主控制器与显示板通讯协议
Communication protocol between master controller and display board

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编　　制：**李云**

Compilation: Li Yun

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1 简介 Introduction

　　储能逆变器控制器由主控制器，从控制器，显示板控制器组成。主控制器主要负责并网算法电压外环，Bus 稳压控制环，MPPT，相关电网接口算法，功率和电量统计，及系统保护功能；从控制器主要负责直流 DCDC 转换，直流升压，主从一致性检测等，显示板主要负责系统工作信息的显示，因此有必要定义主控器与显示板的通讯协议。

　　Energy storage inverter controller consists of master controller, slave controller and display board controller. The main controller is mainly responsible for grid connection algorithm voltage outer loop, Bus voltage control loop, MPPT, related grid interface algorithm, power and quantity statistics, and system protection function. The slave controller is mainly responsible for DC-DC conversion, DC boost, master/slave consistency detection and so on. The display board controller is mainly responsible for displaying system-working information. Therefore, it is necessary to define the communication protocol between the master controller and the display board.

2 通讯接口定义　Communication interface

　　主控制器与显示板采用 UART 通讯，通讯设置为：波特率 **115200bps**，数据位 8 位，停止位 1 位，无奇偶校验，无流控。通讯方式采用半双工通讯方式，在同一时刻主机和从机只能有一个发送数据，另一个接收数据。主控制器与显示板通信由显示板发起，主控制器响应（不主动发起通信）。通信帧为 MODBUS 协议帧。

　　The main controller and the display board adopt UART communication and setting as follows: the baud rate is 115200bps, the data bit is 8 bits and the stop bit is 1 bit. No parity check and flow control. The communication mode adopts half-duplex communication mode. Only one of the host and slave can send data, and the other can receive data at the same time. Communication between the master controller and the display board is initiated by the display board, and the master controller responds (No communication is initiated). The communication frame is MODBUS protocol frame.

3 通讯帧定义 Communication frames

帧结构

从机地址域	0-247（十进制）（0 为广播地址）
功能域	0x03：读多个参数 0x06：写单个参数 0x10：写多个参数 0x17：主从机同步数据 0x41：固件升级
数据域	数据域包括地址域和数据负荷域
CRC 域	16bit CRC 校验值

The frame structure

Address domain of the slave server	0-247(The decimal system)(0 indicates the broadcast address)
Functional domains	0x03：Read multiple registers 0x06：Write single register 0x10：Write multiple registers 0x17:Synchronize data between the primary and secondary servers 0x41：Updating firmware
Data domains	The data domain includes the address domain and the data load domain
CRC domains	16bit CRC Calibration value

倍率：因单片机不具备完整的浮点运算单元，因此会采用整数来取代浮点数进行运算及传输，为了表示表示小于 1 的值，会

Ratio: Because the single chip microcomputer does not have a complete floating point operation unit, it will use integer to replace floating point number for operation and transmission. To represent values less than one,

某寄存器定义如下

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述
001DH	1	PV1Volt	UInt16	0.1	V	R	PV1 电压

A register is defined as follows

Address	SIZE(Word)	Register names	Data type	Ratio	Unit	attribute	Register describe
001DH	1	PV1Volt	UInt16	0.1	V	R	PV1 voltage

Pv1 电压为 300.5 时，寄存器 PV1Volt 的值为 3005，

When the Pv1 voltage is 300.5, the value of register PV1Volt is 3005.

3.1 通讯帧命令及帧描述 Communication Frame Commands and frame Description

CRC 校验范围为**帧地址~CRC 域**（不包括 CRC 域），帧头不需要计算 CRC 校验。

CRC check ranges from the frame address to the CRC domain (excluding the CRC domain). CRC check is not required for the frame header.

3.1.1 0x03 读多个寄存器 0x03 Read multiple registers

该功能码（命令）是用来读取一个连续的块在寄存器的内容。

The function code (command) is used to read the contents of a contiguous block in a register.

请求协议数据单元指定起始寄存器地址和寄存器的数量。

The request protocol data unit specifies the starting register address and the number of registers.

在响应的寄存器数据中，每寄存器数据包含两个字节（二进制数右对齐在每个字节）。每个寄存器，第一个字节为高位和第二个字节为低位。

In the register data of the response, each register data contains two bytes (the binary number is right justified at each byte). For each register, the first byte is high and the second byte is low.

例如请求读寄存器 0x0001-0x0002

请求	（Hex）	应答	（Hex）
从机地址	0A	从机地址	0A
命令	03	命令	03
寄存器起始地址高位	00	字节个数	04
寄存器起始地址低位	01	寄存器值高位（01）	0F
寄存器个数高位	00	寄存器值低位（01）	A0
寄存器个数低位	02	寄存器值高位（02）	01
CRC 低位	―――	寄存器值低位（02）	C2
CRC 高位	―――	CRC 低位	―――
		CRC 高位	―――

For example, request to read register 0x0001-0x0002

request	（Hex）	response	（Hex）
The slave controller address	0A	The slave controller address	0A
Command	03	Command	03
High start register address	00	The number of bytes	04
Low start register address	01	Register value high （01）	0F
High register number	00	Register value low （01）	A0
Low register number	02	Register value high （02）	01
CRC low	———	Register value low （02）	C2
CRC high	———	CRC low	———
		CRC high	———

3.1.2 0x06 写单个寄存器 0x06 Write single register

该功能码（命令）是用于在从设备写一个保持寄存器。请求指定要写入的寄存器的地址。

The function code (command) is used to write a hold register on the slave device. The request specifies the address of the register to write to.

正常的响应是请求的回复，后返回寄存器的内容已写的数值。

The normal response is a reply to the request, after which the contents of the register are returned with the written value.

例如要求写入寄存器 0x0008 地址写入 0xAAAA 数值

请求	（Hex）	应答	（Hex）
从机地址	0A	从机地址	0A
命令	06	命令	06
寄存器起始地址高位	00	寄存器起始地址高位	00
寄存器起始地址低位	08	寄存器起始地址低位	08
寄存器值高位	AA	寄存器值高位	AA
寄存器值低位	AA	寄存器值低位	AA
CRC 低位	———	CRC 低位	———
CRC 高位	———	CRC 高位	———

For example, the register 0x0008 is required to write the address to 0xAAAA

request	（Hex）	response	（Hex）
The slave controller address	0A	The slave controller address	0A
Command	06	Command	06
High start register address	00	High start register address	00
Low start register address	08	Low start register address	08
Register value high	AA	Register value high	AA
Register value low	AA	Register value low	AA
CRC low	———	CRC low	———
CRC high	———	CRC high	———

3.1.3 0x10 写多个寄存器 0x10 write multiple register

该功能码（命令）是用于写入一段（串）连续地址的数值到寄存器。

This function code (command) is used to write a number of consecutive addresses to a register.

要求写入的数值是在数据字段中指定的要求。数据为两字节数寄存器。

The number required to be written is the one specified in the data field. The data is a two-byte register.

正常响应返回功能代码、起始地址和寄存器写数量。

The normal response returns the function code, the starting address, and the number of register writes.

例如写入寄存器 0x0001 地址的数为据 0x1194，写入寄存器 0x0002 地址的数为据 0x01CC。

请求	（Hex）	应答	（Hex）
从机地址	0A	从机地址	0A
命令	10	命令	10
寄存器起始地址高位	00	寄存器起始地址高位	00
寄存器起始地址低位	01	寄存器起始地址低位	01
寄存器个数高位	00	寄存器个数高位	00
寄存器个数低位	02	寄存器个数低位	02
字节个数	04	CRC 低位	———
寄存器值高位（01）	11	CRC 高位	———
寄存器值低位（01）	94		
寄存器值高位（02）	01		
寄存器值低位（02）	CC		
CRC 低位	———		
CRC 高位	———		

For example, the number of addresses written to register 0x0001 is data 0x1194, and the number of addresses written to register 0x0002 is data 0x01CC.

request	（Hex）	response	（Hex）
The slave controller address	0A	The slave controller address	0A
Command	10	Command	10
High start register address	00	High start register address	00
Low start register address	01	Low start register address	01
High register number	00	High register number	00
Low register number	02	Low register number	02
The number of bytes	04	CRC low	―――
Register value high （01）	11	CRC high	―――
Register value low （01）	94		
Register value high （02）	01		
Register value low （02）	CC		
CRC low	―――		
CRC high	―――		

3.1.4 0x17 读/写多个寄存器（主从同步数据）

0x17 Read/write multiple registers (master/slave data synchronization)

该功能码（命令）是用于单次传送中执行一个读操作和一次写操作，多个数据的读写。
例如：

请求	（Hex）	应答	（Hex）
从机地址	11	从机地址	11
命令	17	命令	17
读寄存器起始地址高位	00	字节个数	0C
读寄存器起始地址低位	04	寄存器值高位（04）	00
读寄存器个数高位	00	寄存器值低位（04）	FE
读寄存器个数低位	06	寄存器值高位（05）	0A
写寄存器起始地址高位	00	寄存器值低位（05）	CD
写寄存器起始地址低位	0F	寄存器值高位（06）	00
写寄存器个数高位	00	寄存器值低位（06）	01
写寄存器个数低位	03	寄存器值高位（07）	00
字节个数	06	寄存器值低位（07）	03
写寄存器值高位（0F）	00	寄存器值高位（08）	00
写寄存器值低位（0F）	FF	寄存器值低位（08）	0D
写寄存器值高位（10）	00	寄存器值高位（09）	00
写寄存器值低位（10）	FF	寄存器值低位（09）	FF
写寄存器值高位（11）	00	CRC 低位	———
写寄存器值低位（11）	FF	CRC 高位	———
CRC 低位	———		
CRC 高位	———		

This function code (command) is used to perform a read operation and a write operation in a single transmission, multiple data read and write.

For example:

request	（Hex）	response	（Hex）
The slave controller address	11	The slave controller address	11
Command	17	Command	17
High start register address	00	The number of bytes	0C
Low start register address	04	Register value high （04）	00
Read the high number of registers	00	Register value low （04）	FE
Read the low number of registers	06	Register value high （05）	0A
Write register start address high	00	Register value low （05）	CD
Write register start address low	0F	Register value high （06）	00
Write the high number of registers	00	Register value low （06）	01
Write the low number of registers	03	Register value high （07）	00
The number of bytes	06	Register value low （07）	03
Write the high value of the register （0F）	00	Register value high （08）	00
Write the low value of the register （0F）	FF	Register value low （08）	0D
Write the high value of the register （10）	00	Register value high （09）	00
Write the low value of the register （10）	FF	Register value low （09）	FF
Write the high value of the register （11）	00	CRC low	———
Write the low value of the register （11）	FF	CRC high	———
CRC low	———		
CRC high	———		

3.1.5 错误响应帧定义 Error response frame

从机（服务端）一旦收到请求，根据处理结果的两种类型的响应：、

Once the slave machine (server) receives the request, it responds in two types according to the processing result:

•响应积极：

响应函数的代码响应请求功能代码。

• Positive response:

The code of the response function responds to the request function code.

•异常响应：

在一个异常响应，该服务器设置功能码的最高位置1。

将功能码值 + 0x80 返回异常代码。

•Abnormal response：

In response to an exception, the server sets the function code to the highest position of 1.

Returns the function code value + 0x80 as an exception code.

异常代码：

错误码（Hex）	描述
01	非法的功能码
02	非法的请求地址
03	非法的请求数据值
04	服务器故障
06	服务器忙
10	密码错误
11	校验错误
12	参数无效
13	系统锁定

Abnormal Code:

Abnormal Code（Hex）	Discription
01	The function code is invalid
02	Invalid request address
03	Invalid request data value
04	Server failure
06	Server in busy
10	Error password
11	Check the error
12	Parameter is invalid
13	The system lock

例如：主机读取数据，从机异常响应。

请求	（Hex）	应答	（Hex）
从机地址	0A	从机地址	0A
命令	03	命令	83
寄存器起始地址高位	00	错误代码	02
寄存器起始地址低位	01	CRC 低位	―――
寄存器个数高位	00	CRC 高位	―――
寄存器个数低位	02		
CRC 低位	―――		
CRC 高位	―――		

For example: The master reads data and the slave responds abnormally.

request	（Hex）	response	（Hex）
The slave controller address	0A	The slave controller address	0A
Command	03	Command	83
High start register address	00	The error code	02
Low start register address	01	CRC low	―――
High register number	00	CRC high	―――
Low register number	02		
CRC low	―――		
CRC high	―――		

4 逆变器数据寄存器定义　Inverter data register definition

4.1Information 寄存器定义 Information register definition

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
8F00H	1	Type	UInt16	0		R	DeviceType	0x0055:单相高压交流耦合储能一体机 AS2 系列 （AS2 3-6K S） 0x0056:单相高压交流耦合储能一体机 AS2 系列 （AS2 5-10K S） 0x005A:单相混合储能逆变器 H2 系列 （H2 3-6k S2） 0x005B:单相混合储能逆变器 H2 系列 （三路 MPPT）（H2 5-10k S3） 0x005C:单相高压双路混合储能一体机 HS2 系列（HS2 3-6K S2） 0x005D:单相高压三路混合储能一体机 HS2 系列（HS2 5-10K S3）
8F01H	1	SubType	UInt16			R	power	功率段
8F02H	1	CommProVersion	UInt16	-3		R	Comms Protocol Version	
8F03H	10	SN	String(20)			R	SerialNumber	无效值：0x00
8F0DH	10	PC	String(20)			R	ProductCode	无效值：0x00
8F17H	1	DV	UInt16	-3		R	Display Software Version	无效值：0xFFFF
8F18H	1	MCV	UInt16	-3		R	Master Ctrl Software Version	无效值：0xFFFF
8F19H	1	SCV	UInt16	-3		R	Slave Ctrl Software Version	无效值：0xFFFF
8F1AH	1	DispHWVersion	UInt16	-3		R	DispBoardHardware Version	无效值：0xFFFF
8F1BH	1	CtrlHWVersion	UInt16	-3		R	CtrlBoardHardware Version	无效值：0xFFFF
8F1CH	1	PowerHWVersion	UInt16	-3		R	PowerBoardHardware Vesion	无效值：0xFFFF

Address	SIZE(Word)	Register name	Data types	Ratio	Unit	attribute	Register description	notes
8F00H	1	Type	UInt16	0		R	DeviceType	0x0055: AS2 series Single-phase high voltage AC coupled energy storage

								machine（AS2 3-6K S）
								0x0056: AS2 series Single-phase high voltage AC coupled energy storage machine（AS2 5-10K S）
								0x005A: H2 series Single-phase hybrid energy storage inverter （H2 3-6k S2）
								0x005B: H2 series Single-phase hybrid energy storage inverter （Three channel MPPT）(H2 5-10k S3）
								0x005C: HS2 series Single-phase high voltage dual channel hybrid energy storage integrated machine （HS2 3-6K S2）
								0x005D:HS2 series Single-phase high voltage three channel hybrid storage integrated machine（HS2 5-10K S3）
8F01H	1	SubType	UInt16			R	power	The power section
8F02H	1	CommPro Version	UInt16	-3		R	Comms Protocol Version	
8F03H	10	SN	String(20)			R	SerialNumber	Invalid values: 0x00
8F0DH	10	PC	String(20)			R	ProductCode	Invalid values: 0x00
8F17H	1	DV	UInt16	-3		R	Display Software Version	Invalid values: 0xFFFF
8F18H	1	MCV	UInt16	-3		R	Master Ctrl Software Version	Invalid values: 0xFFFF

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
8F19H	1	SCV	UInt16	−3		R	Slave Ctrl Software Version	Invalid values: 0xFFFF
8F1AH	1	DispHW Version	UInt16	−3		R	DispBoardHardware Version	Invalid values: 0xFFFF
8F1BH	1	CtrlHW Version	UInt16	−3		R	CtrlBoardHardware Version	Invalid values: 0xFFFF
8F1CH	1	PowerHW Version	UInt16	−3		R	PowerBoardHardware Vesion	Invalid values: 0xFFFF

4.2 Peripheral_Information 寄存器定义（选读）Peripheral_Information register definition(read section)

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
8E00H	1	BMS1_type	UInt16			R	BMS1 类型	0：不使用电池 2：铅酸 20:dyness (DYNESS-H) 大秦 21:pylon (SC0500) 派能 22 B2_can
8E01H	8	BMS1_SN	String(16)			R	BMS 1 SN	
8E09H	1	BMS1_software_Version	UInt16	−3		R	BMS 软件版本 1	
8E0AH	1	BMS1_hardware_Version	UInt16	−3		R	BMS 硬件版本 1	
8E0BH	1	BAT1_type	UInt16			R	电池 1 类型	1:50AH;2:80AH;3:100AH
8E0CH	8	BAT1_SN	String(16)			R	电池组 1SN	
8E14H	1	BMS2_type	UInt16			R	BMS2 类型	
8E15H	8	BMS2_SN	String(16)			R	BMS 2 SN	
8E1DH	1	BMS2_software_Version	UInt16	−3		R	BMS 软件版本 2	
8E1EH	1	BMS2_hardware_Version	UInt16	−3		R	BMS 硬件版本 2	
8E1FH	1	BAT2_type	UInt16			R	电池 2 类型	1:50AH;2:80AH;3:100AH
8E20H	8	BAT2_SN	String(16)			R	电池组 2SN	
8E28H	1	BMS3_type	UInt16			R	BMS3 类型	
8E29H	8	BMS3_SN	String(16)			R	BMS 3 SN	
8E31H	1	BMS3_software_Version	UInt16	−3		R	BMS 软件版本 3	
8E32H	1	BMS3_hardware_Version	UInt16	−3		R	BMS 硬件版本 3	
8E33H	1	BAT3_type	UInt16			R	电池 3 类型	1:50AH;2:80AH;3:100AH
8E34H	8	BAT3_SN	String(16)			R	电池组 3SN	

Address	SIZE (Word)	Register name	Data types	Ratio	Unit	Attribute	Register description	Notes
8E3CH	1	BMS4_type	UInt16			R	BMS4 类型	
8E3DH	8	BMS4_SN	String(16)			R	BMS 4 SN	
8E45H	1	BMS4_software_Version	UInt16	-3		R	BMS 软件版本 4	
8E46H	1	BMS4_hardware_Version	UInt16	-3		R	BMS 硬件版本 4	
8E47H	1	BAT4_type	UInt16			R	电池 4 类型	1:50AH;2:80AH;3:100AH
8E48H	8	BAT4_SN	String(16)			R	电池组 4SN	
8E50H	1	BMS5_type	UInt16			R	BMS5 类型	
8E51H	8	BMS5_SN	String(16)			R	BMS 5 SN	
8E59H	1	BMS5_software_Version	UInt16	-3		R	BMS 软件版本 5	
8E5AH	1	BMS5_hardware_Version	UInt16	-3		R	BMS 硬件版本 5	
8E5BH	1	BAT5_type	UInt16			R	电池 5 类型	1:50AH;2:80AH;3:100AH
8E5CH	8	BAT5_SN	String(16)			R	电池组 5SN	

Address	SIZE (Word)	Register name	Data types	Ratio	Unit	Attribute	Register description	Notes
8E00H	1	BMS1_type	UInt16			R	BMS1 type	0: Non-used Battery 2: lead-acid 20:dyness (DYNESS-H) Da Qing 21:pylon (SC0500) Paineng 22 B2_can
8E01H	8	BMS1_SN	String(16)			R	BMS 1 SN	
8E09H	1	BMS1_software_Version	UInt16	-3		R	BMSsoftware version1	
8E0AH	1	BMS1_hardware_Version	UInt16	-3		R	BMShardware version1	
8E0BH	1	BAT1_type	UInt16			R	Battery1 type	1:50AH;2:80AH;3:100AH
8E0CH	8	BAT1_SN	String(16)			R	Battery pack1SN	
8E14H	1	BMS2_type	UInt16			R	BMS2 type	
8E15H	8	BMS2_SN	String(16)			R	BMS 2 SN	
8E1DH	1	BMS2_software_Version	UInt16	-3		R	BMSsoftware version2	
8E1EH	1	BMS2_hardware_Version	UInt16	-3		R	BMShardware version2	
8E1FH	1	BAT2_type	UInt16			R	Battery2 type	1:50AH;2:80AH;3:100AH
8E20H	8	BAT2_SN	String(16)			R	Battery pack2SN	
8E28H	1	BMS3_type	UInt16			R	BMS3 type	
8E29H	8	BMS3_SN	String(16)			R	BMS 3 SN	
8E31H	1	BMS3_software_Version	UInt16	-3		R	BMSsoftware version3	
8E32H	1	BMS3_hardware_Version	UInt16	-3		R	BMShardware	

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
8E33H	1	BAT3_type	UInt16			R	Battery3 type	1:50AH;2:80AH;3:100AH
8E34H	8	BAT3_SN	String(16)			R	Battery pack3SN	
8E3CH	1	BMS4_type	UInt16			R	BMS4 type	
8E3DH	8	BMS4_SN	String(16)			R	BMS 4 SN	
8E45H	1	BMS4_software_Version	UInt16	-3		R	BMSsoftware version4	
8E46H	1	BMS4_hardware_Version	UInt16	-3		R	BMShardware version4	
8E47H	1	BAT4_type	UInt16			R	Battery4 type	1:50AH;2:80AH;3:100AH
8E48H	8	BAT4_SN	String(16)			R	Battery pack 4SN	
8E50H	1	BMS5_type	UInt16			R	BMS5 type	
8E51H	8	BMS5_SN	String(16)			R	BMS 5 SN	
8E59H	1	BMS5_software_Version	UInt16	-3		R	BMSsoftware version5	
8E5AH	1	BMS5_hardware_Version	UInt16	-3		R	BMShardware version5	
8E5BH	1	BAT5_type	UInt16			R	Battery 5 type	1:50AH;2:80AH;3:100AH
8E5CH	8	BAT5_SN	String(16)			R	Battery pack 5SN	

4.3Realtime Data 寄存器定义 Realtime Data register definition

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
4000H	4	Time	HEX	0		R	逆变器当前时间	格式 yyyyMMddHHmmsszz yyyy:年份 MM：月份 dd:日期 HH：时（24 小时制） mm:分 ss:秒 zz:保留位 2015-1-2 10:11:12 对应的数据为 07DF 01 02 0A 0B 0C 00

其中备注说明 version3 出现在表格上方第一行。

4004H	1	MPVMode	Uint 16			R	逆变器工作模式	0 ：初始化 1 ：等待 2 ：运行 3 ：离网模式，储能用 4 ：电网带载模式，储能用 5 ：故障 6 ：升级 7 ：调试 8 ：自检 9 ：复位
4005H	2	HFaultMSG	Uint 32			R	显示板/从机错误消息	
4007H	2	MFaultMSG	Uint 32			R	主控制器错误消息	
4009H	2	MFaultMSG2	Uint 32			R	主控制器错误消息2	
400BH	2	BMSFaultMSG	Uint 32			R	BMS 错误消息	
400DH	2	Reserve					保留	
400FH	1	Error_Count	Uint 16	0		R	逆变器错误警告信息条数	
4010H	1	SinkTempC	Int16	−1	℃	R	扇热器温度	
4011H	1	AmbTempC	Int16	−1	℃	R	环境温度	
4012H	1	GFCI	Int16	0	mA	R	对地漏电流	
4013H	1	ISO1	UInt 16	0	kΩ	R	PV1+_ISO	
4014H	1	ISO2	UInt 16	0	kΩ	R	PV2+_ISO	
4015H	1	ISO3	UInt 16	0	kΩ	R	PV3+_ISO	0xffff
4016H	1	ISO4	UInt 16	0	kΩ	R	PV_ISO	
4017H	1	DRM_HardwareStatus	Uint16	0		R	DRM 硬件状态位	每位为1表示相应的DRM端口被触发： Bit0 为 1 表示 DRM0 端口被触发 Bit1 为 1 表示 DRM1 端口被触发 … 例如，0x0003 表示 DRM0 和 DRM1 已触发

地址	数量	名称	类型	倍率	单位	读写	描述	备注
4018H	1	DRM_SoftwareStatus	Uint16	0		R	DRM 软件状态位	每位为 1 表示相应的 DRM 被触发： Bit0 为 1 表示 DRM0 被触发 Bit1 为 1 表示 DRM1 被触发 … 此寄存器为 DRMSoftwareControl 寄存器的设置结果，但是受 DRM_HardwareStatus 寄存器限制，只要 DRM_HardwareStatus 寄存器值不为 0，此寄存器的值一直为 0，且 DRMSoftwareControl 寄存器的设置无效；
4019H	1	ConnTime	Uint16	0	S	R	并网倒计时	
401AH	1	ErrorDataSN	Uint16	0		R	故障记录区流水号	故障记录区故障的流水号，每新增一条故障，则流水号加 1； 如果流水号计数累计到最大值 60000，再有新增一条故障时，流水号变为 1； 默认值：0 最大值：60000
401BH	1	SettingDataSN	Uint16	0		R	设置参数区流水号	设置区数据有变化+1
401CH	6	Running_data	Uint16	0		R		透传信息（用于控制板的扩展信息添加）
4031H	1	RGridVolt	Uint16	−1	V	R	R 相电网电压	三相电网
4032H	1	RGridCurr	Int16	−2	A	R	R 相电网电流	
4033H	1	RGridFreq	Uint16	−2	Hz	R	R 相电网频率	
4034H	1	RGridDCI	Int16	0	mA	R	R 相电网直流分量	
4035H	1	RGridPowerWatt	Int16	0	W	R	R 相电网有功功率	
4036H	1	RGridPowerVA	Uint16	0	W	R	R 相电网视在功率	
4037H	1	RGridPowerPF	Int16	−3		R	R 相电网功率因数	
4046H	1	RInvVolt	Uint16	−1	V	R	R 相逆变电压	逆变
4047H	1	RInvCurr	Int16	−2	A	R	R 相逆变电流	
4048H	1	RInvFreq	Uint	−	Hz	R	R 相逆变频率	

			16	2				
4049H	1	RInvPowerWatt	Int16	0	W	R	R 相逆变有功功率	
404AH	1	RInvPowerVA	Uint16	0	VA	R	R 相逆变视在功率	
4055H	1	ROutVolt	Uint16	−1	V	R	R 相输出电压	
4056H	1	ROutCurr	Uint16	−2	A	R	R 相输出电流	
4057H	1	ROutFreq	Uint16	−2	Hz	R	R 相输出频率	
4058H	1	ROutDVI	Int16	0	mV	R	R 相输出电压直流分量	输出
4059H	1	ROutPowerWatt	Uint16	0	W	R	R 相输出有功功率	
405AH	1	ROutPowerVA	Uint16	0	VA	R	R 相输出视在功率	
4067H	1	BusVoltMaster	Uint16	−1	V	R	主机 BUS 电压	Bus
4069H	1	BatVolt	Uint16	−1	V	R	电池电压	
406AH	1	BatCurr	Int16	−2	A	R	电池电流	
406DH	1	BatPower	Int16	0	W	R	电池功率	电池实时
406EH	1	BatTempC	Int16	−1	℃	R	电池温度	
406FH	1	BatEnergyPercent	Uint16	−2	%	R	电池电量	
4070H	1	Reserve	Uint16	0		R	保留	
4071H	1	PV1Volt	UInt16	−1	V	R	PV1 电压	PV
4072H	1	PV1Curr	UInt16	−2	A	R	PV1 总电流	
4073H	1	PV1Power	UInt16	0	W	R	PV1 功率	
4074H	1	PV2Volt	UInt16	−1	V	R	PV2 电压	
4075H	1	PV2Curr	UInt16	−2	A	R	PV2 总电流	
4076H	1	PV2Power	UInt16	0	W	R	PV2 功率	
4077H	1	PV3Volt	UInt16	−1	V	R	PV3 电压	
4078H	1	PV3Curr	UInt	−	A	R	PV3 总电流	

			16	2				
4079H	1	PV3Power	UInt16	0	W	R	PV3 功率	
408DH	1	OnGridOutVolt	Uint16	−1	V	R	并网侧电压	网侧
408EH	1	OnGridOutCurr	Uint16	−2	A	R	并网侧电流	
408FH	1	OnGridOutFreq	Uint16	−2	Hz	R	并网侧频率	
4090H	1	OnGridOutPowerWatt	Uint16	0	W	R	并网侧有功功率	
4091H	1	OnGridOutPowerVA	Uint16	0	VA	R	并网侧视在功率	
4092H	3	Reserve	Uint16	0		R	保留	
4095H	1	PV_direction	Uint16	0		R	PV 能量流动方向	1：PV 能量流动 0：PV 无输出
4096H	1	Battery_direction	int16	0		R	电池能量流动方向	1：电池放电 0：无电池能量流动 -1：电池充电
4097H	1	Grid_direction	int16	0		R	电网能量流动方向	1：电网卖电 0：无电网能量流动 -1：电网买电
4098H	1	OutPut_direction	Uint16	0		R	输出到负载能量流动方向	1：输出到负载 0：无输出能量流动
40A0H	1	SysTotalLoadWatt	Int16	0	W	R	系统总负载消耗功率	
40A1H	1	CT_GridPowerWatt	int16	0	W	R	CT 电网有功功率	内部 CT 采集
40A2H	1	CT_GridPowerVA	int16	0	VA	R	CT 电网视在功率	
40A3H	1	CT_PVPowerWatt	int16	0	W	R	CT PV 有功功率	
40A4H	1	CT_PVPowerVA	int16	0	VA	R	CT PV 视在功率	
40A5H	1	TotalPVPower	Int16	0	W	R	PV 总功率	
40A6H	1	TotalBatteryPower	Int16	0	W	R	电池总功率	大于 0 时，电池放电，小于 0，电池充电
40A7H	1	TotalGridPowerWatt	Int16	0	W	R	电网总有功功率	
40A8H	1	TotalGridPowerVA	Int16	0	VA	R	电网总视在功率	
40A9H	1	TotalInvPowerWatt	Int16	0	W	R	逆变总有功功率	
40AAH	1	TotalInvPowerVA	Int1	0	VA	R	逆变总视在功率	

			6					
40ABH	1	BackupTotalLoadPowerWatt	Uint16	0	W	R	Backup 总负载有功功率	
40ACH	1	BackupTotalLoadPowerVA	Uint16	0	VA	R	Backup 总负载视在功率	
40ADH	1	SysGridPowerWall	Int16	0	W	R	系统电网有功功率	大于 0 时，机器买电，小于 0，机器卖电
40B0H	1							
40B1H	11	Reserve	Uint16	0		R	保留	
40BCH	1	Today_Hour	Uint16	−1	H	R	PV 并网日发电时间	
40BDH	2	Total_Hour	Uint32	−1	H	R	PV 并网总发电时间	
40BFH	2	Today_PVEnergy	Uint32	−2	Kwh	R	日 PV 发电量	PV1 发电量
40C1H	2	Month_PVEnergy	Uint32	−2	Kwh	R	月 PV 发电量	
40C3H	2	Year_PVEnergy	Uint32	−2	Kwh	R	年 PV 发电量	
40C5H	2	Total_PVEnergy	Uint32	−2	Kwh	R	总 PV 发电量	
40C7H	2	Today_BatChgEnergy	Uint32	−2	Kwh	R	日电池充电电量	电池充电
40C9H	2	Month_BatChgEnergy	Uint32	−2	Kwh	R	月电池充电电量	
40CBH	2	Year_BatChgEnergy	Uint32	−2	Kwh	R	年电池充电电量	
40CDH	2	Total_BatChgEnergy	Uint32	−2	Kwh	R	总电池充电电量	
40CFH	2	Today_BatDisEnergy	Uint32	−2	Kwh	R	日电池放电电量	电池放电
40D1H	2	Month_BatDisEnergy	Uint32	−2	kwh	R	月电池放电电量	
40D3H	2	Year_BatDisEnergy	Uint32	−2	Kwh	R	年电池放电电量	
40D5H	2	Total_BatDisEnergy	Uint32	−2	Kwh	R	总电池放电电量	
40D7H	2	Today_InvGenEnergy	Uint32	−2	Kwh	R	日逆变电量	逆变电量
40D9H	2	Month_InvGenEnergy	Uint32	−2	Kwh	R	月逆变电量	
40DBH	2	Year_InvGenEnergy	Uint32	−2	kwh	R	年逆变电量	
40DDH	2	Total_InvGenEnergy	Uint32	−2	Kwh	R	总逆变电量	

Address	SIZE(Word)	Register name	Data type	Ratio	Unit	attribute	Register description	Notes
40DFH	2	Today_TotalLoadEnergy	Uint32	−2	Kwh	R	日总负载消耗电量	系统负载消耗电量
40E1H	2	Month_TotalLoadEnergy	Uint32	−2	Kwh	R	月总负载消耗电量	
40E3H	2	Year_TotalLoadEnergy	Uint32	−2	Kwh	R	年总负载消耗电量	
40E5H	2	Total_TotalLoadEnergy	Uint32	−2	Kwh	R	总总负载消耗电量	
40E7H	2	Today_BackupLoadEnergy	Uint32	−2	Kwh	R	日 BackUp 负载消耗电量	Backup 负载消耗电量
40E9H	2	Month_BackupLoadEnergy	Uint32	−2	Kwh	R	月 BackUp 负载消耗电量	
40EBH	2	Year_BackupLoadEnergy	Uint32	−2	Kwh	R	年 BackUp 负载消耗电量	
40EDH	2	Total_BackupLoadEnergy	Uint32	−2	Kwh	R	总 BackUp 负载消耗电量	
40EFH	2	Today_SellEnergy	Uint32	−2	kwh	R	日系统卖电量	（R 相电网 CT 采集）卖电量 旧版本是 并网发电量
40F1H	2	Month_SellEnergy	Uint32	−2	Kwh	R	月系统卖电量	
40F3H	2	Year_SellEnergy	Uint32	−2	Kwh	R	年系统卖电量	
40F5H	2	Total_SellEnergy	Uint32	−2	Kwh	R	总系统卖电量	
40F7H	2	Today_FeedInEnergy	Uint32	−2	Kwh	R	日系统买电量	（R 相电网 CT 采集）买电量 旧版本是 电网馈入电量
40F9H	2	Month_FeedInEnergy	Uint32	−2	Kwh	R	月系统买电量	
40FBH	2	Year_FeedInEnergy	Uint32	−2	Kwh	R	年系统买电量	
40FDH	2	Total_FeedInEnergy	Uint32	−2	Kwh	R	总系统买电量	

Address	SIZE(Word)	Register name	Data type	Ratio	Unit	attribute	Register description	Notes
4000H	4	Time	HEX	0		R	Current time in register	format yyyyMMddHHmmsszz yyyy: year MM: month dd: date HH: hour（24-hour） mm: minute ss: second zz: reserved bits 2015-1-2 10:11:12 corresponding 07DF 01 02 0A 0B 0C 00

4004H	1	MPVMode	Uint16			R	Inverter working mode	0 : Initialization 1 : Waiting 2 : Running 3 : Offnet mode, used for energy storage 4 : Grid on-load mode, used for energy storage 5 : Fault 6 : Update 7 : Test 8 : Self-checking 9 : Reset
4005H	2	HFaultMSG	Uint32			R	Display board/slave error message	
4007H	2	MFaultMSG	Uint32			R	Master controller error message	
4009H	2	MFaultMSG2	Uint32			R	Master controller error message 2	
400BH	2	Reserve				R	BMS error message	
400DH	2	Reserve				R	Reserve	
400FH	1	Error_Count	Uint16	0		R	Number of inverter error warning message	
4010H	1	SinkTempC	Int16	−1	℃	R	Temperature of radiator	
4011H	1	AmbTempC	Int16	−1	℃	R	Environment temperature	
4012H	1	GFCI	Int16	0	mA	R	Electric leakage to the flood	
4013H	1	ISO1	UInt16	0	kΩ	R	PV1+_ISO	
4014H	1	ISO2	UInt16	0	kΩ	R	PV2+_ISO	
4015H	1	ISO3	UInt16	0	kΩ	R	PV3+_ISO	0xffff
4016H	1	ISO4	UInt16	0	kΩ	R	PV__ISO	
4017H	2						Reserved bit	
4019H	1	ConnTime	Uint16	0	S	R	Countdown for grid connection	
401AH	1	ErrorDataSN	Uint16	0		R	Serial number of the fault recording area	Serial number of fault in the fault recording area. For each new fault, the serial number is increased by 1. If the serial number reaches the maximum value of 60000 and another fault is added, the serial number becomes 1;

							R	The default value: 0 Maximum: 60000
401BH	1	SettingDataSN	Uint16	0		R	Serial number of the parameter setting area	If the data in the Settings area has changed +1
401CH	6	Running_data	Uint16	0		R		Pass-through information (for extended information addition to the control board)
4022H	1	SetAppMode	Int16	0		R	Inverter sets the application mode	0=self-using, 1=separate time, 2=For electricity, 3=passivity
4027H	1	BatStatusDisp	Uint16	0		R	Battery working status	normal, Prohibit charging, Prohibyted discharge , Prohibyted charging and discharge, strength charge, waked
4028H	1	BatProtocolSet	Int16	0		R	Battery protocol	0: No using battery 1: Zheng Tai485(deleted) 2: plumbic acid 3: SAJ-CAN 4: DYNESS-48V 5: Guo Neng 485(deleted) 6: GH_485 7: GH_CAN 8: Pai Neng CAN 9: WECO 10:UZ_CAN 11:easyLi-CAN 12:DYNESS-51V 13:SAJ_B2 20:dyness (DYNESS-H) Da Qing 21:pylon (SC0500) Pai Neng 22 saj_can
4029H	1	BatChgSocUpLimit	Int16	0	%	R	Battery set SOC_H	0-100
402AH	1	BatDisSocDowLimit	Int16	0	%	R	Battery set SOC_L	0-100
402BH	1	BatDODSet	Int16	0	%	R	Set battery DOD	0-100
402CH	1	BatResSoc	Int16	0	%	R	Set the reserved SOC value of the battery	0-100
4030H	1	MeterModeSet	Int16	0		R	Meter mode which was set	0: forbid 1: A single phase meter 2: A three-phase electric meter
4031H	1	RGridVol	Uint16	-1	V	R	R phase grid	Three-phase power grid

		t			V		voltage	
4032H	1	RGridCurr	Int16	-2	A	R	R phase grid current	
4033H	1	RGridFreq	Uint16	-2	Hz	R	R phase grid frequency	
4034H	1	RGridDCI	Int16	0	mA	R	R phase grid DC component	
4035H	1	RGridPowerWatt	Int16	0	W	R	R phase grid active power	
4036H	1	RGridPowerVA	Uint16	0	W	R	R phase grid apparent power	
4037H	1	RGridPowerPF	Int16	-3		R	R phase grid power factor	
4038H	1	SGridVolt	Uint16	-1	V	R	S-phase grid voltage	
4039H	1	SGridCurr	Int16	-2	A	R	S-phase grid current	
403AH	1	SGridFreq	Uint16	-2	Hz	R	S-phase grid frequency	
403BH	1	SGridDCI	Int16	0	mA	R	S-phase grid DC component	
403CH	1	SGridPowerWatt	Int16	0	W	R	S-phase grid active power	
403DH	1	SGridPowerVA	Uint16	0	W	R	Apparent power of S-phase grid	
403EH	1	SGridPowerPF	Int16	-3		R	S-phase grid power factor	
403FH	1	TGridVolt	Uint16	-1	V	R	T phase grid voltage	
4040H	1	TGridCurr	Int16	-2	A	R	T-phase grid current	
4041H	1	TGridFreq	Uint16	-2	Hz	R	T-phase grid frequency	
4042H	1	TGridDCI	Int16	0	mA	R	Dc component of T-phase grid	
4043H	1	TGridPowerWatt	Int16	0	W	R	T phase grid active power	
4044H	1	TGridPowerVA	Uint16	0	W	R	Apparent power of T-phase grid	
4045H	1	TGridPowerPF	Int16	-3		R	T-phase grid power factor	
4046H	1	RInvVolt	Uint16	-1	V	R	R phase inverter voltage	
4047H	1	RInvCurr	Int16	-2	A	R	R phase inverse current	inverter
4048H	1	RInvFreq	Uint16	-2	Hz	R	R phase inverter	

							frequency	
4049H	1	RInvPowerWatt	Int16	0	W	R	R phase inverting active power	
404AH	1	RInvPowerVA	Uint16	0	VA	R	R phase inverting apparent power	
404BH	1	SInvVolt	Uint16	-1	V	R	S phase inverter voltage	
404CH	1	SInvCurr	Int16	-2	A	R	S phase inverter current	
404DH	1	SInvFreq	Uint16	-2	Hz	R	S phase inverter frequency	
404EH	1	SInvPowerWatt	Int16	0	W	R	S-phase inverse active power	
404FH	1	SInvPowerVA	Uint16	0	VA	R	S-phase inverting apparent power	
4050H	1	TInvVolt	Uint16	-1	V	R	T phase inverting voltage	
4051H	1	TInvCurr	Int16	-2	A	R	T phase inverse current	
4052H	1	TInvFreq	Uint16	-2	Hz	R	T-phase inverting frequency	
4053H	1	TInvPowerWatt	Int16	0	W	R	T phase inverting active power	
4054H	1	TInvPowerVA	Uint16	0	VA	R	T-phase inverting apparent power	
4055H	1	ROutVolt	Uint16	-1	V	R	R phase output voltage	
4056H	1	ROutCurr	Uint16	-2	A	R	R phase output current	
4057H	1	ROutFreq	Uint16	-2	Hz	R	R phase output frequency	
4058H	1	ROutDVI	Int16	0	mV	R	R phase output voltage DC component	
4059H	1	ROutPowerWatt	Uint16	0	W	R	The R phase outputs active power	Off-grid output
405AH	1	ROutPowerVA	Uint16	0	VA	R	R phase output apparent power	
405BH	1	SOutVolt	Uint16	-1	V	R	S phase output voltage	
405CH	1	SOutCurr	Uint16	-2	A	R	S phase output current	
405DH	1	SOutFreq	Uint16	-2	Hz	R	S phase output frequency	
405EH	1	SOutDVI	Int16	0	mV	R	S phase output	

							voltage DC component	
405FH	1	SOutPowerWatt	Uint16	0	W	R	S phase output active power	
4060H	1	SOutPowerVA	Uint16	0	VA	R	S-phase output apparent power	
4061H	1	TOutVolt	Uint16	-1	V	R	T phase output voltage	
4062H	1	TOutCurr	Uint16	-2	A	R	T phase output current	
4063H	1	TOutFreq	Uint16	-2	Hz	R	T phase output frequency	
4064H	1	TOutDVI	Int16	0	mV	R	T phase output voltage DC component	
4065H	1	TOutPowerWatt	Uint16	0	W	R	T phase output active power	
4066H	1	TOutPowerVA	Uint16	0	VA	R	T phase output apparent power	
4067H	1	BusVoltMaster	Uint16	-1	V	R	Host BUS voltage	Bus
4068H	1	BusVoltSlave	Uint16	-1	V	R	Slave BUS voltage	
4069H	1	BatVolt	Uint16	-1	V	R	The battery voltage	Battery on live
406AH	1	BatCurr	Int16	-2	A	R	The battery current	
406BH	1	BatCurr1	Int16	-2	A	R	Battery controller 1 Current	
406CH	1	BatCurr2	Int16	-2	A	R	Battery controller 2 Current	
406DH	1	BatPower	Int16	0	W	R	The battery power	
406EH	1	BatTempC	Int16	-1	℃	R	Battery temperature	
406FH	1	BatEnergyPercent	Uint16	-2	%	R	Battery electri	
4070H	1	Reserve	Uint16	0		R	Reserve	
4071H	1	PV1Volt	UInt16	-1	V	R	PV1 voltage	PV
4072H	1	PV1Curr	UInt16	-2	A	R	Total current PV1	
4073H	1	PV1Power	UInt16	0	W	R	PV1 power	
4074H	1	PV2Volt	UInt16	-1	V	R	PV2 voltage	
4075H	1	PV2Curr	UInt16	-2	A	R	Total current PV2	
4076H	1	PV2Power	UInt16	0	W	R	PV2 power	
4077H	1	PV3Volt	UInt16	-1	V	R	PV3 voltage	

4078H	1	PV3Curr	UInt16	-2	A	R	PV3 total current	
4079H	1	PV3Power	UInt16	0	W	R	PV3 power	
407AH	1	PV4Volt	UInt16	-1	V	R	PV4 voltage	
407BH	1	PV4Curr	UInt16	-2	A	R	PV4 total current	
407CH	1	PV4Power	UInt16	0	W	R	PV4 power	
408DH	1	ROnGridOutVolt	Uint16	-1	V	R	R phase grid-connected side voltage	Side net
408EH	1	ROnGridOutCurr	Uint16	-2	A	R	Side current of R phase grid-connected	
408FH	1	ROnGridOutFreq	Uint16	-2	Hz	R	Side frequency of R phase grid-connected	
4090H	1	ROnGridOutPowerWatt	Uint16	0	W	R	Side active power of R phase grid-connected	
4091H	1	SOnGridOutVolt	Uint16	-2	A	R	Side voltage of S phase grid-connected	
4092H	1	SOnGridOutPowerWatt	Uint16	0	W	R	Side active power of S phase on the grid-connected	
4093H	1	TOnGridOutVolt	Uint16	-2	A	R	T phase grid-connected side voltage	
4094H	1	TOnGridOutPowerWatt	Uint16	0	W	R	T active power on the grid-connected side	
4095H	1	PV_direction	Uint16	0		R	PV Direction of energy flow	1: PV energy flow 0: PV no output
4096H	1	Battery_direction	int16	0		R	Direction of battery energy flow	1: The battery discharge 0: No battery energy flow -1: The battery charge
4097H	1	Grid_direction	int16	0		R	Direction of grid energy flow	1: Grid output 0: No grid energy flow -1: Grid input
4098H	1	OutPut_direction	Uint16	0		R	Direction of energy flow from output to load	1: from output to load 0: no output energy flow
40A0H	1	SysTotalLoadWatt	Int16	0	W	R	The total system load consumes power	
40A1H	1	CT_GridPowerWatt	int16	0	W	R	CT real power of the grid	Internal CT acquisition

40A2H	1	CT_GridPowerVA	int16	0	VA	R	CT Apparent power of the grid	
40A3H	1	CT_PVPowerWatt	int16	0	W	R	CT PV real power	
40A4H	1	CT_PVPowerVA	int16	0	VA	R	CT PV Apparent power	
40A5H	1	TotalPVPower	Int16	0	W	R	PV total power	
40A6H	1	TotalBatteryPower	Int16	0	W	R	Battery total power	
40A7H	1	TotalGridPowerWatt	Int16	0	W	R	Grid total real power	
40A8H	1	TotalGridPowerVA	Int16	0	VA	R	Grid total apparent power	
40A9H	1	TotalInvPowerWatt	Int16	0	W	R	Inverter total real power	
40AAH	1	TotalInvPowerVA	Int16	0	VA	R	Inverter total apparent power	
40ABH	1	BackupTotalLoadPowerWatt	Uint16	0	W	R	Backup total load real power	
40ACH	1	BackupTotalLoadPowerVA	Uint16	0	VA	R	Backup total load apparent power	
40ADH	1	SysGridPowerWall	Int16	0	W	R	Gird system real power	
40B0H	12	Reserve	Uint16	0		R	reserver	
40BCH	1	Today_Hour	Uint16	-1	H	R	PV Grid-connected day generation time	
40BDH	2	Total_Hour	Uint32	-1	H	R	PV Total grid-connected generation time	
40BFH	2	Today_PVEnergy	Uint32	-2	Kwh	R	PV daily output	PV1 output
40C1H	2	Month_PVEnergy	Uint32	-2	Kwh	R	PV monthly output	
40C3H	2	Year_PVEnergy	Uint32	-2	Kwh	R	PV annual output	
40C5H	2	Total_PVEnergy	Uint32	-2	Kwh	R	PV total output	
40C7H	2	Today_BatChgEner	Uint32	-2	Kwh	R	Daily battery charge	Battery charge

		gy						
40C9H	2	Month_BatChgEnergy	Uint32	-2	Kwh	R	Monthly battery charge	
40CBH	2	Year_BatChgEnergy	Uint32	-2	Kwh	R	Annual battery charge	
40CDH	2	Total_BatChgEnergy	Uint32	-2	Kwh	R	Total battery charge	
40CFH	2	Today_BatDisEnergy	Uint32	-2	Kwh	R	Daily battery discharge quantity	Battery discharge
40D1H	2	Month_BatDisEnergy	Uint32	-2	kwh	R	Monthly battery discharge quantity	
40D3H	2	Year_BatDisEnergy	Uint32	-2	Kwh	R	Annual battery discharge quantity	
40D5H	2	Total_BatDisEnergy	Uint32	-2	Kwh	R	Total battery discharge power	
40D7H	2	Today_InvGenEnergy	Uint32	-2	Kwh	R	Daily inverse electricity	Inverter power
40D9H	2	Month_InvGenEnergy	Uint32	-2	Kwh	R	Monthly inverse electricity	
40DBH	2	Year_InvGenEnergy	Uint32	-2	kwh	R	Annual inverse electricity	
40DDH	2	Total_InvGenEnergy	Uint32	-2	Kwh	R	Total inverse power	
40DFH	2	Today_TotalLoadEnergy	Uint32	-2	Kwh	R	Total daily load power consumption	The system load consumes power
40E1H	2	Month_TotalLoadEnergy	Uint32	-2	Kwh	R	Total monthly load power consumption	
40E3H	2	Year_TotalLoadEnergy	Uint32	-2	Kwh	R	Annual total load power consumption	
40E5H	2	Total_TotalLoadEnergy	Uint32	-2	Kwh	R	Total load consumes power	

40E7H	2	Today_BackupLoadEnergy	Uint32	-2	Kwh	R	BackUp daily load consumes power	Backup load consumes power
40E9H	2	Month_BackupLoadEnergy	Uint32	-2	Kwh	R	BackUp monthly load consumes power	
40EBH	2	Year_BackupLoadEnergy	Uint32	-2	Kwh	R	BackUp annual load consumes power	
40EDH	2	Total_BackupLoadEnergy	Uint32	-2	Kwh	R	BackUp total load consumes power	
40EFH	2	Today_SellEnergy	Uint32	-2	kwh	R	Daily system sells electricity	R phase grid sells electricity
40F1H	2	Month_SellEnergy	Uint32	-2	Kwh	R	Monthly system sells electricity	
40F3H	2	Year_SellEnergy	Uint32	-2	Kwh	R	Annual system sells electricity	
40F5H	2	Total_SellEnergy	Uint32	-2	Kwh	R	Total system sells electricity	
40F7H	2	Today_FedInEnergy	Uint32	-2	Kwh	R	Daily system buys electricity	R phase grid buys electricity
40F9H	2	Month_FedInEnergy	Uint32	-2	Kwh	R	Monthly system buys electricity	
40FBH	2	Year_FedInEnergy	Uint32	-2	Kwh	R	Annual system buys electricity	
40FDH	2	Total_FedInEnergy	Uint32	-2	Kwh	R	Total system buys electricity	
4137H	2	Today_PVEnergy2	Uint32	-2	Kwh	R	Daily PV2 Power generation	PV2 power generation
4139H	2	Month_PVEnergy2	Uint32	-2	Kwh	R	Monthly PV2 Power generation	
413BH	2	Year_PVEnergy2	Uint32	-2	Kwh	R	Annual PV2 Power generation	
413DH	2	Total_PVEnergy2	Uint32	-2	Kwh	R	Total PV2 Power generation	
413FH	2	Today_PVEnergy3	Uint32	-2	Kwh	R	Daily PV3 Power generation	PV3 power generation
4141H	2	Month_PVEnergy3	Uint32	-2	Kwh	R	Monthly PV3 Power generation	
4143H	2	Year_PVEnergy3	Uint32	-2	Kwh	R	Annual PV3 Power generation	

4145H	2	Total_PV Energy3	Uint32	-2	Kw h	R	Total PV3 Power generation	
4147H	2	Today_Se llEnergy 2	Uint32	-2	kw h	R	Daily amount of Grid2 electricity sold	S phase grid sells electricity
4149H	2	Month_Se llEnergy 2	Uint32	-2	Kw h	R	Monthly amount of Grid2 electricity sold	
414BH	2	Year_Sel lEnergy2	Uint32	-2	Kw h	R	Annual amount of Grid2 electricity sold	
414DH	2	Total_Se llEnergy 2	Uint32	-2	Kw h	R	Total amount of Grid2 electricity sold	
414FH	2	Today_Se llEnergy 3	Uint32	-2	kw h	R	Daily amount of Grid3 electricity sold	T phase grid sells electricity
4151H	2	Month_Se llEnergy 3	Uint32	-2	Kw h	R	Monthly amount of Grid3 electricity sold	
4153H	2	Year_Sel lEnergy3	Uint32	-2	Kw h	R	Annual amount of Grid3 electricity sold	
4155H	2	Total_Se llEnergy 3	Uint32	-2	Kw h	R	Total amount of Grid3 electricity sold	
4157H	2	Today_Fe edInEner gy2	Uint32	-2	Kw h	R	Daily amount of Grid2 electricity bought	S phase grid buys electricity
4159H	2	Month_Fe edInEner gy2	Uint32	-2	Kw h	R	Monthly amount of Grid2 electricity bought	
415BH	2	Year_Fee dInEnerg y2	Uint32	-2	Kw h	R	Annual amount of Grid2 electricity bought	
415DH	2	Total_Fe edInEner gy2	Uint32	-2	Kw h	R	Total amount of Grid2 electricity bought	
415FH	2	Today_Fe edInEner gy3	Uint32	-2	Kw h	R	Daily amount of Grid3 electricity bought	T phase grid buys electricity
4161H	2	Month_Fe edInEner gy3	Uint32	-2	Kw h	R	Monthly amount of Grid3 electricity bought	
4163H	2	Year_Fee dInEnerg	Uint32	-2	Kw h	R	Annual amount of Grid3 electricity	

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
		y3					bought	
4165H	2	Total_FeedInEnergy3	Uint32	-2	Kwh	R	Total amount of Grid3 electricity bought	

4.4peripheral device data 寄存器定义（选读） *Peripheral device data register definition (read section)*

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
A000H	1	BatNum	Uint16	0		R	电池数量	
A001H	1	BatCapcity	UInt16	0	AH	R	电池容量	
A002H	1	Bat1FaultMSG	Uint16	0		R	BMS 电池 1 故障信息	
A003H	1	Bat1WarnMSG	Uint16	0		R	BMS 电池 1 告警信息	
A004H	1	Bat2FaultMSG	Uint16	0		R	BMS 电池 2 故障信息	
A005H	1	Bat2WarnMSG	Uint16	0		R	BMS 电池 2 告警信息	
A006H	1	Bat3FaultMSG	Uint16	0		R	BMS 电池 3 故障信息	
A007H	1	Bat3WarnMSG	Uint16	0		R	BMS 电池 3 告警信息	
A008H	1	Bat4FaultMSG	Uint16	0		R	BMS 电池 4 故障信息	
A009H	1	Bat4WarnMSG	Uint16	0		R	BMS 电池 4 告警信息	
A00AH	1	BatUserCap	Uint16	0		R	可用容量	
A00BH	1	BatOnline	Uint16	0		R	电池在线位置信息	
A00CH	1	Bat1SOC	Uint16	-2	%	R	BMS 电池 1SOC	电池 BMS 信息
A00DH	1	Bat1SOH	Uint16	-2	%	R	BMS 电池 1SOH	
A00EH	1	Bat1Voltage	Uint16	-1	V	R	BMS 电池 1 电压	
A00FH	1	Bat1Current	int16	-2	A	R	BMS 电池 1 电流	
A010H	1	Bat1Temperature	int16	-1	℃	R	BMS 电池 1 温度	
A011H	1	Bat1CycleNum	Uint16	0		R	BMS 电池 1 循环次数	
A012H	1	Bat2SOC	Uint16	-2	%	R	BMS 电池 2SOC	
A013H	1	Bat2SOH	Uint16	-2	%	R	BMS 电池 2SOH	
A014H	1	Bat2Voltage	Uint16	-1	V	R	BMS 电池 2 电压	
A015H	1	Bat2Current	int16	-2	A	R	BMS 电池 2 电流	
A016H	1	Bat2Temperature	int16	-1	℃	R	BMS 电池 2 温度	

A017H	1	Bat2CycleNum	Uint16	0		R	BMS 电池 2 循环次数	
A018H	1	Bat3SOC	Uint16	−2	%	R	BMS 电池 3SOC	
A019H	1	Bat3SOH	Uint16	−2	%	R	BMS 电池 3SOH	
A01AH	1	Bat3Voltage	Uint16	−1	V	R	BMS 电池 3 电压	
A01BH	1	Bat3Current	int16	−2	A	R	BMS 电池 3 电流	
A01CH	1	Bat3Temperature	int16	−1	℃	R	BMS 电池 3 温度	
A01DH	1	Bat3CycleNum	Uint16	0		R	BMS 电池 3 循环次数	
A01EH	1	Bat4SOC	Uint16	−2	%	R	BMS 电池 4SOC	
A01FH	1	Bat4SOH	Uint16	−2	%	R	BMS 电池 4SOH	
A020H	1	Bat4Voltage	Uint16	−1	V	R	BMS 电池 4 电压	
A021H	1	Bat4Current	int16	−2	A	R	BMS 电池 4 电流	
A022H	1	Bat4Temperature	int16	−1	℃	R	BMS 电池 4 温度	
A023H	1	Bat4CycleNum	Uint16	0		R	BMS 电池 4 循环次数	
A02AH	1	Bat1DischarCapH	Uint16	0	kWh	R	电池组 1 放电总能量 H	
A02BH	1	Bat1DischarCapL	Uint16	0	kWh	R	电池组 1 放电总能量 L	
A02CH	1	Bat2DischarCapH	Uint16	0	kWh	R	电池组 2 放电总能量 H	
A02DH	1	Bat2DischarCapL	Uint16	0	kWh	R	电池组 2 放电总能量 L	
A02EH	1	Bat3DischarCapH	Uint16	0	kWh	R	电池组 3 放电总能量 H	
A02FH	1	Bat3DischarCapL	Uint16	0	kWh	R	电池组 3 放电总能量 L	
A030H	1	Bat4DischarCapH	Uint16	0	kWh	R	电池组 4 放电总能量 H	
A031H	1	Bat4DischarCapL	Uint16	0	kWh	R	电池组 4 放电总能量 L	
A032H	1	BatProtHigh	UInt16	-1	V	R	电池过高保护点	
A033H	1	BatProtLow	UInt16	-1	V	R	电池低压告警点	
A034H	1	Bat_Chagevoltage	UInt16	-1	V	R	充电电压（充电截止）	
A035H	1	Bat_DisCutOffVolt	UInt16	-1	V	R	放电截止电压	
A036H	1	BatDisCurrLimit	UInt16	-1	A	R	电池放电限制电流	
A037H	1	BatChaCurrLimit	UInt16	-1	A	R	电池充电限制电流	

A03CH	1	Meter_A_Status	Uint16	0		R	Meter 表 A 状态	0：不在线；1：在线
A03DH	1	Meter_A_Volt1	Uint16	−1	V	R	Meter_A_电压 1	
A03EH	1	Meter_A_Curr1	int16	−2	A	R	Meter_A_电流 1	
A03FH	1	Meter_A_PowerWatt1	int16	0	W	R	Meter 有功功率 1	
A040H	1	Meter_A_PowerVA1	Uint16	0	VA	R	Meter 视在功率 1	
A041H	1	Meter_A_PowerFactor1	Int16	−3		R	Meter_A_功率因数 1	
A042H	1	Meter_A_Freq1	Uint16	−2	Hz	R	Meter_A_频率 1	
A053H	1	Meter_B_Status	Uint16	0		R	Meter_B 表状态	0：不在线；1：在线
A054H	1	Meter_B_Volt1	Uint16	−1	V	R	Meter_B_电压 1	
A055H	1	Meter_B_Curr1	int16	−2	A	R	Meter_B_电流 1	
A056H	1	Meter_B_PowerWatt1	int16	0	W	R	Meter_B 有功功率 1	
A057H	1	Meter_B_PowerVA1	Uint16	0	VA	R	Meter_B 视在功率 1	
A058H	1	Meter_B_PowerFactor1	Int16	−3		R	Meter_B_功率因数 1	
A059H	1	Meter_B_Freq1	Uint16	−2	Hz	R	Meter_B_频率 1	
A05AH	1	Meter_B_Volt2	Uint16	−1	V	R	Meter_B_电压 2	
A05BH	1	Meter_B_Curr2	int16	−2	A	R	Meter_B_电流 2	
A05CH	1	Meter_B_PowerWatt2	int16	0	W	R	Meter_B 有功功率 2	
A05DH	1	Meter_B_PowerVA2	Uint16	0	VA	R	Meter_B 视在功率 2	
A05EH	1	Meter_B_PowerFactor2	Int16	−3		R	Meter_B_功率因数 2	
A05FH	1	Meter_B_Freq2	Uint16	−2	Hz	R	Meter_B_频率 2	
A060H	1	Meter_B_Volt3	Uint16	−1	V	R	Meter_B_电压 3	
A061H	1	Meter_B_Curr3	int16	−2	A	R	Meter_B_电流 3	
A062H	1	Meter_B_PowerWatt3	int16	0	W	R	Meter_B 有功功率 3	
A063H	1	Meter_B_PowerV	Uint16	0	VA	R	Meter_B 视在功率 3	

Address	SIZE (Word)	Register name	Data type	Ratio	Unit	attribute	Register description	notes
		A3						
A064H	1	Meter_B_PowerFactor3	Int16	−3		R	Meter_B_功率因数3	
A065H	1	Meter_B_Freq3	Uint16	−2	Hz	R	Meter_B_频率3	

Address	SIZE (Word)	Register name	Data type	Ratio	Unit	atribute	Register description	notes
A000H	1	BatNum	Uint16	0		R	Battery number	
A001H	1	BatCapcity	UInt16	0	AH	R	Battery capacity	
A002H	1	Bat1FaultMSG	Uint16	0		R	BMS battery 1 error information	
A003H	1	Bat1WarnMSG	Uint16	0		R	BMS battery 1 warning information	
A004H	1	Bat2FaultMSG	Uint16	0		R	BMS battery 2 error information	
A005H	1	Bat2WarnMSG	Uint16	0		R	BMS battery 2 warning information	
A006H	1	Bat3FaultMSG	Uint16	0		R	BMS battery 3 error information	
A007H	1	Bat3WarnMSG	Uint16	0		R	BMS battery 3 warning information	Battery BMS information
A008H	1	Bat4FaultMSG	Uint16	0		R	BMS battery 4 error information	
A009H	1	Bat4WarnMSG	Uint16	0		R	BMS battery 4 warning information	
A00AH	1	BatUserCap	Uint16	0		R	Available capacity	
A00BH	1	BatOnline	Uint16	0		R	Indicates the online battery position	
A00CH	1	Bat1SOC	Uint16	−2	%	R	BMS battery 1 SOC	
A00DH	1	Bat1SOH	Uint16	−2	%	R	BMS battery 1 SOH	
A00EH	1	Bat1Voltage	Uint16	−1	V	R	BMS battery1 voltage	
A00FH	1	Bat1Current	int16	−2	A	R	BMS battery 1 current	
A010H	1	Bat1Temperature	int1	−1	℃	R	Temperature of BMS	

			6				battery1	
A011H	1	Bat1CycleNum	Uint16	0		R	BMS battery 1 cycles	
A012H	1	Bat2SOC	Uint16	-2	%	R	BMS battery 2SOC	
A013H	1	Bat2SOH	Uint16	-2	%	R	BMS battery 2SOH	
A014H	1	Bat2Voltage	Uint16	-1	V	R	BMS battery 2 voltage	
A015H	1	Bat2Current	int16	-2	A	R	BMS battery 2 current	
A016H	1	Bat2Temperature	int16	-1	℃	R	BMS battery 2 temperature	
A017H	1	Bat2CycleNum	Uint16	0		R	BMS battery 2 cycles	
A018H	1	Bat3SOC	Uint16	-2	%	R	BMS battery 3SOC	
A019H	1	Bat3SOH	Uint16	-2	%	R	BMS battery 3SOH	
A01AH	1	Bat3Voltage	Uint16	-1	V	R	BMS battery 3 voltage	
A01BH	1	Bat3Current	int16	-2	A	R	BMS battery 3 current	
A01CH	1	Bat3Temperature	int16	-1	℃	R	BMS battery 3 temperature	
A01DH	1	Bat3CycleNum	Uint16	0		R	BMS battery 3 cycles	
A01EH	1	Bat4SOC	Uint16	-2	%	R	BMS battery 4SOC	
A01FH	1	Bat4SOH	Uint16	-2	%	R	BMS battery 4SOH	
A020H	1	Bat4Voltage	Uint16	-1	V	R	BMS battery 4 voltage	
A021H	1	Bat4Current	int16	-2	A	R	BMS battery 4 current	
A022H	1	Bat4Temperature	int16	-1	℃	R	BMS battery 4 temperature	
A023H	1	Bat4CycleNum	Uint16	0		R	BMS battery 4 cycles	
A02AH	1	Bat1DischarCapH	Uint16	0	kWh	R	Battery pack 1 total discharge energy H	
A02BH	1	Bat1DischarCapL	Uint16	0	kWh	R	Battery pack 1 total discharge energy L	
A02CH	1	Bat2DischarCap	Uint1	0	kW	R	Battery pack 2	

		H	6		h		total discharge energy H	
A02DH	1	Bat2DischarCap L	Uint16	0	kWh	R	Battery pack 2 total discharge energy L	
A02EH	1	Bat3DischarCap H	Uint16	0	kWh	R	Battery pack 3 total discharge energy H	
A02FH	1	Bat3DischarCap L	Uint16	0	kWh	R	Battery pack 3 total discharge energy L	
A030H	1	Bat4DischarCap H	Uint16	0	kWh	R	Battery pack 4 total discharge energy H	
A031H	1	Bat4DischarCap L	Uint16	0	kWh	R	Battery pack 4 total discharge energy L	
A032H	1	BatProtHigh	UInt16	-1	V	R	Battery voltage high protection	
A033H	1	BatProtLow	UInt16	-1	V	R	Battery voltage low warning	
A034H	1	Bat_Chagevoltage	UInt16	-1	V	R	Charge voltage (Charge cut-off)	
A035H	1	Bat_DisCutOffVolt	UInt16	-1	V	R	Discharge cut-off voltage	
A036H	1	BatDisCurrLimit	UInt16	-1	A	R	Battery discharge current limit	
A037H	1	BatChaCurrLimit	UInt16	-1	A	R	Battery charge current limit	
A03CH	1	Meter_A_Status	Uint16	0		R	Meter A status	0:offline;1:online
A03DH	1	Meter_A_Volt1	Uint16	-1	V	R	Meter_A_voltage 1	
A03EH	1	Meter_A_Curr1	int16	-2	A	R	Meter_A_current 1	
A03FH	1	Meter_A_Power Watt1	int16	0	W	R	Meter A real power1	
A040H	1	Meter_A_Power VA1	Uint16	0	VA	R	Meter A apparent power 1	
A041H	1	Meter_A_Power Factor1	Int16	-3		R	Meter_A_power factor 1	
A042H	1	Meter_A_Freq1	Uint16	-2	Hz	R	Meter_A_ frequency 1	
A053H	1	Meter_B_Status	Uint16	0		R	Meter B status	0:offline;1:online
A054H	1	Meter_B_Volt1	Uint	-1	V	R	Meter_B_voltage 1	

地址	SIZE	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
			16					
A055H	1	Meter_B_Curr1	int16	−2	A	R	Meter_B_current 1
A056H	1	Meter_B_Power Watt1	int16	0	W	R	Meter B real power1
A057H	1	Meter_B_Power VA1	Uint16	0	VA	R	Meter B apparent power 1
A058H	1	Meter_B_Power Factor1	Int16	−3		R	Meter_B_power factor 1
A059H	1	Meter_B_Freq1	Uint16	−2	Hz	R	Meter_B_ frequency 1
A05AH	1	Meter_B_Volt2	Uint16	−1	V	R	Meter_B_voltage 2
A05BH	1	Meter_B_Curr2	int16	−2	A	R	Meter_B_current 2
A05CH	1	Meter_B_Power Watt2	int16	0	W	R	Meter B real power 2
A05DH	1	Meter_B_Power VA2	Uint16	0	VA	R	Meter B apparent power 2
A05EH	1	Meter_B_Power Factor2	Int16	−3		R	Meter_B_power factor 2
A05FH	1	Meter_B_Freq2	Uint16	−2	Hz	R	Meter_B_ frequency 2
A060H	1	Meter_B_Volt3	Uint16	−1	V	R	Meter_B_voltage 3
A061H	1	Meter_B_Curr3	int16	−2	A	R	Meter_B_current 3
A062H	1	Meter_B_Power Watt3	int16	0	W	R	Meter B real power 3
A063H	1	Meter_B_Power VA3	Uint16	0	VA	R	Meter B apparent power 3
A064H	1	Meter_B_Power Factor3	Int16	−3		R	Meter_B_power factor 3
A065H	1	Meter_B_Freq3	Uint16	−2	Hz	R	Meter_B_ frequency 3

4.5Setting Data 寄存器定义 Setting Data Register definition

地址	SIZE（Wo	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注	默认值	设置范围最小值	设置范围最大值

	r d)					R / W					
3604H	1	Charge_time_enable_control	Uint16	0		R/W	充电时间设置使能位	每位为 1 表示第几条使能充电时间，第 0 位为第一条，第 1 位为第二条…	0	0	127
3605H	1	Discharge_time_enable_control	Uint16	0		R/W	放电时间设置使能位	每位为 1 表示第几条 使能放电时间，第 0 位为第一条，第 1 位为第二条…	0	0	127
3606H	1	First_charge_start_time	HEX	0		R/W	第一条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0		0x173B(23:59)
3607H	1	First_charge_end_time	HEX	0		R/W	第一条充电结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x173B(23:59)
3608H	1	First_charge_power_time	HEX	0		R/W	第一条充电日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
3609H	1	Second_charge_start_time	HEX	0		R/W	第二条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B(23:59)
360AH	1	Second_charge_end_time	HEX	0		R/W	第二条充电结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x173B(23:59)
360BH	1	Second_charge_power_time	HEX	0		R/W	第二条充电日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
360CH	1	Third_charge_start_time	HEX	0		R/W	第三条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B(23:59)
360DH	1	Third_charge_end_time	HEX	0		R/W	第三条充电结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x173B(23:59)
360EH	1	Third_charge_power_time	HEX	0		R/W	第三条充电日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
360FH	1	Fourth_charge_start_time	HEX	0		R/W	第四条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B(23:59)

地址		名称	类型		读写	名称	说明			最大值
3610H	1	Fourth_charge_end_time	HEX	0	R/W	第四条充电结束时间	高字节为小时，低字节为分钟；hh：mm		0	0x173B（23:59）
3611H	1	Fourth_charge_power_time	HEX	0	R/W	第四条充电日期和功率	高字节表示星期几，每位置一使能，如0b0100 表示星期三；低位表示功率，如1 表示机型标准功率的百分之1			
3612H	1	Fifth_charge_start_time	HEX	0	R/W	第五条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B（23:59）
3613H	1	Fifth_charge_end_time	HEX	0	R/W	第五条充电结束时间	高字节为小时，低字节为分钟；hh：mm		0	0x173B（23:59）
3614H	1	Fifth_charge_power_time	HEX	0	R/W	第五条充电日期和功率	高字节表示星期几，每位置一使能，如0b0100 表示星期三；低位表示功率，如1 表示机型标准功率的百分之1			
3615H	1	Sixth_charge_start_time	HEX	0	R/W	第六条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B（23:59）
3616H	1	Sixth_charge_end_time	HEX	0	R/W	第六条充电结束时间	高字节为小时，低字节为分钟；hh：mm		0	0x173B（23:59）
3617H	1	Sixth_charge_power_time	HEX	0	R/W	第六条充电日期和功率	高字节表示星期几，每位置一使能，如0b0100 表示星期三；低位表示功率，如1 表示机型标准功率的百分之1			
3618H	1	Seventh_charge_start_time	HEX	0	R/W	第七条充电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B（23:59）
3619H	1	Seventh_charge_end_time	HEX	0	R/W	第七条充电结束时间	高字节为小时，低字节为分钟；hh：mm		0	0x173B（23:59）
361AH	1	Seventh_charge_power_time	HEX	0	R/W	第七条充电日期和功率	高字节表示星期几，每位置一使能，如0b0100 表示星期三；低位表示功率，如1 表示机型标准功率的百分之1			
361BH	1	First_discharge_start_time	HEX	0	R/W	第一条放电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B（23:59）
361CH	1	First_discharge_end_time	HE	0	R/	第一条放电结束时间	高字节为小时，低字节为分钟；hh：mm		0	0x173B（2

			X			W					3:59)
361DH	1	First_discharge power_time	H E X	0		R / W	第一条放电 日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
361EH	1	Second_discha rge_start_ti me	H E X	0		R / W	第二条放电 起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x17 3B（2 3：59 ）
361FH	1	Second_discha rge_end_tim e	H E X	0		R / W	第二条放电 结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x17 3B（2 3：59 ）
3620H	1	Second_discha rge_power_t ime	H E X	0		R / W	第二条放电 日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
3621H	1	Third_dischar ge_start_time	H E X	0		R / W	第三条放电 起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x17 3B（2 3：59 ）
3622H	1	Third_dischar ge_end_time	H E X	0		R / W	第三条放电 结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x17 3B（2 3：59 ）
3623H	1	Third_dischar ge_power_ti me	H E X	0		R / W	第三条放电 日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
3624H	1	Fourth_disch arge_start_ti me	H E X	0		R / W	第四条放电 起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x17 3B（2 3：59 ）
3625H	1	Fourth_disch arge_end_tim e	H E X	0		R / W	第四条放电 结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x17 3B（2 3：59 ）
3626H	1	Fourth_disch arge_power_t ime	H E X	0		R / W	第四条放电 日期和功率	高字节表示星期几，每位置一使能，如 0b0100 表示星期三；低位表示功率，如 1 表示机型标准功率的百分之 1			
3627H	1	Fifth_dischar ge_start_time	H E X	0		R / W	第五条放电 起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x17 3B（2 3：59 ）
3628H	1	Fifth_dischar ge_end_time	H E X	0		R / W	第五条放电 结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x17 3B（2 3：59 ）

3629H	1	Fifth_discharge_power_time	HEX	0		R/W	第五条放电日期和功率	高字节表示星期几，每位置一使能，如0b0100表示星期三；低位表示功率，如1表示机型标准功率的百分之1		
362AH	1	Sixth_discharge_start_time	HEX	0		R/W	第六条放电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B(23:59)
362BH	1	Sixth_discharge_end_time	HEX	0		R/W	第六条放电结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x173B(23:59)
362CH	1	Sixth_discharge_power_time	HEX	0		R/W	第六条放电日期和功率	高字节表示星期几，每位置一使能，如0b0100表示星期三；低位表示功率，如1表示机型标准功率的百分之1		
362DH	1	Seventh_discharge_start_time	HEX	0		R/W	第七条放电起始时间	高字节为小时，低字节为分钟；hh：mm	0	0	0x173B(23:59)
362EH	1	Seventh_discharge_end_time	HEX	0		R/W	第七条放电结束时间	高字节为小时，低字节为分钟；hh：mm	0		0x173B(23:59)
362FH	1	Seventh_discharge_power_time	HEX	0		R/W	第七条放电日期和功率	高字节表示星期几，每位置一使能，如0b0100表示星期三；低位表示功率，如1表示机型标准功率的百分之1		
3630H	1	Meter_enable	Uint16	0		R/W	电表接线方式	0：关闭电表使能 1：一个单相电表 2：一个三相三线电表 3：一个三相四线电表	0	0	3
3631H	1	Meter_addr	Uint16	0		R/W	电表的通讯地址	1－255	1	1	255
3632H	1	Buzzer_on-off	Uint16	0		R/W	蜂鸣器开关使能	0：使能，1：禁止	1	0	1
3633H	1	RS485_Addr	Uint16			R/W	RS485通讯地址	1~127	1	1	127
3634H	1	RS485_BaudRate	Uint16			R/W	RS485通讯波特率	0为115200，1为57600，2为38400，3为19200，4为9600，5为4800，6为2400，7为1200	0	0	7
3635H	1	PreventReverseFlow_enable	Uint16			R/W	防逆流主从模式	0为关,不使能 1为开，使能，主机模式，读取电表数据 2为开，使能，从机模式，外部通讯模块写数据	1	0	2
3636H	1	Passive_cha	Ui			R	被动充放电	0：待机1：放电2：充电	0	0	2

	rge_enable	nt16			/W	使能				
3637H	1	Passive_GridChargePower	Uint16	−3	%	R/W	被动电网充电功率	被动模式生效	1100	0	1100
3638H	1	Passive_GridDisChargePower	Uint16	−3	%	R/W	被动电网放电功率	被动模式生效	1100	0	1100
3639H	1	Passive_BatChargePower	Uint16	−3	%	R/W	被动电池充电功率	被动模式生效	1100	0	1100
363AH	1	Passive_BatDisChargePower	Uint16	−3	%	R/W	被动电池放电功率	被动模式生效	1100	0	1100
363BH	1	Battery_protocol	Uint16	0		R/W	电池协议（电池品牌）	0：不使用电池 2：铅酸 20:dyness（DYNESS-H）大秦 21:pylon（SC0500）派能 22 B2_can	0	0	22
3642H	1	ReturnFHysteresis	UInt16	−2	Hz	R/W	返回频率滞后	澳洲 FCAS	15	0	15
3643H	1	BatAutoWakeEn	UInt16			R/W	电池自动唤醒功能		0	0	1
3644H	1	BatOnGridDisDepth	UInt16	0	%	R/W	电池并网放电下限		20	5	100
3645H	1	BatOffGridDisDepth	UInt16	0	%	R/W	电池离网放电下限		10	5	100
3646H	1	BatcharDepth	UInt16	0	%	R/W	电池容量充电上限		100	20	100
3647H	1	AppMode	UInt16			R/W	逆变器应用模式	0x00 Self-use_mode 0x01 time_mode 0x02 backup_mode 0x03 passive_mode 0x0E old mode	14	0	14
364DH	1	BatChargePower	UInt16	−3	%	R/W	电池充电功率限制		110	0	1100

地址	数量	名称	类型	系数	单位	读写	名称	说明			
									0		
364EH	1	BatDischargePower	UInt16	-3	%	R/W	电池放电功率限制		1100	0	1100
364FH	1	GridChargePower	UInt16	-3	%	R/W	电网最大买电功率		1100	0	1100
3650H	1	GridDischargePower	UInt16	-3	%	R/W	电网最大卖电功率		1100	0	1100
3651H	1	BatSocLimitkeep	UInt16		%	R/W	后备 SOC 预留值	后备模式下生效	100	20	100
3652H	1	Bat_OffGridDisCutOffVolt	UInt16		%	R/W	离网放电截止电压	铅酸电池生效	8500	850	4500
3653H	1	Bat_Chargevoltage	UInt16	-1	V	R/W	充电电压（充电截止）	铅酸电池生效	4500	850	4500
3654H	1	Bat_OnGridDisCutOffVolt	UInt16	-1	V	R/W	并网放电截止电压	铅酸电池生效	8500	850	4500
3655H	1	BatProtHigh	UInt16	-1	V	R/W	电池过高保护点	铅酸电池生效	4500	850	4500
3656H	1	BatProtLow	UInt16	-1	V	R/W	电池低压告警点	铅酸电池生效	8500	850	4500
3657H	1	BatDisCurrLimit	UInt16	-1	A	R/W	电池放电限制电流	铅酸电池生效	3000	0	300
3658H	1	BatChaCurrLimit	UInt16	-1	A	R/W	电池充电限制电流	铅酸电池生效	3000	0	300
3659H	1	Bat_totalCapacity	UInt16	0	Ah	R/W	电池总容量	铅酸电池生效	1000	0	1000
365AH	1	AntiRefluxPowerLimit	UInt16	-3	%	R/W	防逆流限制功率		0	0	1100
365BH	1	AntiReflux	UI	-	A	R	防逆流限制		0	0	3000

地址	数量	名称	类型			R/W	中文名	说明	默认	最小	最大
		CurrentLimit	nt16	2		/W	电流				0
365CH	1	AntiRefluxCurrentmode	UInt16	0		R/W	防逆流模式	0：不开启防逆流 1：总功率模式 2：相电流模式 3：相功率模式	0	0	3
365DH	1	BmsUpdataID	UInt16	0	0	R/W	bms 升级 ID	0x1F:广播升级	0	0	31
365EH	1	BmsUpdataMode	UInt16	0	0	R/W	Bms 升级方式	BMS 芯片代码	0	0	255
365FH	1	**TimeExcept**	UInt16	0	0	R/W	分时模式下不在充放电时段	0.待机模式 1.自用模式	0	0	1
3660H	1	TimeBatdischar	UInt16	0	0	R/W	分时模式下允许电池放电到电网	0.不允许 1.允许	0	0	1
3661H	1	ParallMaster	UInt16	0	0	R/W	并机主从机	0.主机 1.从机. 2.从机。。。	0	1	10
3662H	1	ParallNumber	UInt16	0	0	R/W	并机台数	1-10 台	1	1	255
3663H	1	Parallmode	UInt16	0	0	R/W	并机模式	0:不并机 1:并网并机使能 2:离网并机使能 3:离网并网并机使能	0	0	3
3664H	1	Batcharvol	UInt16	−1	0	R/W	电池浮充电压		4500	850	4500
3665H	1	Bataverchar	UInt16	−1	0	R/W	电池均充电压		4500	850	4500
3666H	1	Batinputmode	UInt16	0	0	R/W	电池输入模式	1:独立 2:并联	1	1	2
3667H	1	Pvinputmode	UInt16	0	0	R/W	PV 输入模式	0:自动 1:独立 2:并联	0	0	2
3668H	1	Offgridmode	UInt16	0	0	R/W	离网模式使能	0:关闭 1：开启	1	0	1
3669H	1	Offgridvol	UI	−	0	R	离网输出电		2	2	2400

			nt16	1		/W	压		2000	2000	
366AH	1	Offgridfre	UInt16	-2	0	R/W	离网输出频率		50000	50000	6000
366BH	1	motorenable	UInt16	0	0	R/W	发动机使能位				
366CH	1	MachineModel	UInt16			R/W	逆变器机器型号		90	90	96
366DH	1	PowerRated	UInt16	0	W	R/W	逆变器额定功率		60000	30000	6000
366EH	1	FunctionFir	UInt16			R/W	逆变器功能字	bit0:继电器检测使能位 bit1:ISO 检测使能位 bit2:对地漏电流设备自检使能位 bit3:对地漏电流检测使能位 bit4:电网电流直流分量检测使能位 bit5:电网电流直流分量控制使能位 bit6:主动孤岛检测使能位 bit7:风扇检测使能位 bit8:PV 追踪使能 bit9:输出电压直流分量检测使能 bit10:全局扫描 bit11:电网接线检测使能位 bit12:输出电压直流分量控制使能位 bit13:输出端异常接入检测使能位 bit14:逆变发波检测使能位 bit15:PV 独立带载使能位	0	0	65535
366FH	1	FunctionSec	UInt16			R/W	逆变器扩展功能字	bit0:老化测试使能位 bit1:接地检测 bit2:预逆变使能 bit3:主 DSP 控制从继电器使能 bit4:预留 bit5:拉弧检测使能 bit6:高低温度保护使能 bit7:快速关断	0	0	65535
3670H	1	MaxDciVla	UInt16	-3	A	R/W	最大直流电流分量		10000	0	3000
3671H	1	MaxDviVla	UInt16	-	V	R	最大直流电压		1	0	400

Address	Register	Register name	Type of date	Ratio	Unit	Attribu	Register description	Notes	默认值	Min of se	Max of setting
			nt16	1		/W	压分量		00		
3672H	1	MaxIsoVla	UInt16		kΩ	R/W	ISO限制		150	30	1000
3673H	1	MaxGfci	UInt16	-3	A	R/W	最大对地漏电流		200	30	500
3674H	1	GridType	UInt16			R/W	电网类型	0.单相 1.裂相 2.三相三线 3.三相四线	0	0	3
3675H	1	Led_switch	UInt16			R/W	LED灯板控制灯	0 全灭 1.亮外圈灭内圈 2.亮内圈灭外圈 3.全亮	0	3	3
3676H	1	BatForcedPower	UInt16	-3	%	R/W	电池强充、均充功率	限制电网充电池的功率	200	100	1000
3677H	1	InverterStop	UInt16			R/W	逆变器停止	1：关机			
3678H	1	PVStartVolt	UInt16	-1	V	R/W	PV启动电压		1200	0	6500
3679H	1	PVShutDownVolt	UInt16	-1	V	R/W	PV关断电压		700	0	6500
367AH	1	MpptVoltHigh	UInt16	-1	V	R/W	Mppt最大电压		5000	900	5000
367BH	1	MpptVoltLow	UInt16	-1	V	R/W	Mppt最小电压		900	900	5000
367CH	1	MPPTScanTime	UInt16	0	min	R/W	MPPT扫描间隔时间		30	3	30000

	r name e					t e					t ti n g
3604H	1	Charge_time_enable_control	Uint 16	0		R/W	Charge time enable control	Each bit comes 1 means which wire enable charge time, bit 0 for First wire, bit 1 for Second wire…	0	0	127
3605H	1	Discharge_time_enable_control	Uint 16	0		R/W	Discharge time enable control	Each bit comes 1 means which wire enable charge time, bit 0 for First wire, bit 1 for Second wire…	0	0	127
3606H	1	First_charge_start_time	HEX	0		R/W	First charge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59)
3607H	1	First_charge_end_time	HEX	0		R/W	First charge end time	High byte is hour, low byte is minute; hh : mm	0		0x17 3B(2 3:59)
3608H	1	First_charge_power_time	HEX	0		R/W	First charge power time	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
3609H	1	Second_charge_start_time	HEX	0		R/W	Second charge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59)
360AH	1	Second_charge_end_time	HEX	0		R/W	Second charge end time	High byte is hour, low byte is minute; hh : mm	0		0x17 3B(2 3:59)
360BH	1	Second_charge_power_time	HEX	0		R/W	Second charge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
360CH	1	Third_charge_start_time	HEX	0		R/W	Third charge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59)
360DH	1	Third_charge_end_time	HEX	0		R/W	Third charge end time	High byte is hour, low byte is minute; hh : mm	0		0x17 3B(2 3:59)

360EH	1	Third_charge_power_time	HEX		0		R/W	Third charge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power		
360FH	1	Fourth_charge_start_time	HEX		0		R/W	Fourth charge start time	High byte is hour, low byte is minute; hh∶mm	0	0	0x173B(23:59)
3610H	1	Fourth_charge_end_time	HEX		0		R/W	Fourth charge end time	High byte is hour, low byte is minute; hh∶mm	0		0x173B(23:59)
3611H	1	Fourth_charge_power_time	HEX		0		R/W	Fourth charge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power		
3612H	1	Fifth_charge_start_time	HEX		0		R/W	Fifth charge start time	High byte is hour, low byte is minute; hh∶mm	0	0	0x173B(23:59)
3613H	1	Fifth_charge_end_time	HEX		0		R/W	Fifth charge end time	High byte is hour, low byte is minute; hh∶mm	0		0x173B(23:59)
3614H	1	Fifth_charge_power_time	HEX		0		R/W	Fifth charge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power		
3615H	1	Sixth_charge_start_time	HEX		0		R/W	Sixth charge start time	High byte is hour, low byte is minute; hh∶mm	0	0	0x173B(23:59)
3616H	1	Sixth_charge_end_time	HEX		0		R/W	Sixth charge end time	High byte is hour, low byte is minute; hh∶mm	0		0x173B(23:59)
3617H	1	Sixth_charge_power_time	HEX		0		R/W	Sixth charge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power		
3618H	1	Seventh_charge_start_time	HE E	0		R/		Seventh charge start	High byte is hour, low byte is minute; hh∶mm	0	0	0x173B(2

			X		0	W	time				3:59)
3619H	1	Seventh_charge_end_time	HEX	0		R/W	Seventh charge end time	High byte is hour, low byte is minute; hh : mm		0	0x173B(23:59)
361AH	1	Seventh_charge_power_time	HEX	0		R/W	Seventh charge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
361BH	1	First_discharge_start_time	HEX	0		R/W	First discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x173B(23:59)
361CH	1	First_discharge_end_time	HEX	0		R/W	First discharge end time	High byte is hour, low byte is minute; hh : mm	0		0x173B(23:59)
361DH	1	First_discharge_power_time	HEX	0		R/W	First discharge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
361EH	1	Second_discharge_start_time	HEX	0		R/W	Second discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x173B(23:59)
361FH	1	Second_discharge_end_time	HEX	0		R/W	Second discharge end time	High byte is hour, low byte is minute; hh : mm	0		0x173B(23:59)
3620H	1	Second_discharge_power_time	HEX	0		R/W	Second discharge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
3621H	1	Third_discharge_start_time	HEX	0		R/W	Third discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x173B(23:59)
3622H	1	Third_discharge_end_time	HEX	0		R/W	Third discharge end time	High byte is hour, low byte is minute; hh : mm	0		0x173B(23:59)
3623H	1	Third_dischar	H	0		R	Third	High bytes mean the date, one enable per			

		ge_power_ti me	E X			/ W	discharge time and power	location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
3624H	1	Fourth_disch arge_start_ti me	H E X	0		R / W	Fourth discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59)
3625H	1	Fourth_disch arge_end_tim e	H E X	0		R / W	Fourth discharge end time	High byte is hour, low byte is minute; hh : mm	0		0x17 3B(2 3:59)
3626H	1	Fourth_disch arge_power_t ime	H E X	0		R / W	Fourth discharge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
3627H	1	Fifth_dischar ge_start_time	H E X	0		R / W	Fifth discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59)
3628H	1	Fifth_dischar ge_end_time	H E X	0		R / W	Fifth discharge end time	High byte is hour, low byte is minute; hh : mm	0		0x17 3B(2 3:59)
3629H	1	Fifth_dischar ge_power_ti me	H E X	0		R / W	Fifth discharge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
362AH	1	Sixth_dischar ge_start_time	H E X	0		R / W	Sixth discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59)
362BH	1	Sixth_dischar ge_end_time	H E X	0		R / W	Sixth discharge end time	High byte is hour, low byte is minute; hh : mm	0		0x17 3B(2 3:59)
362CH	1	Sixth_dischar ge_power_ti me	H E X	0		R / W	Sixth discharge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
362DH	1	Seventh_disc harge_start_ti me	H E X	0		R / W	Seventh discharge start time	High byte is hour, low byte is minute; hh : mm	0	0	0x17 3B(2 3:59

										)
362EH	1	Seventh_discharge_end_time	HEX	0	%	R/W	Seventh discharge end time	High byte is hour, low byte is minute; hh：mm	0		0x173B(23:59)
362FH	1	Seventh_discharge_power_time	HEX	0		R/W	Seventh discharge time and power	High bytes mean the date, one enable per location. For example, 0b0100 means Wednesday. Low bytes means power, for example 1 means 1% of machine's standard power			
3630H	1	Meter_enable	Uint16	0		R/W	Meter wiring mode	0：Close meter enable 1：One single phase meter 2：One three phase three wires meter 3：One three phase four wires meter	0	0	3
3631H	1	Meter_addr	Uint16	0		R/W	Communication address of meter	1 - 255	1	1	255
3632H	1	Buzzer_on-off	Uint16	0		R/W	Buzzer on-off enable	0：enable, 1：forbid	1	0	1
3633H	1	RS485_Addr	Uint16			R/W	RS485 Communication address	1~127	1	1	127
3634H	1	RS485_BaudRate	Uint16			R/W	RS485Communication Baud rate	0 means 115200,1 means 57600,2means 38400,3 means 19200,4 means 9600,5 means 4800,6 means 2400,7 means 1200	0	0	7
3635H	1	PreventReverseFlow_enable	Uint16			R/W	Prevent reverse flow master slave mode	0 means close, no enable 1 means open, enable, master mode, read meter data 2 means open, enable, slave machine mode, the external communication module writes data	1	0	2
3636H	1	Passive_charge_enable	Uint16			R/W	Passive charge and discharge enable	0: Standby 1: Discharge 2: Charge	0	0	2
3637H	1	Passive_GridChargePower	Uint16	-3	%	R/W	Passive grid charge power	Passive mode in effect	1100	0	1100
3638H	1	Passive_GridDisChargePower	Uint16	-3	%	R/W	Passive grid discharge power	Passive mode in effect	1100	0	1100
3639H	1	Passive_BatChargePower	Uint	-3	%	R/	Passive battery	Passive mode in effect	11	0	1100

			16			W	charge power		0 0		
363AH	1	Passive_Bat DisChargePo wer	Uint 16	−3	%	R / W	Passive battery discharge power	Passive mode in effect	1 1 0 0	0	1100
363BH	1	Battery_proto col	Uint 16	0		R / W	Battery protocol (Battery brand)	0: Battery not used 2: Lead-acid 20:dyness (DYNESS-H) Da Qing 21:pylon (SC0500) Pai Neng 22 B2_can	0	0	22
3642H	1	ReturnFHyst eresis	UI nt 16	−2	H z	R / W	Return frequency hysteresis	Australia FCAS	1 5	0	15
3643H	1	BatAutoWak eEn	UI nt 16			R / W	Battery auto-wake -up function		0	0	1
3644H	1	BatOnGridD isDepth	UI nt 16	0	%	R / W	Battery on grid discharge Depth		2 0	5	100
3645H	1	BatOffGrid DisDepth	UI nt 16	0	%	R / W	Battery off grid discharge depth		1 0	5	100
3646H	1	BatcharDep th	UI nt 16	0	%	R / W	Battery capacity charge upper limit		1 0 0	2 0	100
3647H	1	AppMode	UI nt 16			R / W	Inverter app mode	0x00 Self-use_mode 0x01 time_mode 0x02 backup_mode 0x03 passive_mode 0x0E old mode	1 4	0	14
364DH	1	BatChargeP ower	UI nt 16	−3	%	R / W	Battery charge power limit		1 1 0 0	0	1100
364EH	1	BatDischar gePower	UI nt 16	−3	%	R / W	Battery discharge power limit		1 1 0 0	0	1100
364FH	1	GridCharge Power	UI nt 16	−3	%	R / W	Grid max charge power		1 1 0	0	1100

									0		
3650H	1	GridDischargePower	UInt16	-3	%	R/W	Grid max discharge power		1100	0	1100
3651H	1	BatSocLimitkeep	UInt16		%	R/W	Battery SOC reserved back up value	Effective under backup mode	100	20	100
3652H	1	Bat_OffGridDisCutOffVolt	UInt16		%	R/W	Battery off grid discharge cut off voltage	Lead-acid battery work	850	850	4500
3653H	1	Bat_Chargevoltage	UInt16	-1	V	R/W	Battery charge voltage(charge cut off)	Lead-acid battery work	4500	850	4500
3654H	1	Bat_OnGridDisCutOffVolt	UInt16	-1	V	R/W	Battery on grid discharge cut off voltage	Lead-acid battery work	850	850	4500
3655H	1	BatProtHigh	UInt16	-1	V	R/W	Battery high voltage protection	Lead-acid battery work	4500	850	4500
3656H	1	BatProtLow	UInt16	-1	V	R/W	Battery low voltage warning	Lead-acid battery work	850	850	4500
3657H	1	BatDisCurrLimit	UInt16	-1	A	R/W	Battery discharge current limit	Lead-acid battery work	300	0	300
3658H	1	BatChaCurrLimit	UInt16	-1	A	R/W	Battery charge current limit	Lead-acid battery work	300	0	300
3659H	1	Bat_totalCapacity	UInt16	0	Ah	R/W	Battery total capacity	Lead-acid battery work	1000	0	1000
365AH	1	AntiRefluxPowerLimit	UInt16	-3	%	R/W	Anti-reflux power limit		0	0	1100
365BH	1	AntiReflux	UInt16	-	A	R	Anti-reflu		0	0	3000

		CurrentLimit	nt 16	2		/ W	x current limit					0
365CH	1	AntiReflux Currentmode	UI nt 16	0		R / W	Anti-reflux current mode	0: Not open anti-reflux 1: Total power mode 2: Phase current mode 3: Phase power mode	0	0	3
365DH	1	BmsUpdataID	UI nt 16	0	0	R / W	Bms update ID	0x1F: Broadcasting upgrade	0	0	31
365EH	1	BmsUpdataMode	UI nt 16	0	0	R / W	Bms update mode	BMS chip code	0	0	255
365FH	1	**TimeExcept**	UI nt 16	0	0	R / W	The charging and discharging period is not available in time-sharing mode	0.Standby mode 1.Self use mode	0	0	1
3660H	1	TimeBatdischar	UI nt 16	0	0	R / W	The charging and discharging period is available in time-sharing mode	0.Not allow 1.Allow	0	0	1
3661H	1	ParallMaster	UI nt 16	0	0	R / W	Parallel master and slave machine	0.Master machine 1.slave machine. 2.slave machine。。。	0	1	10
3662H	1	ParallNumber	UI nt 16	0	0	R / W	Parallel number	1-10 set	1	1	255
3663H	1	Parallmode	UI nt 16	0	0	R / W	Parallel mode	0:Not parallel 1:On grid parallel enable 2:Off grid parallel enable 3:Off grid/ On grid parallel enable	0	0	3
3664H	1	Batcharvol	UI nt 16	- 1	0	R / W	Battery discharge voltage		4500	850	4500

3665H	1	Bataverchar	UInt16	-1	0	R/W	Battery average charge voltage		4500	8500	4500
3666H	1	Batinputmode	UInt16	0	0	R/W	Battery input mode	1:independent 2:Parallel	1	1	2
3667H	1	Pvinputmode	UInt16	0	0	R/W	PV input mode	0:Auto 1:Independent 2:Parallel	0	0	2
3668H	1	Offgridmode	UInt16	0	0	R/W	Off grid mode enable	0:off 1: on	1	0	1
3669H	1	Offgridvol	UInt16	-1	0	R/W	Off grid discharge voltage		2200	2200	2400
366AH	1	Offgridfre	UInt16	-2	0	R/W	Off grid discharge frequency		5000	5000	6000
366BH	1	motorenable	UInt16	0	0	R/W	Motor enable bit				
366CH	1	MachineModel	UInt16			R/W	Inverter machine model		90	90	96
366DH	1	PowerRated	UInt16	0	W	R/W	Inverter power rated		6000	3000	6000
366EH	1	FunctionFir	UInt16			R/W	Inverter function	bit0: The relay detection enable bit bit1: Enable bit of ISO detection bit2: Enable bit of the floor drain current device self-test bit3: Enable bit of the floor drain current detection bit bit4: Enable bit of the DC component detection of the grid current bit5: Enable bit of the DC component control of the grid current bit6: Enable bit of the active island detection bit7: Enable bit of the fan detection	0	0	65535

							bit8: PV tracing enable bit9: DC component detection of output voltage enable bit10: Global scan bit11: Enable bit of power grid wiring detection bit12: Enable bit of DC component control of output voltage bit13: Enable bit of abnormal access detection at the output end bit14: Enable bit of inverter wave detection bit15:PV independent on-load enable bit			
366FH	1	FunctionSec	UInt16			R/W	Inverter expansion function word	bit0: enable bit of the aging test bit1: Ground detection bit2: The pre-inverting function enable bit3: The master DSP control slave relay enable bit4: Reserve bit5: Arc pull detection enable bit6: High and low temperature protection enable bit7: Quick shutdown	0	0	65535
3670H	1	MaxDciVla	UInt16	−3	A	R/W	Maximum DC current component		1000	0	3000
3671H	1	MaxDviVla	UInt16	−1	V	R/W	Maximum DC voltage component		100	0	400
3672H	1	MaxIsoVla	UInt16		kΩ	R/W	ISO limit		150	30	1000
3673H	1	MaxGfci	UInt16	−3	A	R/W	Maximum current to floor drain		200	30	500
3674H	1	GridType	UInt16			R/W	Grid type	0. Single phase 1. Split phase 2. Three phase three wires 3. Three phase four wires	0	0	3
3675H	1	Led_switch	UInt16			R/W	LED broad control broad	0 All lighting off 1.Outer ring lighting on inner ring lighting off 2. Inner ring lighting on outer ring lighting off 3.All lighting on	0	3	3

3676H	1	BatForcedPower	UInt16	−3	%	R/W	Battery forced charge and average charge power	Limit battery charge on grid	200	100	1000
3677H	1	InverterStop	UInt16			R/W	Inverter stop running	1: power off			
3678H	1	PVStartVolt	UInt16	−1	V	R/W	PV start voltage		1200	0	6500
3679H	1	PVShutDownVolt	UInt16	−1	V	R/W	PV cut-off voltage		700	0	6500
367AH	1	MpptVoltHigh	UInt16	−1	V	R/W	Mppt Max voltage		5000	900	5000
367BH	1	MpptVoltLow	UInt16	−1	V	R/W	Mppt Min voltage		9000	900	5000
367CH	1	MPPTScanTime	UInt16	0	min	R/W	MPPT scan invertal time		30	3	30000

4.6Error Code 定义 Error Code Definition

位号	显示板故障代码定义	显示板故障代码定义		位号	主机故障代码定义	主机故障代码定义		位号	主机故障代码定义	主机故障代码定义	
0	Lost Com.H<->M Err	主从机内部通信故障	H2高压	0	Master Bus Voltage High	主机母线软件过压	H2高压	0	Master Relay Error	主机继电器故障	H2高压
1	Meter Lost Com Warn	电表通讯丢失警告	H2高压	1	Master Bus Voltage Low	主机母线软件欠压		1	Master EEPROM Error	主机存储器（EEPROM）故障	H2高压
2	HMI Eeprom Err	存储器故障	H2高压	2	Master Grid Phase Error	主机电网相位错误	H2高压	2	Master Temperature High Error	主机温度高	H2高压
3	HMI RTC Err	RTC故障	H2高压	3	Master PV Voltage High Error	主机PV过压	H2高压	3	Master Temperature Low Error	主机温度低	H2高压
4	BMS Device Err	BMS设备故障	H2高压	4	Master Islanding Error	主机孤岛错误		4	Master Lost Communication M<->	主机内部通信故障	
5	BMS Lost.Conn Warn	BMS通讯丢失警告	H2高压	5	Reserved(bit 6)	Reserved(bit 6)		5	Master GFCI Device Error	主机接地故障漏电流检测设备故障	H2高压
6	Reserved(bit 71)	Reserved(bit 71)		6	Master PVInput Error	主机PV输入错误	H2高压	6	Master DCI Device Error	主机直流分量检测设备故障	
7	Reserved(bit 72)	Reserved(bit 72)		7	Communication between DSP and Po	主机与电表通讯丢失		7	Master Current Sensor Error	主机电流检测设备故障	H2高压
8	Reserved(bit 73)	Reserved(bit 73)		8	Master HW Bus Voltage High	主机母线硬件过压		8	Master Phase1 Voltage High	主机L1相电网过压	H2高压
9	Reserved(bit 74)	Reserved(bit 74)		9	Master HW PV Current High	主机PV硬件过流	H2高压	9	Master Phase1 Voltage Low	主机L1相电网欠压	H2高压
10	Reserved(bit 75)	Reserved(bit 75)		10	Reserved(bit 11)	Reserved(bit 11)		10	Master Phase2 Voltage High	主机L2相电网过压	H2高压
11	RVoltHighFault	R相电网过压		11	Master HW Inv Current High	主机逆变硬件过流	H2高压	11	Master Phase2 Voltage Low	主机L2相电网欠压	H2高压
12	RVoltLowFault	R相电网欠压		12	Reserved(bit 13)	Reserved(bit 13)		12	Master Phase3 Voltage High	主机L3相电网过压	H2高压
13	SVoltHighFault	S相电网过压		13	Reserved(bit 14)	Reserved(bit 14)		13	Master Phase3 Voltage Low	主机L3相电网欠压	H2高压
14	SVoltLowFault	S相电网欠压		14	Master Grid NE Voltage Error	主机N对地电压故障	H2高压	14	Master Voltage 10Min High	主机电网电压10分钟平均值过压	H2高压
15	TVoltHighFault	T相电网过压		15	Master DRM0 Error	DRM0 故障	H2高压	15	Master OffGrid Voltage Low	主机离网输出欠压	H2高压
16	SVoltLowFault	S相电网欠压		16	Master Fan1 Error	主机风扇1故障	H2高压	16	Reserved(bit 49)	Reserved(bit 49)	
17	FreqHighFault	电网过频		17	Master Fan2 Error	主机风扇2故障		17	Master Grid Frequency High	主机电网过频	H2高压
18	FreqLowFault	电网欠频		18	Master Fan3 Error	主机风扇3故障		18	Master Grid Frequency Low	主机电网欠频	H2高压
19	Reserved(bit 84)	Reserved(bit 84)		19	Master Fan4 Error	主机风扇4故障		19	Reserved(bit 52)	Reserved(bit 52)	
20	Reserved(bit 85)	Reserved(bit 85)		20	Master Arc Error	主机电弧故障		20	Master Phase1 DCV Error	主机L1相电压直流分量高	H2高压
21	Reserved(bit 86)	Reserved(bit 86)		21	Master SW PV Current High	主机软件PV过流		21	Master Phase2 DCV Error	主机L2相电压直流分量高	H2高压
22	Reserved(bit 87)	Reserved(bit 87)		22	Master Battery Voltage High	主机电池过压	H2高压	22	Master Phase3 DCV Error	主机L3相电压直流分量高	H2高压
23	NoGridFault	电网丢失		23	Master Battery Current High	主机电池过流	H2高压	23	Master No Grid Error	主机电网丢失	H2高压
24	PVInputModeFault	PV模式错误		24	Master Battery Charge Voltage Hi	主机电池充电电压高	H2高压	24	Reserved(bit 57)	Reserved(bit 57)	
25	HWPVCurrHighFault	PV硬件过流		25	Master Battery OverLoad	主机电池过载	H2高压	25	Reserved(bit 58)	Reserved(bit 58)	
26	PVVolHighFault	从机PV过压		26	Master Battery SoftConnet TimeO	主机电池软连接超时	H2高压	26	Master GFCI Error	主机对地漏电流故障	H2高压
27	HWBusVoltHighFault	BUS硬件过压		27	Master Output OverLoad	主机输出过载	H2高压	27	Master Phase1 DCI Error	主机L1相直流分量高	H2高压
28	Reserved(bit 93)	Reserved(bit 93)		28	Master Battery Open Circuit Erro	主机电池开路	H2高压	28	Master Phase2 DCI Error	主机L2相直流分量高	H2高压
29	Reserved(bit 94)	Reserved(bit 94)		29	Master Battery Discharge Voltage L	主机电池放电电压低	H2高压	29	Master Phase3 DCI Error	主机L3相直流分量高	H2高压
30	Reserved(bit 95)	Reserved(bit 95)		30	Authority expires	授权到期		30	Master ISO Error	主机绝缘故障	H2高压
31	Reserved(bit 96)	Reserved(bit 96)		31	Lost Communication D<->C	器内部显示板和主控制器通信	H2高压	31	Master Bus Voltage Balance Erro	主机母线电压不平衡	H2高压

Bit number	Fault code definition	Display board fault code definition		Bit number	Master Fault code definition	Master Fault code definition		Bit number	Master Fault code definition	Master Fault code definition	
0	Lost Com.H<->M Err	Lost communication between master and slave error	H2 high voltage	0	Master Bus Voltage High	Master Bus Voltage High	H2 high voltage	0	Master Relay Error	Master Relay Error	H2 high voltage
1	Meter Lost Com Warn	Meter lost communication warning	H2 high voltage	1	Master Bus Voltage Low	Master Bus Voltage Low		1	Master EEPROM Error	Master (EEPROM) error	H2 high voltage
2	HMI Eeprom Err	HIMI Eeprom error	H2 high voltage	2	Master Grid Phase Error	Master Grid Phase Error	H2 high voltage	2	Master Temperature High Error	Master Temperature High Error	H2 high voltage
3	HMI RTC Err	RTC error	H2 high voltag	3	Master PV Voltage High Error	Master PV Voltage High Error	H2 high voltag	3	Master Temperature Low Error	Master Temperature Low Error	H2 high voltag

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4	BMS Device Err	BMS device error	H2 high voltages	4	Master Islanding Error	Master Islanding Error		4	Master Lost Communication M<->S	The internal communication of the host is faulty	
5	BMS Lost.Conn Warn	BMS lost communication warning	H2 high voltage	5	Reserved(bit 6)	Reserved(bit 6)		5	Master GFCI Device Error	Master GFCI Device Error	H2 high voltage
6	Reserved(bit 71)	Reserved (bit 71)		6	Master PVInput Error	Master PVInput Error	H2 high voltage	6	Master DCI Device Error	Master DCI Device Error	
7	Reserved (bit 72)	Reserved (bit 72)		7	Communication between DSP and PC lost	Communication between DSP and PC lost		7	Master Current Sensor Error	Master Current Sensor Error	H2 high voltages
8	Reserved(bit 73)	Reserved (bit 73)		8	Master HW Bus Voltage High	Master Hardware Bus Voltage High		8	Master Phase 1 Voltage High	Master Phase 1 Voltage High	H2 high voltage
9	Reserved(bit 74)	Reserved (bit 74)		9	Master HW PV Current High	Master hardware PV current high	H2 high voltage	9	Master Phase 1 Voltage Low	Master Phase 1 Voltage Low	H2 high voltage
10	Reserved(bit 75)	Reserved(bit 75)		10	Reserved(bit 11)	Reserved (bit 11)		10	Master Phase2 Voltage High	Master Phase2 Voltage High	H2 high voltage
11	RVoltHighFault	R phase voltage high fault		11	Master HW Inv Current High	Master hardware inverter current high	H2 high voltage	11	Master Phase2 Voltage Low	Master Phase2 Voltage Low	H2 high voltage
12	RVoltLowFault	R phase voltage low fault		12	Reserved(bit 13)	Reserved (bit 13)		12	Master Phase3 Voltage High	Master Phase3 Voltage High	H2 high voltage
13	SVoltHighFault	S phase voltage high fault		13	Reserved (bit 14)	Reserved (bit 14)		13	Master Phase3 Voltage Low	Master Phase3 Voltage Low	H2 high voltage
14	SVoltLowFault	S phase voltage low fault		14	Master Grid NE Voltage Error	Master grid NE voltage error	H2 high voltage	14	Master Voltage 10Min High	Voltage of host power network is under voltage	H2 high voltage

										average in 10 minutes	
15	TVoltHighFault	T phase voltage high fault		15	Master DRM0 Error	Master DRM0 error	H2 high voltage	15	Master OffGrid Voltage Low	Master OffGrid Voltage Low	H2 high voltage
16	SVoltLowFault	S phase voltage low fault		16	Master Fan1 Error	Master Fan1 Error	H2 high voltage	16	Reserved(bit 49)	Reserved(bit 49)	
17	FreqHighFault	Frequency high fault		17	Master Fan2 Error	Master Fan2 Error		17	Master Grid Frequency High	Mater Grid Frequency high	H2 high voltage
18	FreqLowFault	Frequency low fault		18	Master Fan3 Error	Master Fan3 Error		18	Master Grid Frequency Low	Master Grid Frequency Low	H2 high voltage
19	Reserved(bit 84)	Reserved (bit 84)		19	Master Fan4 Error	Master Fan4 Error		19	Reserved(bit 52)	Reserved(bit 52)	
20	Reserved(bit 85)	Reserved (bit 85)		20	Master Arc Error	Master electric error		20	Master Phase1 DCV Error	Master phase L1 direct current voltage high error	H2 high voltage
21	Reserved(bit 86)	Reserved (bit 86)		21	Master SW PV Current High	Master software PV current high		21	Master Phase2 DCV Error	Master phase L2 direct current voltage high error	H2 high voltage
22	Reserved(bit 87)	Reserved (bit 87)		22	Master Battery Voltage High	Master battery voltage high	H2 high voltage	22	Master Phase3 DCV Error	Master phase L3 direct current voltage high error	H2 high voltage
23	NoGridFault	No grid fault		23	Master Battery Current High	Master Battery Current High	H2 high voltage	23	Master No Grid Error	Master No Grid Error	H2 high voltage
24	PVInputModeFault	PV input mode fault		24	Master Battery Charge Voltage High	Master Battery Charge Voltage High	H2 high voltage	24	Reserved(bit 57)	Reserved(bit 57)	

25	HWPVCurrHighFault	Hardware PV current high fault		25	Master Battery OverLoad	Master Battery OverLoad	H2 high voltage	25	Reserved(bit 58)	Reserved(bit 58)	
26	PVVolHighFault	PVvoltage high fault		26	Master Battery SoftConnet TimeOut	Master Battery SoftConnet TimeOut	H2 high voltage	26	Master GFCI Error	Master Ground Fault Circuit Interrupter error	H2 high voltage
27	HWBusVoltHighFault	Hardware BUS voltage high fault		27	Master Output OverLoad	Master Output OverLoad	H2 high voltage	27	Master Phase1 DCI Error	Master Phase1 DCI Error	H2 high voltage
28	Reserved(bit 93)	Reserved(bit 93)		28	Master Battery Open Circuit Error	Master Battery Open Circuit Error	H2 high voltage	28	Master Phase2 DCI Error	Master Phase2 DCI Error	H2 high voltage
29	Reserved(bit 94)	Reserved(bit 94)		29	Master Battery Discharge Voltage Low	Master Battery Discharge Voltage Low	H2 high voltage	29	Master Phase3 DCI Error	Master Phase3 DCI Error	H2 high voltage
30	Reserved(bit 95)	Reserved(bit 95)		30	Authority expires	Authority expires		30	Master ISO Error	Master ISO Error	H2 high voltage
31	Reserved(bit 96)	Reserved(bit 96)		31	Lost Communication D<->C		H2 high voltage	31	Master Bus Voltage Balance Error	Master Bus Voltage Balance Error	H2 high voltage

4.7 工厂参数 The factory parameter

地址	SIZE(Word)	寄存器名	数据类型	倍率	单位	属性	寄存器描述	备注
8015H	1	CleanHistoryRecord	UInt16			W	清除历史故障	1：清除历史故障 2.清除当前故障
801AH	1	InvertReset	UInt16			W	复位重启	1:复位
801BH	1	CleanPower	UInt16			W	清除发电量	1：清除发电量
801CH	1	Cleandata	UInt16			W	清除数据恢复出厂设置	1：清除数据
8020H	4	Time	HEX	0		W	机器时间	格式 yyyyMMddHHmmsszz yyyy:年份 MM：月份 dd:日期 HH：时（24 小时制） mm:分 ss:秒 zz:保留位 2015-1-2 10:11:12 对应的数据为 07DF 01 02 0A 0B 0C 00

address	SIZE(Word)	Register name	Data type	ratio	unit	atrribute	Register description	notes
8015H	1	CleanHistoryRecord	UInt16			W	Clearing Historical Faults	1: Clear the historical fault. 2. Clear the current fault
801AH	1	InvertReset	UInt16			W	Reset to restart	1: reset
801BH	1	CleanPower	UInt16			W	Cleared energy yield	1: Cleared energy yield
801CH	1	Cleandata	UInt16			W	Clear data restoration factory Settings	1: Clear data
8020H	4	Time	HEX	0		W	Machine time	format yyyyMMddHHmmsszz yyyy:year MM: month dd:date HH: hour（24-hour） mm: minute ss: second zz: reserve bit 2015-1-2 10:11:12 corresponding to 07DF 01 02 0A 0B 0C 00