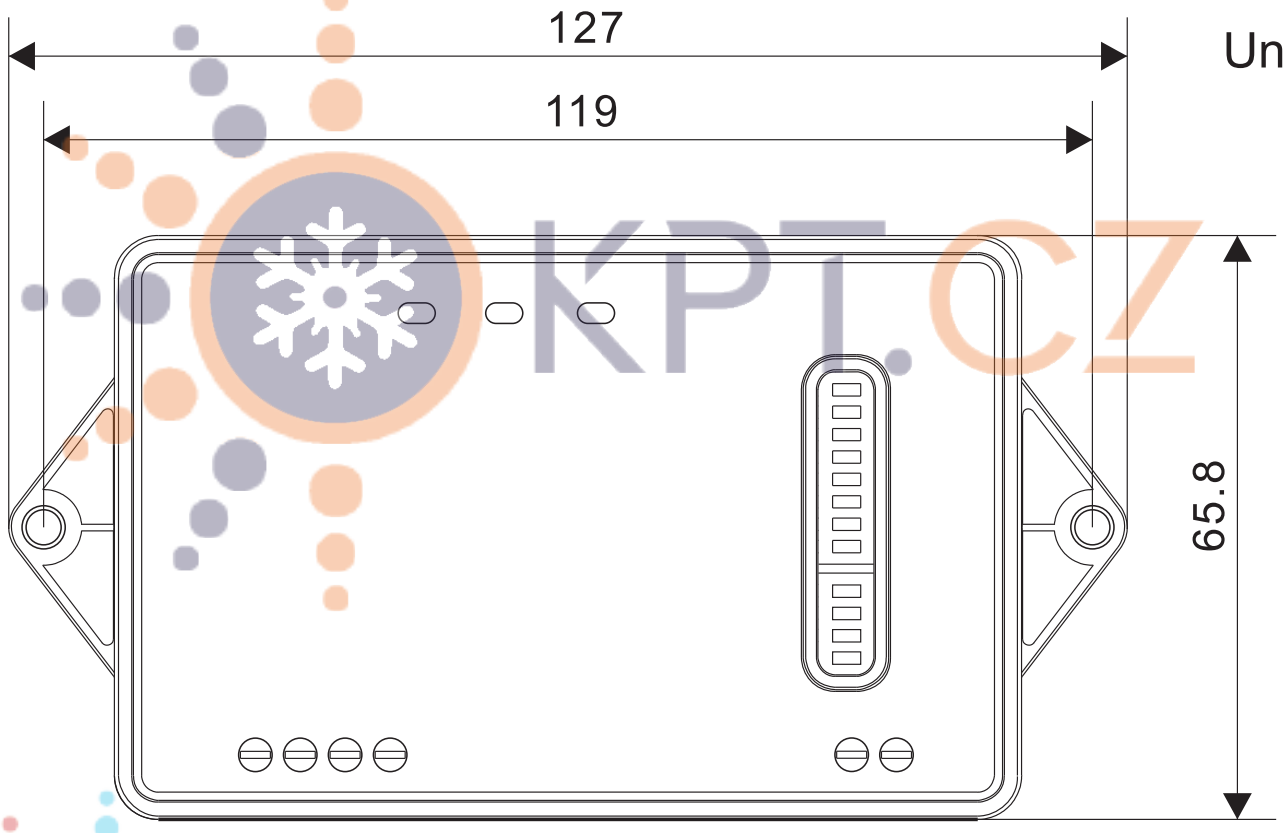


- BMS systen wiring diagram (Heat pump product)



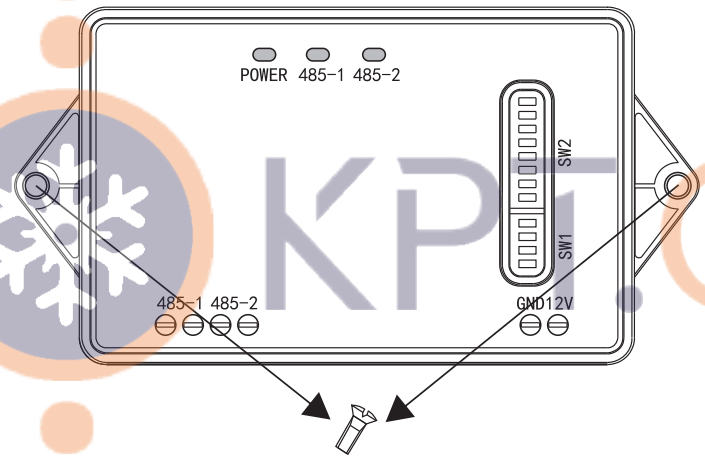
Note: When this product is connected to the heat pump product, ensure that the unit is connected to the heat pump wire controller .

Dimension

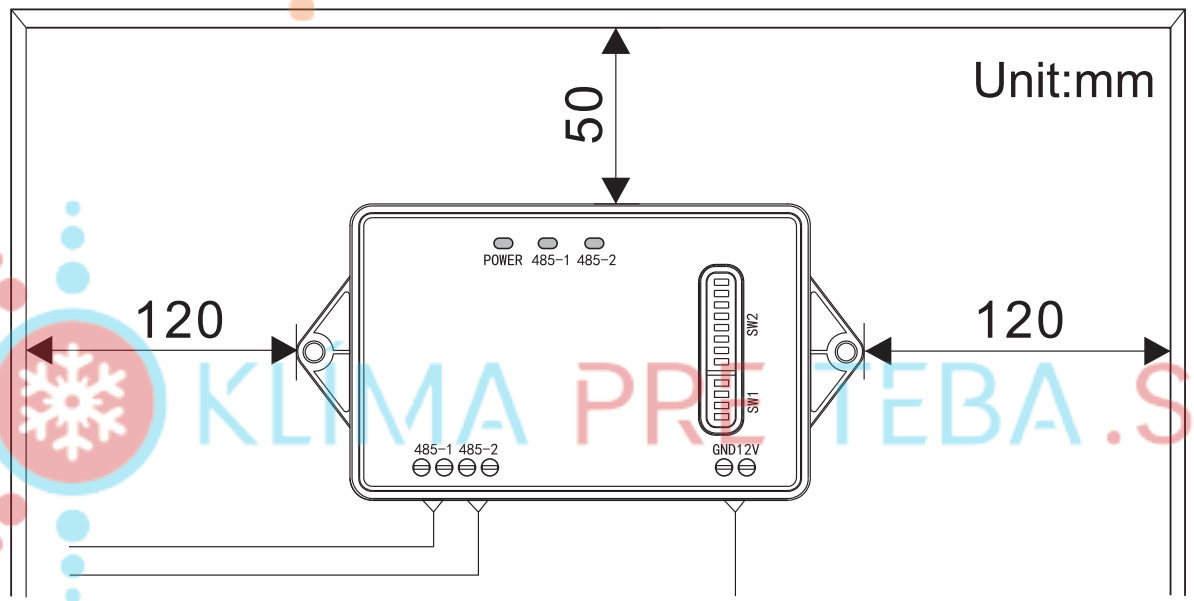


Installation

- 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

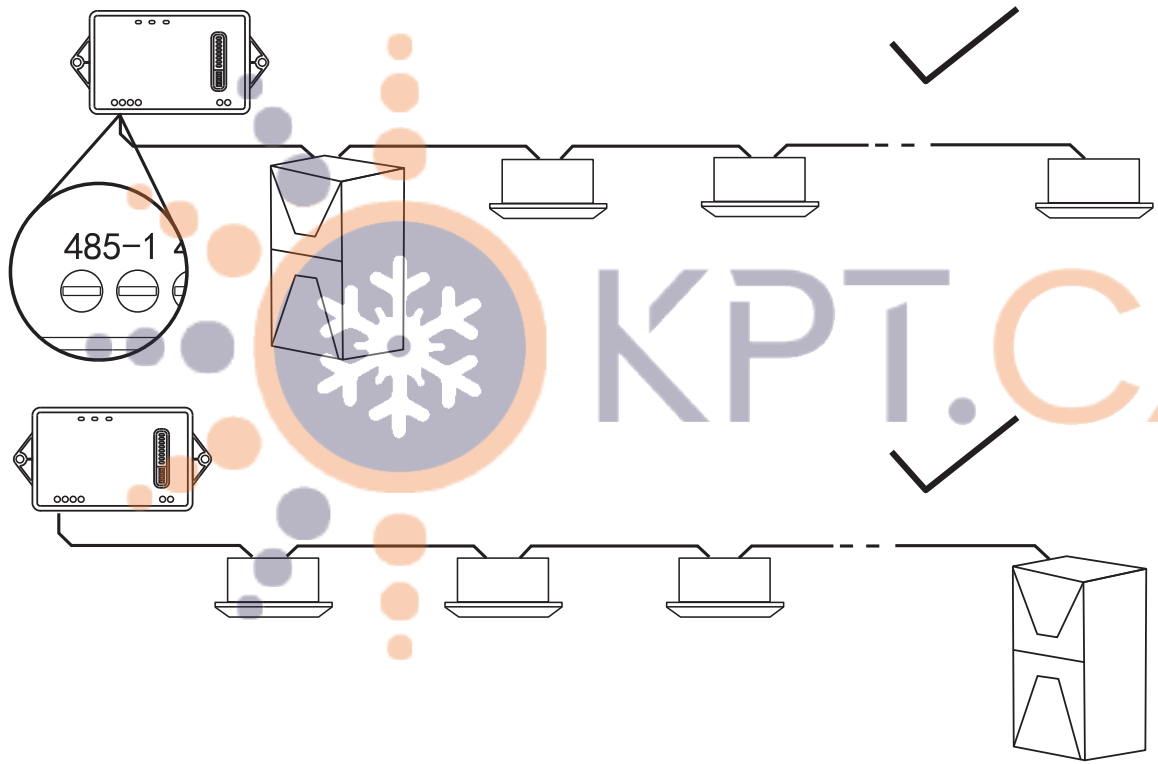
	Wiring between AC and gateway	Wiring between central controller &BMS system
Material	Shielded light / ordinary PVC sheathed twisted pair copper cord (RVVSP)	Shielded light / ordinary PVC sheathed twisted pair copper cord (RVVSP)
Length	⩽800m	⩽800m
Diameter	⩾2×0.75mm²	⩾2×0.75mm²
Standard	GB/T 5023.5-2008	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

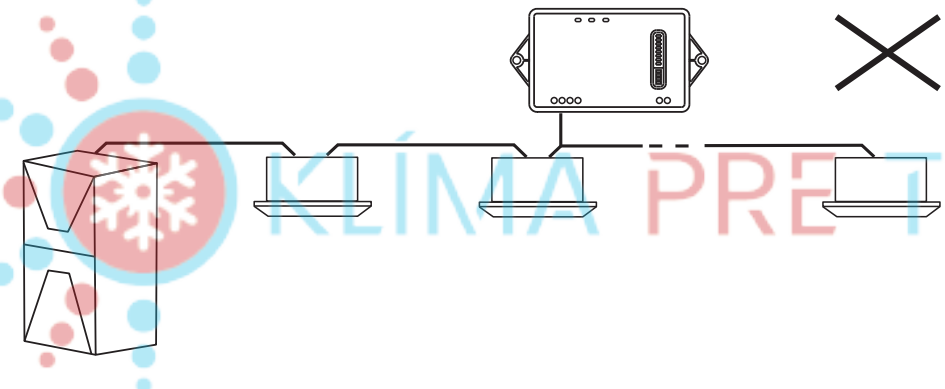
Note: Gateway should be connected hand in hand. forbidden connection such as star type and Y type.

(1) Wiring between AC and gateway

- Normal wiring:

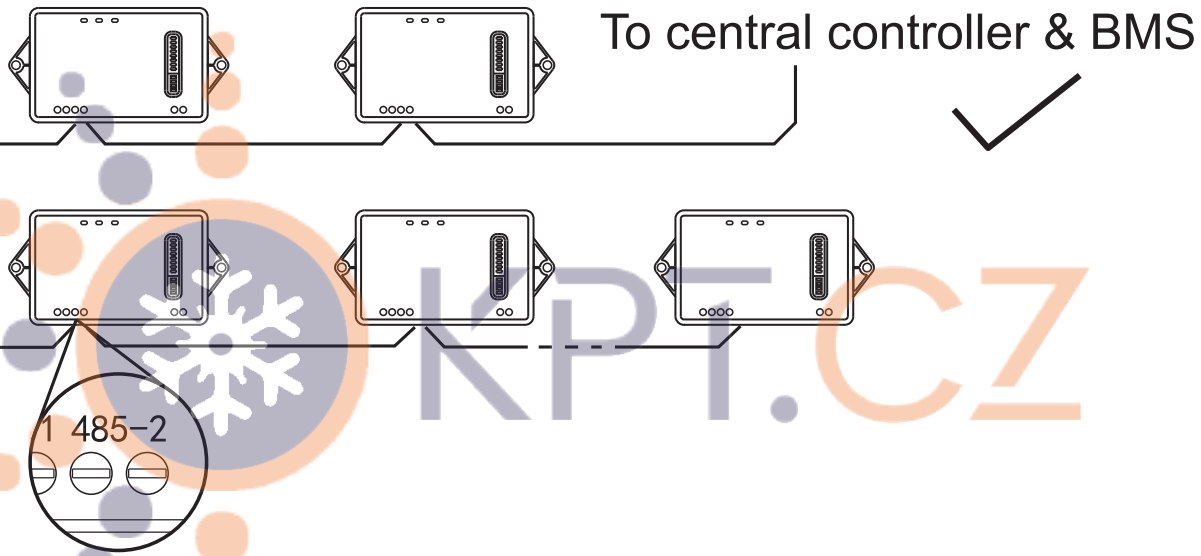


- Wrong wiring:

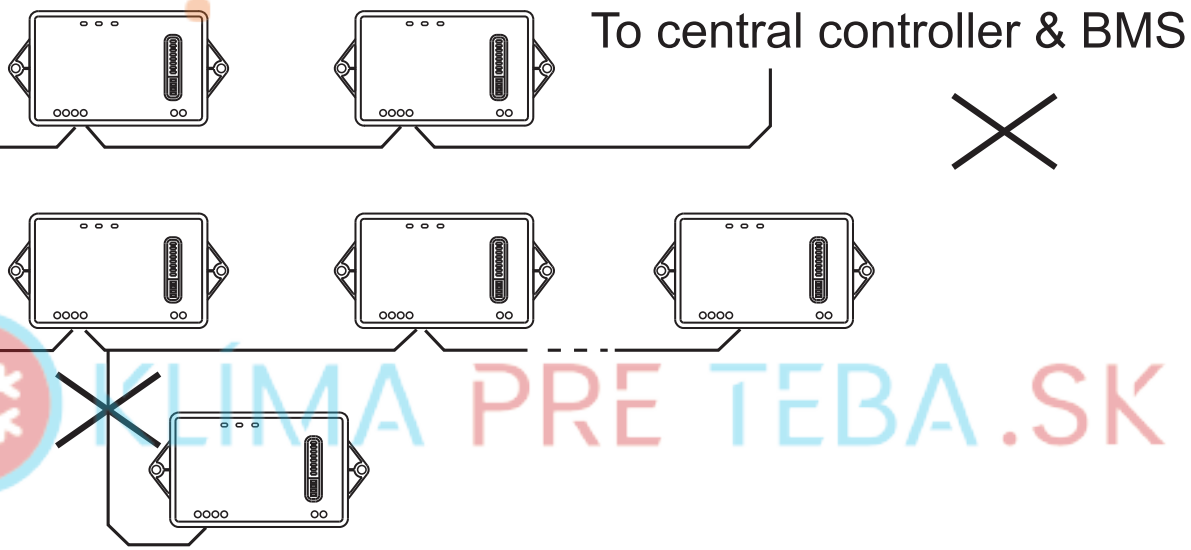


(2) Wiring between gateway and central controller & BMS system

- 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
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1	1	0	0	0	1	1	0	198
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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
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0	1	0	1	1	1	1	0	94
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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
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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
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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
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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	/
1283~1295	reserve	R	0		

Address	Content	Access type (W/R)	Definition	Type	Unit
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.

(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, 45】℃	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

Address	Content	Access type (W/R)	Definition	Type	Unit
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
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	

*n maximum is 16.

(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	/
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	Tset_FLH	W/R	[30 , 35]℃	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	0-40kW	Signed Word	0. 5KW

Address	Content	Access type (W/R)	Definition	Type	Unit
267	E-HEATER2 POWER	W/R	0-40kW	Signed Word	0. 5KW
268	TBH	W/R	0-OFF , 1-ON	Signed Word	/
269	TANK E-HEATER POWER	W/R	0-40kW	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	1-60min	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	/

NOTE:

1.When using 0x10 (16) function code preset register 200~275, you can preset up to 5 registers at the same time

2.Due to product upgrade, if indoor unit program version is lower than V05 (can be queried via wired controller), the following parameter usage restrictions or differences from the above table：

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].