Single Phase Multifunction Din Rail Meter

SDM320Y

User Manual V1.1

Zhejiang Eastron Electronic Co., Ltd.

Statement

The company reserves the right to amend the product specifications in this manual without prior notice. Before placing an order, please contact our company or local agent to get the latest specifications.

Catalogue

SDM320Y

Chapter One. Product Overview

1.1 Product Introduction

SDM320Y prepaid energy meter is EASTRON's latesy model of single phase electronic prepaid energy meter. It is in full compliance with technical requirements of IEC62053-22 standard for Class 0.5S energy meter. It has a complete prepaid management system, which is convenient for power purchase. The system automatically deducts fees according to electricity consumption. Recharding operation can be done throught network remotely, no need any medium such as IC card. The meter has two-level balance alarm function and an emergency amount function. It will automatically stop power supply when tenant in arrears or credit become zero or reaching the pre-set value and the real-time monitoring the look whether there is any abonormal situation.

The meter is with excleent reliability that can display remaining capacity, available remaining, total power consumption/ purchase of electricity, credit line, overdraft consumption, load threshlod, pay model, voltage, current, active power, active energy, import energy, export energy, power factor, frequency and time ect. The reactive power, apparent power can be read by Modbus.

SDM320Y is easy to install with nice appearance, small and light. With battery installed inside the meter, the value on the meter still can be read when grid power off.

SDM320Y is suitable for real-time power monitoring system and has the characteristics of multi-function, multi-purpose, high stability and long life.

The meter has 1 pulse output, and the pulse constant, pulse width and output unit all can be set.

It has RS485 communication interface, support high speed communication function of RS485 (9600bps). It is an ideal choice for power energy monitoring.

1.2 Product Feature

- Max.100A Direct Connect
- Multifunction Measurement, Displays Scrollable Settings
- Support AMR, SCADA system
- Prepaid Function
- Energy Resettable
- White Backlit LCD Display
- Din Rail Mounting 35mm

1.3 Application Scenarios

SDM320Y is a multifunctional power meter designed to address the needs of small and medium power users/commercial households with high mobility and tendency to owe fees. It can be applied to Ac charging posts, solar photovoltaic, etc. Its complete communication function makes it suitable for various real-time power monitoring systems.

Chapter Two. Technical Specification Parameters

2.1 Technical Parameters

- Input Voltage： Basic Value：230V AC
  Operating Voltage Range：±20%Basic Value
  Measurement Form: Valid Values

- Input Current： Basic Value：5A
  Max.Current：100A
  Over Current Withstand: 20 Imax for 0.5s

- Input Frequency： Basic Value：50/60Hz
  Input Frequency Range：45-65 Hz

- Insulation Capabilities： - AC voltage withstand 4KV/1min
  Impulse Voltage Withstand 6kV – 1.2μS waveform

- Power Consumption： ≤ 2W

- Pulse Port：Can be Set（See Operating Instructions for Details）

- Pulse Output Rate：1000imp/kWh(Default)

- Display：LCD with White Backlit

- Max reading：999999.99 kWh

2.2 Measurement Accuracy

- Voltage：0.5%
- Current：0.5%
- Frequency：0.1
- Power Factor：0.01
- Active Power：0.5%
- Reactive Power：1%
- Apparent power：0.5%
- Active Energy：Class 0.5s
- Reactive Energy：Class 2

2.3 RS485 Communication

- Bus Type：RS485
- Protocol：Modbus RTU
- Baud Rate：1200/2400/4800/9600bps (Default)

- Address Range：1-247 (Default:1)
- Max. Bus loading：64pcs
- Max. Bus loading：1000m
- Parity：EVEN /ODD/NONE (Default)
- Data Bit：8
- Stop Bit：1

2.4 performance standard

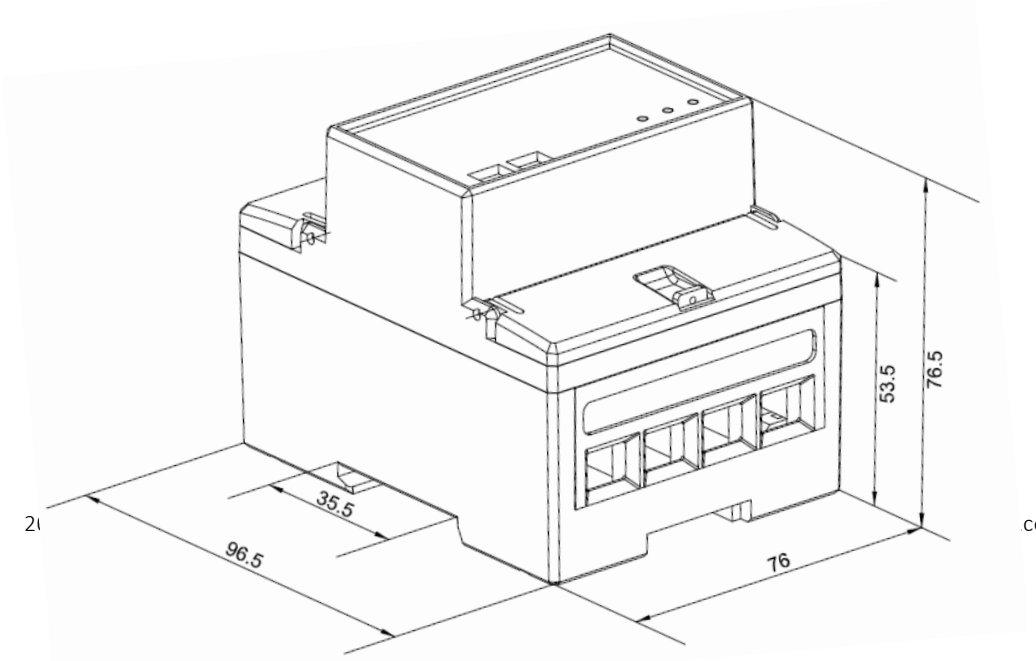
- Operating Humidity：≤90%
- Storage Humidity：≤95%
- Operating Temperature：-25℃~+55℃
- Storage Temperature：-40℃~+70℃
- International Standard：GB-T 17215/ IEC62053-22/ EN50470-1/3
- Accuracy Class：Class 0.5S
- Installation Category：CATII
- Protection against Penetration of Dust and Water : IP51 (Indoor)
- Insulating Encased Meter of Protective Class: II
- Altitude：≤2000m

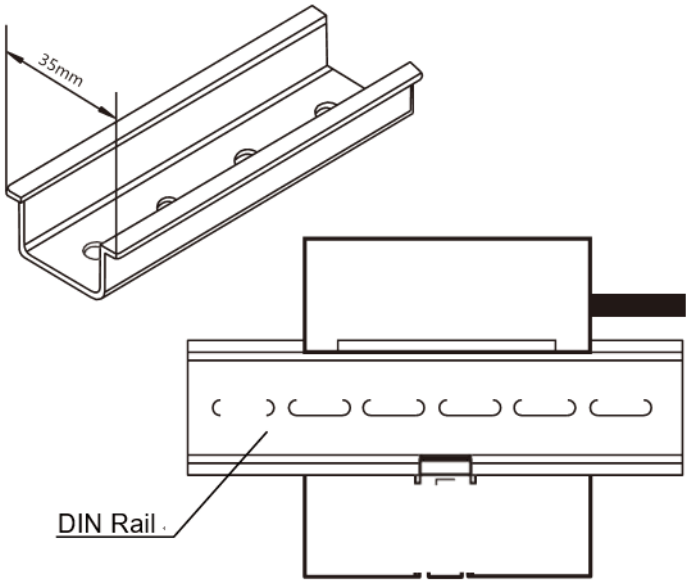
2.5 Dimensions

Height：76.5 mm

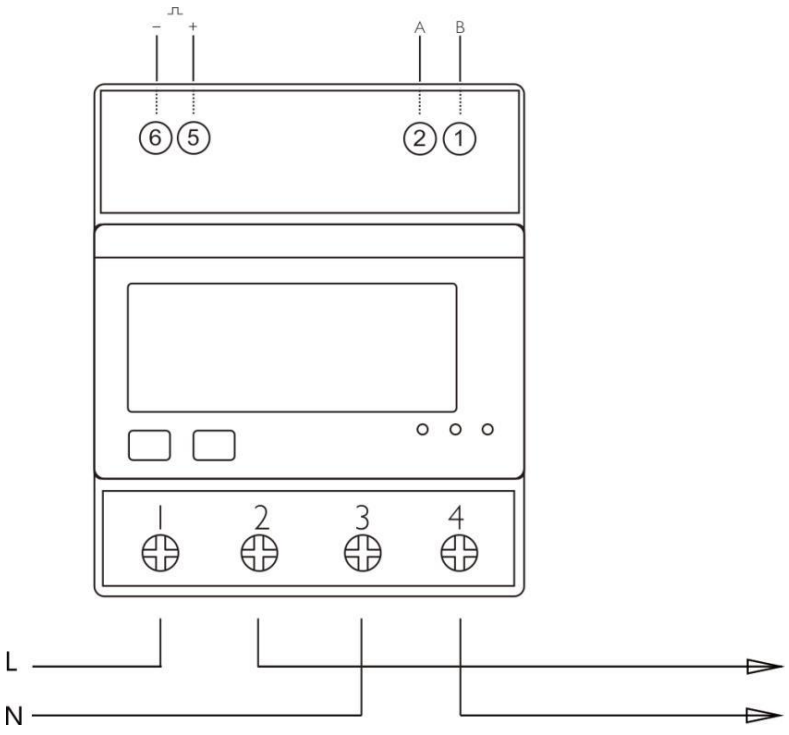
Width：96.5 mm

Length：76mm





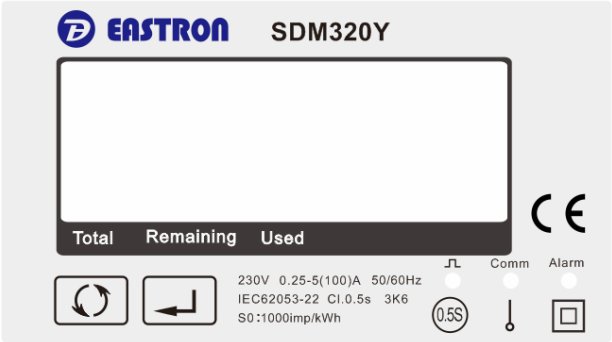
2.6 Wiring diagram



Chapter Three. Operating instructions

3.1 Panel Instructions and Key Operation Instructions

3.1.1 Panel Instructions



After the correct connection, it will enter the normal measurement state, and the screen is displayed as follows:

1st Screen	Start up Screens: All Display Segments
2nd Screen	Start up Screens: Software Version

Failure Interface	Display fault code: the display interface of fault code and normal display interface automatic scrolling display, with the switching time of 3s.Error-01 indicates that the relay cannot close.

3.1.2 key Definitions：

	◆ Measurement mode, short press: switch the display ◆ Setting mode: short press: switch menu or single-digit increases at the same level; Long press: return to the previous menu.
	◆ Measurement mode, short press: invalid; Long press: enter the setting mode; ◆ Setting mode, short press: move the cursor (the cursor is flashing digital bit); Long press: menu item selection confirmation and parameter modification confirmation.

3.2 Prepaid Function Description

This function needs to be used in conjunction with the company's prepaid management system software (see the detailed software operation instructions of the prepaid management system software).
Description of alarm threshold and emergency amount:

The meter has a two-level balance alarm threshold, called the first-level alarm threshold and second-level alarm threshold. In which the first-level alarm threshold value is higher than the second-level alarm threshold value. That is, the first-level alarm value is triggered first when the balance is insufficient.

The meter has the function of emergency amount. When the emergency amount is set to a value higher than 0, the emergency function is activated, means, the user is allowed to overdraw a certain amount of expenses. If the user has used the emergency amount, and when the user buy electricity, the used emergency amount will be deducted first, and the remaining electricity charge will be charged to the meter. Turn off this function when the emergency amount is set to 0.

3.2.1 Electricity Purchase：

The user goes to the administrative department of selling electricity to deal with the electricity purchase business.

3.2.2 Electricity Use：

When the remaining amount of the meter is less than the first alarm value, the buzzer is on and the alarm indicator starts flashing. If the user presses any button, the buzzer is turned off, but the alarm indicator remains flashing. If the user does not press any button, the buzzer alarm will automatically shut down after 10 minutes. The function reminds users that the amount is insufficient and needs to be topped up.

If the value is not charged at this time, when the remaining amount of the meter is less than the second-level alarm value, the relay will open and the buzzer will be turned on at the same time. In the mean while, the alarm indicator light becomes normally on; If the user presses any button, the relay is switched on and the buzzer is turned off. The alarm indicator remains on. If the user does not press any key, the buzzer alarm will automatically shut down after 10 minutes, but the relay clock will remain open until the user presses any key. This function alerts the user that need to recharge immediately.

3.2.3 Meet an Emergency：

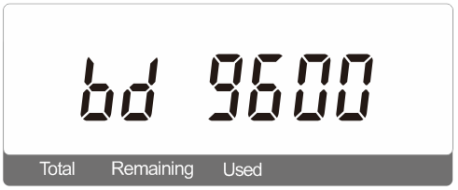
When the remaining amount of the meter goes to 0, the relay will be automatically disconnected and cut off. If the emergency amount function is not turned on, the relay is always disconnected. If the emergency amount function is turned on, the meter will be automatically connected to the relay after the user presses any key, and the relay will be automatically disconnected after the user has consumed the emergency amount.

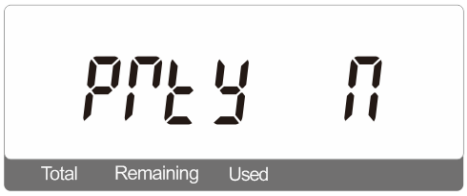
3.3 Measurement Parameters

It can be viewed by pressing the button：

Balance→ Accumulated Used Amount → Accumulated Used Electricity → Total Active Power → recharge amount → Communication Address → Communication Baud Rate → Communication Parity Bit → Pulse Constant → Software Version

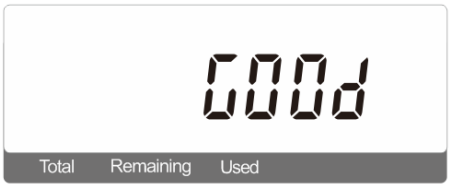
Page	Display	Description

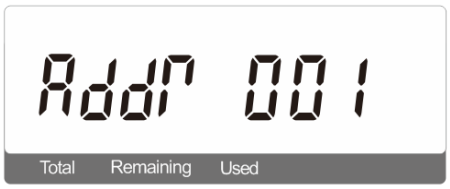
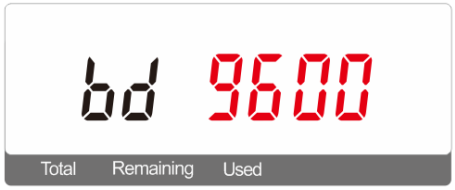
1		Balance Example:60.00$
2		Accumulated Used Amount Example: 80.00$
3		Accumulated Used Electricity Example: 120.00kWh
4		Total Active Power Example: 120.00kWh
5		recharge amount Example: 120.00$
6		Communication Address Example: 001
7		Communication Baud Rate Example: 9600

8		Communication Parity Bit Example: None Explanation: Parity Bit “N” stands none; “E” stands even; “O” stands odd
9		Pulse Constant Example: 1000
10		Software Version Example: 12 01.00
11		**fault code** Example: Err-01

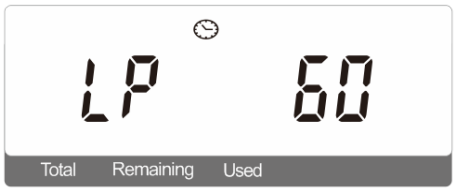
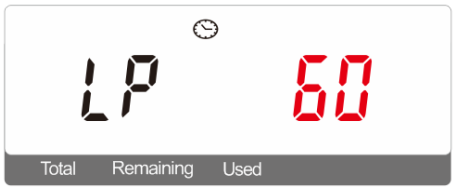
3.4 Basic Setting

Long press "  " for three seconds to enter the setting mode (It will exit the setting interface if there is no operation in the next minute and return the remaining amount interface) :

Page	Display	Description
1		Set successful, display: good

2		Setting failed, display: err
3		**Password** Enter password into the Settings screen Default password: 1000 Press select number, press select shift. Then long press to enter the setup system.
4		**Communication Address** Default Communication Address：001 Communication address range: 001~247
4-1		Long press into the communication address setting interface, the current character flashing. Then, press select new communication address. Finally, long press to confirm Settings.
5		**Baud Rate** Default baud rate: 9600bps Baud rate range: 1200, 2400, 4800, 9600.
5-1		Long press enter baud rate setting interface, the current character flashing. Then, press select the new baud rate. Finally, long press confirm Settings.

6		**Parity Bit** Default: None Optional：None, Even, Odd
6-1		Long press enter the parity bit setting interface, the current character flashing. Then, press select the new parity bit. Finally, long press confirm Settings.
7		**Pulse Constant** Default: 1000imp/kwh Optional：1000, 100,10,1.
7-1		Long press into the constant setting interface, the current character flashing. Then, press select the new constant. Finally, long press confirm Settings.
8		**pulse width** Default: 100ms Optional:200, 100,60. If the pulse constant is equal to 1000imp/kWh, the setting interface cannot be set to 200ms at this time.
8-1		Long press enter pulse width setting interface, the current character flashing. Then, press select the new pulse width. Finally, long press confirm Settings.

9		**The time of scrolling display** Default : 0s (no scrolling display) The time range of scrolling display: 0 ~ 30s.
9-1		Long press :er auto scrolling display time setting interface, the current character flashing. Then, press select the new auto scr; display time. Finally, long press confirm Settings.
10		**Backlight lighting time** Default : 60 min Optional : off,on,5,10,20,30,60,120. Off stands that the backlight is always out. On stands for backlight on.
10-1		Long press into the backlit time setting interface, the current character flashing. Then, press select the new backlight lighting time. Finally, long press confirm Settings.
11		**User Password** Default :1000 Optional : 0 ~ 9999
11-1		Long press to enter the user password setting interface, the current character flashing. Then, press select a new user password. Finally, long press confirm Settings.

Chapter Four. Communication Introduction

4.1 Input Register, Function Code (Hex) : 04

Register Serial Number	Enter Register Parameters				Register start address Hex	
	Parameter Definition	Data length (bytes)	Data Format	Unit	High Byte	Low Byte
30343	Total Active Power	4	Float	kWh	01	56
33841	Accumulated Used Electricity	4	Float	kWh	0F	00
33851	Balance of the meter	4	Float	$	0F	0A
33853	The sum of the accumulated recharge of the meter	4	Float	$	0F	0C
33855	Last time recharge amount of the meter	4	Float	$	0F	0E
33857	Accumulated Used Amount	4	Float	$	0F	10

4.2 Keep Register, Function Code (Hex) : 03 /10

Register Serial Number	Parameter	Register start address（Hex）		The value description	Pattern
		High Byte	Low Byte		
40013	Pulse 1 output pulse width	00	OC	Set range：60, 100, 200，Unit:ms，Default:100. Note：If the pulse constant of pulse 1 =1000imp/kWh，Then the automatic fixation is 35ms，can't be set. **Data length : 4 byte** **Data type : Float**	Pulse 1 output pulse width
40019	Parity bit and stop bit	00	12	Set range：0~3，Default 0 0 Stands for 1 stop bit, no parity; 1 Stands for 1 stop bit, even parity; 2 Stands for 1 stop bit，odd parity; 3 Stands for 2 stop bit，no parity. **Data length : 4 byte** **Data type : Float**	Parity bit and stop bit

40021	Modbus address	00	14	Set range：1~247，Default 1 **Data length : 4 byte** **Data type : Float**	Modbus address
40023	Pulse 1 pulse constant	00	16	Set range 0~3，Default 0 0 Stands for 1000 imp/kWh 1 Stands for 100 imp/kWh 2 Stands for 10 imp/kWh 3 Stands for 1 imp/kWh Note: if the pulse constant of pulse 1=1000imp/kWh，it is automatically fixed to 35ms , cannot be set. **Data length : 4 byte** **Data type : Float**	Pulse 1 pulse constant
40025	Password	00	18	Set range 0000 ~ 9999，Default1000 **Data length : 4 byte** **Data type : Float**	Password
40029	Baud rate	00	1C	Settable value：0, 1, 2, 5，Default2. 0 Stands for 2400 bps 1 Stands for 4800 bps 2 Stands for 9600 bps 5 Stands for 1200 bps **Data length : 4 byte** **Data type : Float**	Baud rate
40059	Automatic scrolling display	00	3A	Set range 0~30，unit：second，Default0. 0 Stands for no scrolling display。 **Data length : 4 byte** **Data type : Float**	Automatic scrolling display
40061	Backlight time	00	3C	Set range 0 ~ 121，unit：minute，Default60. 0 Stands for Backlight normally on；121 Stands for Backlight normally off. **Data length : 4 byte** **Data type : Float**	Backlight time
41281	Current recharge information	05	00	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16	Current recharge information

				Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	
41291	The last recharge information	05	0A	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last recharge information
41301	The last two recharge information	05	14	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last two recharge information
41311	The last three recharge information	05	1E	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last three recharge information
41321	The last four recharge information	05	28	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last four recharge information
41331	The last five recharge information	05	32	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data	The last five

				format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	recharge information
41341	The last six recharge information	05	3C	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last six recharge information
41351	The last seven recharge information	05	46	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last seven recharge information
41361	The last eight recharge information	05	50	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last eight recharge information
41371	The last nine recharge information	05	5A	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20	The last nine recharge information

				Data length : 10 byte	
41381	The last ten recharge information	05	64	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last ten recharge information
41391	The last eleven recharge information	05	6E	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for13:12:20 **Data length : 10 byte**	The last eleven recharge information
41401	The last twelve recharge information	05	78	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twelve recharge information
41411	The last thirteen recharge information	05	82	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirteen recharge information
41421	The last fourteen recharge information	05	8C	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD，	The last fourteen

				Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	recharge information
41431	The last fifteen recharge information	05	96	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last fifteen recharge information
41441	The last sixteen recharge information	05	A0	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last sixteen recharge information
41451	The last seventeen recharge information	05	AA	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last seventeen recharge information
41461	The last eighteen recharge information	05	B4	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last eighteen recharge information

41471	The last nineteen recharge information	05	BE	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last nineteen recharge information
41481	The last twenty recharge information	05	C8	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty recharge information
41491	The last twenty-one recharge information	05	D2	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-one recharge information
41501	The last twenty-two recharge information	05	DC	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-two recharge information
41511	The last twenty-three recharge information	05	E6	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second	The last twenty-three

				For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	recharge information
41521	The last twenty-four recharge information	05	F0	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-four recharge information
41531	The last twenty-five recharge information	05	FA	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-five recharge information
41541	The last twenty-six recharge information	06	04	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-six recharge information
41551	The last twenty-seven recharge information	06	0E	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-seven recharge information
41561	The last twenty-	06	18	1）Recharge amount，length：4byte，data format：	The

	eight recharge information			Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	last twenty-eight recharge information
41571	The last twenty-nine recharge information	06	22	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last twenty-nine recharge information
41581	The last thirty recharge information	06	2C	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for2018.7.16，13 12 20 Stands for13:12:20 **Data length : 10 byte**	The last thirty recharge information
41591	The last thirty-one recharge information	06	36	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-one recharge information
41601	The last thirty-two recharge information	06	40	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42	The last thirty-two recharge

				C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16， 13 12 20 Stands for 13:12:20 **Data length : 10 byte**	information
41611	The last thirty-three recharge information	06	4A	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16， 13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-three recharge information
41621	The last thirty-three recharge information	06	54	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16， 13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-three recharge information
41631	The last thirty-five recharge information	06	5E	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16， 13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-five recharge information
41641	The last thirty-six recharge information	06	68	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16， 13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-six recharge information
41651	The last thirty-seven recharge	06	72	1）Recharge amount，length：4byte，data format：Float	The last

	information			2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	thirty-seven recharge information
41661	The last thirty-eight recharge information	06	7C	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-eight recharge information
41671	The last thirty-nine recharge information	06	86	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last thirty-nine recharge information
41681	The last forty recharge information	06	90	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty recharge information
41691	The last forty-one recharge information	06	9A	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16	The last forty-one recharge inform

				Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	ation
41701	The last forty-two recharge information	06	A4	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-two recharge information
41711	The last forty-three recharge information	06	AE	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-three recharge information
41721	The last forty-four recharge information	06	B8	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-four recharge information
41731	The last forty-five recharge information	06	C2	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-five recharge information
41741	The last forty-six recharge information	06	CC	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data	The last forty-

				format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	six recharge information
41751	The last forty-seven recharge information	06	D6	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-seven recharge information
41761	The last forty-eight recharge information	06	E0	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-eight recharge information
41771	The last forty-nine recharge information	06	EA	1）Recharge amount，length：4byte，data format：Float 2）The time recharge occurs，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：42 C8 00 00 18 07 16 13 12 20, 42 C8 00 00 Stands for recharge amount（100）, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 10 byte**	The last forty-nine recharge information
41793	Current relay control record	07	00	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00	Only read

				Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
41801	The last one relay control record	07	08	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41809	The last two relay control record	07	10	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41817	The last three relay control record	07	18	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41825	The last four relay control record	07	20	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data	Only read

				format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
71833	The last five relay control record	07	28	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41841	The last six relay control record	07	30	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41849	The last seven relay control record	07	38	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41857	The last eight relay control	07	40	1）Relay action record，length：2byte，data format：Hex;	Only read

	record			FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
41865	The last nine relay control record	07	48	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41873	The last ten relay control record	07	50	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41881	The last eleven relay control record	07	58	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20	Only read

				Data length : 8 byte	
41889	The last twelve relay control record	07	60	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41897	The last thirteen relay control record	07	68	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41905	The last fourteen relay control record	07	70	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41913	The last fifteen relay control record	07	78	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second	Only read

				For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
41921	The last sixteen relay control record	07	80	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41929	The last seventeen relay control record	07	88	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41937	The last eighteen relay control record	07	90	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41945	The last nineteen relay control record	07	98	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open；	Only read

				2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
41953	The last twenty relay control record	07	A0	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41961	The last twenty-one relay control record	07	A8	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41969	The last twenty-two relay control record	07	B0	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41977	The last twenty-	07	B8	1）Relay action record，length：2byte，data format：	Only

	three relay control record			Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	read
41985	The last twenty-four relay control record	07	C0	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
41993	The last twenty-five relay control record	07	C8	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42001	The last twenty-six relay control record	07	D0	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13	Only read

				12 20 Stands for13:12:20 **Data length : 8 byte**	
42009	The last twenty-seven relay control record	07	D8	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42017	The last twenty-eight relay control record	07	E0	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42025	The last twenty-nine relay control record	07	E8	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42033	The last thirty relay control record	07	F0	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD，	Only read

				Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
42041	The last thirty-one relay control record	07	F8	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42049	The last thirty-two relay control record	08	00	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42057	The last thirty-three relay control record	08	08	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42065	The last thirty-four relay control record	08	10	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay	Only read

				open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
42073	The last thirty-five relay control record	08	18	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42081	The last thirty-six relay control record	08	20	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42089	The last thirty-seven relay control record	08	28	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read

42097	The last thirty-eight relay control record	08	30	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42105	The last thirty-nine relay control record	08	38	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42113	The last forty relay control record	08	40	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42121	The last forty-one relay control record	08	48	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00	Only read

				Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
42129	The last forty-two relay control record	08	50	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42137	The last forty-three relay control record	08	58	1）Relay action record，length：2byte，data format：Hex; FF 00Stands for relay off；00 00Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42145	The last forty-four relay control record	08	60	1）Relay action record，length：2byte，data format：Hex; FF 00 Stands for relay off；00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42153	The last forty-five relay control record	08	68	1）Relay action record，length：2byte，data format：Hex; FF 00Stands for relay off；00 00Stands for relay open： 2）The time of relay operation，length：6byte，data	Only read

				format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	
42161	The last forty-six relay control record	08	70	1）Relay action record，length：2byte，data format：Hex; FF 00Stands for relay off：00 00 Stands for relay open： 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42169	The last forty-seven relay control record	08	78	1）Relay action record，length：2byte，data format：Hex; FF 00Stands for relay off：00 00 Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42177	The last forty-eight relay control record	08	80	1）Relay action record，length：2byte，data format：Hex; FF 00Stands for relay off：00 00Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16 Stands for 2018.7.16，13 12 20 Stands for 13:12:20 **Data length : 8 byte**	Only read
42185	The last forty-nine relay control	08	88	1）Relay action record，length：2byte，data format：Hex;	Only read

	record			FF 00Stands for relay off；00 00Stands for relay open； 2）The time of relay operation，length：6byte，data format：BCD， Year-Month-Date-Hour-Minute-Second For example（Hex）：FF 00 18 07 16 13 12 20, FF 00 Stands for relay off, 18 07 16Stands for2018.7.16，13 12 20Stands for13:12:20 **Data length : 8 byte**	
464511	Meter fault code	FB	FE	00 00 Stands for no trouble 00 01 Stands for relay cannot open **Data length : 2 byte** **Data type : Hex**	Only read
464513	Serial number	FC	00	Meter serial number **Data length : 4 byte** **Data type : unsigned int32**	Only read
464517	Electric unit price	FC	04	Read the electric unit price of the prepaid meter； **Data length : 4 byte** **Data type: Float**	Only read
464535	Meter alarm amount	FC	16	Read the threshold value of the meter two - level alarm，unit RMB Alarm value 1，Alarm value 2 For example：41 20 00 00 40 A0 00 00,41 20 00 00 Stands for Alarm threshold1（RMB 10），40 A0 00 00 Stands for Alarm threshold2（RMB 5） **Data length : 8 byte** **Data type: Float**	Only read
464539	Meter emergency amount	FC	1A	Read the emergency amount of the meter，unit:RMB **Data length : 4 byte** **Data type: Float**	Only read

4.3 For example

1. Read input register

For example: Read "total active power"

Send: 01 04 01 56 00 02 90 27

, 01 = The modbus address of meter

04 = Function code

01 = High byte of register start address

56 = Low byte of register start address

00 = High bytes of register number

02 = Low bytes of register number
90 = CRC Low byte of the parity code
27 = CRC High byte of the parity code

Back: 01 04 04 43 66 33 34 1B 38

, 01 = The modbus address of meter
04 = Function code
04 = The number of return data bytes
43 = Data, (high byte of high word)
66 = Data, (low bytes of high word)
33 = Data, (high bytes of low word)
34 = Data, (low byte of low word)
1B = CRC Low byte of the parity code
38 = CRC High byte of the parity code

Note: 43 66 33 34(Hex) = 230.2 (Floating point)

2. Read hold register

For example: Read "pulse 1 output width"

Send: 01 03 00 0C 00 02 04 08

, 01 = The modbus address of meter
03 = Function code
00 = High byte of register start address
0C = Low byte of register start address
00 = High bytes of register number
02 = Low bytes of register number
04 = CRC Low byte of the parity code
08 = CRC High byte of the parity code

Back: 01 03 04 42 C8 00 00 6F B5

, 01 = The modbus address of meter
03 = Function code
04= The number of return data bytes
42 = Data, (high byte of high word)
C8 = Data, (low bytes of high word)
00 = Data, (high bytes of low word)
00 = Data, (low byte of low word)
6F = CRC Low byte of the parity code
B5 = CRC High byte of the parity code

Note: 42 C8 00 00 (Hex) = 100 (Floating point)

3. Write hold register

For example: Set "pulse constant of pulse 1"= 100 imp/kWh

Send: 01 10 00 16 00 02 04 3F 80 00 00 7F 75

, 01 = The modbus address of meter

10 = Function code
00 = High byte of register start address
16 = Low byte of register start address
00 = High bytes of register number
02 = Low bytes of register number
04 = The number of bytes written to data
3F = Data, (high byte of high word)
80 = Data, (low bytes of high word)
00 = Data, (high bytes of low word)
00 = Data, (low byte of low word)
7F = CRC Low byte of the parity code
75 = CRC High byte of the parity code

Note: 3F 60 00 00 (Hex) = 1 (Floating point), According to the register definition， 1Stands for 100 imp/kWh

Back: 01 10 00 16 00 02 A0 0C

Where, 01 = The modbus address of meter
10 = Function code
00 = High byte of register start address
16 = Low byte of register start address
00 = High bytes of register number
02 = Low bytes of register number
A0 = CRC Low byte of the parity code
0C = CRC High byte of the parity code

IF you have any question, please feel free to contact our sales team.

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