



# INSTALLATION & OWNER'S MANUAL

Gateway

**K8-MODBUS** 



Thank you for purchasing our product. Before using the unit, please read this manual carefully and keep it for future reference.

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## **Safety Precautions**

The Installation & Owner's Manual of this product describes how to properly handle the product, prevent personal injury and property losses, as well as how to use the product correctly and safely. Read the following carefully, make sure you understand the content (symbols and marks), and observe the precautions below.

#### **⚠** CAUTION

Read the safety warnings carefully prior to installation.

Be sure to observe the important safety precautions provided be low.

Meanings of labels:

A Warning Indicates that improper handling may lead to personal injury or material loss.

 $\triangle$  Caution Indicates that the operations will be affected due to ignoring a precaution.

After the installation is completed, confirm that no errors occur during the trial run, and hand over the manual to the customer for safekeeping.

#### Icon Description

Icon	Name							
$\otimes$	Prohibited. Informaticon or nearby.	Prohibited. Information about what is specifically prohibited is provided using graphs or texts in the icon or nearby.						
(!)	Mandatory. A specific mandatory requirement is provided using graphs or texts in the icon or nearby.							
∭. Warning	Commissioned Installation	Ask your local dealer or professionals to install the product. Installation personnel must have relevant professional knowledge. Incorrect installation by non-professionals may lead to a fire, electric shock, or injury.						
$\bigotimes$	Do not use combustible paints to spray directly on the data converter as this may cause a fire.							
Warning of Use	Prohibited	Do not handle the product with wet hands, and do not let water seep into the device. Otherwise, an electric shock may occur.						

#### 

This unit must be installed by professional technicians. Users are not allowed to install the unit themselves; otherwise, personal injury or damage to the controller may occur.

Other electrical wiring work must be carried out by a professional technician according to the circuit diagram. All wiring work must comply with electrical safety specifications.

It is forbidden to modify the use and function of the product without authorization.

\_\_\_\_\_

#### **A**CAUTION

Do not install the product in a location where flammable gas can easily leak. Any leakage within the vicinity of the device may cause a fire.

The wiring must be compatible with controller current.

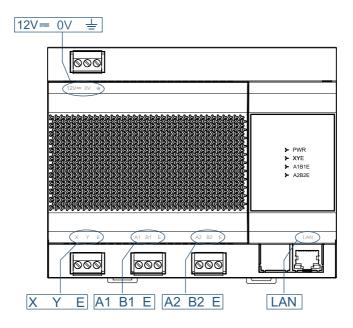
Be sure to check the wiring before powering on the product. Never install the machine while the power is on.

In the event of any malfunction, please contact a professional technician. DO NOT disassemble or repair the unit without authorization.

This equipment is not suitable for places where children gather.

# **Product Description**

K8-MODBUS Gateway (this Gateway) provides standard Modbus services for VRF units. It is suitable for all S8 series units, that is, S8 ODUs and S8 IDUs.



Port	Function
12V 0V	12V DC power supply
XYE	Isolated RS-485 ports, connecting to S8 VRF units in up to eight refrigerant systems (The maximum IDU quantity is 64.) *The X port of the Gateway is connected to the X port of the ODU, and the Y port of the Gateway is connected to the Y port of the ODU. When multiple refrigerant systems are connected, they need to use different addresses.
A1 B1 E	Modbus/RTU
A2 B2 E	Reserved port
LAN	Provides the Modubus/TCP protocols, and enables web page configuration (The computer and this Gateway need to be in the same network segment.) * The Modbus/TCP interface of the Modbus Gateway supports only port 502.

Indicator	Item	Status	Description
PWR	Power supply	Off	The Gateway is powered off.
FWR	Power suppry	Steady on	The Gateway is powered on.
XYE	X1Y1E XYE communication status	Off/Steady on	No data transmitting
		Blinking	Data transmitting
A1 B1 E	X2Y2E communication	Off/Steady on	No data transmitting
	status	Blinking	Data transmitting
A2 B2 E	Reserved		

Operating ambient temperature	-10°C to +50°C
Operating ambient humidity	RH25%~RH90%

#### Function Codes for Commands

Function Code	Function Name	Description
0x02	Discrete input	Read
0x03	Read Holding Register	Read
0x04	Read Input Register	Read
0x06	Write Single Register	Write
0x10	Write Multiple Registers	Write

## 1 Debugging

According to the description above, connect the X Y E ports on the ODU to those on the access Gateway. (\*1)

A1 B1 E ports provide Modbus RTU protocol interfaces, and the LAN port provides Modus TCP protocol interfaces. The integrator can select the access mode based on the actual project requirements, and select the corresponding access mode for debugging.

(\*1) When the refrigerant system is powered on, system detection will take some time. During this period, the Gateway may obtain incorrect information of the refrigerant system. You are advised to perform Modbus Gateway debugging after the refrigerant system is stable (about 15 minutes after power-on, depending on the actual refrigerant system).

Before integrated development by a third party, ensure that all steps in section 1 Debugging are completed on the Modbus Gateway on site.

# 1.1 Checking the Communication Between the Gateway and Refrigerant System

On the web page embedded on the Gateway, check whether the Gateway and refrigerant system are communicating normally.

(\*2)

- 1. The PC and the Gateway need to be in the same network segment. For specific settings, consult relevant IT personnel.
- 2. The PC OS can be Windows 7 (32-bit or 64-bit) or later versions.

#### 1.1.1 Opening Web Debugging Page

In the address bar of Chrome browser (\*3), enter "http://Gateway IP address" to open the web page of the Gateway. For example, the default IP address of the Gateway is 192.168.1.200. enter" http://192.168.1.200" to open the web page as shown below.

(\*3)

1: Chrome browser needs to be in 70.0 or any later version.

2. Other browsers may be incompatible, preventing the Web function from working properly.

Settings	DataView Firmware
Device Infos	
Version:	Modbus-V1.4.0022.0914
Network Settin	11gs:
IP address:	192.168.1.200
Mask:	255.255.255.0
Gateway:	192.168.1.1
··· <i>Modbus Settir</i> Port setting:	1955 9600 ▼ None ▼ 1 StopBit ▼ A1-B1-E 1 ▼

#### 1.1.2 Discrete Input and Input Register

Click "DataView" to check the online information of the refrigerant system that the Gateway has obtained so far.

# Modbus Gateway **P**X | English

Settings DataView	Firm	ware										
Discrete inputs	0	1	2	3	4	5	6	7	8	9	10	11
	12	13	14	15	16	17	18	19	20	21	22	23
Input registers	24	25	26	27	28	29	30	31	32	33	34	35
	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59
	60	61	62	63	O#0	O#1	O#2	O#3	O#4	O#5	O#6	O#7
	O#8	O#9	O#10	O#11	O#12	O#13	O#14	O#15	O#16	O#17	O#18	O#19
	O#20	O#21	O#22	O#23	O#24	O#25	O#26	O#27	O#28	O#29	O#30	O#31
	Ad	dress			Nam	ie			Value		Pars	e
	10	0001		ON/OFF					0		OFF	
	10	0002			Fau	t			0		No	
	10	0003			Onlir	ne			1		Onlin	e
	10	0004							0			
	10	0005							0			
		006							0			
		10007							0			
	10	800							0			

07

A pure number indicates an IDU, and the numeral indicates the IDU address. For example, IDU 0

0

"O#number" indicates an ODU, and the numeral indicates the ODU address. For example, ODU 0 O#0



You can click an address to view the specific parameters of the device, and click "Discrete inputs" or "Input registers" to check different information.

# Modbus Gateway **#X | English**

Settings DataView	/	Firm	nware					
Discrete inputs		0	1	2	3	4	5	
		12	13	14	15	16	17	
Input registers		24	25	26	27	28	29	

#### 1.1.3 Determining Whether the Communication Is Normal

1. The number of devices online is consistent with the actual project.

2. Device parameters are correct.

If the above two points are met, the Gateway and refrigerant system communicate normally. In this case, you can proceed to "Modbus Interface Debugging ".

If the number of devices is inconsistent with the actual project, or the device parameters are displayed incorrectly, check X Y E connection, and confirm whether the refrigerant system works properly.

#### 1.2 Modbus Interface Debugging

Interface debugging requires knowledge of the Modbus protocol. The following section deems that the user has relevant knowledge by default.

This document uses the Modbus Poll software as an example only, and the product does not provide the Modbus Poll software.

1.2.1 Configuring Modbus Gateway

Settings	DataView Firmware
Device Infos-	
Version:	Modbus-V1.4.0022.0914
- Network Sett	ings:
IP address:	192.168.1.200
Mask:	255 255.255.0
Gateway:	192.168.1.1
<i>Modbus Setti</i> Port setting: Station ID:	ngs [9600 ▼] [None ▼] [1 StopBit ▼] A1-B1-E [1 ▼]

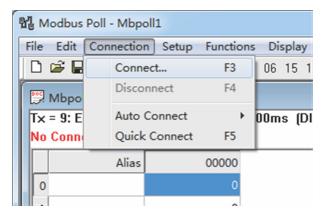
On the "Settings" page, configure Modbus parameters.

Network	IP address	IP address of the Modbus Gateway				
Settings	Mask	Subnet mask in the IP configuration				
	Gateway	Default gateway in the IP configuration				
Modbus Settings	Port setting	Modbus interface configuration The first field indicates the baud rate. The default value is 9600. (Available values include 4800, 9600, 19200, and 38400.) The second field indicates the parity check. The default value is none. (Available values include none, even, and odd.) The third field indicates the stop bit. The default value is 1 StopBit. (Available values include 1 StopBit and 2 StopBit.) * The data bit supports only 8. * The Modbus/TCP interface of the Modbus Gateway supports only port 502.				
	Station ID	ID Modbus station ID, ranging from 1 to 254. The default value is 1.				

#### 1.2.2 Modbus/RTU

#### Configuring Modbus/RTU Parameters

Click "Connection" > "Connect" and configure Modbus Poll connection parameters:



Choose "Serial Port" for "Connection" and "RTU" for "Mode".

The serial port configuration needs to be consistent with the configuration in the Gateway "Modbus Settings".

Modbus Setting	15		
Port setting:	9600 🔻	None • 1 StopBit	▼ A1-B1-E
Station ID:	1	¥	

Connection Setup		×
Connection	© ТСР/IР	ок
Port 10	Mode RTU O ASCII	Cancel
8 Data bits 🔻	Response Timeout 1000 [ms]	
None Parity   I Stop Bit	Delay Between Polls 100 [ms]	vanced
Remote Server IP Address 0.0.0.0	Port Connect Time	eout [ms]

Click "Setup" > "Read/Write Enabled". If the  $\surd$  icon is not displayed, the auto sending function is cancelled.

뭡 Modbus Poll - Mbpoll1	2	
File Edit Connection Se	tup Functions Display	View Window Help
🗅 📽 🖬 🎒 🗙 🗠	Read/Write Definition	F8 💡 隆
	Read/Write Once	F6
Mbpoll1 Tx = 7: Err = 0: ID = 1	Read/Write Enabled	Shift+F6
	Log	Alt+L
Alias	Logging Off	Alt+O 0010
0	Reset Counters	F12 1
1	Use as Default	
2		

Click "Setup" > "Read/Write Definition..." to set read/write configuration:

웹 Modbus Poll - Mbpol	1	-		-	11.4	ñ	
File Edit Connection	Set	p Function	s Display	View	Window	H	lelp
🗋 D 📽 🖬 🎒 🗙 🛯		Read/Write	Definition		F8	8	<b>\?</b>
Mbpoll1		Read/Write	Once		F6	F	
Tx = 3: Err = 0: ID = 1		Read/Write	Enabled	S	hift+F6	F	
		Log			Alt+L	L	
Alias		Logging Off			Alt+O	F	
0		Reset Count	ers		F12		
1		Use as Defa	ult			L	
2		0					

Example: Read Discrete input

Example: Read "On/Off status", "Fault status", and "Online status" of IDU 1.

Refer to "2 Mapping Tables" > "2.1 Discrete Input" > "2.2.1 IDU".

n# IDU (The	2	n*8+1+10000	ON/OFF	0: off 1: on
valid value of n ranges from 0	2	n*8+2+10000	Fault	0: no fault 1: fault
to 63.)	2	n*8+3+10000	Online	0: offline 1: online

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 10001
ON/OFF	10009	8
Fault	10010	9
Online	10011	10

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 02 (Function: 02), start address 8 (Address: 8), read length 3 (Quantity: 3)

Read/Write	Definition	×
Slave ID: Function: Address: Quantity: Scan Rate:	1         (           02 Read Discrete Inputs (1x)         (           8         (           3         (           1000         ms	OK Cancel Apply
View Rows 10 (	/rite Enabled Read	ell

Click "Read/Write Once". The read values will be displayed in the area with a red box.

웹 Modbus Poll - Mbpol	11			
File Edit Connection	Setup Functions [	Display View V	Vindow Help	
D 📽 🖬 🚭 🗙   🛙	] !!! @   ㅈ ፡፡ ፡	6 15 16 22 23	101 💡 隆	
Mbpoll1				
T× = 2139: Err = 0: II	D = 1: F = 02: SR = 1	000ms (DISABL	.ED]	
Alias	00000	Alias	00010	Read/Write Definition
0 1 2 3 4 5 6 7 8 9 9	1		1	Slave ID:     1     OK       Function:     02 Read Discrete Inputs (1x)     Cancel       Address:     8     Apply       Quanity:     3     Apply       Scan Rate:     1000     ms       Read/Wite Enabled     Read/Wite Once       View     0     0       9     10     20     50       0     100     Address in Cel       Display:     Signed     PLC Addresse (Base 1)

The interpretation is listed below.

Parameter name	Register address	Protocol address	Value	Definition
ON/OFF	10009	8	1	On
Fault	10010	9	0	No fault
Online	10011	10	1	Online

Packets are listed below.

Packet sent by Modbus Poll	01 02 00 08 00 03 B9 C9
Packet replied by Modbus Gateway	01 02 01 05 61 8B

Example: Read Input Register

Example: Read "Operating mode", "Operating fan speed", and "Set temperature" of IDU 1.

Refer to "2 Mapping Tables" > "2.2 Input Register" > "2.2.1 IDU".

	04	30002+n*32	Operating mode	Bit7 Bit4~Bit0	Auto mode 1: yes,0: no Actual mode 0: Off 1: Fan 2: Cooling 3: Heating 4: Forced cooling 6: Drying	
n#IDU (The valid value of n ranges from 0 to 63.)	lid value of anges from	30002+n*32	Fan speed level	Bit7 Bit4~Bit0	Auto (Fixed) fan speed 1: yes,0: no For a 7-speed fan, values 1-7 indicate fan speeds 1 to 7, respectively.For a 3-speed fan, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed.	
	04	30002+n*32	Set temperature	Actual temperature (°C)*10		

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 30001
Operating mode	30033	32
Operating fan speed	30034	33
Set temperature	30035	34

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 04 (Function: 04), start address 32 (Address: 32), read length 3 (Quantity: 3)

Read/Write	Definition	×
Slave ID: Function: Address: Quantity: Scan Rate:	1 04 Read Input Registers (3x) ▼ 32 31 1000 ms	OK Cancel Apply
	110	/rite Once
View Rows (international data of the second	20     50     100     Hide Alias Colur     Address in Cell  Signed     PLC Addresses	

Click "Read/Write Once". The read values will be displayed in the area with a red box.

21	Modbus Poll - Mbpo	oll1	THE GEAL CALCER						
			s Display View Window Help						
	🗅 🖨 🔚 🎒 🗙 🛅 🗒 🚊 🏾 JL 05 06 15 16 22 23 🔤 101 💡 🕅								
	🕅 Mbpoll1								
F	Tx = 4: Err = 0: ID = 1: F = 04: SR = 1000ms (DISABLED)								
ŀ	Alias	00030	Read/Write Definition						
H	Alias	00030							
	0 1 2 3 4 5 6 7	2 4 200	Slave ID:     1     OK       Function:     04 Read Input Registers (3x)     ✓       Address:     32     Apply       Quantity:     3     Apply       Scan Rate:     1000     ms       Read/Write Enabled     Read/Write Once       View     Rows     Hide Alias Columns						
	9		10 20 50 100     Address in Cell Display: Signed      PLC Addresses (Base 1)						

The interpretation is listed below.

Name	Register address	Protocol address	Data	Definition
Operating mode	30033	32	2	Cool
Operating fan speed	30034	33	4	Medium fan speed / Fan speed 4
Set temperature	30035	34	200	20°C

Packet sent by Modbus Poll	01 04 00 20 00 03 B1 C1
Packet replied by Modbus Gateway	01 04 06 00 02 00 04 00 C8 59 04

Example 1: Write Multiple Holding Register

Example: Write "Set mode", "Set fan speed", and "Set temperature" of IDU 1.

Refer to "2 Mapping Tables" > "2.3 Holding Register" > "2.3.2 IDU Control Register 1".

	06/16	40002+n*25	Set mode	0xFF: Unc 0x9F: Off 0xDF: On Start up ar Bit7 Bit6 Bit5 Bit0~Bit4	nd specify the operating mode: Auto mode, valid when the value is 1 Fixed to 1 Fixed to 0
n# IDU (The valid value of n ranges from 0 to 63.)	06/16	40003+n*25	Set fan speed	0x01: For	Auto fan speed 1: yes, 0: no For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate Iow fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed. o fan speed is set. a 7-fan-speed IDU, fan speed 1 is set. n-speed IDU, Iow fan speed is set.
	06/16 40004+n*25 Set temperature			0.5°C, 1: yes, 0: no	

\*If auto mode is set, "cooling temperature in auto mode (40005+n\*25)" and "heating temperature in auto mode (40006+n\*25)" are required. "Set temperature (40004+n\*25)" can be set the same as" cooling temperature in auto mode (40005+n\*25)".

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 40001
Set mode	40027	26
Set fan speed	40028	27
Set temperature	40029	28

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 16 (Function: 16), start address 26 (Address: 26), read length 3 (Quantity: 3)

Read/Write	Definition
Slave ID: Function: Address: Quantity: Scan Rate:	
View Rows 10	Image: Signed     Hide Alias Columns       20     50     100       Address in Cell       Signed   PLC Addresses (Base 1)

Click "OK", double-click the corresponding address (in the red box), and enter the desired control parameter in the displayed window (blue box), and click "OK" to close the window.

ſ	웹 Modbus Poll - Mbpoll1										
	F	File Edit Connection Setup Functions Display View Window Help									
		🗅 🗃 🖶 🎒 🗙 🛅 🗒 🚊   Л. 05 06 15 16 22 23   101   🤋 🍂									
Mbpoll1											
		Tx = 4: Err = 0: ID = 1: F = 16: SR = 1000ms (DISABLED)									
	I	_									
			Alias	00020							
		0									
		1									
		2									
		3									
	Ц	л									
		5			Enter Value						
		6		66							
		7		3	Value: DK						
	Π	8		19	Cancel						
		9									
	П	_									

#### Set parameters:

Name	Register address	Protocol address	Data	Definition
Set mode	40027	26	66(0x42)	Cooling upon startup
Set fan speed	40028	27	03(0x03)	Speed 3
Set temperature	40029	28	19(0x13)	19°C

The above steps only configure the parameters to be written, and the command is not sent. Click "Setup" > "Read/Write Definition...":

월 Modbus Poll - Mbpo	1			-
File Edit Connection	Set	up Functions Display	View Window	Help
🗋 D 🚅 🖬 🎒 🗙 🛙		Read/Write Definition.	. F8	8 №
Mbpoll1		Read/Write Once	F6	
Tx = 3: Err = 0: ID =	1	Read/Write Enabled	Shift+F6	
		Log	Alt+L	L
Alias		Logging Off	Alt+O	
0		Reset Counters	F12	L
1		Use as Default		
2		0		

Click "Read/Write Once". Then, the command is sent:

2	l M	lodbus Poll - Mbpo	oll1		· ····································					
				Display View Window Help						
	D	D 🖨 🖬 🎒 🗙 🛅   🖳 🎒 几 05 06 15 16 22 23   104   💡 🕅								
ſ	Tx = 2141: Err = 0: ID = 1: F = 16: SR = 1000ms (DISABLED)									
L										
I				(						
L		Alias	00020	Read/Write Definition						
L	0			Slave ID:	ОК					
L	1			Function: 16 Write Multiple Registers						
L	2			Address: 26	Cancel					
L	3			Quantity: 3	Apply					
I	4			Scan Rate: 1000 ms						
	5			Read/Write Enabled	Read/Write Once					
l	6		66	View						
L	7		3	Rows	e Alias Columns					
L	8		19							
L	9			Display: Signed 🔻 🗖 PLI	CAddresses (Base 1)					

Packets are listed below.

Packet sent by Modbus Poll	01 10 00 1A 00 03 06 00 42 00 03 00 13 0E F7		
Packet replied by Modbus Gateway	01 10 00 1A 00 03 A1 CF		

Example 2: Write Single Holding Register

Example: Write "Set mode" of IDU 1. The IDU must support separate writing of a single parameter. Otherwise, an error will occur. See "Precautions" in "2 Mapping Tables".

Refer to "2 Mapping Tables" > "2.3 Holding Register" > "2.3.2 IDU Control Register 1".

n#IDU (The		40002+n*25	Set mode	0xFF: Unchanged 0x9F: Off 0xDF: On Start up and specify the operating mode:		
valid value				Bit7	Auto mode, valid when the value is 1	
of n ranges from 0 to	06/16			Bit6	Fixed to 1	
63.)				Bit5	Fixed to 0	
				Bit0~Bit4	1: Fan 2: Cooling 3: Heating 6: Drying	

Obtained Register address and Protocol address are as listed be low.

Name	Register address	Protocol address = Register address - 40001
Set mode	40027	26

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 06 (Function: 06), start address 26 (Address: 26), read length 1 (Quantity: 1)

Read/Write	Definition						
Slave ID: Function: Address: Quantity: Scan Rate:							
Read/Write Enabled      News     10 0 20 50 100      Address in Cell      Display. Signed      PLC Addresses (Base 1)							

Click "OK", double-click the corresponding address (in the red box), and enter the desired control parameter in the displayed window (blue box), and click "OK" to close the window.

1	21	Modbus Poll - Mbpo	oll1							
	Fil	e Edit Connection	n Setup Functio	ons Display View Window Help						
		) 🖻 🖬 🚭 🗙	П 🚊 🗐 Г.	05 06 15 16 22 23   101   🍞 🎀						
	B Mbpoll1									
	Т	× = 2: Err = 0: ID =	: 1: F = 06: SR =	1000ms (DISABLED)						
		Alias	00020							
		0								
		1								
		2								
		3								
		4								
		5		Enter Value						
		6	66	Value: 223 OK						
		7		Cancel						
		8		Cancer						
		9								

Set parameters:

Name	Register address	Protocol address	Data	Definition
Set mode	40027	26	223 (0xDF)	On

The above steps only configure the parameters to be written, and the command is not sent. Click "Setup" > "Read/Write Definition...":

월 Modbus Poll - Mbpoll:		
File Edit Connection	Setup Functions Display	View Window Help
🗅 🖻 🖬 🎒 🗙 📋	Read/Write Definition	F8 💡 🌾
Dec Marcell1	Read/Write Once	F6
Mbpoll1 Tx = 3: Err = 0: ID = 1	Read/Write Enabled	Shift+F6
	Log	Alt+L
Alias	Logging Off	Alt+O
0	Reset Counters	F12
1	Use as Default	
2	0	

Click "Read/Write Once". Then, the command is sent:

	Functions Display View Window Help
Mbpoll1	(☐   JL 05 06 15 16 22 23   101   <b>? №?</b> 6: SR = 1000ms (DISABLED)
Alias 0 1 2 3 4 5 6 7 8 9	00020       Read/Write Definition         Slave ID:       Image: Cancel Address:         Function:       16 Write Multiple Registers         Address:       26         Quantity:       1         Scan Rate:       1000 ms         Read/Write Enabled       Read/Write Once         View       Rows         010       20       50       100         Address in Cell       Display:       Signed       PLC Addresses (Base 1)

Packets are listed below.

Packet sent by Modbus Poll	01 06 00 1A 00 DF E9 95
Packet replied by Modbus Gateway	01 06 00 1A 00 DF E9 95

#### 1.2.3 Modbus/TCP

For Modbus/TCP protocol interface debugging, set the IP address of the PC to be in the same network segment as that of the Modbus Gateway.

#### Configuring Modbus/TCP Parameters

Click "Connection" > "Connect" and configure Modbus Poll connection parameters:

법 Modbus Poll - Mbpoll1									
File Edit	Connection	Display							
🗋 🚔 🖥	Conne	ect	F3	06 15 1					
🔛 Mbpo	Disco	nnect	F4						
Tx = 9: E	Auto	Connect	•	00ms (DI					
No Conn	Quick	Connect	F5						
	Alias		00000						
0	Alias		00000						

Choose "TCP/IP" for "Connection" and enter the Gateway IP address in the "IP Address" field, such as 192.168.1.200:

onnection Setur	<b>b</b>	×
Connection © Serial Port	TCP/IP	ОК
Port 10 👻	Mode	ASCII
9600 Baud 👻	Response Timeou	ut
8 Data bits 🛛 👻	1000 [ms]	
None Parity 🛛 🔻	Delay Between P	olls
1 Stop Bit 🛛 👻	100 [ms]	Advanced
Remote Server	Port	Connect Timeout
192.168.1.200	502	3000 [ms]

\* Response Timeout and Delay Between Polls need to be adjusted based on the actual conditions of the project. For gateway debugging only, configurations in the screenshot above can be used.

\* In the "IP Address" field, enter the Modbus Gateway IP address. Port is fixed to 502. Connect Timeout needs to be adjusted based on the actual conditions of the project. For gateway debugging only, configurations in the screenshot above can be used.

Click "Setup" > "Read/Write Enabled". If the  $\sqrt{}$  icon is not displayed, the auto sending function is cancelled.

Modbus Poll - Mbpoll1	Setu	p Functions Display	View Window	Help
D 🖻 🖬 🎒 🗙   🗂		Read/Write Definition	F8	8 ₩2
野 Mbpoll1 Tx = 7: Err = 0: ID = 1	<ul> <li>Image: A start of the start of</li></ul>	Read/Write Once Read/Write Enabled	F6 Shift+F6	
Alias		Log Logging Off	Alt+L Alt+O	0010
0		Reset Counters Use as Default	F12	1

Click "Setup" > "Read/Write Definition..." to set read/write configuration:

-	Įм	odbus Poll - Mbpo	oll1	-		-	-	-
	File	Edit Connection	n Seti	up Functions	Display	View	Window	/ Help
	Ľ	🖻 🖬 🎒 🗙		Read/Write D	Definition		F8	8 №?
r	Mbpoll1 Tx = 3: Err = 0: ID = 1			Read/Write C		cŀ	F6 ift+F6	
				Read/Write Enabled		Shirt+TO		
				Log			Alt+L	
		Alias		Logging Off			Alt+O	
	0		Reset Counte	ers		F12		
	1			Use as Defau	ilt			
	2			0				

Example: Read Discrete input

Example: Read "On/Off status", "Fault status", and "Online status" of IDU 1.

Refer to "2 Mapping Tables" > "2.1 Discrete Input" > "2.1.1 IDU".

n# IDU (The	02	n*8+1+10000	On/Off status	0: off 1: on
valid value of n ranges from 0	02	n*8+2+10000	Fault status	0: no fault 1: fault
to 63.)	02	n*8+3+10000	Online status	0: offline 1: online

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 10001
On/Off status	10009	8
Fault status	10010	9
Online status	10011	10

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 02 (Function: 02), start address 8 (Address: 8), read length 3 (Quantity: 3)

Read/Write	Definition
Slave ID:	1 ОК
Function:	02 Read Discrete Inputs (1x)  Cancel
Address:	8
Quantity:	3 Apply
Scan Rate:	1000 ms
📃 Read/W	rite Enabled Read/Write Once
View Rows 10 (	20 💿 50 💿 100 📄 Hide Alias Columns
Display:	Signed   PLC Addresses (Base 1)

Click "Read/Write Once".. The read values will be displayed in the area with a red box.

웹 Modbus Poll - Mbpoll				[ ]
File Edit Connection				
Mbpoll1 Tx = 2139: Err = 0: ID	= 1: F = 02: SR = 1(	100ms (DISABL	.ED)	
Alias 0 1 2 3 4 5 6 7 8	1	Alias	00010	Read/Write Definition     Image: Constraint of the second se
9	0		_	Display: Signed PLC Addresses (Base 1)

The interpretation is listed below.

Name	Register address	Protocol address	Data	Definition
On/Off status	10009	8	1	On
Fault status	10010	9	0	No fault
Online status	10011	10	1	Online

Packets are listed below.

Packet sent by Modbus Poll	00 04 00 00 00 06 01 02 00 08 00 03		
Packet replied by Modbus Gateway	00 04 00 00 00 04 01 02 01 05		

#### Example: Read Input Register

Example: Read "Operating mode", "Operating fan speed", and "Set temperature" of IDU 1. Refer to "2 Mapping Tables" > "2.2 Input Register" > "2.2.1 IDU".

		30001+n*32	Operating mode	Bit7	Auto mode 1: yes,0: no
n# IDU	04			Bit4~Bit0	Actual mode 0: Off 1: Fan 2: Cooling 3: Heating 4: Forced cooling 6: Drying
(The valid value of	04 <u>30002+n</u> .32			Bit7	Auto (Fixed) fan speed 1: yes,0: no
value of n ranges from 0 to 63.)		Fan speed level	Bit4~Bit0	For a 7-speed fan, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-speed fan, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed.	
	04	30003+n*32	Set temperature	Actual tem	perature (°C)*10

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 30001
Operating mode	30033	32
Operating fan speed	30034	33
Set temperature	30035	34

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 04 (Function: 04), start address 32 (Address: 32), read length 3 (Quantity: 3)

Read/Write	Definition
Slave ID: Function: Address: Quantity: Scan Rate:	1     OK       04 Read Input Registers (3x) ▼     Cancel       32     Apply       31     Apply       1000     ms
View Rows 10	rite Enabled 20 ○ 50 ○ 100     ☐ Hide Alias Columns     ☐ Address in Cell      Signed      PLC Addresses (Base 1)

Click "Read/Write Once". The read values will be displayed in the area with a red box.

웹 Modbus Poll - Mbpo	oll1						
	File Edit Connection Setup Functions Display View Window Help						
	🗅 🖨 🖶 🎒 🗙 🛅 🖳 🗒 05 06 15 16 22 23   101   💡 🕅						
🔛 Mbpoll1	🗒 Mbpoll1						
Tx = 4: Err = 0: ID =	1: F = 04: SR = 10	DOOms (DISABLED)					
Alias	00030	Read/Write Definition					
Anas           0           1           2           3           4           5           6           7           8           9	2 2 4 200	Slave ID:       1       OK         Function:       04 Read Input Registers (3x)       Cancel         Address:       32       Apply         Quantity:       3       Apply         Scan Rate:       1000       ms         Read/Write Enabled       Read/Write Once         View       Rows       Hide Alias Columns         0       10       20       50       100         Jisplay:       Signed       PLC Addresses (Base 1)					

The interpretation is listed below.

Name	Register address	Protocol address	Data	Definition
Operating mode	30033	32	2	Cool
Operating fan speed	30034	33	4	Medium fan speed/Fan speed 4
Set temperature	30035	34	200	20°C

Packets are listed below.

Packet sent by Modbus Poll	00 87 00 00 00 06 01 04 00 20 00 03		
Packet replied by Modbus Gateway	00 87 00 00 00 09 01 04 06 00 02 00 04 00 C8		

Example 1: Write Multiple Holding Register

Example: Write "Set mode", "Set fan speed", and "Set temperature" of IDU 1.

Refer to "2 Mapping Tables" > "2.3 Holding Register" > "2.3.2 IDU Control Register 1".

	06/16 40002+n*25 Set mode	Set mode	0xFF: Unc 0x9F: Off 0xDF: On Start up ar Bit7 Bit6 Bit5 Bit0~Bit4	nd specify the operating mode: Auto mode, valid when the value is 1 Fixed to 1 Fixed to 0	
n#IDU (The valid value of n ranges from 0 to 63.)	06/16	40003+n*25	5 Set fan speed	0x01: For	Auto fan speed 1: yes, 0: no For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate Iow fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed. 0 fan speed is set. a 7-fan-speed IDU, fan speed 1 is set. n-speed IDU, Iow fan speed is set.
	06/16	40004+n*25	Set temperature		changed 0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C. temperature is set to 17.5°C. temperature is set to 17°C.

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 40001
Set mode	40027	26
Set fan speed	40028	27
Set temperature	40029	28

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 16 (Function: 16), start address 26 (Address: 26), read length 3 (Quantity: 3)

Read/Write	Definition
Slave ID: Function: Address: Quantity: Scan Rate: BeadAw	1     OK       16 Write Multiple Registers     Cancel       26     ▲       3     ▲       1000     ms       /rite Enabled     ▲
View Rows () 10	20      50      100     Hide Alias Columns     Address in Cell  Signed      PLC Addresses (Base 1)

Click "OK", double-click the corresponding address (in the red box), and enter the desired control parameter in the displayed window (blue box), and click "OK" to close the window.

컵 Modbus Poll - Mbpoll1								
				ns Display View Window Help				
	3 (	🎽 🖬 🚭 🗙	П 🗏 📋 Г.	05 06 15 16 22 23   101   🦹 🕅				
[	21	Vbpoll1						
F	×	= 4: Err = 0: ID =	: 1: F = 16: SR =	1000ms (DISABLED)				
		Alias	00020					
	0							
	1							
	2							
	3							
	4							
	5			Enter Value				
	6		66					
	7		3	Value: 55 OK				
	8		19	Cancel				
T	9							
ľ								

#### Set parameters:

Name	Register address	Protocol address	Data	Definition
Set mode	40027	26	66 (0x42)	Cooling upon startup
Set fan speed	40028	27	03 (0x03)	Speed 3
Set temperature	40029	28	19 (0x13)	19°C

Click "Setup" > "Read/Write Definition...":

험 Modbus Poll - Mbpol	11	-		-	-	-
File Edit Connection	Set	up Function	s Display	View	Window	Help
🗋 D 🖨 🖬 🎒 🗙 🗄		Read/Write	Definition		F8	? №?
Mha all1		Read/Write	Once		F6	
Mbpoll1 Tx = 3: Err = 0: ID = 1	1	Read/Write	Enabled	Sh	ift+F6	
	-	Log			Alt+L	
Alias	1	Logging Of	f		Alt+O	
0		Reset Coun	ters		F12	
1		Use as Defa	ault			
2		0				-

Click "Read/Write Once". Then, the command is sent: The above steps only configure the parameters to be written, and the command is not sent.

1	1 M	odbus Poll - Mbpo	oll1		· ····································				
				Display View Window Help					
Ē	Ľ		□  <u>≒</u> ≘ Л 05	06 15 16 22 23   101   🤋 🌾					
		Mbpoll1							
	Tx = 2141: Err = 0: ID = 1: F = 16: SR = 1000ms (DISABLED)								
				ſ					
		Alias	00020	Read/Write Definition					
	0			Slave ID:	ОК				
	1			Function: 16 Write Multiple Registers					
	2			Address: 26	Cancel				
	3			Quantity: 3	Apply				
	4			Scan Rate: 1000 ms					
	5			Read/Write Enabled	Read/Write Once				
	6		66	View					
	7		3	Rows Hide A	lias Columns				
	8		19	● 10 ○ 20 ○ 50 ○ 100	ss in Cell				
	9			Display: Signed 🔻 🗖 PLC A	ddresses (Base 1)				

Packets are listed below.

Packet sent by Modbus Poll	00 89 00 00 00 0D 01 10 00 1A 00 03 06 00 42 00 03 00 13
Packet replied by Modbus Gateway	00 89 00 00 00 06 01 10 00 1A 00 03

Example 2: Write Single Holding Register

Example: Write "Set mode" of IDU 1.

The IDU must support separate writing of a single parameter. Otherwise, an error will occur. See "Precautions" in "2 Mapping Tables".

Refer to "2 Mapping Tables" > "2.3 Holding Register" > "2.3.2 IDU Control Register 1".

n#IDU (The				0xFF: Unch 0x9F: Off 0xDF: On Start up and	anged d specify the operating mode:
valid value	06/16	40002+n*25	Set mode	Bit7	Auto mode, valid when the value is 1
of n ranges from 0 to				Bit6	Fixed to 1
63.)				Bit5	Fixed to 0
				Bit0~Bit4	1: Fan 2: Cooling 3: Heating 6: Drying

Obtained Register address and Protocol address are as listed below.

Name	Register address	Protocol address = Register address - 40001
Set mode	40027	26

Modbus Poll adopts Protocol address. Set as follows: Modbus slave station address 1 (Slave ID: 1), command code 06 (Function: 06), start address 26 (Address: 26), read length 1 (Quantity: 1)

Read/Write	Definition			×
Slave ID:	1			ОК
Function:	06 Write Single	e Register	-	Cancel
Address:	26			
Quantity:	1			Apply
Scan Rate:	1000 m	ns		
🔲 Read/W	rite <u>E</u> nabled		<u></u> <u> </u>	ad/Write Once
View				
- Rows ( ) 10 (	0 20 (0 50	100	🔲 Hide Alias	Columns
010	20 0 30	0100	🔲 Address in	Cell
Display:	Signed	•	PLC Addre	esses (Base 1)

Click "OK", double-click the corresponding address (in the red box), and enter the desired control parameter in the displayed window (blue box), and click "OK" to close the window.

4	Modbus Poll - Mbpoll1									
	File	ile Edit Connection Setup Functions Display View Window Help								
	Ľ	🗅 🗃 🗑   🗙   🗂   🖳 🎰   Л. 05 06 15 16 22 23   101   🎖 🎼								
ľ		🛒 Mbpoll1								
I	T×	= 2: Err = 0: ID =	: 1: F = 06: SR =	1000ms (DISABLED)						
I	L									
I		Alias	00020							
I	C									
I	1									
I	2									
I	3									
I	4									
I	5			Enter Value						
I	e	5	66	Value: 223 OK						
I	7									
	8			Cancel						
	9									
1										

Set parameters:

Name	Register address	Protocol address	Data	Definition
Set mode	40027	26	223 (0xDF)	On

The above steps only configure the parameters to be written, and the command is not sent. Click "Setup" > "Read/Write Definition...":

웹 Modbus Poll - Mbpo	oll1	-		-	-	-
File Edit Connection	n Setu	up Functions	Display	View	Window	Help
🗅 🖻 🖬 🎒 🗙 🛛		Read/Write D	efinition		F8	? №?
Mbpoll1		Read/Write C		F6 Shift+F6		
Tx = 3: Err = 0: ID =	1	Read/Write E	S			
		Log			Alt+L	
Alias		Logging Off			Alt+O	
0	0				F12	
1		Use as Defau	lt			
2		0				

Click "Read/Write Once". Then, the command is sent:

Modbus Poll - Mbpo		s Display View Window Help
		5 06 15 16 22 23   101   <b>? №</b>
🛒 Mbpoll1		
Tx = 1: Err = 0: ID =	1: F = 16: SR = 1	000ms (DISABLED)
Alias	00020	Read/Write Definition
0 1 2 3 4 5 6 7 8 9	223	Slave ID:       Image: Cancel and the segment of the seg

Packets are listed below.

Packet sent by Modbus Poll	00 8A 00 00 00 06 01 06 00 1A 00 DF
Packet replied by Modbus Gateway	00 8A 00 00 00 06 01 06 00 1A 00 DF

## 2 Mapping Tables

The conversion relationship between Register address and Protocol address is listed below.

Туре	Protocol address (*4)
Discrete input	Protocol address = Register address - 10001
Input Register	Protocol address = Register address - 30001
Holding Register	Protocol address = Register address - 40001

(\*4): By default, Modbus Poll uses Protocol address to read/write Modbus registers. Protocol address needs to be calculated based on the conversion in the table above. Please choose to use the Protocol address, Register address or software-defined address based on the actual integration software.

In mapping tables, an IDU/ODU number indicates the address of the IDU/ODU. For example, IDU 0 indicates an IDU whose address is 0.

### Precautions for Integrated Development

- Some models do not support certain registers in the mapping tables. In this case, values of the unsupported registers are random and meaningless. For example, if IDU 0 does not support swing up/down, the read value of Modbus register "swing up/down (30009)" does not have actual meaning, and the value may be not in the valid range.
- 2. The register range in the mapping tables is the maximum range supported by all models. The range of registers supported by some models is smaller than that in the mapping tables. The actually supported range depends on the specific model.

#### Example1:

The valid value range of Holding Register "Set mode" includes on, off, auto, cool, heat, dry, and fan. However, the model of IDU 0 supports only on, off, cool, dry, and fan. When Holding Register "Set mode (40002)" is set to heat, IDU 0 may be actually turned off or work abnormally.

Example 2:

The valid value range of Holding Register "Set temperature" is 1-100, indicating 1°C to 100°C. However, the model of IDU 0 supports only 17°C to 30°C. When Holding Register "Set temperature (40004)" is set to 0x64 (100°C), the actual operating temperature of IDU 0 may be 30°C, which is abnormal.

#### Example 3:

The valid value range of Holding Register "Set temperature" is 1-100, indicating 1°C to 100°C. However, the model of IDU 0 does not support  $0.5^{\circ}$ C. When Holding Register "Set temperature (40004)" is set to 0x91 (17.5°C), the actual operating temperature of IDU 0 may be 17°C, which is abnormal.

3. General control parameters of IDUs include "Set mode", "Set temperature", "Set fan speed", "Cooling temperature in auto mode", "Heating temperature in auto mode", "Swing left/right", and "Swing up/down". Some models require that all the general control parameters are set at the same time. That is, command code 16 is used to set all the general control parameters at the same time. Parameters cannot be remained "unchanged". If only some of the parameters are configured, unconfigured parameters may be different from what is expected.

#### Example:

If only the "Set mode" is set to cool, "Set fan speed" is set to low fan speed, "cooling temperature in auto mode" is set to 26°C, and "heating temperature in auto mode" is set to 20°C, after the IDU receives the command, "Set temperature" may be the temperature set upon last startup or a random temperature, such as 30°C, and "Swing left/right" and "Swing up/down" may be auto swing or fixed swing angles.

4. The Modbus Gateway polls to obtain the operating status of the refrigerant system. The duration of a polling cycle depends on the refrigerant system type and number of devices accessed to the Modbus Gateway (\*5). When the Modbus Gateway sends a control command, the device generally responds within 5s, but the Modbus Gateway may only obtain the latest operating status of the device after a polling cycle.

(\*5)

When the Modbus Gateway is connected to eight refrigerant systems and 64 IDUs, laborary test data shows that the maximum polling cycle is about five minutes. The duration may vary in actual projects.

## 2.1 Discrete Input

### 2.1.1 IDU

	Function code	Register address	Data length	Name	Definition
	02	10001	1 bit	On/Off	0: off 1: on
	02	10002	1 bit	Fault	0: no fault 1: fault
	02	10003	1 bit	Online	0: offline 1: online
0///D11	02	10004	1 bit	/	/
0#IDU	02	10005	1 bit	/	/
	02	10006	1 bit	/	/
	02	10007	1 bit	/	/
	02	10008	1 bit	/	/
	02	10009	1 bit	On/Off	0: off 1: on
	02	10010	1 bit	Fault	0: no fault 1: fault
	02	10011	1 bit	Online	0: offline 1: online
	02	10012	1 bit	/	/
1#IDU	02	10013	1 bit	/	/
	02	10014	1 bit	/	/
	02	10015	1 bit	/	/
	02	10016	1 bit	/	/
	02	10001 + n*8	1 bit	On/Off	0: off 1: on
	02	10002 +n*8	1 bit	Fault	0: no fault 1: fault
n# IDU	02	10003 + n*8	1 bit	Online	0: offline 1: online
(The valid	02	10004 + n*8	1 bit	/	/
value of n	02	10005 + n*8	1 bit	/	/
ranges from 0 to 63.)	02	10006 + n*8	1 bit	/	/
	02	10007 + n*8	1 bit	/	/
	02	10008 + n*8	1 bit	1	/

#### 2.1.2 ODU

	Function code	Register address	Data length	Name	Definition
	02	11001	1 bit	On/Off	0: off 1: on
	02	11002	1 bit	Fault	0: no fault 1: fault
	02	11003	1 bit	Online	0: offline 1: online
0#ODU	02	11004	1 bit	Fan 1 on/off	0: off 1: on
0#000	02	11005	1 bit	Fan 2 on/off	0: off 1: on
	02	11006	1 bit	Compressor 1 on/off status	0: off 1: on
	02	11007	1 bit	Compressor 2 on/off status	0: off 1: on
	02	11008	1 bit	/	/

	Function code	Register address	Data length	Name	Definition
	02	11009		On/Off	0: off 1: on
	02	11010	1 bit	Fault	0: no fault 1: fault
	02	11011	1 bit	Online	0: offline 1: online
1#ODU	02	11012	1 bit	Fan 1 on/off	0: off 1: on
1#000	02	11013	1 bit	Fan 2 on/off	0: off 1: on
	02	11014	1 bit	Compressor 1 on/off status	0: off 1: on
	02	11015	1 bit	Compressor 2 on/off status	0: off 1: on
	02	11016	1 bit	1	/
	02	11001 + n*8	1 bit	On/Off	0: off 1: on
n# ODU (The valid	02	11002 + n*8	1 bit	Fault	0: no fault 1: fault
	02	11003 + n*8	1 bit	Online	0: offline 1: online
value of	02	11004 + n*8	1 bit	Fan 1 on/off	0: off 1: on
n ranges	02	11005 + n*8	1 bit	Fan 2 on/off	0: off 1: on
from 0 to 31.)	02	11006 + n*8	1 bit	Compressor 1 on/off status	0: off 1: on
51.)	02	11007 + n*8	1 bit	Compressor 2 on/off status	0: off 1: on
	02	11008 + n*8	1 bit	1	1

## 2.2 Input Register

### 2.2.1 IDU

	Function code	Register address	Data length	Name		Definition
	04	30001	2 Bytes	Operating mode	Bit7       Auto mode 1: yes, 0: no         Actual mode       0: Shutdown         1: Fan       2: Cooling         3: Heating       4: Forced cooling         6: Drying       6: Drying	
0#IDU	04	04 30002 2 Bytes Operating fan speed	Bit7 Bit4~Bit0	Auto fan speed 1: yes, 0: no 7-fan-speed IDU 1-7: speed 1 to speed 7 3-fan-speed IDU 1, 2: Low fan speed 3, 4: Medium fan speed 5, 6, 7: High fan speed		
	04	30003	2 Bytes	Set temperature	Actual temperature (°C) x 10 Actual temperature (°C) x 10	
	04	30004	2 Bytes	Cooling temperature in auto mode		

	Function code	Register address	Data length	Name		Definition		
	04	30005	2 Bytes	Heating temperature in auto mode	Actual tem	perature (°C) x 10		
	04	30006	2 Bytes	Indoor ambient temperature	Actual tem	perature (°C) x 10		
	04	30007	2 Bytes	IDU error code	Low byte of byte of the 0 1~20 21~40 41~60 61~80 81~100 101~120 121~140 141-160 161-180 181-200 201-220 221-240	No fault A0~AF, AH, AL, AP, AU b0~bF, bH, bL, bP, bU C0~CF, CH, CL, CP, CU E0~EF, EH, EL, EP, EU F0~FF, FH, FL, FP, FU H0~HF, HH, HL, HP, HU L0~LF, LH, LL, LP, LU J0~JF, JH, JL, JP, JU n0~nF, nH, nL, nP, nU P0~PF, PH, PL, PP, PU r0~rF, rH, rL, rP, rU t0~tF, tH, tL, tP, Tu		
	0.4	00000	0.0.1		241-260	U0~UF, UH, UL, UP, UU		
0#IDU	04	30008	2 Bytes	Swing left/right	0	angle 1-5, 14: auto swing		
	04	30009	2 Bytes	Swing up/down	1-5: swing angle 1-5, 14: auto swing			
	04	30010	2 Bytes	Upper limit of cooling temperature	Actual tem	Actual temperature (°C) x 10		
	04	30011	2 Bytes	Lower limit of cooling temperature	Actual temp	Actual temperature (°C) x 10		
	04	30012	2 Bytes	Upper limit of heating temperature	Actual tem	perature (°C) x 10		
	04	30013	2 Bytes	Lower limit of heating temperature	Actual temp	perature (°C) x 10		
	04	30014	2 Bytes	Mode lock	Bit7 Bit4~Bit0 When bit 7 is locked.	1: auto mode locked, 0: auto mode unlocked 0: unlocked, 1: fan mode locked, 2: cool mode locked, 3: heat mode locked, 6: dry mode locked and bits 4-0 are all 0, no mode		
	04	30015	2 Bytes	On/Off lock		l, 1: on locked, 2: off locked		
	04	50015	2 Dytes	UN/UN IOCK	0. uniocket	a, 1. on locked, 2. on locked		

Officient         Name         Definition           code         address         length         Name         Definition           code         address         length         length         Iength         Iength           04         30016         2 Bytes         Fan speed lock         7-fan-speed IDU         1-7: speed 1 to speed 7 loc           1-7         seed lock         1-7: speed IDU         1-7: speed IDU         1, 2: low fan speed locked           04         30017         2 Bytes         Swing up/down lock         1-5: angle 1 to angle 5 locked           04         30017         2 Bytes         Swing up/down lock         1-5: angle 1 to angle 5 locked           04         30018         2 Bytes         Remote controller lock         0: unlocked, 1: locked           04         30019         2 Bytes         Wired controller lock         0: unlocked, 1: locked           04         30020         2 Bytes         IDU electronic expansion valve         Actual opening           04         30021         2 Bytes         T2A         Actual temperature (*C) x 10           04         30022         2 Bytes         T2B         Actual temperature (*C) x 10           04         30022         2 Bytes         T2B         Actual tempera				
04       30016       2 Bytes       Fan speed lock       7-fan-speed IDU         1-7       3-fan-speed IDU       1-7: speed 1 to speed 7 loc       3-fan-speed IDU         1, 2: low fan speed locked       3, 4: medium fan speed locked       3, 4: medium fan speed locked         1, 2: low fan speed locked       3, 4: medium fan speed locked       3, 4: medium fan speed locked         04       30017       2 Bytes       Swing up/down lock       0: unlocked         04       30018       2 Bytes       Remote controller lock       0: unlocked         04       30019       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic       0: unlocked, 1: locked         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30023       2 Bytes       IDU model       13: Heat Recove </td <td></td>				
04       30016       2 Bytes       Fan speed lock       1-7: speed 1 to speed 7 loc       3-fan-speed IDU       1, 2: low fan speed locked       3, 4: medium fan speed locked       1-7: single 1 to angle 5 locked </td <td></td>				
04       30016       2 Bytes       Fan speed lock       1-7       3-fan-speed IDU       1, 2: low fan speed locked       3, 4: medium fan speed locked       3, 4: medium fan speed locked       3, 4: medium fan speed locked       14       Auto fan speed locked       14       14       Auto fan speed locked       14 <t< td=""><td></td></t<>				
04       30016       2 Bytes       Fan speed lock       1.7       1, 2: low fan speed locked 3, 4: medium fan speed locked 3, 4: medium fan speed locked         04       30017       2 Bytes       Swing up/down lock       14       Auto fan speed locked         04       30017       2 Bytes       Swing up/down lock       0: unlocked         04       30018       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0#IDU       04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0#IDU       04       30023       2 Bytes       IDU model       1: Have Cassette         0HDU       04       30023       2 Bytes       IDU model	ked			
04       30017       2 Bytes       Swing up/down lock       0: unlocked         04       30017       2 Bytes       Swing up/down lock       1-5: angle 1 to angle 5 locked         04       30018       2 Bytes       Remote controller lock       0: unlocked         04       30019       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       0: unlocked, 1: locked         04       30021       2 Bytes       T2A       Actual opening         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30023       2 Bytes       IDU model       1: Identecove         2 Wall-mounted       3: Heat Recove       2: Wall-mounted       1: Heat Recove         3: Medium Static Pressure       14: 1: Way Casset       1: Heat Recove       1:				
0#IDU       Image: Section of the sectin of the section of the section of the section				
04       30017       2 Bytes       Swing up/down lock       0: unlocked       1-5: angle 1 to angle 5 locked         04       30018       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0/#IDU       4       30023       2 Bytes       IDU model       1: 4-Way Cassette         0/#IDU       4       30023       2 Bytes       IDU model       1: formeration IDU       1: Inverter Split	(ed			
04       30017       2 Bytes       Swing up/down lock       0: unlocked       1-5: angle 1 to angle 5 locked         04       30018       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0/#IDU       12: Inverter Split       1: 4:Way Cassette       1: Heat Recove         2: Wall-mounted       3: Medium Static Pressure       14: 1-Way Casset         0/4       30023       2 Bytes       IDU model       5: Air Handling Unit	∋d			
04       30017       2 Bytes       Swing up/down lock       1-5: angle 1 to angle 5 locked 14: auto swing locked         04       30018       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0#IDU       12: Inverter Split       1: 4: Way Cassette       1: Heat Recove         2: Wall-mounted       3: Medium Static Pressure       14: 1-Way Casset         3: Medium Static Pressure       14: 1-Way Casset       15: 2:Way Casset         04       30023       2 Bytes       IDU model       5: Air Handling Unit				
0#IDU       Image: Section of the section				
04       30018       2 Bytes       Remote controller lock       0: unlocked, 1: locked         04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30023       2 Bytes       IDU model       0: 1st Generation IDU       12: Inverter Split         1: 4-Way Cassette       1: Heat Recove       2: Wall-mounted       13: Heat Recove       2: Wall-mounted       14: 1-Way Casset         04       30023       2 Bytes       IDU model       1DU       12: Inverter Split				
04       30019       2 Bytes       Wired controller lock       0: unlocked, 1: locked         04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0/#IDU       12: Inverter Split       1: 4-Way Cassette       13: Heat Recove         2: Wall-mounted       14: 1-Way Cassette       13: Heat Recove       15: 2-Way Cassette         0/4       30023       2 Bytes       IDU model       5: Air Handling Unit       17: High Temperature				
04       30020       2 Bytes       IDU electronic expansion valve       Actual opening         04       30021       2 Bytes       T2A       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0#IDU       12 Inverter Split       1: 4-Way Cassette       13: Heat Recover         0: Nedium Static Pressure       14: 1-Way Casset       15: 2-Way Casset         0: Low Static Pressure Duct       16: console       16: console         04       30023       2 Bytes       IDU model       5: Air Handling Unit				
04     30020     2 Bytes     expansion valve     Actual opening       04     30021     2 Bytes     T2A     Actual temperature (°C) x 10       04     30022     2 Bytes     T2B     Actual temperature (°C) x 10       04     30022     2 Bytes     T2B     Actual temperature (°C) x 10       0#IDU     12: Inverter Split     1: 4-Way Cassette     1: Heat Recove       2: Wall-mounted     1: Heat Recove     1: Heat Recove       0: Medium Static Pressure     14: 1-Way Casset       0: Medium Static Pressure     15: 2-Way Casset       0: Medium Static Pressure Duct     16: console       0: Stair Handling Unit     17: High Temperature	0: unlocked, 1: locked			
04       30022       2 Bytes       T2B       Actual temperature (°C) x 10         0#IDU       12: Inverter Split       1: 4-Way Cassette       13: Heat Recove         0: 1st Generation IDU       12: Inverter Split       13: Heat Recove         2: Wall-mounted       14: 1-Way Cassette       13: Heat Recove         3: Medium Static Pressure       14: 1-Way Casset       15: 2-Way Casset         4: Low Static Pressure Duct       16: console       16: console         0: At 30023       2 Bytes       IDU model       5: Air Handling Unit				
0#IDU 0#IDU 04 30023 2 Bytes IDU model 0: 1st Generation IDU 12: Inverter Split 1: 4-Way Cassette 2: Wall-mounted 3: Medium Static Pressure Duct 14: 1-Way Casse 15: 2-Way Casse 4: Low Static Pressure Duct 16: console 5: Air Handling Unit 17: High Temperative				
0#IDU       1: 4-Way Cassette       13: Heat Recover         2: Wall-mounted       3: Medium Static Pressure       14: 1-Way Casset         3: Medium Static Pressure       15: 2-Way Casset       15: 2-Way Casset         4: Low Static Pressure Duct       16: console       16: console         5: Air Handling Unit       17: High Temperature       17: High Temperature				
0#IDU 2: Wall-mounted 3: Medium Static Pressure Duct 4: Low Static Pressure Duct 4: Low Static Pressure Duct 4: Low Static Pressure Duct 4: Low Static Pressure Duct 5: Air Handling Unit 17: High Tempera	AC			
2: Wall-mounted       2: Wall-mounted         3: Medium Static Pressure       14: 1-Way Casse         Duct       15: 2-Way Casse         4: Low Static Pressure Duct       16: console         5: Air Handling Unit       17: High Temperature	n Vontilator			
04     30023     2 Bytes     IDU model     5: Air Handling Unit     17: High Temperature	y ventilator			
04     30023     2 Bytes     IDU model     4: Low Static Pressure Duct     16: console       5: Air Handling Unit     17: High Temperature	tte			
04 30023 2 Bytes IDU model 5: Air Handling Unit 17: High Temper	tte			
6: High Static Pressure Duct Module	ature Hydro			
7: Compact 4-Way Cassette 21: AHUKIT (retu 8: Ceiling & Floor control)	m air			
9. 10: Floor Standing 22: Floor Standing	0			
11、18、20: Fresh Air 24: AHUKIT (disc	•			
Processing Unit control)				
0-200: 0-20 HP				
04 30024 2 Bytes IDU HP 201-220: 21-40 HP				
221-240: 42-80 HP				
0: 3 fan speed levels				
04 30025 2 Bytes IDU fan speed levels 1: 7 fan speed levels				
04 30026 2 Bytes Reserved Reserved				
04 30027 2 Bytes Reserved Reserved				
04 30028 2 Bytes Reserved Reserved				
04 30029 2 Bytes Reserved Reserved				

	Function code	Register address	Data length	Name		Definition	
	04	30030	2 Bytes	Reserved	Reserved		
0#IDU	04	30031	2 Bytes	Reserved	Reserved		
	04	30032	2 Bytes	Reserved	Reserved		
	04	30001+n*32	2 Bytes	Operating mode	Bit7 Bit4~Bit0	Auto mode 1: yes, 0: no Actual mode 0: Shutdown 1: Fan 2: Cooling 3: Heating 4: Forced cooling 6: Drying	
	04	30002+n*32	2 Bytes	Operating fan speed	Bit7 Bit4~Bit0	Auto fan speed 1: yes, 0: no 7-fan-speed IDU 1-7: speed 1 to speed 7 3-fan-speed IDU 1, 2: low fan speed 3, 4: medium fan speed 5, 6, 7: high fan speed	
n# IDU	04	30003+n*32	2 Bytes	Set temperature	Actual tem	perature (°C) x 10	
(The valid	04	30004+n*32	2 Bytes	Cooling temperature in auto mode	Actual temperature (°C) x 10		
value of n ranges	04	30005+n*32	2 Bytes	Heating temperature in auto mode	Actual temperature (°C) x 10		
from 0 to 63.)	04	30006+n*32	2 Bytes	Indoor ambient temperature	Actual tem	perature (°C) x 10	
63.)	04	30007+n*32	2 Bytes	IDU error code		f error code+Bit 0 of the high error code No fault A0~AF, AH, AL, AP, AU b0~bF, bH, bL, bP, bU C0~CF, CH, CL, CP, CU E0~EF, EH, EL, EP, EU F0~FF, FH, FL, FP, FU H0~HF, HH, HL, HP, HU L0~LF, LH, LL, LP, LU J0~JF, JH, JL, JP, JU n0~nF, nH, nL, nP, nU P0~PF, PH, PL, PP, PU r0~rF, rH, rL, rP, rU t0~tF, tH, tL, tP, Tu U0~UF, UH, UL, UP, UU	

	Function code	Register address	Data length	Name			Definition	
	04	30008+n*32	2 Bytes	Swing left/right	1-5: s	wing	angle 1-5, 14: auto swing	
	04	30009+n*32	2 Bytes	Swing up/down	1-5: s	1-5: swing angle 1-5, 14: auto swing		
	04	30010+n*32	2 Bytes	Upper limit of cooling temperature	Actual temperature (°C) x 10			
n# IDU (The valid	04	30011+n*32	2 Bytes	Lower limit of cooling temperature	Actua	Actual temperature (°C) x 10		
	04	30012+n*32	2 Bytes	Upper limit of heating temperature	Actua	l temp	perature (°C) x 10	
	04	30013+n*32	2 Bytes	Lower limit of heating temperature	Actua	l temp	perature (°C) x 10	
					Bit7		1: auto mode locked, 0: auto mode unlocked	
	04	30014+n*32	2 Bytes	Mode lock	Bit4~ When	bit 7	0: unlocked, 1: fan mode locked, 2: cool mode locked, 3: heat mode locked, 6: dry mode locked and bits 4-0 are all 0, no mode	
value	04	30015+n*32	2 Bytes	On/Off lock	0: unlocked, 1: on locked, 2: off locked			
of n ranges from 0 to 63.)	04	30016+n*32	2 Bytes	Fan speed lock	0 1-7 14	7-fai 1-7: 3-fai 1, 2: 3, 4: 5, 6,	speed unlocked n-speed IDU speed 1 to speed 7 locked n-speed IDU : low fan speed locked : medium fan speed locked . 7: high fan speed locked o fan speed locked	
	04	30017+n*32	2 Bytes	Swing up/down locked	1-5: a	0: unlocked 1-5: angle 1 to angle 5 locked 14: auto swing locked		
	04	30018+n*32	2 Bytes	Remote control locking	0: unl	ocked	I, 1: locked	
	04	30019+n*32	2 Bytes	Wired controller locking	0: unl	0: unlocked, 1: locked		
	04	30020+n*32	2 Bytes	IDU electronic expansion valve	Actua	l oper	ning	
	04	30021+n*32	2 Bytes	T2A	Actua	l temp	perature (°C) x 10	
	04	30022+n*32	2 Bytes	T2B	Actua	l temp	perature (°C) x 10	

	Function code	Register address	Data length	Name	Defi	nition	
n# IDU (The valid	04	30023+n*32	2 Bytes	IDU model	0: 1st Generation IDU 1: 4-Way Cassette 2: Wall-mounted 3: Medium Static Pressure Duct 4: Low Static Pressure Duct 5: Air Handling Unit 6: High Static Pressure Duct 7: Compact 4-Way Cassette 8: Ceiling & Floor 9, 10: Floor Standing 11, 18, 20: Fresh Air Processing Unit	12: Inverter Split AC 13: Heat Recovery Ventilator 14: 1-Way Cassette 15: 2-Way Cassette 16: console 17: High Temperature Hydro Module 21: AHUKIT (return air control) 22: Floor Standing 24: AHUKIT (discharge air control)	
value of n ranges from 0 to 63.)	04	30024+n*32	2 Bytes	IDU HP	0-200: 0-20 HP 201-220: 21-40 HP 221-240: 42-80 HP		
	04	30025+n*32	2 Bytes	IDU fan speed levels	0: 3 fan speed levels 1: 7 fan speed levels		
	04	30026+n*32	2 Bytes	Reserved	Reserved		
	04	30027+n*32	2 Bytes	Reserved	Reserved		
	04	30028+n*32	2 Bytes	Reserved	Reserved		
	04	30029+n*32	2 Bytes	Reserved	Reserved		
	04	30030+n*32	2 Bytes	Reserved	Reserved		
	04	30031+n*32	2 Bytes	Reserved	Reserved		
	04	30032+n*32	2 Bytes	Reserved	Reserved		

### 2.2.2 ODU

	Function code	Register address	Data length	Name	Definition
n# IDU (The valid value	04	34001	2 Bytes	Operating mode	0: Shutdown 2: Cooling 3: Heating 4: Forced cooling 29: Mix-cooling 30: Mix-heating
of n	04	34002	2 Bytes	Fan 1	Speed of fan 1
ranges	04	34003	2 Bytes	Fan 2	Speed of fan 2
from 0 to 63.)	04	34004	2 Bytes	Outdoor ambient temperature	Actual temperature (°C) x 10
	04	34005	2 Bytes	Frequency of compressor 1	Speed of compressor 1

	Function code	Register address	Data length	Name		Definition
	04	34006	2 Bytes	Frequency of compressor 2	Speed of c	ompressor 2
	04	34007	2 Bytes	Discharge temperature of compressor 1	Discharge	temperature of compressor 1
	04	34008	2 Bytes	Discharge temperature of compressor 2	Discharge	temperature of compressor 2
	04	34009	2 Bytes	High pressure	Actual pres	ssure x 10
	04	34010	2 Bytes	Low pressure	Actual pres	ssure x 100
					Low byte o byte of the	f error code+Bit 0 of the high error code
					0	No fault
					1~20	A0~AF, AH, AL, AP, AU
					21~40	b0~bF, bH, bL, bP, bU
n# IDU		04 34011	2 Bytes	Error code	41~60	C0~CF, CH, CL, CP, CU
(The valid	04				61~80	E0~EF, EH, EL, EP, EU
					81~100	F0~FF, FH, FL, FP, FU
value of					101~120	H0~HF, HH, HL, HP, HU
n ranges					121~140	L0~LF, LH, LL, LP, LU
from 0 to					141-160	J0~JF, JH, JL, JP, JU
63.)					161-180	n0~nF, nH, nL, nP, nU
					181-200	P0~PF, PH, PL, PP, PU
					201-220	r0~rF, rH, rL, rP, rU
					221-240	t0~tF, tH, tL, tP, Tu
					241-260	U0~UF, UH, UL, UP, UU
	04	34012	2 Bytes	Т3	Actual tem	perature (°C) x 10
	04	34013	2 Bytes	Discharge superheat	Discharge	superheat
	04	34014	2 Bytes	Compressor current 1	Actual curr	
	04	34015	2 Bytes	Compressor current 2	Actual curr	ent value
					1-100: 0.1-	10 HP
	04	34016	2 Bytes	HP	101-240: 1	
	04	34017	2 Bytes	Reserved	Reserved	
	04	34018	2 Bytes	Reserved	Reserved	
	04	34019	2 Bytes	Reserved	Reserved	
	04	34020	2 Bytes	Reserved	Reserved	
n# ODU					0: Shutdow	/n
(The valid					2: Cooling	
value of	0.1	0.4004 000	0.0.1		3: Heating	
n ranges	04	34001+20*n	2 Bytes	Operating mode	4: Forced of	cooling
from 0 to					29: Mix-co	oling
31.)					30: Mix-he	ating

	Function code	Register address	Data length	Name		Definition		
	04	34002+20*n	2 Bytes	Fan 1	Speed of fa	an 1		
	04	34003+20*n	2 Bytes	Fan 2	Speed of fa	an 2		
	04	34004+20*n	2 Bytes	Outdoor ambient temperature	Actual tem	perature (°C) x 10		
	04	34005+20*n	2 Bytes	Frequency of compressor 1	Speed of compressor 1			
	04	34006+20*n	2 Bytes	Frequency of compressor 2	Speed of c	Speed of compressor 2		
	04	34007+20*n	2 Bytes	Discharge temperature of compressor 1	Discharge temperature of compressor 1			
	04	34008+20*n	2 Bytes	Discharge temperature of compressor 2	Discharge	temperature of compressor 2		
	04	34009+20*n	2 Bytes	High pressure	Actual pressure x 10			
	04	34010+20*n	2 Bytes	Low pressure	Actual pres	ssure x 100		
n# ODU (The valid value of n ranges from 0 to 31.)	04	34011+20*n		Error code		f error code+Bit 0 of the high		
	04	34012+20*n	2 Bytes	Т3	Actual tem	perature (°C) x 10		
	04	34013+20*n	-	Discharge superheat	Discharge			
	04	34014+20*n		Compressor current 1	Actual curr			
	04	34015+20*n	-	Compressor current 2	Actual curr			
	04	34016+20*n	-	HP		10 HP101-240: 11-150 HP		
	04	34017+20*n	,	Reserved	Reserved			
	04	34018+20*n	-	Reserved	Reserved			
	04	34019+20*n	-	Reserved	Reserved			
	04	34020+20*n			Reserved			
	04	0-1020+20 II	2 Dytes	Reserveu	Reserved			

# 2.2.3 By IDU/ODU Parameter Type (Continuous Addresses)

	Function code	Register address	Data length	Name		Definition		
	04	36001	2 Bytes	IDU 0	Bit7	Auto mode 1: yes, 0: no		
	04	36002	2 Bytes	IDU 1		Actual mode		
IDU	04	36003	2 Bytes	IDU 2		0: Shutdown		
operating mode						1: Fan		
	04	36063	2 Bytes	IDU 62	Bit4~Bit0	2: Cooling		
	04	36064	2 Bytes	IDU 63		<ul><li>3: Heating</li><li>4: Forced cooling</li><li>6: Drying</li></ul>		
	04	36065	2 Bytes	IDU 0	Bit7	Auto fan speed 1: yes, 0: no		
	04	36066	2 Bytes	IDU 1		7-fan-speed IDU		
IDU	04	36067	2 Bytes	IDU 2		1-7: speed 1 to speed 7		
operating					Bit4~Bit0	3-fan-speed IDU		
fan speed	04	36127	2 Bytes	IDU 62		1, 2: low fan speed		
	04	36128	2 Bytes	IDU 63		3, 4: medium fan speed 5, 6, 7: high fan speed		
	04	36129	2 Bytes	IDU 0				
	04	36130	2 Bytes	IDU 1				
IDU set	04	36131	2 Bytes	IDU 2		Actual temperature (°C) x 10		
temperature					Actual tem			
	04	36191	2 Bytes	IDU 62				
	04	36192	2 Bytes	IDU 63				
	04	36193	2 Bytes	IDU 0				
	04	36194	2 Bytes	IDU 1				
IDU ambient	04	36195	2 Bytes	IDU 2	Actual tam	novotuvo (°C) v 10		
temperature					Actual tem	perature (°C) x 10		
	04	36255	2 Bytes	IDU 62				
	04	36256	2 Bytes	IDU 63				
IDU on/off status	04	36257	2 Bytes	IDUs 0-15	Bit 00: operating status of IDU 00, 1: on, 0: off Bit 01: operating status of IDU 01, 1: on, 0: off  Bit 15: operating status of IDU 15, 1: on, 0: off			

	Function code	Register address	Data length	Name	Definition
	04	36258	2 Bytes	IDUs 16-31	Bit 00: operating status of IDU 16, 1: on, 0: off Bit 01: operating status of IDU 17, 1: on, 0: off  Bit 15: operating status of IDU 31, 1: on, 0: off
IDU on/off status	04	36259	2 Bytes	IDUs 32-47	Bit 00: operating status of IDU 32, 1: on, 0: off Bit 01: operating status of IDU 33, 1: on, 0: off  Bit 15: operating status of IDU 47, 1: on, 0: off
	04	36260	2 Bytes	IDUs 48-63	Bit 00: operating status of IDU 48, 1: on, 0: off Bit 01: operating status of IDU 49, 1: on, 0: off  Bit 15: operating status of IDU 63, 1: on, 0: off
	04	36261	2 Bytes	IDUs 0-15	Bit 00: online status of IDU 00, 1: online, 0: offline Bit 01: online status of IDU 01, 1: online, 0: offline  Bit 15: online status of IDU 15, 1: online, 0: offline
IDU online status	04	36262	2 Bytes	IDUs 16-31	Bit 00: online status of IDU 16, 1: online, 0: offline Bit 01: online status of IDU 17, 1: online, 0: offline  Bit 15: online status of IDU 31, 1: online, 0: offline
	04	36263	2 Bytes	IDUs 32-47	Bit 00: online status of IDU 32, 1: online, 0: offline Bit 01: online status of IDU 33, 1: online, 0: offline  Bit 15: online status of IDU 47, 1: online, 0: offline

	Function code	Register address	Data length	Name	Definition
IDU online status	04	36264	2 Bytes	IDUs 48-63	Bit 00: online status of IDU 48, 1: online, 0: offline Bit 01: online status of IDU 49, 1: online, 0: offline  Bit 15: online status of IDU 63, 1: online, 0: offline
	04	36265	2 Bytes	IDUs 0-15	Bit 00: fault status of IDU 00, 1: yes, 0: no Bit 01: fault status of IDU 01, 1: yes, 0: no  Bit 15: fault status of IDU 15, 1: yes, 0: no
IDU fault status	04	36266	2 Bytes	IDUs 16-31	Bit 00: fault status of IDU 16, 1: yes, 0: no Bit 01: fault status of IDU 17, 1: yes, 0: no  Bit 15: fault status of IDU 31, 1: yes, 0: no
	04	36267	2 Bytes	IDUs 32-47	Bit 00: fault status of IDU 32, 1: yes, 0: no Bit 01: fault status of IDU 33, 1: yes, 0: no  Bit 15: fault status of IDU 47, 1: yes, 0: no
	04	36268	2 Bytes	IDUs 48-63	Bit 00: fault status of IDU 48, 1: yes, 0: no Bit 01: fault status of IDU 49, 1: yes, 0: no  Bit 15: fault status of IDU 63, 1: yes, 0: no
ODU operating status	04	36269	2 Bytes	ODUs 0-15	Bit 00: operating status of ODU 00 (system 00), 1: yes, 0: no Bit 01: operating status of ODU 01 (system 00), 1: yes, 0: no  Bit 12: operating status of ODU 12 (system 03), 1: yes, 0: no Bit 13: operating status of ODU 13 (system 03), 1: yes, 0: no Bit 14: operating status of ODU 14 (system 03), 1: yes, 0: no Bit 15: operating status of ODU 15 (system 03), 1: yes, 0: no

	Function code	Register address	Data length	Name	Definition
ODU operating status	04	36270	2 Bytes	ODUs 16-31	Bit 00: operating status of ODU 16 (system 04), 1: yes, 0: no Bit 01: operating status of ODU 17 (system 04), 1: yes, 0: no  Bit 12: operating status of ODU 28 (system 07), 1: yes, 0: no Bit 13: operating status of ODU 29 (system 07), 1: yes, 0: no Bit 14: operating status of ODU 30 (system 07), 1: yes, 0: no Bit 15: operating status of ODU 31 (system 07), 1: yes, 0: no
ODU	04	36271	2 Bytes	ODUs 0-15	Bit 00: fault status of ODU 00 (system 00), 1: yes, 0: no Bit 01: fault status of ODU 01 (system 00), 1: yes, 0: no  Bit 12: fault status of ODU 12 (system 03), 1: yes, 0: no Bit 13: fault status of ODU 13 (system 03), 1: yes, 0: no Bit 14: fault status of ODU 14 (system 03), 1: yes, 0: no Bit 15: fault status of ODU 15 (system 03), 1: yes, 0: no
fault status	04	36272	2 Bytes	ODUs 16-31	Bit 00: fault status of ODU 16 (system 04), 1: yes, 0: no Bit 01: fault status of ODU 17 (system 04), 1: yes, 0: no  Bit 12: fault status of ODU 28 (system 07), 1: yes, 0: no Bit 13: fault status of ODU 29 (system 07), 1: yes, 0: no Bit 14: fault status of ODU 30 (system 07), 1: yes, 0: no Bit 15: fault status of ODU 31 (system 07), 1: yes, 0: no

	Function code	Register address	Data length	Name	Definition
ODU	04	36273	2 Bytes	ODUs 0-15	Bit 00: online status of ODU 00 (system 00), 1: yes, 0: no Bit 01: online status of ODU 01 (system 00), 1: yes, 0: no  Bit 12: online status of ODU 12 (system 03), 1: yes, 0: no Bit 13: online status of ODU 13 (system 03), 1: yes, 0: no Bit 14: online status of ODU 14 (system 03), 1: yes, 0: no Bit 15: online status of ODU 15 (system 03), 1: yes, 0: no
online status	04	36274	2 Bytes	ODUs 16-31	Bit 00: online status of ODU 16 (system 04), 1: yes, 0: no Bit 01: online status of ODU 17 (system 04), 1: yes, 0: no  Bit 12: online status of ODU 28 (system 07), 1: yes, 0: no Bit 13: online status of ODU 29 (system 07), 1: yes, 0: no Bit 14: online status of ODU 30 (system 07), 1: yes, 0: no Bit 15: online status of ODU 31 (system 07), 1: yes, 0: no

# 2.3 Holding Register

### 2.3.1 All-off Control Register

	Function code	Register address	Data length	Name	Definition
IDUs 0-63	06	40001	2 Bytes	Turn off IDUs 0-63	1: all off

### 2.3.2 IDU Control Register 1

	Function code	Register address	Data length	Name		Definition
	06/16	40002	2 Bytes	Set mode	0xFF: uncl 0x9F: off 0xDF: on Start up ar Bit7 Bit6 Bit5 Bit0~Bit4	nd specify the operating mode: Auto mode, valid when the value is 1 Fixed to 1 Fixed to 0
0#IDU	06/16	40003	2 Bytes	Set fan speed	0xFF: unchanged         Bit7       Auto fan speed 1: yes, 0: no         Bit0-Bit6       For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed.         Examples:       0x80: Auto fan speed is set.         0x80: Auto fan speed is set.       0x01: For a 7-fan-speed IDU, fan speed 1 set. For a 3-fan-speed IDU, low fan speed	
	06/16	40004	2 Bytes	Set temperature		0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.

	Function code	Register address	Data length	Name		Definition
					0xFF: uncl	nanged
					Bit7	0.5°C, 1: yes, 0: no
					Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.
	06/16	40005	2 Bytes	Cooling temperature	Examples:	
				in auto mode	0x91: The	cooling temperature in auto
					mode is 17	7.5°C.
					0x11: The	cooling temperature in auto
					mode is 17	л°С.
					0xFF: unch	nanged
		40006		Heating temperature in auto mode	Bit7	0.5°C, 1: yes, 0: no
			2 Bytes		Bit0-Bit6	The setting range of 1-100
						means 1°C to 100°C.
	06/16				Examples:	
					0x91: The	cooling temperature in auto
					mode is 17	7.5°C.
0#IDU						cooling temperature in auto
					mode is 17	7°C.
		40007	2 Bytes	Swing Left/Right	0xFF: unch	0
	06/16				1-5: angle 1 to angle 5	
					14: auto sv	ving
					0xFF: unch	•
	06/16	40008	2 Bytes	Swing up/down	-	1 to angle 5
					14: auto sv	ů.
					0xFF: unch	nanged
					Bit7	0.5°C, 1: yes, 0: no
					Bit0-Bit6	The setting range of 1-100
				Upper limit of heating		means 1°C to 100°C.
	06/16	40009	2 Bytes	temperature	Examples:	
						upper limit of the heating
						re is 17.5°C.
						upper limit of the heating
					temperatur	re is 17°C.

	Function code	Register address	Data length	Name		Definition
			0		0xFF: uncl	nanged
			2 Bytes	Lower limit of heating temperature	Bit7 Bit0-Bit6	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.
	06/16	40010			temperatu	lower limit of the heating re is 17.5°C. lower limit of the heating
	06/16				0xFF: uncl	°
					Bit7	0.5°C, 1: yes, 0: no
				Lippor limit of cooling	Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.
		40011	2 Bytes	Upper limit of cooling temperature	temperatu	upper limit of the cooling re is 17.5°C. upper limit of the cooling
0#IDU		40012			0xFF: uncl	nanged
					Bit7	0.5°C, 1: yes, 0: no
				Lower limit of cooling	Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.
	06/16		2 Bytes	Lower limit of cooling temperature	temperatu	lower limit of the cooling re is 17.5°C. lower limit of the cooling
					0x00: unlo	
					Specific m Bit7	Auto mode lock, valid when the value is 1
	06/16	40013	2 Bytes	Mode lock	Bit5~Bit6	Fixed to 0
					Bit0~Bit4	1: fan mode locked 2: cool mode locked 3: heat mode locked 6: dry mode locked

	Function code	Register address	Data length	Name		Definition	
	06/16	40014	2 Bytes	On/Off lock	0x0F: unchanged 0: unlocked 1: on locked 2: off locked		
	06/16	40015	2 Bytes	Fan speed lock	0x0F     Unchanged       Bit0~Bit4     Unlock       0     For a 7-fan-speed IDU, values       1-7 indicate fan speeds 1 to 7, respectively.       For a 3-fan-speed IDU, values       1 and 2 indicate low fan       speed, 3 and 4 indicate medium       fan speed, 5, 6, and 7 indicate       high fan speed.       14     Auto fan speed locked		
0#IDU	06/16	40016	2 Bytes	Swing up/down lock	0x0F: unchanged 0: unlocked 1-5: angle 1 to angle 5 locked 14: auto swing locked		
	06/16	40017	2 Bytes	Remote controller lock	0x03: unchar 0: unlocked 1: locked	nged	
	06/16	40018	2 Bytes	Wired controller lock	0x03: unchar 0: unlocked 1: locked	nged	
	06/16	40019	2 Bytes	Reserved	Reserved		
	06/16	40020	2 Bytes	Reserved	Reserved		
	06/16	40021	2 Bytes	Reserved	Reserved		
	06/16	40022	2 Bytes	Reserved	Reserved		
	06/16	40023	2 Bytes	Reserved	Reserved		

	Function code	Register address	Data length	Name		Definition	
					0xFF: unch 0x9F: off 0xDF: on Start up ar	nanged id specify the operating mode:	
	06/16	40002+n*25	2 Bytes	Set mode	Bit7 Bit6	Auto mode, valid when the value is 1	
	00/10	40002111 25	2 Dytes	Set mode	Bit5 Bit0~Bit4	Fixed to 1 Fixed to 0	
					BIO~BI4	1: Fan 2: Cooling 3: Heating 6: Drying	
		40003+n*25	2 Bytes		0xFF: unchanged		
n# IDU					Bit7	Auto fan speed 1: yes, 0: no	
(The valid value of n ranges from 0 to 63.)	06/16			Set fan speed	Bit0-Bit6	For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed.	
					Examples:		
					0x01: For a	fan speed is set. a 7-fan-speed IDU, fan speed 1 is 3-fan-speed IDU, low fan speed	
					0xFF: uncl	nanged	
			2 Bytes		Bit7	0.5°C, 1: yes, 0: no	
	06/16	40004+n*25		Set temperature	Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.	
					Examples:		
						temperature is set to 17.5°C. temperature is set to 17°C.	

	Function code	Register address	Data length	Name		Definition
n# IDU (The valid value of n ranges	06/16	40005+n*25	2 Bytes	Cooling temperature in auto mode	0xFF: unchanged         Bit7       0.5°C, 1: yes, 0: no         Bit0-Bit6       The setting range of 1-100 means 1°C to 100°C.         Examples:       0x91: The cooling temperature in auto mode is 17.5°C.         0x11: The cooling temperature in auto mode is 17°C.	
	06/16	40006+n*25	2 Bytes	Heating temperature in auto mode	0xFF: unchanged         Bit7       0.5°C, 1: yes, 0: no         Bit0-Bit6       The setting range of 1-100 means 1°C to 100°C.         Examples:       0x91: The cooling temperature in auto mode is 17.5°C.         0x11: The cooling temperature in auto mode is 17°C.	
from 0 to 63.)	06/16	40007+n*25	2 Bytes	Swing Left/Right	0xFF: unchanged 1-5: angle 1 to angle 5 14: auto swing	
	06/16	40008+n*25	2 Bytes	Swing up/down	0xFF: unchanged 1-5: angle 1 to angle 5 14: auto swing	
	06/16	40009+n*25	2 Bytes	Upper limit of heating temperature	temperatu 0x11: The	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.

	Function code	Register address	Data length	Name		Definition
					0xFF: uncl	0
			2 Bytes	Lower limit of heating temperature	Bit7 Bit0-Bit6	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.
	06/16	40010+n*25			temperatur	lower limit of the heating re is 17.5°C. lower limit of the heating
					0xFF: uncl	nanged
					Bit7	0.5°C, 1: yes, 0: no
				Lippor limit of cooling	Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.
n# IDU (The valid	06/16	40011+n*25	2 Bytes	Upper limit of cooling temperature	temperatur	upper limit of the cooling re is 17.5°C. upper limit of the cooling
value of n ranges		40012+n*25	2 Bytes		0xFF: unch	nanged
from 0 to					Bit7	0.5°C, 1: yes, 0: no
63.)				Lower limit of cooling	Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.
	06/16			Lower limit of cooling temperature	temperatur	lower limit of the cooling re is 17.5°C. lower limit of the cooling
					0x00: unlo	cked
					Specific m	ode lock
					Bit7	Auto mode lock, valid when the value is 1
	06/16	40013+n*25	2 Bytes	Mode lock	Bit5~Bit6	Fixed to 0
					Bit0~Bit4	
						2: cool mode locked
						3: heat mode locked
						6: dry mode locked

	Function code	Register address	Data length	Name		Definition	
	06/16	40014+n*25	2 Bytes	On/Off lock	0x0F: unch 0: unlocked 1: on locke 2: off locke	b d	
n# IDU (The valid	06/16	40015+n*25	2 Bytes	Fan speed lock	0x0F Bit0~Bit4 0	Unchanged Unlock For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed. Auto fan speed locked	
value of n ranges from 0 to 63.)	06/16	40016+n*25	2 Bytes	Swing up/down lock	0x0F: unchanged 0: unlocked 1-5: angle 1 to angle 5 locked 14: auto swing locked		
	06/16	40017+n*25	2 Bytes	Remote controller lock	0x03: unch 0: unlocked 1: locked	8	
	06/16	40018+n*25	2 Bytes	Wired controller lock	0x03: unch 0: unlocked 1: locked	0	
	06/16	40019+n*25	2 Bytes	Reserved	Reserved		
	06/16	40020+n*25	2 Bytes	Reserved	Reserved		
	06/16	40021+n*25	2 Bytes	Reserved	Reserved		
	06/16	40022+n*25	2 Bytes		Reserved		
	06/16	40023+n*25	2 Bytes	Reserved	Reserved		

\* In "Set mode", value 0xDF indicates sending the power-on command only, and the actual mode of the IDU depends on the logic of the IDU, and is generally the last operating mode memorized by the IDU.

### 2.3.3 IDU Control Register 2

Use registers 41602-41605 to select the desired IDU and use registers 41606-41622 to set specific group control parameters.

	Function code	Register address	Data length	Name		Definition	
	06/16 41602 2 Bytes Selection of IDU				Bit 1: IDU <sup>-</sup>	Js 0-15 0. 1: selected, 0: unselected 1. 1: selected, 0: unselected 15. 1: selected, 0: unselected	
	06/16 41603 2 Bytes Selection of IDUs 16-31			Control IDUs 16-31 Bit 0: IDU 16. 1: selected, 0: unselected Bit 1: IDU 17. 1: selected, 0: unselected  Bit 31: IDU 31. 1: selected, 0: unselected			
	06/16	41604	2 Bytes	Selection of IDUs 32-47	Control IDUs 32-47 Bit 0: IDU 32. 1: selected, 0: unselected Bit 1: IDU 33. 1: selected, 0: unselected  Bit 31: IDU 47. 1: selected, 0: unselected		
Group control of any IDU	06/16	41605	2 Bytes	Selection of IDUs 48-63	Control IDUs 48-63 Bit 0: IDU 48. 1: selected, 0: unselected Bit 1: IDU 49. 1: selected, 0: unselected  Bit 31: IDU 63. 1: selected, 0: unselected		
	06/16	41606	2 Bytes	Set mode	0xFF: unch 0x9F: off 0xDF: on Start up an Bit7 Bit6 Bit5 Bit0~Bit4	Auto mode, valid when the value is 1 Fixed to 1 Fixed to 0 1: Fan 2: Cooling 3: Heating 6: Drying	

	Function code	Register address	Data length	Name		Definition
			_		0xFF: uncl	hanged
	06/16	41607	2 Bytes	Set fan speed	Bit7 Bit0-Bit6	Auto fan speed 1: yes, 0: no For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed.
					Examples: 0x80: Auto fan speed is set. 0x01: For a 7-fan-speed IDU, fan speed 1 is set. For a 3-fan-speed IDU, Iow fan speed is set.	
		41608	2 Bytes	Set temperature	0xFF: uncl	
	06/16				Bit7 Bit0-Bit6	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.
Group control of any IDU						temperature is set to 17.5°C. temperature is set to 17°C.
		41609	2 Bytes	Cooling temperature in auto mode	0xFF: uncl	-
					Bit7 Bit0-Bit6	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.
	06/16				mode is 17	cooling temperature in auto 7.5°C. cooling temperature in auto
					0xFF: uncl	
	06/16	41610	2 Bytes	Heating temperature in auto mode	Bit7 Bit0-Bit6	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C.
					mode is 17	cooling temperature in auto 7.5°C. cooling temperature in auto

	Function code	Register address	Data length	Name		Definition
	06/16 41611 2 Bytes Swing l		Swing left/right	0xFF: unchanged       wing left/right       1-5: angle 1 to angle 5       14: auto swing		
	06/16	41612	2 Bytes	Swing up/down	0xFF: unch 1-5: angle 14: auto sv	1 to angle 5
	06/16	41613	2 Bytes	Upper limit of heating temperature	temperatur	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C. upper limit of the heating re is 17.5°C. upper limit of the heating
Group control of any IDU	06/16	41614	2 Bytes	Lower limit of heating temperature	0xFF: unchanged         Bit7       0.5°C, 1: yes, 0: no         Bit0-Bit6       The setting range of 1-1         means 1°C to 100°C.         Examples:         0x91: The lower limit of the heating temperature is 17.5°C.         0x11: The lower limit of the heating temperature is 17°C.	
	06/16	06/16 41615 2 Bytes Upper limit of co temperature		Upper limit of cooling temperature	temperatur	0.5°C, 1: yes, 0: no The setting range of 1-100 means 1°C to 100°C. upper limit of the cooling re is 17.5°C. upper limit of the cooling

	Function code	Register address	Data length	Name		Definition
					0xFF: uncl	hanged
			2 Bytes	Lower limit of cooling temperature	Bit7	0.5°C, 1: yes, 0: no
					Bit0-Bit6	The setting range of 1-100 means 1°C to 100°C.
	06/16	41616			temperatu	lower limit of the cooling re is 17.5°C. lower limit of the cooling
			2 Bytes	Mode lock	0x00: unlo Specific m	
	06/16	41617			Bit7	Auto mode lock, valid when the value is 1
Group					Bit5~Bit6 Bit0~Bit4	Fixed to 0 1: fan mode locked 2: cool mode locked 3: heat mode locked 6: dry mode locked
control of any IDU	06/16	41618	2 Bytes	On/Off lock	0x0F: unch 0: unlocke 1: on locke 2: off locke	d ed
					0x0F	Unchanged
	06/16	41619	2 Bytes	Fan speed lock	Bit5~Bit6 0 14	Unlock For a 7-fan-speed IDU, values 1-7 indicate fan speeds 1 to 7, respectively. For a 3-fan-speed IDU, values 1 and 2 indicate low fan speed, 3 and 4 indicate medium fan speed, 5, 6, and 7 indicate high fan speed. Auto fan speed locked
	06/16	41620	2 Bytes	Swing up/down lock	-	-

	Function code	Register address	Data length	Name	Definition
Group	06/16	41621	2 Bytes	Remote controller lock	0x03: unchanged 0: unlocked 1: locked
control of any IDU	06/16	41622	2 Bytes	Wired controller lock	0x03: unchanged 0: unlocked 1: locked
	06/16	41623	2 Bytes	Reserved	Reserved

## 3 Web Functions

\*

The Gateway is embedded with a web server, which can be used to upgrade and configure the Gateway.

The default IP address of the Gateway is 192.168.1.200. In the address bar of Chrome browser, enter "http://Gateway IP address" to open the web page of the Gateway.

- 1. The PC and the Gateway need to be in the same network segment. For specific settings, consult relevant IT personnel.
- 2. The PC OS can be Windows 7 (32-bit or 64-bit) or later versions. 3. Chrome browser needs to be in 70.0 or any later version.
- 4. Other browsers may be incompatible, preventing the Web function from working properly.

Settings [	DataView Firmware	
···· Device Infos·····		
Version:	Modbus-V1.4.0022.0914	
Network Settin	Igs:	
IP address:	192.168.1.200	
Mask:	255.255.255.0	
Gateway:	192.168.1.1	
···· Modbus Settin	77	
Port setting:	9600 • None • 1 StopBit • A1-B1-E	
Station ID:	1	

Click 中文 | English to switch the language to Chinese or English.

### 3.1 System Settings

Settings	DataView Firmware	
Device Infos		
Version:	Modbus-V1.4.0022.0914	
···· Network Settin	ngs:	
IP address:	192.168.1.200	
Mask:	255.255.255.0	
Gateway:	192.168.1.1	
···· Modbus Settin		
Port setting:	9600 • None • 1 StopBit • A1-B1-E	
Station ID:	1 •	

### Web function list

Device Infos	Version	Version of the Modbus Gateway
Network	IP address	IP address of the Modbus Gateway
Settings	Mask	Subnet mask in the IP configuration
	Gateway	Default gateway in the IP configuration
Modbus Settings	Port setting	Modbus interface configuration The first field indicates the baud rate. The default value is 9600. (Available values include 4800, 9600, 19200, and 38400.) The second field indicates the parity check. The default value is none. (Available values include none, even, and odd.) The third field indicates the stop bit. The default value is 1 StopBit. (Available values include 1 StopBit and 2 StopBit.) * The data bit supports only 8. * The Modbus/TCP interface of the Modbus Gateway supports only port 502.
User	Station ID	Modbus station ID, ranging from 1 to 254. The default value is 1.

# Modbus Gateway ex | English

ettings DataView	Firm	nware										
Discrete inputs	0	1	2	3	4	5	6	7	8	9	10	11
	12	13	14	15	16	17	18	19	20	21	22	23
Input registers	24	25	26	27	28	29	30	31	32	33	34	35
	36	37	38	39	40	41	42	43	44	45	46	47
	48	49	50	51	52	53	54	55	56	57	58	59
	60	61	62	63	O#0	O#1	O#2	O#3	O#4	O#5	O#6	O#7
	O#8	O#9	O#10	O#11	O#12	O#13	O#14	O#15	O#16	O#17	O#18	O#19
	O#20	O#21	O#22	O#23	O#24	O#25	O#26	O#27	O#28	O#29	O#30	O#31
	٨d	dress			Nam				Value		Pars	•
									0		OFF	
	10001			ON/OFF				_				
		002		Fault					0		No	
		003		Online					1		Onlir	ne
	10	004							0			
	10005								0			
	10	0006							0			
	10	007							0			
		800							0			

A pure number indicates an IDU, and the numeral indicates the IDU address. For example, IDU 0

"O#number" indicates an ODU, and the numeral indicates the ODU address. For example, ODU 0

O#0

Offline	Online	Selected
0 RGB (210,212,214)	0 RGB (210,212,214)	0 RGBA (87,176,254,1) 0%, RGBA (64,144,245,1) 100%)

You can click an address to view the specific parameters of the device, and click "Discrete inputs" or "Input registers" to check different information.

# Modbus Gateway #x | English

Settings DataView	Firm	ware				
	0	1	2	3	4	5
Discrete inputs	12	13	14	15	16	17
Input registers	24	25	26	27	28	29

### 3.3 Firmware Upgrade

100	lbus G		ay <sub>₱文  </sub>	English	 
Settings	DataView	Firmware			
S	elect the file to up	load	Upload		

Click "Select the file to upload", select the desired firmware in the displayed window, and click "Upload".

 $^{\ast}$  Only professionals can use this function. Otherwise, the Modbus Gateway may be damaged and cannot be used.

## 4 Restoring Factory Settings

	SW1
Function	Restoring Factory Settings

When the factory configuration is restored, the Gateway IP address and other parameters are set to factory setting values.

Steps:

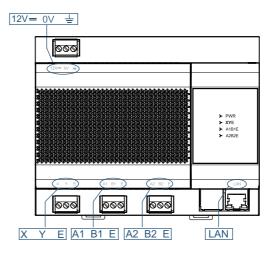
1. Cut off the Gateway power supply, open the Gateway shell, press and hold SW1 and turn on the power of the Gateway;

2. Keep holding SW1 until the digital display shows "LL" and release SW1; when the digital display shows "FF", the Gateway has been restored to factory configuration and automatically reset and restarted.

\* For details of this function, consult professional technicians.

# Installation

# 1 Product Introduction



## 2 Product Dimensions

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Unit: mm

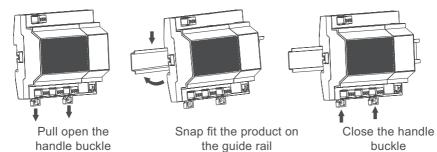
# **3** Installation Accessories

Please confirm that you have all the following parts.

No.	Name	Quantity	Remarks
1	Self-tapping screw	4	ST4*20
2	Plastic expansion pipe	4	For installing the controller onto the wall
3	3-pin black terminal	3	For communication
4	3-pin gray terminal	1	For connecting the power supply
5	Power adaptor	1	Module: AP24S1200WP-XS1 Input:100-240V~50/60Hz 0.8A Output:12V 2.0A 24.0W

# 4 Installation Method

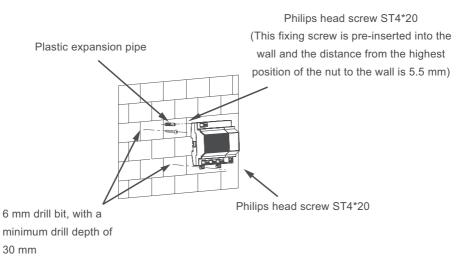
1. Installing the Guide Rail



2. Mounting the Device on the Wall



Pull open the handle buckle







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