Modbus RTU Communication Protocol for Energy Storage Inverters

Ver3.4

Contents

Modified Version

Version	Modified Content	Responsible person	Date
V000B000D000	1.New.	JW	2026/02/04

1. Overview

This protocol applies to the communication between our company's energy storage inverters and the host computer monitoring software. It adopts the MODBUS RTU communication protocol. This protocol enables real-time reading of the energy storage inverter's operational information and control operations on the energy storage inverter.

2. Physical Interface

2.1. Electrical Interface and Its Description

Using RS485. The default parameters are as follows:
Slave Address: 1
Baud Rate: 9600
Parity: None
Data Bits: 8
Stop Bits: 1

3. Communication Protocol Description

3.1. Data Types

U16: 2-byte unsigned integer, high-order byte first, low-order byte last.
S16: 2-byte signed integer, high-order byte first, low-order byte last.
U32: 4-byte unsigned integer, high-order byte first, low-order byte last, high-order word first, low-order word last.
S32: 4-byte signed integer, high-order byte first, low-order byte last, high-order word first, low-order word last.

3.2. Communication Interval Requirements

The query command frame interval must be greater than 300ms, and the control command interval must be greater than 700ms.

3.3. Data Frame Format

Slave Address	Function Code	Data Field	CRC Code
8-Bits	8-Bits	Nx8-Bits	16-Bits

Slave Address: It must match the slave address of the inverter.
Function Code: It supports function codes 03H, 04H, 06H, and 10H.

Function Code (Hexadecimal)	Name	Register Address	Function
03H	Read Holding Registers	43000-44999	Read Setting Register Contents

04H	Read Input Registers	33000-36999 25000~25999	Read Inverter Information Content
06H	Write Single Holding Register	43000-44999	Set Single Register Function
10H	Write Multiple Holding Registers	43000-44999	Set Multiple Registers Function

Data Field: The data field includes the start register address, data length, number of data bytes, and the data content itself. All values follow a high-byte-first, low-byte-last byte order.

CRC (Cyclic Redundancy Check) Code: The CRC verification method uses a table lookup approach, with the low-order byte preceding the high-order byte in the check result.

3.4. Other Precautions

(1) Reading Unimplemented Registers: If a register address within the protocol range is not implemented by the chip, it returns 0x0000 and does not throw an exception.

(2) Writing to Unimplemented Registers: If a register address within the protocol range is not implemented by the chip, the data is discarded, but a normal response is still returned.

(3) Write Operation Restrictions: A single Modbus frame supports only one write operation. It is recommended to use function code 06 (Write Single Register).

(4) Broadcast Silence (Address 0xFF): When the slave station receives a frame with a "write" function code and the address 0xFF, it executes the action but does not return any response.

(5) General Address (Address 0xFE): The slave station can respond normally when it receives a frame with the address 0xFE, even if it differs from the inverter's actual address.

4. Error Information and Data Handling

Slave Response (Hexadecimal):

Slave Address	Function Code	Error Code	CRC Code	
xx	xx|0x80	xx	Low-order Byte	High-order Byte
			xx	xx

When the inverter's communication module detects an error other than a CRC code error, it must send a response back to the host. The highest bit of the function code is set to 1, which means 128 is added to the function code sent by the host.

4.1. Error Code Definitions

0x02 Illegal Data Address (related to the request)

0x03 Illegal Data Value (related to the request)

0x04 Service Fault (The inverter communication module encountered an internal failure while attempting to retrieve data during execution)

5. Detailed Protocol Description

5.1. Definition of Operational Information Addresses

Corresponding to function code 0x04**.**

Register Address (Decimal)	Description	Data Type	Unit	Remarks
35000	Definition of Solis inverter types	U16		Refer to Appendix 1 for specific details (M35000)
33000	Product Model Number	U16		
33001	DSP Software Major Version	U16		High-order Byte: Reserved, default 0x00; any value other than 0x00 indicates the Sub-DSP Major Version. Low-order Byte: The Main DSP Major Version (displayed in hexadecimal). Description: Together with the low-order byte of register 33021, this forms the complete Main DSP Software Version Number. Example: If the low-order byte of register 33001 is 0x1A and the low-order byte of register 33021 is 0x0B, then the Main DSP Software Version Number is 1A0B (hexadecimal).
33002	HMI Software Major Version	U16		High-order byte: Reserved, default 0x00 Low-order byte: Major version number (displayed in hexadecimal) Description: Together with the low-order byte of register 33069, this forms the complete HMI software version number. Example: If the low-order byte of register 33002 is 0x1C and the low-order byte of register 33069 is 0x06, then the HMI software version number is 1C06.
33004	Inverter Serial Number SN_1	U16		Inverter Serial Number (Hexadecimal Display)

33005	Inverter Serial Number SN_2	U16		Example: If the value uploaded from register 33004 is '01', and the value from register 33005 is '23', then the corresponding display is '0123'. When the two-digit Model Number (high byte of register 33000 is 0x00), only the high-order 15 bytes are valid as the SN. When the four-digit Model Number is used, only the high-order 16 bytes are valid as the SN. The unused data bits of the Inverter Serial Number have a value of 0. Register 33004 is the highest-order byte, and register 33019 is the lowest-order byte.
33006	Inverter Serial Number SN_3	U16		
33007	Inverter Serial Number SN_4	U16		
33008	Inverter Serial Number SN_5	U16		
33009	Inverter Serial Number SN_6	U16		
33010	Inverter Serial Number SN_7	U16		
33011	Inverter Serial Number SN_8	U16		
33012	Inverter Serial Number SN_9	U16		
33013	Inverter Serial Number SN_10	U16		
33014	Inverter Serial Number SN_11	U16		
33015	Inverter Serial Number SN_12	U16		
33016	Inverter Serial Number SN_13	U16		
33017	Inverter Serial Number SN_14	U16		
33018	Inverter Serial Number SN_15	U16		
33019	Inverter Serial Number SN_16	U16		
33021	DSP Software Sub Version	U16		High-order byte: Reserved, default 0x00; Low-order byte: Main DSP Sub version number (displayed in hexadecimal) Description: Together with the low-order byte of register 33001, this forms the complete Main DSP Software Version Number. Example: If the low-order byte of register 33001 is 0x1A and the low-order byte of register 33021 is 0x0B, then the Main DSP Software Version Number is 1A0B.

33029~ 33030	Total PV Energy Generation	U32	1kWh	For Hybrid Energy Storage Inverter models: Indicates the PV energy generation data of this unit itself. For S6 Single-Phase Low-Voltage AC-Coupled models: Indicates the PV energy generation data of the paralleled PV inverter(s).
33035	Today's PV Energy Generation	U16	0.1kWh	
33041	Maximum Charge/Discharge Current of this device's battery	U16	0.1A	
33042	Rated Output Current of this device‘s AC Grid Port	U16	0.1A	
33043	Battery 1 Temperature	S16	0.1℃	Description: From Battery 1 BMS
33046	Inverter Battery MOSFET Temperature	S16	0.1℃	Description: Supported by S6 Generation Energy Storage Models
33048	DC Input Type	U16		0: Indicates 1 input 1: Indicates 2 inputs 2: Indicates 3 inputs 3: Indicates 4 inputs ……
33049	PV DC Voltage 1	U16	0.1V	
33050	PV DC Current 1	U16	0.1A	
33051	PV DC Voltage 2	U16	0.1V	
33052	PV DC Current 2	U16	0.1A	
33053	PV DC Voltage 3	U16	0.1V	
33054	PV DC Current 3	U16	0.1A	
33055	PV DC Voltage 4	U16	0.1V	
33056	PV DC Current 4	U16	0.1A	
33057~ 33058	Total PV Input Power	U32	1W	Represents the real-time total PV power of this unit
33059	PV DC Voltage 5	U16	0.1V	
33060	PV DC Current 5	U16	0.1A	
33061	PV DC Voltage 6	U16	0.1V	
33062	PV DC Current 6	U16	0.1A	
33063	PV DC Voltage 7	U16	0.1V	
33064	PV DC Current 7	U16	0.1A	
33065	PV DC Voltage 8	U16	0.1V	
33066	PV DC Current 8	U16	0.1A	
33067	This device's Rated Apparent Power	U16	10VA	
33068	Safety Regulation Ver-	U16		Refer to the "Safety Ver" column in

	sion Number			the "National Grid Protection Standard Settings Table"
33069	HMI Software Sub Version	U16		High-order byte: Reserved, default 0x00 Low-order byte: Sub version number (displayed in hexadecimal) Description: Together with the low-order byte of register 33002, this forms the HMI software version number. Example: If the low-order byte of register 33002 is 0x1C and the low-order byte of register 33069 is 0x06, then the HMI software version number is V1CB06 (or 1C06, the prefix V and infix B may be specific display format).
33070	Warning/Fault Message Data	U16		Refer to Appendix 3 (M33095) for details. Description: Used in conjunction with register address 33095 to subdivide and display detailed fault information. 。
33073	AB Line Voltage / A Phase Voltage	U16	0.1V	For 5G/S5 generation energy storage units: represents the internal inverter-side AC voltage. For S6 generation energy storage units: represents the AC voltage at the inverter's AC Grid port. Single-phase energy storage units use A phase voltage. S6 Single-Phase High-Voltage US Version Energy Storage Inverter: L1-N voltage.
33074	BC Line Voltage / B Phase Voltage	U16	0.1V	S6 Single-Phase High-Voltage US Version Energy Storage Inverter: L2-N voltage.
33075	CA Line Voltage / C Phase Voltage	U16	0.1V	S6 Single-Phase High-Voltage US Version Energy Storage Inverter: L1-L2 voltage.
33076	A Phase Current	U16	0.1A	For 5G/S5 generation energy storage units: represents the internal inverter-side AC current. For S6 generation energy storage

				units: represents the AC current at the inverter's AC Grid port. Single-phase energy storage units use A phase current. S6 Single-Phase High-Voltage US Version Energy Storage Inverter: L1-N current.
33077	B Phase Current	U16	0.1A	S6 Single-Phase High-Voltage US Version Energy Storage Inverter: L2-N current.
33078	C Phase Current	U16	0.1A	S6 Single-Phase High-Voltage US Version Energy Storage Inverter: This register is invalid when N (Neutral) is connected; when N is not connected, this register represents the L1-L2 current.
33079~ 33080	Active Power Value	S32	1W	Active power of the inverter/rectifier.
33081~ 33082	Reactive Power Value	S32	1Var	Reactive power of the inverter/rectifier.
33083~ 33084	Apparent Power Value	S32	1VA	Apparent power of the inverter/rectifier.
33092	National Standard Number	U16		Refer to Appendix 2 (M33092) for details.
33093	Inverter Module Temperature Note: AC NTC (IGBT)	S16	0.1℃	
33094	Grid Frequency	U16	0.01Hz	
33095	Inverter Current Status	U16		Refer to Appendix 3 (M33095) for details. Description: Used in conjunction with register address 33070 to subdivide and display detailed information.
33096	Lead-Acid Battery Ambient Temperature	S16	0.1℃	
33098	Current DRM Status	U16		
33121	Operating Status	U16		Refer to Appendix 4: Status Bit Definitions for details.
33123	Standard Operating Mode Startup Status	U16		Each bit indicates the startup status of an operating mode: 0 = not started, 1 = started. BIT00: Volt-watt (Voltage vs. Active Power).

				BIT01: Volt-var (Voltage vs. Reactive Power). BIT02: Fixed power factor. BIT03: Fixed reactive power. BIT04: Power-PF (Active Power vs. Power Factor). BIT05: Power-Q (Active Power vs. Reactive Power).
33133	Battery 1 Real-time Voltage	U16	0.1V	Description: Battery 1 real-time voltage value.
33134	Battery 1 Real-time Current	S16	0.1A	Description: (1) Charge/discharge direction is determined by register 33135; (2) The absolute value of this register represents the real-time current of Battery 1.
33135	Battery 1 Real-time Charge/Discharge Direction	U16		0: Charging; 1: Discharging.
33137	Backup Port AC Voltage A	U16	0.1V	Description: (1) Backup port information for single-phase systems; (2) For split-phase systems, represents L1-N voltage when connected to Neutral; (3) For three-phase systems, represents L1-N voltage.
33138	Backup Port AC Current A	U16	0.1A	Description: (1) Backup port information for single-phase systems; (2) For split-phase systems, represents current on L1 line; (3) For three-phase systems, represents current on L1 line.
33139	Battery 1 State of Charge (SOC)	U16	1%	100<-->100%
33140	Battery 1 State of Health (SOH)	U16	1%	100<-->100%
33147	Grid-side Home Load Power (Low Register)	U16	1W	Represents only grid-side home loads, excluding Backup loads; for three-phase systems, represents the total active power sum of all grid-side phase loads. Description:

				(1) When the actual grid-side load exceeds 65 kW, it combines with register 34343 to form a U32 data type representing the grid-side load power. Combination example: Power = 700,000 W; 700,000 (Dec) = 0x00011170 (Hex); therefore, register 34343 data is 0x0001, and register 33147 data is 0x1170.
33148	Backup Load Power (Low Register)	S16	1W	A positive value indicates power flowing out of the energy storage inverter Backup port, and a negative value indicates power flowing into the energy storage inverter Backup port. Description: (1) For models with a capacity not exceeding 20 kW, use only register 33148. (2) For models exceeding 20 kW, combine with register 34344 to form an S32 data type representing the Backup load power. See the combination examples below for details. (3) In parallel systems, the master controller reads the Backup port active power values from each inverter and sums them. Combination examples: 1. Power = 700,000 W; 700,000 (Dec) = 0x00011170 (Hex); thus, register 34344 data is 0x0001, and register 33148 data is 0x1170. 2. Power = -1,000 W; -1,000 (Dec) = 0xFFFCFC18 (Hex); thus, register 34344 data is 0xFFF, and register 33148 data is 0xFC18.
33149~ 33150	Battery 1 Real-time Power	S32	1W	Description: (1) The charge/discharge direction is determined by register 33135.

				(2) The absolute value of this register represents the real-time power of Battery 1. (3) For models with a single battery port, this represents the power at the energy storage inverter's battery current port. For models with two independent battery ports, this represents the power at the energy storage inverter's battery current port 1.
33151~ 33152	Inverter AC Grid Port Real-time Total Active Power	S32	1W	Positive value: Power flowing out of the AC Grid port; Negative value: Power flowing into the AC Grid port
33153	Backup Port AC Voltage B	U16	0.1V	10<-->1V，Description: (1) For single-phase systems, data is 0. (2) For split-phase systems, when connected to Neutral, represents L2-N voltage. (3) For three-phase systems, represents L2-N voltage.
33154	Backup Port AC Current B	U16	0.1A	10<-->1V，Description: (1) For single-phase systems, data is 0. (2) For split-phase systems, represents current on the L2 line. (3) For three-phase systems, represents current on the L2 line.
33155	Backup Port AC Voltage C	U16	0.1V	10<-->1V，Description: (1) For single-phase systems, data is 0. (2) For split-phase systems, data is 0. (3) For three-phase systems, represents L3-N voltage.
33156	Backup Port AC Current C	U16	0.1A	10<-->1A，Description: (1) For single-phase systems, data is 0. (2) For split-phase systems, data is 0. (3) For three-phase systems, represents current on the L3 line.

33161~ 33162	Battery Total Charging Energy	U32	1kWh	Description: For models with dual battery ports, this value represents the cumulative charging energy of both batteries.
33163	Battery Daily Charging Energy	U16	0.1kWh	Description: For models with dual battery ports, this value represents the cumulative charging energy of both batteries.
33165~ 33166	Battery Total Discharging Energy	U32	1kWh	Description: For models with dual battery ports, this value represents the cumulative charging energy of both batteries.
33167	Battery Daily Discharging Energy	U16	0.1kWh	Description: For models with dual battery ports, this value represents the cumulative charging energy of both batteries.
33169~ 33170	Grid Total Power Consumption	U32	1kWh	Description: Represents the cumulative energy consumed from the public grid
33171	Grid Daily Power Consumption	U16	0.1kWh	Description: Represents the cumulative energy consumed from the public grid
33173~ 33174	Grid Total Power Feed-in	U32	1kWh	Description: Represents the cumulative energy feed in to the public grid
33175	Grid Daily Power Feed-in	U16	0.1kWh	Description: Represents the cumulative energy feed in to the public grid
33177~ 33178	Load Total Power Consumption	U32	1kWh	Description: Represents the cumulative energy consumption of the Grid-side Home Load AND the Backup Load.
33179	Load Daily Power Consumption	U16	0.1kWh	Description: Represents the cumulative energy consumption of the Grid-side Home Load AND the Backup Load.
33186~ 33187	Inverter AC Grid Port Total Power Feed-in	U32	1kWh	
33188~ 33189	Inverter AC Grid Port Total Power Consumption	U32	1kWh	
33221	Italian Single Test Function Setting (Italian Self-check Project -	U16		0---Null 01---59.S1(253.0V 3000ms) 02---59.S2(264.5V 200ms)

	Single Item Self-check)			03---27.S1(195.5V 1500ms) 04---27.S2(34.5V 200ms) 05---81>.S1(50.2Hz 100ms) 06---81<.S1(49.8 Hz 100ms) 07---81>.S2F(51.5Hz 100ms) 08---81<.S2F(47.5 Hz 100ms) 09---81>.S2S(51.5Hz 1000ms) 10---81<.S2S(47.5 Hz 4000ms) 11---59.S1 PhaseB(253.0V 3000ms) 12---59.S2 PhaseB (264.5V 200ms) 13---27.S1 PhaseB (195.5V 1500ms) 14---27.S2 PhaseB (34.5V 200ms) 15---81>.S1 PhaseB (50.2Hz 100ms) 16---81<.S1 PhaseB (49.8 Hz 100ms) 17---81>.S2F PhaseB (51.5Hz 100ms) 18---81<.S2F PhaseB (47.5 Hz 100ms) 19---81>.S2S PhaseB (51.5Hz 1000ms) 20---81<.S2S PhaseB (47.5 Hz 4000ms) 21---59.S1 PhaseC (253.0V 3000ms) 22---59.S2 PhaseC (264.5V 200ms) 23---27.S1 PhaseC (195.5V 1500ms) 24---27.S2 PhaseC (34.5V 200ms) 25---81>.S1 PhaseC (50.2Hz 100ms) 26---81<.S1 PhaseC (49.8 Hz 100ms) 27---81>.S2F PhaseC (51.5Hz 100ms) 28---81<.S2F PhaseC (47.5 Hz

				100ms) 29---81>.S2S PhaseC (51.5Hz 1000ms) 30---81<.S2S PhaseC (47.5 Hz 4000ms) The self-check items for Phase B and Phase C are only supported by three-phase energy storage machines.
33222	Italian One-Key Full Test (Complete Self-check of Italian Self-check Items 01-10)	U16		Value: Start Complete Self Test 1—In single-item self-check state. 2—In one-key full-test state.
33223	59.S1 Measurement Voltage Value	U16	0.1V	10<-->1V
33224	59.S1 Measurement Time Value	U16	1ms	1<-->1ms
33225	59.S2 Measurement Voltage Value	U16	0.1V	10<-->1V
33226	59.S2 Measurement Time Value	U16	1ms	1<-->1ms
33227	27.S1 Measurement Voltage Value	U16	0.1V	10<-->1V
33228	27.S1 Measurement Time Value	U16	1ms	1<-->1ms
33229	27.S2 Measurement Voltage Value	U16	0.1V	10<-->1V
33230	27.S2 Measurement Time Value	U16	1ms	1<-->1ms
33231	81>.S1 Measurement Frequency Value	U16	0.01Hz	100<-->1Hz
33232	81>.S1 Measurement Time Value	U16	1ms	1<-->1ms
33233	81<.S1 Measurement Frequency Value	U16	0.01Hz	100<-->1Hz
33234	81<.S1 Measurement Time Value	U16	1ms	1<-->1ms
33235	81>.S2F Measurement Frequency Value	U16	0.01Hz	100<-->1Hz
33236	81>.S2F Measurement Time Value	U16	1ms	1<-->1ms
33237	81<.S2F Measurement Frequency Value	U16	0.01Hz	100<-->1Hz
33238	81<.S2F Measurement	U16	1ms	1<-->1ms

	Time Value			
33239	81>.S2S Measurement Frequency Value	U16	0.01Hz	100<-->1Hz
33240	81>.S2S Measurement Time Value	U16	1ms	1<-->1ms
33241	81<.S2S Measurement Frequency Value	U16	0.01Hz	100<-->1Hz
33242	81<.S2S Measurement Time Value	U16	1ms	1<-->1ms
33245	Parallel Inverter Power	U16	0.1kW	Applicable only to single-phase low-voltage AC Coupled systems.
33246	Parallel Inverter CT Detection Switch	U16		Value: 0: Off. When register 33245 value is greater than 500W, it indicates that the parallel inverter has a CT installed and power is present. Value: 1： On. Regardless of the value in register 33245, the host computer must display the power value. Note: Applicable only to single-phase low-voltage AC Coupled systems.
33251	Meter AC Voltage A	U16	0.1V	10<-->1V (1) Registers 33251~33286 represent data read from the external meter/CT itself, when installed on the public grid side or the load side. (2) When the meter/CT is installed on the public grid side, reading these register addresses indicates AC information from the public grid side. (3) When the meter is installed on the load side, refer to the description in registers 33540-33575.
33252	Meter AC Current A	U16	0.01A	100<-->1A
33253	Meter AC Voltage B	U16	0.1V	10<-->1V
33254	Meter AC Current B	U16	0.01A	100<-->1A
33255	Meter AC Voltage C	U16	0.1V	10<-->1V
33256	Meter AC Current C	U16	0.01A	100<-->1A
33257~ 33258	Meter Active Power A	S32	1W	1000<-->1kW, Description: When the external meter/CT is installed on the public grid side, a

				positive value indicates power flowing toward the public grid, while a negative value indicates power being drawn from the public grid.
33259~ 33260	Meter Active Power B	S32	1W	1000<-->1kW, Description: When the external meter/CT is installed on the public grid side, a positive value indicates power flowing toward the public grid, while a negative value indicates power being drawn from the public grid.
33261~ 33262	Meter Active Power C	S32	1W	1000<-->1kW, Description: When the external meter/CT is installed on the public grid side, a positive value indicates power flowing toward the public grid, while a negative value indicates power being drawn from the public grid.
33263~ 33264	Meter Total Active Power	S32	1W	1000<-->1kW, Description: When the external meter/CT is installed on the public grid side, a positive value indicates power flowing toward the public grid, while a negative value indicates power being drawn from the public grid.
33265~ 33266	Meter Reactive Power A	S32	1Var	1<-->1Var
33267~ 33268	Meter Reactive Power B	S32	1Var	1<-->1Var
33269~ 33270	Meter Reactive Power C	S32	1Var	1<-->1Var
33271~ 33272	Meter Total Reactive Power	S32	1Var	1<-->1Var
33273~ 33274	Meter Apparent Power A	S32	1VA	1<-->1VA
33275~ 33276	Meter Apparent Power B	S32	1VA	1<-->1VA
33277~ 33278	Meter Apparent Power C	S32	1VA	1<-->1VA
33279~	Meter Total Apparent	S32	1VA	1<-->1VA

33280	Power			
33281	Meter Power Factor	S16	0.01	100<-->1.0 Range: -1.0~-0.8 , +0.8~+1.0
33282	Meter Grid Frequency	U16	0.01Hz	100<-->1Hz
33283~ 33284	Meter Total Active Energy Imported from Grid	U32	0.01 kWh	100<-->1kWh
33285~ 33286	Meter Total Active Energy Exported to Grid	U32	0.01 kWh	100<-->1kWh
33289	Optimal Revenue Function Version Identification	U16		Optimization Revenue V2 Function Enable Status: 0xAA55: Active; Others: Inactive
33295	Battery 1 BMS Real-time Status	U16		bit00~01: Forced Charging Request, 0—Invalid, 1—No Request, 2—Request, 3—Invalid bit02~03: Auxiliary Heating Request, 0—Invalid, 1—No Request, 2—Request, 3—Invalid bit04~15: Reserved
33388	Parallel System Inverter Online Status	U16		Each BIT indicates the online status of the corresponding inverter ID. BIT00: Not used. BIT01~15: Indicate the online status of inverters with IDs 1~15; 0 = Offline, 1 = Online. Note: When the App reads BIT01 and BIT02 of register 33097 both as 1 (indicating it is the master inverter of the parallel system), it will then operate (including reading/writing) the registers of each inverter based on the online status in register 33338 and the corresponding inverter ID.
33339	Inverter Warning	U16		For details, refer to Appendix 4: Status Bit Definitions.
33470	59.S1 Measurement Voltage Value (Phase B)	U16	0.1V	10<-->1V. Note: Registers 33470-33509 are used for the Phase B and Phase C results of the Italian CEI 0-21 stan-

				dard self-test function and are applicable only to three-phase energy storage machines.
33471	59.S1 Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33472	59.S2 Measurement Voltage Value (Phase B)	U16	0.1V	10<-->1V
33473	59.S2 Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33474	27.S1 Measurement Voltage Value (Phase B)	U16	0.1V	10<-->1V
33475	27.S1 Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33476	27.S2 Measurement Voltage Value (Phase B)	U16	0.1V	10<-->1V
33477	27.S2 Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33478	81>.S1 Measurement Frequency Value (Phase B)	U16	0.01Hz	100<-->1Hz
33479	81>.S1 Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33480	81<.S1 Measurement Frequency Value (Phase B)	U16	0.01Hz	100<-->1Hz
33481	81<.S1 Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33482	81>.S2F Measurement Frequency Value (Phase B)	U16	0.01Hz	100<-->1Hz
33483	81>.S2F Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33484	81<.S2F Measurement Frequency Value (Phase B)	U16	0.01Hz	100<-->1Hz
33485	81<.S2F Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33486	81>.S2S Measurement Frequency Value (Phase B)	U16	0.01Hz	100<-->1Hz
33487	81>.S2S Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33488	81<.S2S Measurement Frequency Value (Phase	U16	0.01Hz	100<-->1Hz

	B)			
33489	81<.S2S Measurement Time Value (Phase B)	U16	1ms	1<-->1ms
33490	59.S1 Measurement Voltage Value (Phase C)	U16	0.1V	10<-->1V
33491	59.S1 Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33492	59.S2 Measurement Voltage Value (Phase C)	U16	0.1V	10<-->1V
33493	59.S2 Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33494	27.S1 Measurement Voltage Value (Phase C)	U16	0.1V	10<-->1V
33495	27.S1 Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33496	27.S2 Measurement Voltage Value (Phase C)	U16	0.1V	10<-->1V
33497	27.S2 Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33498	81>.S1 Measurement Frequency Value (Phase C)	U16	0.01Hz	100<-->1Hz
33499	81>.S1 Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33500	81<.S1 Measurement Frequency Value (Phase C)	U16	0.01Hz	100<-->1Hz
33501	81<.S1 Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33502	81>.S2F Measurement Frequency Value (Phase C)	U16	0.01Hz	100<-->1Hz
33503	81>.S2F Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33504	81<.S2F Measurement Frequency Value (Phase C)	U16	0.01Hz	100<-->1Hz
33505	81<.S2F Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33506	81>.S2S Measurement Frequency Value (Phase C)	U16	0.01Hz	100<-->1Hz
33507	81>.S2S Measurement Time Value (Phase C)	U16	1ms	1<-->1ms

33508	81<.S2S Measurement Frequency Value (Phase C)	U16	0.01Hz	100<-->1Hz
33509	81<.S2S Measurement Time Value (Phase C)	U16	1ms	1<-->1ms
33512	Inverter AC Grid Port Phase A Active Power	S16	10W	Positive value indicates power flowing out of the energy storage inverter, negative value indicates power flowing into the energy storage inverter. Range: -327,680 W to 327,680 W. Description: (1) For single-phase energy storage systems, Phase A data is used by default. (2) For split-phase energy storage systems, Phase A and Phase B data are used by default.
33513	Inverter AC Grid Port Phase A Reactive Power	S16	10Var	Range: -327680Var~327680Var
33514	Inverter AC Grid Port Phase A Apparent Power	S16	10VA	Range: 0VA~327680VA
33515	Inverter AC Grid Port Phase B Active Power	S16	10W	Positive value indicates power flowing out of the energy storage inverter, negative value indicates power flowing into the energy storage in-verter. Range: -327680W~327680W；
33516	Inverter AC Grid Port Phase B Reactive Power	S16	10Var	Range: -327680Var~327680Var
33517	Inverter AC Grid Port Phase B Apparent Power	S16	10VA	Range: 0VA~327680VA
33518	Inverter AC Grid Port Phase C Active Power	S16	10W	Positive value indicates power flowing out of the energy storage inverter, negative value indicates power flowing into the energy storage inverter. Range: -327680W~327680W；
33519	Inverter AC Grid Port Phase C Reactive Power	S16	10Var	Range: -327680Var~327680Var

33520	Inverter AC Grid Port Phase C Apparent Power	S16	10VA	Range: 0VA~327680VA
33521	Inverter Backup Port Phase A Active Power	S16	10W	A positive value indicates power flowing out of the Backup port, while a negative value indicates power flowing into the Backup port. Range: -327680W~327680W； For U.S. models, it represents the active power calculated using L1-N voltage and L1 current.
33522	Inverter Backup Port Phase A Reactive Power	S16	10Var	Range: -327680Var~327680Var For U.S. models, it represents the reactive power calculated using L1-N voltage and L1 current.
33523	Inverter Backup Port Phase A Apparent Power	S16	10VA	Range: 0VA~327680VA； For U.S. models, it represents the apparent power calculated using L1-N voltage and L1 current.
33524	Inverter Backup Port Phase B Active Power	S16	10W	A positive value indicates power flowing out of the Backup port, while a negative value indicates power flowing into the Backup port. Range: -327680W~327680W； For U.S. models, it represents the active power calculated using L2-N voltage and L2 current.
33525	Inverter Backup Port Phase B Reactive Power	S16	10Var	Range: -327680Var~327680Var For U.S. models, it represents the reactive power calculated using L2-N voltage and L2 current.
33526	Inverter Backup Port Phase B Apparent Power	S16	10VA	Range: 0VA~327680VA； For U.S. models, it represents the apparent power calculated using L2-N voltage and L2 current.
33527	Inverter Backup Port Phase C Active Power	S16	10W	A positive value indicates power flowing out of the Backup port, while a negative value indicates power flowing into the Backup port. Range: -327680W~327680W； For U.S. models, the value is 0.
33528	Inverter Backup Port Phase C Reactive Power	S16	10Var	Range: -327680Var~327680Var For U.S. models, the value is 0.

33529	Inverter Backup Side Phase C Apparent Power	S16	10VA	Range: 0VA~327680VA； For U.S. models, the value is 0.
33530	Generator Phase A Active Power	S16	10W	Single-phase systems use Phase A power.
33531	Generator Daily Power Generation	U16	0.1kWh	10<-->1kWh
33532~33533	Generator Total Power Generation	U32	1kWh	1<-->1kWh
33534	Generator Phase B Active Power	S16	10W	100<-->1kW
33535	Generator Phase C Active Power	S16	10W	100<-->1kW
33577	Inverter AC Grid Port Daily Power Export	U16	0.1kWh	10 <--> 1kWh
33578	Inverter AC Grid Port Daily Power Import	U16	0.1kWh	10 <--> 1kWh
33580~33581	Grid-side Home Load Total Power Consumption	U32	1kWh	
33586	Grid-side Home Load Daily Power Consumption	U16	0.1kWh	
33590~33591	Backup Load Total Power Consumption	U32	1kWh	Standalone Mode: Represents the energy flowing out of the local unit's Backup port. Parallel Mode: The master unit's Backup load energy data represents the total Backup energy of the entire parallel system, while slave units represent the energy flowing out of their respective Backup ports.
33596	Backup Load Daily Power Consumption	U16	0.1kWh	10 <--> 1kWh
34200	LG Battery 10H/16H Master Battery SOC	U16	0.001	1000<-->100% From LG High Voltage Battery BMS
34201	LG Battery 10H/16H Master Battery SOH	U16	0.001	1000<-->100%
34202	LG Battery 10H/16H Master Battery Voltage	U16	0.1V	10<-->1V
34203	LG Battery 10H/16H Master Battery Current	S16	0.1V	10<-->1A Positive indicates charging, negative indicates discharging.

34204	LG Battery 10H/16H Master Battery Maximum Charging Power	U16	1W	1<-->1W
34205	LG Battery 10H/16H Master Battery Maximum Discharging Power	U16	1W	1<-->1W
34206	LG Battery 10H/16H Master Battery DCDC Firmware Version (Main)	U16		
34207	LG Battery 10H/16H Master Battery DCDC Firmware Version (Test)	U16		
34208	LG Battery 10H/16H Master Battery BMS Firmware Version High Byte	U16		
34209	LG Battery 10H/16H Master Battery BMS Firmware Version Low Byte	U16		
34210	LG Battery 10H/16H Master Battery Fault ID	U16		
34211	LG Battery 10H/16H Master Battery Diagnostic Result	U16		0: No abnormality detected 1: Level 1 Warning – Warning1 (limits available battery charging/discharging power) 2: Level 2 Warning – Warning2 (battery actively switches to Standby state) 3: Fault (battery actively switches to Fault state)
34212	LG Battery 10H/16H Master Battery Status/Mode	U16		0: Initial State 1: Standby State 3: Operation State 4: Update State (battery firmware update via inverter) 5: Fault State (cannot recover automatically) 6: Battery Self Update 10: Power-saving State
34213	LG Battery 10H/16H Master Battery Current	S16	1W	1<-->1W Positive value indicates charging.

	Power			
34214	LG Battery 10H/16H Master Battery Maximum Temperature	S16	0.1Degc	10<-->1DegC
34215	LG Battery 10H/16H Master Battery Status Flags	U16		BIT00: Full Charge Flag – 0: Not fully charged, 1: Fully charged BIT01: Full Discharge Flag – 0: Not fully discharged, 1: Fully discharged BIT02: CB Status – 0: Open, 1: Closed BIT03: Power-saving Mode Entry Flag – 0: Available, 1: Unavailable BIT04–15: Reserved
34216	LG Battery 10H/16H Secondary Battery SOC	U16	0.001	1000<-->100% From LG High Voltage Battery BMS
34217	LG Battery 10H/16H Secondary Battery SOH	U16	0.001	1000<-->100%
34218	LG Battery 10H/16H Secondary Battery Voltage	U16	0.1V	10<-->1V
34219	LG Battery 10H/16H Secondary Battery Current	S16	0.1A	10<-->1A Positive indicates charging, negative indicates discharging.
34220	LG Battery 10H/16H Secondary Battery Maximum Charging Power	U16	1W	1<-->1W
34221	LG Battery 10H/16H Secondary Battery Maximum Discharging Power	U16	1W	1<-->1W
34222	LG Battery 10H/16H Secondary Battery DCDC Firmware Version (Main)	U16		
34223	LG Battery 10H/16H Secondary Battery DCDC Firmware Version (Test)	U16		
34224	LG Battery 10H/16H Secondary Battery BMS Firmware Version High Byte	U16		

34225	LG Battery 10H/16H Secondary Battery BMS Firmware Version Low Byte	U16		
34226	LG Battery 10H/16H Secondary Battery Fault ID	U16		
34227	LG Battery 10H/16H Secondary Battery Diagnostic Result	U16		0: No abnormality detected 1: Level 1 Warning – Warning1 (limits available battery charging/discharging power) 2: Level 2 Warning – Warning2 (battery actively switches to Standby state) 3: Fault (battery actively switches to Fault state)
34228	LG Battery 10H/16H Secondary Battery Status/Mode	U16		0: Initial State 1: Standby State 3: Operation State 4: Update State (battery firmware update via inverter) 5: Fault State (cannot recover automatically) 6: Battery Self Update 10: Power-saving State
34229	LG Battery 10H/16H Secondary Battery Current Power	S16	1W	1<-->1W Positive value indicates charging.
34230	LG Battery 10H/16H Secondary Battery Maximum Temperature	S16	0.1DegC	10<-->1DegC
34231	LG Battery 10H/16H Secondary Battery Status Flags	U16		BIT00: Full Charge Flag – 0: Not fully charged, 1: Fully charged BIT01: Full Discharge Flag – 0: Not fully discharged, 1: Fully discharged BIT02: CB Status – 0: Open, 1: Closed BIT03: Power-saving Mode Entry Flag – 0: Available, 1: Unavailable BIT04–15: Reserved
34240	AFCI Board Software Version	U16		(Displayed in Hexadecimal) Description: This indicates the version number of the AFCI detection board.

				The high byte represents the major version number of the AFCI detection board, and the low byte represents the minor version number of the AFCI detection board. For example, 0xAABB: AA represents the major version number of the AFCI detection board, and BB represents the minor version number of the AFCI detection board.
34277	BMS2 Temperature	S16	0.1℃	Description: Data from Battery 2 BMS. BMS2 data is only applicable to energy storage models supporting dual batteries.
34278	BMS2 SOC	U16	1%	Description: From Battery 2 BMS.
34279	BMS2 SOH	U16	1%	Description: From Battery 2 BMS.
34280	BMS2 Charging Voltage Limit	U16	0.1V	Description: From Battery 2 BMS.
34281	BMS2 Charging Current Limit	U16	0.1A	Description: From Battery 2 BMS.
34282	BMS2 Discharging Current Limit	U16	0.1A	Description: From Battery 2 BMS.
34289	Battery 2 Real-time Voltage Value	U16	0.1V	Description: Battery 2 Real-time Voltage Value. Inverter Battery 2 data is only applicable to energy storage models supporting dual batteries.
34290	Battery 2 Real-time Current Value	S16	0.1A	Description: (1) The charge/discharge direction is determined by register 34291. (2) The absolute value of this register represents the real-time current value of Battery 2.
34291	Battery 2 Real-time Charge/Discharge Direction	U16		0: Charging 1: Discharging
34328	Smartport Phase A AC Voltage	U16	0.1V	Registers 34328~34333 represent the real-time voltage and current of the Smart Port (which can be configured as a generator, smart load, or AC coupling).
34329	Smartport Phase B AC Voltage	U16	0.1V	

34330	Smartport Phase C AC Voltage	U16	0.1V	
34331	Smartport Phase A AC Current	U16	0.1A	
34332	Smartport Phase B AC Current	U16	0.1A	
34333	Smartport Phase C AC Current	U16	0.1A	
34343	Grid-side Home Load Power (High Register)	U16	1W	Combined with register 33147 to form the grid-side load power. Example: Power = 700,000 W, 700,000 (Dec) = 0x00011170 (Hex). Therefore, register 34343 data is 0x0001, and register 33147 data is 0x1170.
34344	Backup Load Power (High Register)	S16	1W	Combined with register 33148 to form the Backup load power. Examples: 1. Power = 700,000 W, 700,000 (Dec) = 0x00011170 (Hex). Thus, register 34344 data is 0x0001, and register 33148 data is 0x1170. 2. Power = -1,000 W, -1,000 (Dec) = 0xFFFFFC18 (Hex). Thus, register 34344 data is 0xFFFF, and register 33148 data is 0xFC18.
34348	Battery 1 BMS Minimum Cell Voltage	U16	0.001V	
34349	Battery 1 BMS Maximum Cell Voltage	U16	0.001V	
34350	Battery 1 BMS Minimum Cell Temperature	U16	0.1℃	
34351	Battery 1 BMS Maximum Cell Temperature	U16	0.1℃	
34367	HMI-LCD Firmware Version	U16		High Byte: Major Version Number Low Byte: Minor Version Number
34368~ 34369	Battery 2 Real-time Power Value	S32	1W	Description: (1) The charge/discharge direction is determined by register 34291. (2) The absolute value of this register represents the real-time power value of Battery 2.

				(3) Applicable only to models supporting dual battery ports, representing the power of battery port.
34371	BMS2 Discharge Voltage Limit Value	U16	0.1V	Description: From Battery 2 BMS.
34372	BMS2 Status	U16		BIT00: Charge Disable – 0: Invalid, 1: Valid BIT01: Discharge Disable – 0: Invalid, 1: Valid BIT02: Forced Charge – 0: No Request, 1: Request Forced Charge BIT04~15: Reserved
34373	BMS2 Minimum Cell Voltage	U16	0.001V	
34374	BMS2 Maximum Cell Voltage	U16	0.001V	
34375	BMS2 Minimum Cell Temperature	U16	0.1℃	
34376	BMS2 Maximum Cell Temperature	U16	0.1℃	
34391	Smart Port Phase A Active Power (for connected smart load or grid-tied inverter)	S16	10W	A positive value indicates power flowing out of the energy storage inverter's Smart Port, while a negative value indicates power flowing into the Smart Port.
34392	Smart Port Phase B Active Power (connected smart load or grid-tied inverter)	S16	10W	Positive values indicate power flowing out of the energy storage inverter's Smart Port; negative values indicate power flowing into the Smart Port.
34393	Smart Port Phase C Active Power (connected smart load or grid-tied inverter)	S16	10W	Positive values indicate power flowing out of the energy storage inverter's Smart Port; negative values indicate power flowing into the Smart Port.
34410	Generator Frequency	U16	0.01Hz	
34411~ 34412	Smart Load Total Power Consumption	U32	1kWh	For parallel systems, the data in this register of the master unit represents the total power consumption of the Smart load in the parallel system.
34413	Smart Load Daily Power Consumption	U32	1kWh	For parallel systems, the data in this register of the master unit represents the daily power consumption of the

				Smart load in the parallel system.
34424	Grid-side Load Phase A Active Power	U16	10W	Currently only supports the S6 generation of three-phase energy storage machines.
34425	Grid-side Load Phase B Active Power	U16	10W	Currently only supports the S6 generation of three-phase energy storage machines.
34426	Grid-side Load Phase C Active Power	U16	10W	Currently only supports the S6 generation of three-phase energy storage machines.
34427	Parallel System Information Valid Flag	U16		0xAA55 – Parallel system power values (registers 34428~34434, 34490~34491) are valid. Any other value – invalid.
34428	Parallel System Total PV Power	S16	100W	
34429	Parallel System Total Generator Active Power	S16	100W	
34430	Parallel System Total Battery Power	S16	100W	Positive value indicates battery charging, negative value indicates battery discharging.
34431	Parallel System Total Backup Load Active Power	S16	100w	
34432	Parallel System Total Inverter Active Power	S16	100w	Positive value indicates power flowing toward the grid, negative value indicates power being drawn from the grid.
34433	Parallel System Total Smart Load Active Power	S16	100w	Positive value indicates power flowing out of the Smart Port, negative value indicates power flowing into the Smart Port.
34434	Parallel System AC Couple Total Active Power	S16	100w	Positive value indicates power flowing out of the AC Coupling port, negative value indicates power flowing into the AC Coupling port.
34445~34446	AC Coupling Total Power Generation	U32	1kWh	Indicates the energy output from the grid-tied inverter to the energy storage system after the Smart Port of the energy storage inverter is configured for AC Coupling functionality.
34451	AC Coupling Daily Power Generation	U16	0.1kWh	

34490	Parallel System Grid-side Load Total Active Power	S16	100W	
34491	Parallel System Public Grid-side Total Active Power	S16	100W	Positive value indicates power flowing toward the grid, negative value indicates power being drawn from the grid.
34498	PV DC Voltage 9	U16	0.1V	
34499	PV DC Current 9	U16	0.1A	
34500	PV DC Voltage 10	U16	0.1V	
34501	PV DC Current 10	U16	0.1A	
34537	Parallel System AC Grid Port Total Active Power	S16		Positive value indicates power flowing out of the AC Grid port; negative value indicates power flowing into the AC Grid port. Note: Readable only by the master unit in a parallel system.
34578	Battery 2 BMS Real-time Status	U16		bits 00–01: Forced charging request – 0: invalid, 1: no request, 2: request, 3: invalid bits 02–03: Auxiliary heating request – 0: invalid, 1: no request, 2: request, 3: invalid bits 04–15: reserved
33590	Generator Preheat/Cooling Operation Status	U16		1: Generator Stopped 2: Generator Supplying Power 3: Generator Preheating 4: Generator Cooling 5–65535: Invalid
34600	Module ID 1 【For each ports' power values (For this device)】	U16		0x0001 indicates the power values of this unit's ports. Any other value is invalid. Description: (1) The content of Module 1 was added from a certain firmware version onwards. The conditions for use are as specified in (2). When Module 1 is invalid, relevant non-contiguous register addresses can be read. (2) Criteria for Module 1 validity: - Register 34600 value equals 0x0001, - Register 34601 value is in the

				range 1~48 (decimal), - Register 34602 value equals 0xAA55.
34601	Module 1 Register Count	U16		Low byte: Number of valid registers in 34602~34649, not exceeding 48. High byte: Reserved, default 0x00. Note: When Module 1 is active, the value of this register ranges from 1 to 48.
34602	Valid Identifier – For each ports' power values (For this device)	U16		0xAA55 – The power values of this unit's ports (registers 34603~34649) are valid. Any other value – invalid.
34603~34604	PV Power	S32	1W	Positive values are valid; negative values are invalid. 0x80000000 indicates invalid. Note: For models without a PV port (e.g., AC Coupled), this register is fixed at 0x80000000.
34605~34606	Battery 1 Power	S32	1W	Positive value indicates charging; negative value indicates discharging. 0x80000000 indicates invalid.
34607~34608	Battery 2 Power	S32	1W	Positive value indicates charging; negative value indicates discharging. 0x80000000 indicates invalid. Description: Only applicable to models with a Battery 2 port. For models without a Battery 2 port, this register is fixed at 0x80000000.
34609~34610	Inverting Bridge Total Active Power	S32	1W	Positive value indicates feeding power to the grid; negative value indicates drawing power from the grid. 0x80000000 indicates invalid.
34611~34612	Backup Load Total Active Power	S32	1W	Positive value indicates power flowing out of the Backup port; negative value indicates power flowing into the Backup port. 0x80000000 indicates invalid.
34613~34614	Backup Load Total Apparent Power	S32	1VA	Positive values are valid; negative values are invalid. 0x80000000 indicates invalid.

34615~ 34616	Inverter AC Grid Port Total Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates invalid.
34617~ 34618	Generator Total Active Power	S32	1W	Positive values are valid; negative values are invalid. 0x80000000 indicates invalid. Note: When no generator is connected, this register is fixed at 0x80000000.
34619~ 34620	Smart Load Total Active Power	S32	1W	Positive value indicates power flowing out of the Smart port; negative value indicates power flowing into the Smart port. 0x80000000 indicates invalid. Note: For models without a Smart port or when the Smart port is not configured for Smart load functionality, this register is fixed at 0x80000000.
34621~ 34622	Grid-tied Inverter Output Total Active Power	S32	1W	Positive values are valid; negative values are invalid. 0x80000000 indicates invalid. Note: When no grid-tied inverter is connected, this register is fixed at 0x80000000.
34623~ 34624	Grid-side Load Total Active Power	S32	1W	Positive values are valid; negative values are invalid. 0x80000000 indicates invalid.
34625~ 34626	Public Grid Total Active Power	S32	1W	Positive value indicates feeding power to the grid; negative value indicates drawing power from the grid. 0x80000000 indicates invalid. Note: For machines without sampling on the public grid side, this register is fixed at 0x80000000.
34799	Remote Control (e.g., for frequency regulation) Protocol Version	U16		High byte: Major version number Low byte: Minor version number Example: If the register value is 0x0100, it indicates the protocol version is 0100.

				Description: (1) A high byte of 0x01 indicates support for Remote Control V1 protocol (starting from register 43280).
34900	**Module ID 6** 【For hybrid system with PV and hybrid inverters】	U16		0x0006 — Photovoltaic & Storage System Information Any other value is invalid. Description: (1) The content of Module 6 was added starting from a specific firmware version. Usage conditions are as described in (2). When Module 6 is invalid, some information can be read from relevant non-contiguous register addresses. (2) Criteria for Module 6 validity: - Register 34900 value equals 0x0006, - Register 34901 value is in the range 1~48 (decimal), - Register 34902 value equals 0xAA55.
34901	Module 6 Register Count	U16		Low byte: Number of valid registers in the range 34902~34949, not exceeding 48. High byte: Reserved, default 0x00. Note: When Module 6 is active, the value of this register ranges from 1 to 48.
34902	Valid Identifier - For hybrid system with PV and hybrid inverters	U16		0xAA55–Photovoltaic & Storage System Information (registers 34903~34949) is valid. Any other value – invalid.
34903~ 34904	Hybrid inverters' PV Total Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is invalid. Description: Represents the cumulative PV power connected to all energy storage units in the system.

34905~ 34906	Hybrid inverters' Total Battery Power	S32	1W	Positive value indicates battery charging; negative value indicates battery discharging. 0x80000000 indicates the value is invalid. Description: Represents the cumulative battery power connected to all energy storage units in the system.
34907~ 34908	Hybrid inverters' Total Inverter Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is invalid. Description: Represents the cumulative inverter power of all energy storage units in the system.
34909~ 34910	System Backup Load Total Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is invalid. Description: Represents the cumulative power of the system Backup load.
34911~ 34912	Hybrid inverters' AC Grid Port Total Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is invalid. Description: Represents the cumulative AC Grid port power of all energy storage units in the system.
34913~ 34914	Generator Total Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is

				invalid.
34915~ 34916	Hybrid inverters' Smart Load Total Active Power	S32	1W	Positive value indicates power flowing out of the Smart Port; negative value indicates power flowing into the Smart Port. 0x80000000 indicates the value is invalid. Description: Represents the cumulative power of the system smart load.
34917~ 34918	Grid-tied Inverters' Total Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is invalid. Description: Represents the cumulative power of all grid-tied inverters in the system.
34919~ 34920	System Grid-side Load Total Active Power	S32	1W	Positive value indicates power flowing out of the energy storage inverter; negative value indicates power flowing into the energy storage inverter. 0x80000000 indicates the value is invalid.
34921~ 34922	System Public Grid-side Total Active Power	S32	1W	Positive value indicates power flowing toward the grid; negative value indicates power being drawn from the grid. 0x80000000 indicates the value is invalid.
34923	Number of Grid-tied Inverters Online	U16		Range: 0~20, other values are invalid.
25000	**Module ID 7** 【Remote Control Information】	U16		0x0007 – Remote Control Information Any other value – invalid. Description: (1) The content of Module 7 is used for operational information of the Remote Control V1 function. (2) Criteria for Module 7 validity: - Register 25000 value equals

				0x0007, - Register 25001 value is in the range 1~98 (decimal), - Register 25002 value equals 0xAA55.
25001	Module 7 Register Count	U16		Low byte: Number of valid registers in the range 25002–25099, range 2~98. High byte: Reserved, default 0x00.
25002	Valid Identifier – For Remote Control Information	U16		0xAA55 – Remote Control Information (registers 25003~25099) is valid. Any other value – invalid.
25003	Remote Control Status	U16		BIT00: 0 unready for Remote Control 1 ready for Remote Control BIT01: 0 available remote control power is not limited by BMS 1 available remote control power is limited by BMS BIT02: 0 available remote control power is not limited by inverter 1 available remote control power is limited by inverter BIT03: 0 available remote control power is not limited by grid frequency(grid code) 1 available remote control power is limited by grid frequency(grid code) BIT04: 0 available remote control power is not limited by grid voltage(grid code) 1 available remote control power is limited by grid voltage(grid code) BIT05: 0 available remote control power is not limited by active power Ramp-up(grid code) 1 available remote control power is limited by active power

				Ramp-up(grid code) BIT06: 0 available remote control power is not limited by DRM(set by customer) 1 available remote control power is limited by DRM(set by customer) BIT07: 0 available remote control power is not limited by EPM(set by customer) 1 available remote control power is limited by EPM(set by customer) BIT08: 0 available remote control power is not limited by grid peak power(set by customer) 1 available remote control power is limited by grid peak power(set by customer) BIT09: 0 available remote control power is not limited by reactive power(set by customer) 1 available remote control power is limited by reactive power(set by customer) BIT10~BIT15 reserved
25004~ 25005	This device's Battery Available Charge Power Value	U32	1W	
25006~ 25007	This device's Battery Available Discharge Power Value	U32	1W	
25008~ 25009	This device's AC Grid Port Available Import Active Power Value	U32	1W	
25010~ 25011	This device's AC Grid Port Available Export Active Power Value	U32	1W	
25012~ 25013	Parallel System Battery Available Charge Power Value	U32	1W	
25014~	Parallel System Battery	U32	1W	

25015	Available Discharge Power Value			
25016~ 25017	Parallel System AC Grid Port Available Import Active Power Value	U32	1W	
25018~ 25019	Parallel System AC Grid Port Available Export Active Power Value	U32	1W	

5.2. Definition of Set Parameter Addresses

Corresponding function codes 0x03, 0x06, and 0x10.

Register Address (Decimal)	Description	Data Type	Unit	Remarks
43000	Real-Time Clock: Year	U16		Range: 0~99, representing the years 2000~2099.
43001	Real-Time Clock: Month	U16		Range: 1~12， representing month 1~12
43002	Real-Time Clock: Day	U16		Range: 1–31, representing day 1–31
43003	Real-Time Clock: Hour	U16		Range: 0–23, representing hour 0–23
43004	Real-Time Clock: Minute	U16		Range: 0–59, representing minute 0–59
43005	Real-Time Clock: Second	U16		Range: 0–59, representing second 0–59
43006	Slave Address Setting	U16		Setting range: 1–10, default 1. Note: Only set using function code 0x06.
43007	Startup/Shutdown	U16		0xBE–Startup , 0xDE–Shutdown
43009	Current Battery Model	U16		Low byte: Low-voltage battery manufacturer (see Appendix 5 for low-voltage battery codes) High byte: High-voltage battery manufacturer (see Appendix 6 for high-voltage battery codes)
43010	Maximum Charging SOC	U16	1%	Setting range: 80–100%, default 100%. Note: Represents the charge cutoff SOC for communication-capable lithium batteries.
43011	Over-Discharge SOC	U16	1%	Setting range: 5–40%, default 20%; must be greater than the forced charge SOC (register address 43018).
43018	Forced Charge SOC	U16	1%	Setting range: 4% – (Over-Discharge SOC – 1%), default 10% (Note: Over-Discharge SOC register address 43011).
43019	Rated Capacity	U16	1 Ah	Range: 0–9999 Ah, default 200 Ah. Note: Supports lead-acid and 48/51.2V non-communication li-

				thium batteries.
43020	Over-Discharge Voltage	U16	0.1V	Lead-acid battery: S5 models, range 40.0–48.0 V, default 44.5 V; S6 models, range 40.0–52.0 V, default 44.5 V. 48V lithium battery: range 45–52 V, default 47 V. 51.2V lithium battery: range 45–52 V, default 50 V.
43021	Forced Charge Voltage	U16	0.1V	Lead-acid battery: S5 models, range 40.0–48.0 V, default 43.8 V; S6 models, range 40.0–50.0 V, default 43.8 V.
43022	Lead-Acid Battery Temperature Compen-sation Coefficient	U16	1mV/ ℃	Range: 0–180 mV/°C, Default: 0 mV/°C; Note: Only supported for lead-acid batteries.
43023	Ambient Temperature Status Selection	U16		1: Normal Temperature, 2: Low Temperature, 3: High Tempera-ture,Other values invalid; Default: 1; Note: Only supported for lead-acid batteries.
43024	Battery Reserved SOC	U16	1%	Range: Over-discharge SOC to 100%, default 80% (Note: Over-discharge SOC register 43011) Description: Parameter setting for enabling backup battery functional-ity.
43038	81>S1	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table. Note: Registers 43038-43049 are only effective when configured un-der the CEI 0-21 standard.
43039	81>S1-T	U16	0.01s	The configurable range and default values are determined according to the national standard parameter table.
43040	81<S1	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter

				table.
43041	81<S1-T	U16	0.01s	The configurable range and default values are determined according to the national standard parameter table.
43042	81>S2F	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43043	81>S2F-T	U16	0.01s	The configurable range and default values are determined according to the national standard parameter table.
43044	81<S2F	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43045	81<S2F-T	U16	0.01s	The configurable range and default values are determined according to the national standard parameter table.
43046	81>S2S	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43047	81>S2S-T	U16	0.01s	The configurable range and default values are determined according to the national standard parameter table.
43048	81<S2S	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43049	81<S2S-T	U16	0.01s	The configurable range and default values are determined according to the national standard parameter table.
43068	National Standard Number	U16		Refer to Appendix 2.
43071	Built-in EPM Hard limit Switch (Note: Related to the Australian 2020 new standard)	U16		00: Default invalid action command; 01: Turn On; 02: Turn Off; Applicable to all series covered by

				the Australian new standard. (Note: Related to the Australian 2020 new standard)
43072	Built-in EPM Hard limit Backflow power value (Note: Related to Australian 2020 new standard)	S16	100W	Standalone setting range: 0–1.1 times inverter rated power. Parallel setting range: 0–1.1 times inverter rated power × number of units. Setting method V2 range: Standalone: 0–4 times inverter rated power, default: 1.1 times inverter rated power. Parallel: 0–4 times inverter rated power × number of units, default: 1.1 times inverter rated power × number of units. Positive value indicates power fed to the grid; negative value indicates power drawn from the grid. (Note: Related to Australian 2020 new standard)
43073	Meter/CT Placement Setting	U16		BIT00–03: Reserved BIT04: EPM switch (anti-reverse-flow power setting switch), 0–Off, 1–On, default 0. (Note: Related to Australian 2020 new standard, EPM soft switch) BIT05: FailSafe switch, 0–Off, 1–On, default 0. BIT06: Power control mode, default 0; 0: Three-phase unified control (inverter outputs balanced current); 1: Three-phase independent control (inverter outputs unbalanced current). BIT07–12: Reserved BIT13: Meter/CT selection for public grid-side energy management, 0–Meter, 1–CT; default 0 (applies to energy storage machines supporting both Meter and CT). BIT14: Control mode for sin-

				gle-phase energy storage machine connected to a three-phase meter, 0–Total power, 1–Single-phase power, default 0 (for S6-generation energy storage machines). BIT15: Reserved
43074	EPM Backflow Power Setting	S16	100W	RHI-(3-6)K-48ES-5G：1<-->100W, Setting range: 0~99. RHI-1P(5-10)K-HVES-5G/RHI-3P(5-10)K-HVES-5G/RAI-3K-48ES-5G：1<-->1W, Setting range: 0~30000. S6 Models：1<-->100W, Standalone/Three-Phase Network: Setting range: 0–1.1 times inverter rated power. Parallel System: Setting range: 0–1.1 times inverter rated power × number of units. Setting method V2 range: Standalone: 0–4 times inverter rated power, default: 1.1 times inverter rated power. Parallel: 0–4 times inverter rated power × number of units, default: 1.1 times inverter rated power × number of units. Upper limit uniformly set to 3 MW (related to register 34806 bits 06–07). (Note: Related to Australian 2020 new standard, EPM soft backflow power limit.)
43076	AFCI Turn On / Turn Off	U16		1<--> Turn On 0<--> Turn Off
43077	Italian Standard Mode Switching Digital Signal	U16		0: Off (default: off) (81>S1 – 50.2 Hz / 0.1 s – Inverter 81<S1 – 49.8 Hz / 0.1 s – Inverter) 1: Local Control (81>S2 – 51.5 Hz / 0.1 s – Local 81<S2 – 47.5 Hz / 0.1 s – Local) 2: External Signal (81>S2 – 51.5 Hz / 1.0 s – External

				81<S2 – 47.5 Hz / 4.0 s – External) Note: Settings are non-volatile and can only be configured under the Italian CEI 0-21 standard.
43079	One-Key Full Test (Complete Italian Self-check Items 01-10)	U16		Value: Start Complete Self Test 0---One-key full test stopped or not started 2---One-key full test started
43082	Grid Upper Voltage Limit Required for Post-Fault Recovery	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table.
43083	Grid Lower Voltage Limit Required for Post-Fault Recovery	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table.
43084	Grid Upper Frequency Limit Required for Post-Fault Recovery	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43085	Grid Lower Frequency Limit Required for Post-Fault Recovery	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43086	Grid Upper Voltage Limit Required for First Power-On	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table.
43087	Grid Lower Voltage Limit Required for First Power-On	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table.
43088	Grid Upper Frequency Limit Required for First Power-On	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43089	Grid Lower Frequency Limit Required for First Power-On	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43090	Grid Primary Over-Voltage Threshold	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table.

				For the CEI 0-21 standard, it represents 59 Hz S2.
43091	Grid Primary Over-Voltage Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the CEI 0-21 standard, it represents 59.S2 Time
43092	Grid Secondary Over-Voltage Threshold	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table.
43093	Grid Secondary Over-Voltage Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table.
43094	Grid Primary Under-Voltage Threshold	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table. For the CEI 0-21 standard, it represents 27.S1
43095	Grid Primary Under-Voltage Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the CEI 0-21 standard, it represents 27.S1 Time
43096	Grid Secondary Under-Voltage Threshold	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table. For the CEI 0-21 standard, it represents 27.S2
43097	Grid Secondary Under-Voltage Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the CEI 0-21 standard, it represents 27.S2 Time
43098	Grid Primary Over-Frequency Threshold	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.

43099	Grid Primary Over-Frequency Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the Hawaiian and new U.S. standard UL1547-2018,1<-->20mS (Reason: Since the upper limit of the parameter range is 1000 s, if 1<-->10mS，the maximum value of a single register would be 655.35 s, which does not meet the safety regulation requirements.)
43100	Grid Secondary Over-Frequency Threshold	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43101	Grid Secondary Over-Frequency Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the Hawaiian and new U.S. standard UL1547-2018,1<-->20mS
43102	Grid Primary Under-Frequency Threshold	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43103	Grid Primary Under-Frequency Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the Hawaiian and new U.S. standard UL1547-2018, 1<-->20 ms.
43104	Grid Secondary Under-Frequency Threshold	U16	0.01Hz	The configurable range and default values are determined according to the national standard parameter table.
43105	Grid Secondary Under-Frequency Delay Threshold	U16	10ms	The configurable range and default values are determined according to the national standard parameter table. For the Hawaiian and new U.S. standard UL1547-2018, 1<-->20 ms.

43106	Start-up Time	U16	1s	The configurable range and default values are determined according to the national standard parameter table.
43107	Fault Recovery Time	U16	1s	The configurable range and default values are determined according to the national standard parameter table.
43108	10-Minute Average Over-Voltage Protection Threshold	U16	0.1V	The configurable range and default values are determined according to the national standard parameter table. For the CEI 0-21 standard, it represents 59 Hz S1.
43110	Energy Storage Control Switch	U16		For details, refer to Appendix 7: Energy Storage Control Switch Status Description. Note: BIT00 (Self-Consumption Priority), BIT06 (Grid Feed-in Priority), and BIT11 (Peak-Shaving) cannot be enabled simultaneously. BIT04 (Backup Battery Enable) and BIT11 (Peak-Shaving) cannot be enabled simultaneously. Operation Instructions for Writing BITxx: The host computer shall first read the current value of this register, then modify the value of the corresponding BIT as needed based on the current value, and finally write the updated value back.
43111	Backup Load Function Enable Setting	U16		0000H – Disabled, 0001H – Enabled, default: Enabled.
43112	Backup Port AC Output Voltage Setting	U16	0.1V	Standard Voltage Grid: Phase voltage range: 190–250 V; Default: 230 V. Low Voltage Grid: Phase voltage range: 110–140 V, Default: 132 V; Line voltage range: 190–250 V, Default: 230 V.
43117	Battery 1 Maximum Charging Current Setting	U16	0.1A	5G Series: Range: 1–100 A, Default: 100 A. S5 Series: Range: 1 – unit's battery

				maximum charging current, Default: unit's battery maximum charging current. S6 Series: Range: 0 – unit's battery maximum charging current, Default: unit's battery maximum charging current.
43118	Battery 1 Maximum Discharging Current Setting	U16	0.1A	5G Series: Range: 1–100 A, Default: 100 A. S5 Series: Range: 1 – unit's battery maximum discharging current, Default: unit's battery maximum discharging current. S6 Series: Range: 0 – unit's battery maximum discharging current, Default: unit's battery maximum discharging current.
43123	Overload Voltage Droop Setting	U16		0000H – Disabled, 0001H – Enabled, default: Disabled.
43125	Phase A Reverse Power Flow Setting	S16	100W	Range: 0–99, default 0. Effective only when BIT06 (power control mode) of register 43073 is set to "three-phase unbalanced output". Note: Only applicable to S6 three-phase high-voltage 10 kW series and S6 single-phase high-voltage 11.4 kW series software versions that have not been simplified; corresponds to register 35000 values 0x2070 and 0x2080.
43126	Phase B Reverse Power Flow Setting	S16	100W	1<-->100W，Range: 0–99, default 0. Effective only when BIT06 (power control mode) of register 43073 is set to "three-phase unbalanced output". Note: Only applicable to S6 three-phase high-voltage 10 kW series and S6 single-phase high-voltage 11.4 kW series software versions that have not been simplified; corresponds to register 35000 values 0x2070 and 0x2080.

43127	Phase C Reverse Power Flow Setting	S16	100W	1<-->100W，Range: 0–99, default 0. Effective only when BIT06 (power control mode) of register 43073 is set to "three-phase unbalanced output". Note: Only applicable to S6 three-phase high-voltage 10 kW series software versions that have not been simplified; corresponds to register 35000 value 0x2070.
43128	Remote Control: Inverter AC Grid Port Active Power Setting	S16	10W	Range：0~300kW Positive value indicates power flowing out of the inverter; negative value indicates power flowing into the inverter. Description: (1) Effective only after remote control of the inverter AC Grid port is enabled (register 43132 = 2). (2) Settings are not retained after power loss.
43129	Remote Control: Battery Discharging Power Setting	U16	10W	Range：0~300kW Description: (1) Effective only after remote control of battery discharging is enabled (register 43135 = 2). (2) Settings are not retained after power loss.
43130	Remote Control: Battery Charging Limit Power	U16	10W	Range: 10 W – device Backup rated output power; default 0 (invalid). Note: Settings are not retained after power loss.
43131	Remote Control: Battery Discharging Limit Power	U16	10W	Range: 10 W – device Backup rated output power; default 0 (invalid). Note: Settings are not retained after power loss.
43132	Remote Control: Grid Regulation via Remote Control	U16		0: Off 1: Reserved 2: Enable remote control of inverter AC Grid port (active power setting register 43128) 3–65535: Reserved If no continuous "enable" command

				is received within 5 minutes after an enable command is received, the function will automatically turn off. When this function is enabled, if remote control of battery charging/discharging was previously active, remote control of forced battery charging will automatically stop. Description: (1) Command timeout period: default 5 minutes. After setting the timeout period in register 43282, operation follows the set timeout value. (2) Settings are not retained after power loss.
43135	Remote Control: Battery Charge/Discharge Mode Setting	U16		0: Off 1: Battery Charging 2: Battery Discharging 3–65535: Reserved Description: (1) When this function is enabled, if remote grid regulation control was previously active, the remote grid regulation mode will automatically stop. (2) Settings are not retained after power loss.
43136	Remote Control: Battery Charging Power Setting	U16	10W	Range: 0–300 kW Description: (1) Effective only after remote control of battery charging is enabled (register 43135 = 1). (2) Settings are not retained after power loss.
43139	EPS Switchover Time	U16	10ms	Host computer setting range: 1–500 s; default: 2000 ms. Note: Before the addition of register 43705, setting register 43139 to 0 meant the EPS control function was turned off. After the addition of register 43705, register 43139 cannot be set to 0.

43140	Meter Type and Its Installation Location	U16		High byte indicates meter installation location: 0x0100 – Grid side 0x0200 – Reserved 0x0300 – Grid side + parallel inverter output side (dual meters) Note: Applicable to Eastron standard single-phase, Eastron standard three-phase, and Chint dual-channel meters. Low byte indicates meter type: 0x0001 – Acrel single-phase 0x0002 – Acrel three-phase 0x0003 – Reserved 0x0004 – Eastron standard single-phase 0x0005 – Eastron standard three-phase 0x0006 – No meter mode 0x0007 – Chint split-phase meter 0x0008 – Chint dual-channel meter
43141	TOU Scheduled Charging Current Setting	U16	0.1A	Range: 0 – maximum rated charging current of the corresponding model, default 50 A. Description: (1) Only used for parameter settings in Optimization Revenue V1 version. (2) Takes effect when BIT01 of register 43110 is enabled.
43142	TOU Scheduled Discharging Current Setting	U16	0.1A	Range: 0 – maximum rated discharging current of the corresponding model, default 50 A.
43143	TOU Scheduled Charging Start Hour Setting	U16	hour	1<-->1h
43144	TOU Scheduled Charging Start Minute Setting	U16	min	1<-->1m
43145	TOU Scheduled Charging End Hour Setting	U16	hour	1<-->1h
43146	TOU Scheduled Charging End Minute Setting	U16	min	1<-->1m
43147	TOU Scheduled Discharging Start Hour Setting	U16	hour	1<-->1h

43148	TOU Scheduled Discharging Start Minute Setting	U16	min	1<-->1m
43149	TOU Scheduled Discharging End Hour Setting	U16	hour	1<-->1h
43150	TOU Scheduled Discharging End Minute Setting	U16	min	1<-->1m
43153	TOU Scheduled Charging Start Hour Setting 2	U16	hour	1<-->1h
43154	TOU Scheduled Charging Start Minute Setting 2	U16	min	1<-->1m
43155	TOU Scheduled Charging End Hour Setting 2	U16	hour	1<-->1h
43156	TOU Scheduled Charging End Minute Setting 2	U16	min	1<-->1m
43157	TOU Scheduled Discharging Start Hour Setting 2	U16	hour	1<-->1h
43158	TOU Scheduled Discharging Start Minute Setting 2	U16	min	1<-->1m
43159	TOU Scheduled Discharging End Hour Setting 2	U16	hour	1<-->1h
43160	TOU Scheduled Discharging End Minute Setting 2	U16	min	1<-->1m
43163	TOU Scheduled Charging Start Hour Setting 3	U16	hour	1<-->1h
43164	TOU Scheduled Charging Start Minute Setting 3	U16	min	1<-->1m
43165	TOU Scheduled Charging End Hour Setting 3	U16	hour	1<-->1h
43166	TOU Scheduled Charging End Minute Setting 3	U16	min	1<-->1m
43167	TOU Scheduled Discharging Start Hour Setting 3	U16	hour	1<-->1h

43168	TOU Scheduled Discharging Start Minute Setting 3	U16	min	1<-->1m
43169	TOU Scheduled Discharging End Hour Setting 3	U16	hour	1<-->1h
43170	TOU Scheduled Discharging End Minute Setting 3	U16	min	1<-->1m
43173	TOU Scheduled Charging Start Hour Setting 4	U16	hour	1<-->1h
43174	TOU Scheduled Charging Start Minute Setting 4	U16	min	1<-->1m
43175	TOU Scheduled Charging End Hour Setting 4	U16	hour	1<-->1h
43176	TOU Scheduled Charging End Minute Setting 4	U16	min	1<-->1m
43177	TOU Scheduled Discharging Start Hour Setting 4	U16	hour	1<-->1h
43178	TOU Scheduled Discharging Start Minute Setting 4	U16	min	1<-->1m
43179	TOU Scheduled Discharging End Hour Setting 4	U16	hour	1<-->1h
43180	TOU Scheduled Discharging End Minute Setting 4	U16	min	1<-->1m
43183	TOU Scheduled Charging Start Hour Setting 5	U16	hour	1<-->1h
43184	TOU Scheduled Charging Start Minute Setting 5	U16	min	1<-->1m
43185	TOU Scheduled Charging End Hour Setting 5	U16	hour	1<-->1h
43186	TOU Scheduled Charging End Minute Setting 5	U16	min	1<-->1m
43187	TOU Scheduled Discharging Start Hour Setting 5	U16	hour	1<-->1h

43188	TOU Scheduled Discharging Start Minute Setting 5	U16	min	1<-->1m
43189	TOU Scheduled Discharging End Hour Setting	U16	hour	1<-->1h
43190	TOU Scheduled Discharging End Minute Setting 5	U16	min	1<-->1m
43195	Total Grid-side Active Power Control Compensation	S16	1W	Range: For units with rated power ≤ 20 kW: –1000 W to +1000 W For units with rated power > 20 kW: –10 kW to +10 kW Default: –30 W
43279	Remote Control: Function Switch	U16		BIT00–BIT01: PV Shutdown control – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT02–BIT15: Reserved. Description: (1) Effective only when remote battery charge/discharge control (register 43135) or remote AC control (register 43132) mode is active. (2) While remote control mode is active, if an invalid value is written to any switch setting (enabled or disabled), the corresponding register bit data will revert to its previous enabled/disabled state, ensuring that a valid data status can be read for each switch setting. (3) After remote control mode is exited, this register data is cleared to 0. (4) Settings are not retained after power loss.
43282	Remote Control: Timeout Setting	U16	1min	Range: 2–30; default 5. Note: Settings are not retained after power loss.
43283	Meter Communication Access Method	U16		0 – Wired, 1 – Wireless; other values invalid, default 0.
43284	Special Function Control Word 02	U16		BIT00: PV-Only Load Enable – 0: disabled, 1: enabled, default 0.

				BIT01: Fan Low-Noise Mode – 0: disabled, 1: enabled, default 0. BIT02: Battery Saving – 0: enabled, 1: disabled, default 0. BIT03–15: Reserved.
43285	AC Coupling Start SOC	U16	1	Range: 0 to (AC Coupling Stop SOC – 10%), default 0. Only applicable to battery types with communication capability.
43286	AC Coupling Start Voltage	U16	0.1V	Range: Over-discharge voltage to (AC Coupling Stop Voltage – 2 V), default 48 V. Only applicable to battery types without communication capability.
43287	AC Coupling Start Frequency	U16	0.01Hz	50 Hz Standard: 50 Hz ~ (primary over-frequency threshold + 0.1 Hz), default 50 Hz. 60 Hz Standard: 60 Hz ~ (primary over-frequency threshold + 0.1 Hz), default 60 Hz.
43300	G100-2022 Standard Public Grid-side Apparent Current Output Limit Setting	U16	0.01A	For three-phase energy storage machines, this indicates the apparent current output limit per phase. Standalone range: 0 ~ 4 × unit rated AC output current. Parallel system range: 0 ~ 4 × unit rated AC output current × number of parallel units. Note: The set upper limit must not exceed the data-type upper limit of this register.
43313	Clear AFCI Fault	U16		Used to manually clear the fault after 5 cumulative AFCI faults have occurred on the same day. 0xAA55 – enable, other values invalid. Only writable via single-register command 0x06.
43333	Lead-Acid Battery Equalization Enable	U16		0: Disable; 1: Enable. Default: 0.
43334	Lead-Acid Battery Equalization Voltage	U16	0.1V	Range: 55–59.5 V; default 57.6 V.
43335	Lead-Acid Battery Equalization Time	U16	1min	Range: 120–360 min; default 180 min.

43336	Lead-Acid Battery Equalization Timeout	U16	1min	Range: 5–900 min; default 120 min.
43337	Lead-Acid Battery Equalization Interval	U16	1 day	Range: 20–180 days; default 30 days.
43338	Lead-Acid Battery Equalization Immediate Activation	U16		0: Disable, 1: Enable; default 0. Requires battery equalization enable to be turned on first.
43339	Lead-Acid Battery Float Current Limit	U16	0.1A	Range: 4.0–10.0 A; default 4.0 A.
43340	Generator Setting Enable Switch	U16		BIT00: Generator connection mode – 0: Manual, 1: Automatic; default 0. BIT01: Generator charging enable – 0: Enable, 1: Disable; default 0. BIT02–15: Reserved.
43344	Generator Start Lithium Battery SOC	U16	1%	In generator mode, the SOC at which the generator starts and charges the lithium battery. Range: 1–95%; default 25%.
43345	Generator Lithium Battery Charge Cut-off SOC	U16	1%	Range: (Start SOC + 5%) – 100%; default 80%. Note: Start SOC < Cut-off SOC.
43346	Generator Start Lead-Acid Battery Voltage	U16	0.1V	Range: 40–55 V; default 46 V.
43347	Generator Lead-Acid Battery Charge Cut-off Voltage	U16	0.1V	Range: (Start voltage + 2 V) – 60 V; default 55 V.
43348	Battery Wake-up Voltage Setting	U16	0.1V	Low-voltage energy storage unit: 40–60 V, default 40 V. Off-grid energy storage unit: 40–58 V, default 40 V. Single-phase high-voltage energy storage unit: 120–500 V, default 120 V. Three-phase high-voltage energy storage unit: 120–600 V, default 120 V. Note: Registers 43348-43349 only take effect when BIT03 of register 43110 (battery wake-up trigger action) is enabled.
43349	Battery Wake-up Time Setting	U16	1s	Range: 20–3600 s, default: 20 s
43361	MPPT Active Scanning	U16	1s	Range: 600–10800 (10 min–180

	Interval			min); default: 1800 (30 min)
43362	CT Ratio	U16		Range: 1–30000. Note: (1) Effective only when BIT13 of register 43073 is set to CT. (2) For 50 kW, 100 kW commercial/industrial storage series, used for setting the CT ratio of Meter 1.
43363	Generator Start/Stop in Manual Mode	U16		(1) Before simplified setting: Forced generator start – 0: invalid, 1: valid; default 0; other values invalid. After a single write of "1", the inverter immediately starts the generator. When the generator stop condition is met, this register data is automatically cleared to 0. (2) After simplified setting: Generator start/stop in manual mode – 1: start, 0: stop; default 0; other values invalid.
43364	Generator Rated Input Power	U16	0.1kW	
43365	Generator Setting Switch	U16		BIT00: Generator connection location – 0: generator port, 1: grid port; default 0. BIT01: With Generator – 0: No, 1: Yes; default 0. Note: Cannot be enabled simultaneously with AC Coupling enable (register 43483 BIT01); otherwise invalid – one must be turned off before the other is turned on. BIT02: Generator enable signal – 0: disabled, 1: enabled; default 0. BIT03: AC Coupling connection location – 0: generator port, 1: Backup port; default 0. BIT04: Generator connection location (used in combination with BIT00): BIT04 = 0, BIT00 = 0: generator port (Smart port) (supported by models with Smart port) BIT04 = 0, BIT00 = 1: grid side

				BIT04 = 1, BIT00 = 0: Backup side (currently only supported for models without a dedicated generator port) BIT04 = 1, BIT00 = 1: invalid BIT05: Disabled. BIT06–15: Reserved. Operation instructions for writing BITxx: The host computer shall first read the current value of this register, then modify the value of the corresponding BIT as needed based on the current value, and finally write the updated value back.
43366	Forced Stop Generator	U16		(1) Before simplified setting: Forced stop generator – 0: invalid, 1: valid; default 0; other values invalid. When the generator is running, a single write of “1” to this register will cause the inverter to stop the generator immediately. (2) After simplified setting: Deactivate.
43367	Generator Maximum Allowable Percentage	U16	1%	Gen_Max_Run_Pct; Range: 1%–120%, default: 100%.
43368	Generator Target Power	U16	0.1kW	Gen_Target_Power， Default: 90% of generator rated input power.
43369	Generator Charging Power	U16	0.1kW	Range: 0 – maximum charging power of the corresponding model, default 0.
43374	Function Setting Enable Switch	U16		BIT00: AC Output Control Switch 0: Disable, 1: Enable; default: Disable. When Enable is selected, the inverter, upon detecting grid presence, forcibly (regardless of the Backup enable switch) stops Backup-side output; upon detecting grid absence, it forcibly (regardless of the Backup enable switch) turns on Backup-side output.

				When Disable is selected, Backup output is controlled according to the Backup enable switch and the off-grid battery over-discharge logic. BIT01: Battery Auto-Wake-up Switch 0: Disable, 1: Enable; default: Disable. When set to Enable, if the inverter does not detect battery voltage after power-on, it executes a wake-up action for the duration specified in register 43376. BIT02: Reserved BIT03: Digital Control Signal Switch – 0: OFF, 1: ON; default: 0 BIT04: Analog Control Signal Switch – 0: OFF, 1: ON; default: 0 BIT05: Battery 2 Auto-Wake-up Switch 0: Disable, 1: Enable; default: Disable. BIT06: Scheduled Energy-Saving Function Switch – 0: OFF, 1: ON; default: 0 Currently only used for ODM models. BIT07–15: Reserved Note: Operation instructions for writing BITxx: The host computer shall first read the current value of this register, then modify the value of the corresponding BIT as needed based on the current value, and finally write the updated value back.
43376	Battery Auto-Wake-up Duration Setting	U16	1S	Range: 20–300 s, default: 60 s S6 single-phase high-voltage 11.4 kW US models: Range: 20–300 s, default: 180 s Other S6 models: Range: 20–3600 s, default: 180 s
43377	Upgrade Type Selection	U16		00: Main DSP upgrade

				01: Secondary DSP upgrade (for 100 kW energy storage inverter) 05: AFCI board upgrade Note: Before performing an upgrade, each time an upgrade is initiated, the corresponding enable command must be sent (e.g., send 0 for main DSP, send 5 for AFCI board).
43378	Single-Function Operation	U16		0x0000: Invalid 0x0001: CT detection function – after setting, read register 33290 to obtain the detection result. 0x0002: G100-2022 fault manual clear. 0x0003: G100-2022 fault restricted clear – specific clearing method is related to BIT01 of register 43290; refer to the G100 standard for details. 0x0007: Load overload fault clear. 0x000A: Battery 2 manual wake-up, only for models supporting dual battery channels. 0x000E: AC Coupling Lock reset. 0x0012: Total grid-side CT detection and self-adaptation start. 0x0013: EMS firmware upgrade confirmation x. 0x0014: EMS firmware upgrade confirmation x+1 (two writes confirm the upgrade request). 0x0016~0xFFFF: Undefined. Description: (1) This register is used for single-function operation settings. (2) Settings are not retained after power loss.
43382	Manual Master/Slave Setting	U16		0: Slave; 1: Master; Other values invalid.
43384	Inverter Connection Phase Setting	U16		Range: 0–9; default 1. 0: Not set. 1: Single-phase system. 2: Phase A of three-phase system.

				3: Phase B of three-phase system. 4: Phase C of three-phase system. 5: Split-phase system. 6: AB phase (split-phase forming three-phase). 7: BC phase (split-phase forming three-phase). 8: CA phase (split-phase forming three-phase). 9: ABC phase (three-phase grid). Other values invalid.
43391	Standalone/Parallel Setting	U16		0 – Standalone, 1 – Parallel; default 0.
43481	Over-Discharge Hysteresis SOC	U16	1%	Range: 1–20%, default 1%. Description: When battery SOC reaches the over-discharge SOC, battery discharge is prohibited. Battery discharge becomes available again after SOC exceeds (over-discharge SOC + over-discharge hysteresis SOC). (Note: Over-discharge SOC register address is 43011.)
43482	Battery Healing SOC	U16	1%	Range: 80–100%; default: 100%.
43483	Energy Storage Function Control Word	U16		BIT00: Smart Load enable – 0: disabled, 1: enabled, default 0. BIT01: AC Coupling enable – 0: disabled, 1: enabled, default 0. Note: Cannot be enabled simultaneously with "With Generator" (BIT01 of register 43365); otherwise invalid – one must be turned off before the other is turned on. BIT02: Smart Load on-grid always on (smart load port forced output when grid-tied) – 0: disabled, 1: enabled, default 0. BIT03: Allow export switch under self-consumption mode – 0: enabled, 1: disabled, default 0. BIT04: Backup2Load manual/auto switch – 0: manual, 1: auto, default 0. BIT05: Backup2Load manual on –

				0: invalid, 1: valid, default 0. BIT06: Smart Load off-grid always off (smart load port stops output when off-grid) – 0: disabled, 1: enabled, default 0. BIT07: Grid Peak-shaving power enable – 0: disabled, 1: enabled, default 0. When disabled, battery charging power is not limited based on public grid-side power conditions. When enabled, if public grid-side power draw exceeds the value set in register 43488, battery charging power is limited. BIT08–14: Reserved. BIT15: Not used; default 0.
43484	AC Coupling Stop SOC	U16	1%	Range: 60–90%; default: 60%.
43485	AC Coupling Stop Voltage	U16	0.1V	Range: 50 V ~ equalization charge voltage setting; Default: 50 V; Note: Only applicable to battery types without communication capability.
43486	AC Coupling Maximum Load-Shedding Frequency	U16	0.01Hz	Range: (National standard corresponding primary over-frequency threshold + 0.1 Hz) ~ 54 Hz (50 Hz grid) / 65 Hz (60 Hz grid), Default: (National standard corresponding primary over-frequency threshold + 0.1 Hz).
43487	Peak SOC	U16	1%	Range：0 ~ 100%
43488	Maximum Allowable Total Grid-side Power Import	U16	100W	Indicates the active power value for single-phase (or total per-phase for three-phase machines). Range: Standalone: 0 ~ unit rated input power Parallel: 0 ~ (unit rated input power × number of parallel units) Setting method V2 range: Standalone: 0 ~ unit rated input power × 4, default: unit rated input power Parallel: 0 ~ (unit rated input

				power × 4 × number of parallel units), default: unit rated input power × number of parallel units Upper limit uniformly set to 3 MW.
43493	TOU Scheduled Charging Start Hour Setting 6	U16	hour	Description: (1) Only used for parameter settings in Optimization Revenue V1 version. (2) Takes effect when BIT01 of register 43110 is enabled.
43494	TOU Scheduled Charging Start Minute Setting 6	U16	min	
43495	TOU Scheduled Charging End Hour Setting 6	U16	hour	
43496	TOU Scheduled Charging End Minute Setting 6	U16	min	
43497	TOU Scheduled Discharging Start Hour Setting 6	U16	hour	
43498	TOU Scheduled Discharging Start Minute Setting 6	U16	min	
43499	TOU Scheduled Discharging End Hour Setting 6	U16	hour	
43500	TOU Scheduled Discharging End Minute Setting 6	U16	min	
43630	LG High Voltage Battery Parallel Switch	U16		0: Off, 1: On.
43631	LG High Voltage Battery Dead-Zone Lower Limit	U16	0.1V	Range: 350–450V; default: 410 V.
43632	LG High Voltage Battery Dead-Zone Upper Limit	U16	0.1V	Range: 350~450V; default: 420V；
43633	LG High Voltage Battery Charging Slope	U16	1 W/V	Range: 20–2000; 10H battery default: 250, 16H battery default: 350.
43634	LG High Voltage Battery Maximum Charg-	U16	0.1V	Range: 350–450 V; default: 450 V.

	ing Voltage			
43635	LG High Voltage Battery Discharging Slope	U16	1W/V	Range: 20–2000; 10H battery default: 250, 16H battery default: 350.
43636	LG High Voltage Battery Maximum Discharging Voltage	U16	0.1V	Range: 350–450 V; default: 350 V.
43637	LG High Voltage Battery Charging Limit Power	U16	1W	10H battery range: 0–5000 W; 16H battery range: 0–7000 W.
43638	LG High Voltage Battery Discharging Limit Power	U16	1W	10H battery range: 0–7000 W; 16H battery range: 0–11000 W.
43639	LG High Voltage Battery Communication Fault Timeout	U16	0.5min	Range: 0.5–1440 min; default: 10 minutes.
43640~ 43641	LG High Voltage Battery Sleep Hold Time	U32	1s	Range: 0–86400; default: 86400.
43642	LG High Voltage Battery Black-Start Enable	U16		Range: 0–1; default: 0. In battery parallel configuration, only sent to the master battery.
43643	LG High-Voltage Battery Black-Start Initialization Time	U16	1s	Range: 5–200 s; default: 15 s.
43650	Backup Load Droop Control Minimum Voltage	U16	0.1V	Standard-voltage models: phase voltage range 120–230 V, default 180 V. Low-voltage models: phase voltage range 70–130 V, default 100 V; Line voltage range 120–230 V, default 180 V.
43672	Smart Load Turn-off SOC	U16	1%	Range: over-discharge SOC (start SOC = 5%) to default 85%. Note: This setting takes effect only when BIT02 (smart load port forced grid-tied output) of register 43483 is disabled.
43673	Smart Load Turn-on SOC	U16	1%	Range: (over-discharge SOC + 5%) to 100%, default 90%, and turn-off SOC ≤ turn-on SOC – 5%. Note: This setting takes effect only when BIT02 (smart load port forced grid-tied output) of register 43483 is disabled.

43674	Smart Load Turn-off Battery Voltage	U16	0.1V	Range: 45–57 V, default 52 V, and turn-off battery voltage ≤ turn-on battery voltage – 3 V. Note: (1) Takes effect only after "Follow Grid" is set to Enable. (2) This setting takes effect only when BIT02 (smart load port forced grid-tied output) of register 43483 is disabled.
43675	Smart Load Turn-on Battery Voltage	U16	0.1V	Range: 50–60 V, default 55 V. Note: (1) Takes effect only after "Follow Grid" is set to Enable. (2) This setting takes effect only when BIT02 (smart load port forced grid-tied output) of register 43483 is disabled.
43676	Over-Discharge Full Recovery Voltage	U16	0.1V	Range: 2.0–7.0 V, default 3 V. Note: Used for lead-acid batteries and 48 V/51.2 V non-communication lithium batteries.
43677	Off-Grid Battery Over-Discharge SOC Function Switch	U16		1: Off, 2: On (register 43137 function takes effect), other values invalid. Default: 1.
43705	EPS Function Control	U16		0xA5 – Disabled; Backup relay is controlled according to register 43111 “Backup Load Function Enable”. 0x5A – Enabled; when grid-tied, the Backup relay is forced open; when off-grid, it closes after a delay (time configurable). Default: 0xA5; other values invalid.
43707	TOU Grid-Tied Optimization Revenue V2 Switch	U16		**When using this function, first read register 33289 to determine whether Optimization Revenue V2 is valid. If it is invalid, the Optimization Revenue V1 function must be used.** BIT00: Grid-tied charging period 1 switch – 0: off, 1: on, default 0. BIT01: Grid-tied charging period 2 switch – 0: off, 1: on, default 0.

				BIT02: Grid-tied charging period 3 switch – 0: off, 1: on, default 0. BIT03: Grid-tied charging period 4 switch – 0: off, 1: on, default 0. BIT04: Grid-tied charging period 5 switch – 0: off, 1: on, default 0. BIT05: Grid-tied charging period 6 switch – 0: off, 1: on, default 0. BIT06: Grid-tied discharging period 1 switch – 0: off, 1: on, default 0. BIT07: Grid-tied discharging period 2 switch – 0: off, 1: on, default 0. BIT08: Grid-tied discharging period 3 switch – 0: off, 1: on, default 0. BIT09: Grid-tied discharging period 4 switch – 0: off, 1: on, default 0. BIT10: Grid-tied discharging period 5 switch – 0: off, 1: on, default 0. BIT11: Grid-tied discharging period 6 switch – 0: off, 1: on, default 0. BIT12–15: Reserved, default 0. Operation instructions for writing BITxx: The host computer shall first read the current value of this register, then modify the value of the corresponding BIT as needed based on the current value, and finally write the updated value back.
43708	TOU Optimization Revenue V2: Grid-Tied Charging Period 1 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%.
43709	TOU Optimization Revenue V2: Grid-Tied Charging Period 1 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum charging current, Default: unit rated battery maximum charging current.
43710	TOU Optimization Revenue V2: Grid-Tied Charging Period 1	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries.

	Cut-off Voltage			Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43711	TOU Optimization Revenue V2: Grid-Tied Charging Period 1 Start Hour	U16	1Hour	
43712	TOU Optimization Revenue V2: Grid-Tied Charging Period 1 Start Minute	U16	1Min	
43713	TOU Optimization Revenue V2: Grid-Tied Charging Period 1 End Hour	U16	1Hour	
43714	TOU Optimization Revenue V2: Grid-Tied Charging Period 1 End Minute	U16	1Min	
43715	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43716	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum charging current, Default: unit rated battery maximum charging current.
43717	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V.

				48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43718	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 Start Hour	U16	1Hour	
43719	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 Start Minute	U16	1Min	
43720	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 End Hour	U16	1Hour	
43721	TOU Optimization Revenue V2: Grid-Tied Charging Period 2 End Minute	U16	1Min	
43722	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43723	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum charging current, Default: unit rated battery maximum charging current.
43724	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V.

				51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43725	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 Start Hour	U16	1Hour	
43726	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 Start Minute	U16	1Min	
43727	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 End Hour	U16	1Hour	
43728	TOU Optimization Revenue V2: Grid-Tied Charging Period 3 End Minute	U16	1Min	
43729	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43730	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum charging current, Default: unit rated battery maximum charging current.
43731	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.

43732	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 Start Hour	U16	1Hour	
43733	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 Start Minute	U16	1Min	
43734	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 End Hour	U16	1Hour	
43735	TOU Optimization Revenue V2: Grid-Tied Charging Period 4 End Minute	U16	1Min	
43736	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43737	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum charging current, Default: unit rated battery maximum charging current.
43738	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43739	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 Start Hour	U16	1Hour	

43740	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 Start Minute	U16	1Min	
43741	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 End Hour	U16	1Hour	
43742	TOU Optimization Revenue V2: Grid-Tied Charging Period 5 End Minute	U16	1Min	
43743	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43744	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum charging current, Default: unit rated battery maximum charging current.
43745	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43746	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 Start Hour	U16	1Hour	
43747	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 Start Minute	U16	1Min	

43748	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 End Hour	U16	1Hour	
43749	TOU Optimization Revenue V2: Grid-Tied Charging Period 6 End Minute	U16	1Min	
43750	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43751	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum discharging current, Default: unit rated battery maximum discharging current.
43752	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43753	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 Start Hour	U16	1Hour	
43754	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 Start Minute	U16	1Min	
43755	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 End Hour	U16	1Hour	

43756	TOU Optimization Revenue V2: Grid-Tied Discharging Period 1 End Minute	U16	1Min	
43757	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43758	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum discharging current, Default: unit rated battery maximum discharging current.
43759	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43760	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 Start Hour	U16	1Hour	
43761	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 Start Minute	U16	1Min	
43762	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 End Hour	U16	1Hour	
43763	TOU Optimization Revenue V2: Grid-Tied Discharging Period 2 End Minute	U16	1Min	

43764	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43765	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum discharging current, Default: unit rated battery maximum discharging current.
43766	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43767	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 Start Hour	U16	1Hour	
43768	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 Start Minute	U16	1Min	
43769	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 End Hour	U16	1Hour	
43770	TOU Optimization Revenue V2: Grid-Tied Discharging Period 3 End Minute	U16	1Min	
43771	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with

				SOC capability.
43772	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum discharging current, Default: unit rated battery maximum discharging current.
43773	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 Cut-off Voltage	U16	0.1V	10<-->1V； For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43774	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 Start Hour	U16	1Hour	
43775	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 Start Minute	U16	1Min	
43776	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 End Hour	U16	1Hour	
43777	TOU Optimization Revenue V2: Grid-Tied Discharging Period 4 End Minute	U16	1Min	
43778	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43779	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5	U16	0.1A	Range: 0 – unit rated battery maximum discharging current, Default: unit rated battery maxi-

	Battery Current			mum discharging current.
43780	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5 Cut-off Voltage	U16	0.1V	For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries. Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43781	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5 Start Hour	U16	1Hour	
43782	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5 Start Minute	U16	1Min	
43783	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5 End Hour	U16	1Hour	
43784	TOU Optimization Revenue V2: Grid-Tied Discharging Period 5 End Minute	U16	1Min	
43785	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6 Cut-off SOC	U16	1%	Range: (Over-discharge SOC + 1%) to 100%, Default: 50%. Note: For lithium batteries with SOC capability.
43786	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6 Battery Current	U16	0.1A	Range: 0 – unit rated battery maximum discharging current, Default: unit rated battery maximum discharging current.
43787	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6	U16	0.1V	10<-->1V； For batteries without SOC capability, including lead-acid batteries and 48 V/51.2 V batteries.

	Cut-off Voltage			Lead-acid battery range: (Over-discharge voltage + 0.5 V) ~ (Float charge voltage – 0.5 V), default: 49.5 V. 48 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 49.0 V. 51.2 V battery range: (Over-discharge voltage + 0.5 V) ~ (Equalization charge voltage – 2.5 V), default: 52.0 V.
43788	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6 Start Hour	U16	1Hour	
43789	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6 Start Minute	U16	1Min	
43790	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6 End Hour	U16	1Hour	
43791	TOU Optimization Revenue V2: Grid-Tied Discharging Period 6 End Minute	U16	1Min	
43792	Generator Minimum Input Power	U16	10W	Range: 0 – unit rated value × number of parallel units Default: 1 kW.
43802	Dual-Battery Connection Mode	U16		1: Battery Independent, 2Batt2DC 2: Battery Shared, 1Batt2DC 3: Single battery connected to one battery port – 1Batt1DC Other values: Invalid Default: 1 Note: Applicable to models supporting dual-battery configuration.
43803	Battery 2 Type Setting	U16		For details, see Appendix 6: Battery Numbering. Battery 2 settings are only applicable to energy storage models that support dual-battery configurations.

43804	Battery 2 Maximum Charging Current Setting	U16	0.1A	
43805	Battery 2 Maximum Discharging Current Setting	U16	0.1A	
43806	Battery 2 Under-Voltage Protection Setting	U16	0.1V	
43808	Battery 2 Equalization Charge Voltage Setting	U16	0.1V	
43809	Battery 2 Over-Voltage Protection Setting	U16	0.1V	
43810	Battery 2 Over-Discharge SOC	U16	1%	
43811	Battery 2 Over-Discharge Hysteresis SOC	U16	1%	
43812	Battery 2 Forced Charge SOC	U16	1%	
43813	Battery 2 Auto-Wake-up Duration Setting	U16	1s	Range: 20–3600 s, default: 180 s.
43814	Battery 2 Type Setting Follows Battery 1.	U16		0xAA55: Follow – the read parameters for Battery 2 are consistent with Battery 1, and writing to the Battery 2 type setting register is invalid. Other values: Do not follow – writing to Battery 2 related setting registers is valid. Default: 0 (i.e., do not follow). Note: Applicable to models supporting dual-battery configurations.
43858	Battery 2 Wake-up Voltage	U16	0.1V	Low-voltage energy storage unit: 40–60 V, default 40 V. Off-grid energy storage unit: 40–60 V, default 40 V. Single-phase high-voltage energy storage unit: 120–500 V, default 120 V. Three-phase high-voltage energy storage unit: 120–600 V, default 120 V.

				Note: Takes effect only when BIT12 (battery wake-up trigger action) of register 43110 is enabled.
43859	Battery 2 Wake-up Time	U16	1s	Range: 20–3600 s, default: 20 s.
43860	PCS Limiting Mode Setting	U16		PCS Anti-Reverse-Flow Limiting Mode Settings: 0: No limit mode (no restriction on energy exchange between battery and grid). 1: Output limit mode (only battery discharge to the grid is allowed; battery charging from the grid is prohibited). 2: Input limit mode (only battery charging from the grid is allowed; battery discharge to the grid is prohibited). 3: No-exchange mode (battery charging from the grid is prohibited, and battery discharge to the grid is also prohibited). Settings are retained after power loss. Currently only supported for S6 single-phase high-voltage energy storage systems.
43861	Grid-Side Load Single-Phase Protection Current Limit	U16	1A	When the current of the load connected to the distribution panel exceeds the protection limit of the distribution panel, the inverter switches to off-grid operation. At this point, the overload protection device activates to ensure the distribution panel current does not exceed the user-defined limit. This function becomes effective after the PCS limiting mode is enabled (i.e., when register 43860 is not 0) and operates under the condition that protection in register 43871 is enabled. Settings are retained after power loss. Currently only supported for

				S6 single-phase high-voltage energy storage systems.
43862	PCS Input Limit Battery Current Limit	U16	0.1A	When the PCS limiting mode is configured as input limit mode, this is the allowable current limit for battery charging from the grid. Setting range: 0 A – maximum battery current of the current model. Default value: maximum battery current of the current model. Settings are retained after power loss. Currently only supported for S6 single-phase high-voltage energy storage systems.
43863	PCS Output Limit Battery Current Limit	U16	0.1A	When the PCS limiting mode is configured as output limit mode, this is the allowable current limit for battery discharging to the grid. Setting range: 0 A – maximum battery current of the current model. Default value: maximum battery current of the current model. Settings are retained after power loss. Currently only supported for S6 single-phase high-voltage energy storage systems.
43864	PV Inverter AC Output Side CT Ratio	U16	1	Range: 1–2000, default: 1000. Settings are retained after power loss. Currently only supported for S6 AC Coupled models.
43871	Grid-Side Load Single-Phase Overcurrent Protection Switch	U16		0 – Off, 1 – On, default: 1. Other values: Invalid.
43885	Heat Pump Function Switch	U16		BIT00: Heat pump function master switch – 0: Off, 1: On, default 0. BIT01: Heat pump manual mode – 0: Normal, 1: Enhanced, default 0. BIT02: Heat pump scheduled enhancement switch – 0: Off, 1: On, default 0. BIT03: Heat pump intelligent control mode switch – 0: Off, 1: On,

				default 0. BIT04–15: Reserved.
43886	Heat Pump Minimum Control Time Interval	U16	1min	Range: 5–60, default: 10.
43971	Heat Pump Intelligent Control Mode Start SOC	U16	1%	Range: (Over-discharge SOC + 5%) to 100%, default: 90%. Note: Over-discharge SOC register address is 43011.
43972	Heat Pump Intelligent Control Mode Stop SOC	U16	1%	Range: Over-discharge SOC to (Start SOC – 5%), default: 70%.
43973	Heat Pump Intelligent Control Mode Start Voltage	U16	0.1V	Start voltage ≥ (Stop voltage + 2 V) Range: 42.0 – 60.0 V (max 59.5 V) Default: Lead-acid battery: 55 V, 48 V non-communication lithium battery: 51.5 V, 51.2 V non-communication lithium battery: 55 V.
43974	Heat Pump Intelligent Control Mode Stop Voltage	U16	0.1V	Start voltage ≥ (Stop voltage + 2 V) Range: 40.0 – 60.0 V (max 57.5 V) Default: Lead-acid battery: 50 V, 48 V non-communication lithium battery: 49 V, 51.2 V non-communication lithium battery: 52 V.
43975~ 43976	Maximum Total Feed-in Active Power under Phase Unbalance Mode	S32	1W	Indicates the sum of active power from all phases. Standalone range: 0–1,000,000 W, default: 1.1 times the unit rated power. Parallel range: 0–1,000,000 W, default: 1.1 times the unit rated power × number of parallel units. Note: Only applicable to S6-generation three-phase high-voltage 10 kW series energy storage machines and S6-generation single-phase high-voltage US-version machines.
43977	Paid leasing function	U16		0x0000: Off 0x0001: On Default: 0x0000 (Off), other values

				invalid.
43978	Paid Rental Equipment Lock Function Switch – Lock	U16		0x0000: Off 0x0001: On Default: 0x0000 (Off), other values invalid. Only effective when the paid rental function is enabled (register 43977 = 0xAA55, 0x0001).
43984	Heat Pump Intelligent Control Mode Enable Power	S16	0.1kW	Range: 0.1–1000 kW, default: 2 kW. Enable power > Disable power.
43985	Heat Pump Intelligent Control Mode Disable Power	S16	0.1kW	Range: –5 to 10 kW, default: –0.5 kW. Enable power > Disable power.
43989	AC coupling Max Export Control	U16		0：None 1：Based on Export Power&SOC 2：Second RS485(Only for Solis INV) Other values invalid; default: 0.
43998	Dynamic Reactive Power Compensation Switch	U16		0: Off, 1: On, default: Off. Meaning: When Dynamic Reactive Power Compensation (SVG) is enabled, the inverter automatically compensates the reactive power at the total grid port.
44099	AC Coupling Connected to AC Side	U16		0x01 – Disabled, 0x02 – Enabled, Other values invalid, default: 0x01.
44100	Remote Dispatch Mode Switch	U16		0: Off, 1: On, default 0, other values invalid. Description: This function takes effect when register 34502 = 0xAA55; specific function mapping corresponds to 34503. Registers 44100–44199 are used to configure the remote dispatch mode. All setting values related to the remote dispatch mode are not retained after power loss. Recommendation: The host computer should write to the inverter in three parts: 44100–44104 represent the overall

				remote dispatch settings. 44105–44115 represent remote dispatch real-time control. 44116–44199 represent remote dispatch time-scheduled control (send no more than 50 registers at a time: Periods 1–3 (42 registers) in one write, periods 4–6 (42 registers) in one write).
44101	Remote Dispatch Mode – Failsafe Interval	U16	1min	Range: 1–1440, default: 5; out-of-range settings are invalid.
44102	Remote Dispatch Mode – System Limiting Switch	U16		BIT00: System power-draw active power upper-limit switch – 0: Disabled, 1: Enabled (system power-draw active power upper-limit setting takes effect), default 0. BIT01: System feed-in active power upper-limit switch – 0: Disabled, 1: Enabled (system feed-in active power upper-limit setting takes effect), default 0. BIT02–15: Reserved.
44103	Remote Dispatch Mode – System Power-Draw Active Power Upper Limit	U16	100W	Standalone range: 0 ~ 4 × unit maximum rated value, Upper limit uniformly set to 3 MW (related to register 34806 bits 06-07). Parallel range: 0 ~ 4 × unit maximum rated value × number of parallel units, Upper limit uniformly set to 3 MW (related to register 34806 bits 06-07). Default: Inverter maximum rated output power × number of parallel units. Out-of-range recovery to default: (Example: When the upper-limit switch is enabled, writing 0xFFFF restores the default value.)
44104	Remote Dispatch Mode – System Feed-in Active Power Upper Limit	U16	100W	Standalone range: 0 ~ 4 × unit maximum rated value, Upper limit uniformly set to 3

				MW (related to register 34806 bits 06-07). Parallel range: 0 ~ 4 × unit maximum rated value × number of parallel units, Upper limit uniformly set to 3 MW (related to register 34806 bits 06-07). Default: Inverter maximum rated output power × number of parallel units. Out-of-range recovery to default: (Example: When the upper-limit switch is enabled, writing 0xFFFF restores the default value.)
44105	Remote Dispatch Mode – Real-Time Control – Control Mode	U16		1 – Battery Standby control (no charging/discharging) 2 – Battery charge/discharge control 3 – Point of Common Coupling (PCC) Import/Export control 4 – AC Grid port Import/Export control 5 – Self-consumption control 6 – Grid-feed priority control Default: 1, other values invalid.
44106~ 44107	Remote Dispatch Mode – Real-Time Control – Power Setting	S32	10W	The function is determined by the control mode in register 44105. Default: 0; out-of-range settings are invalid. (1) When the control mode is 1, this power value has no effect. (2) When the control mode is 2: Negative values indicate battery discharge power, positive values indicate battery charging power. Range: –(maximum charge/discharge power × number of parallel units) ~ +(maximum charge/discharge power × number of parallel units). (3) When the control mode is 3: Negative values indicate Import power, positive values indicate

				Export power. Range: –(inverter maximum output power × number of parallel units) ~ +(inverter maximum output power × number of parallel units). (4) When the control mode is 4: Negative values indicate Import power, positive values indicate Export power. Range: –(inverter maximum output power × number of parallel units) ~ +(inverter maximum output power × number of parallel units).
44108	Remote Dispatch Mode – Real-Time Control – Function Switch	U16		BIT00–BIT01: PV Shutdown control – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT02–BIT03: DO control – 0: invalid, 1: open, 2: closed, 3: invalid, default 0. BIT04–BIT05: Allow grid-to-battery charging – 0: invalid, 1: allowed, 2: not allowed, 3: invalid, default 0. BIT06–BIT07: Off-grid battery standby – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT08–BIT09: Battery reserve (used with register 44111) – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT10–BIT11: Battery discharge disable – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT12–BIT13: Demand control – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT14–BIT15: PV power-limit percentage switch –0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. Note: After writing “invalid” data, reading this register returns the last valid data written. Example: first write 1, then write 0; the read data

				will be 1.
44109	Remote Dispatch Mode – Real-Time Control – SOC Lower Limit	U16	1%	Range: 0 to Real-Time Control SOC Upper Limit, default 0. If out of range or greater than/equal to the Real-Time Control SOC Upper Limit, the setting is invalid.
44110	Remote Dispatch Mode – Real-Time Control – SOC Upper Limit	U16	1%	Range: Real-Time Control SOC Lower Limit to 100%, default 100%. If out of range or less than/equal to the Real-Time Control SOC Lower Limit, the setting is invalid.
44111	Remote Dispatch Mode – Real-Time Control – Battery Reserve SOC	U16	1%	Range: Over-discharge SOC to Real-Time Control Upper Limit SOC, default 40%. Description: (1) Over-discharge SOC is set in register 43011; Real-Time Control Upper Limit SOC is set in register 44110. (2) Only effective when battery reserve is enabled in register 44108.
44112	Remote Dispatch Mode – Real-Time Control – PV Power-Limit Percentage	U16	0.01%	100 <--> 1% Description: (1) Takes effect when the PV power-limit percentage switch is enabled.
44113	Remote Dispatch Mode – Real-Time Control – Reserved 3	U16		
44114	Remote Dispatch Mode – Real-Time Control – Reserved 4	U16		
44115	Remote Dispatch Mode – Real-Time Control – Reserved 5	U16		
44116	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Switch	U16		0: Disabled 1: Enabled Default 0, other values invalid.
44117	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Start Time Setting	U16		High byte: Hour, range 0–23, default 0, other values invalid. Low byte: Minute, range 0–59, default 0, other values invalid. Enabled time periods must not overlap. If periods overlap, only the

				period with the lower segment number will be executed. Example: If period 1 is set to 01:00–05:00 and period 2 is set to 03:00–06:00, because of time overlap, only period 1 control will be executed.
44118	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – End Time Setting	U16		High byte: Hour, range 0–23, default 0, other values invalid. Low byte: Minute, range 0–59, default 0, other values invalid.
44119	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Control Mode	U16		1 – Battery Standby control (no charging/discharging) 2 – Battery charge/discharge control 3 – Point of Common Coupling (PCC) Import/Export control 4 – AC Grid port Import/Export control 5 – Self-consumption control 6 – Grid-feed priority control Default: 1, other values invalid.
44120~ 44121	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Power Setting	S32	10W	The function is determined by the control mode in register 44105. Default: 0; out-of-range settings are invalid. (1) When the control mode is 1, this power value has no practical effect. (2) When the control mode is 2, negative values indicate battery discharge power, positive values indicate battery charging power. Range: –(maximum charge/discharge power × number of parallel units) ~ +(maximum charge/discharge power × number of parallel units). (3) When the control mode is 3, negative values indicate Import power, positive values indicate Export power. Range: –(inverter maximum output power × number of parallel

				units) ~ +(inverter maximum output power × number of parallel units). (4) When the control mode is 4, negative values indicate Import power, positive values indicate Export power. Range: –(inverter maximum output power × number of parallel units) ~ +(inverter maximum output power × number of parallel units).
44122	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Function Switch	U16		BIT00–BIT01: PV Shutdown control – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT02–BIT03: DO control – 0: invalid, 1: open, 2: closed, 3: invalid, default 0. BIT04–BIT05: Allow grid-to-battery charging –0: invalid, 1: allowed, 2: not allowed, 3: invalid, default 0. BIT06–BIT07: Off-grid battery standby – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT08–BIT09: Battery reserve (used with register 44111) – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT10–BIT11: Battery discharge disable – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT12–BIT13: Demand control – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. BIT14–BIT15: PV power-limit percentage switch – 0: invalid, 1: disabled, 2: enabled, 3: invalid, default 0. Note: After writing “invalid” data, reading this register returns the last valid data written. Example: first write 1, then write 0; the read data will be 1.
44123	Remote Dispatch Mode – Time-Scheduled Con-	U16		Range: 0 to Period 1 SOC Upper Limit, default 0.

	trol – Period 1 – SOC Lower Limit			If out of range or greater than/equal to Period 1 SOC Upper Limit, the setting is invalid.
44124	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – SOC Upper Limit	U16		Range: Period 1 SOC Lower Limit to 100%, default 100%. If out of range or less than/equal to Period 1 SOC Lower Limit, the setting is invalid.
44125	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Battery Reserve SOC	U16		Range: Over-discharge SOC to Time-Scheduled Control Period 1 Upper Limit SOC, default 40%. Description: (1) Over-discharge SOC is set in register 43011; Time-Scheduled Control Period 1 Upper Limit SOC is set in register 44124. (2) Only effective when battery reserve is enabled in register 44108.
44126	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – PV Power-Limit Percentage	U16		100 <--> 1% Description: (1) Takes effect when the PV power-limit percentage switch (bits 14-15 of register 44122) is enabled.
44127	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Reserved 3	U16		
44128	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Reserved 4	U16		
44129	Remote Dispatch Mode – Time-Scheduled Control – Period 1 – Reserved 5	U16		
44130	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Switch	U16		The content format of Segment 2 is the same as Segment 1.
44131	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Start Time Setting	U16		
44132	Remote Dispatch Mode	U16		

	– Time-Scheduled Control – Period 2 – End Time Setting			
44133	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Control Mode	U16		
44134~ 44135	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Power Setting	S32		
44136	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Function Switch	U16		
44137	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – SOC Lower Limit	U16		
44138	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – SOC Upper Limit	U16		
44139	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Reserved 1	U16		
44140	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Reserved 2	U16		
44141	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Reserved 3	U16		
44142	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Reserved 4	U16		
44143	Remote Dispatch Mode – Time-Scheduled Control – Period 2 – Reserved 5	U16		
44144	Remote Dispatch Mode	U16		The content format of Segment 3 is

	– Time-Scheduled Control – Period 3 – Switch			the same as Segment 1.
44145	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Start Time Setting	U16		
44146	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – End Time Setting	U16		
44147	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Control Mode	U16		
44148~ 44149	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Power Setting	S32		
44150	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Function Switch	U16		
44151	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – SOC Lower Limit	U16		
44152	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – SOC Upper Limit	U16		
44153	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Reserved 1	U16		
44154	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Reserved 2	U16		
44155	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Reserved 3	U16		
44156	Remote Dispatch Mode – Time-Scheduled Con-	U16		

	trol – Period 3 – Reserved 4			
44157	Remote Dispatch Mode – Time-Scheduled Control – Period 3 – Reserved 5	U16		
44158	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Switch	U16		The content format of Segment 4 is the same as Segment 1.
44159	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Start Time Setting	U16		
44160	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – End Time Setting	U16		
44161	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Control Mode	U16		
44162~ 44163	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Power Setting	S32		
44164	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Function Switch	U16		
44165	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – SOC Lower Limit	U16		
44166	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – SOC Upper Limit	U16		
44167	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Reserved 1	U16		
44168	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Re-	U16		

	served 2			
44169	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Reserved 3	U16		
44170	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Reserved 4	U16		
44171	Remote Dispatch Mode – Time-Scheduled Control – Period 4 – Reserved 5	U16		
44172	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Switch	U16		The content format of Segment 5 is the same as Segment 1.
44173	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Start Time Setting	U16		
44174	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – End Time Setting	U16		
44175	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Control Mode	U16		
44176~ 44177	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Power Setting	S32		
44178	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Function Switch	U16		
44179	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – SOC Lower Limit	U16		
44180	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – SOC Upper Limit	U16		

44181	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Reserved 1	U16		
44182	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Reserved 2	U16		
44183	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Reserved 3	U16		
44184	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Reserved 4	U16		
44185	Remote Dispatch Mode – Time-Scheduled Control – Period 5 – Reserved 5	U16		
44186	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Switch	U16		The content format of Segment 6 is the same as Segment 1.
44187	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Start Time Setting	U16		
44188	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – End Time Setting	U16		
44189	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Control Mode	U16		
44190~ 44191	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Power Setting	S32		
44192	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Function Switch	U16		
44193	Remote Dispatch Mode	U16		

	– Time-Scheduled Control – Period 6 – SOC Lower Limit			
44194	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – SOC Upper Limit	U16		
44195	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Reserved 1	U16		
44196	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Reserved 2	U16		
44197	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Reserved 3	U16		
44198	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Reserved 4	U16		
44199	Remote Dispatch Mode – Time-Scheduled Control – Period 6 – Reserved 5	U16		
44202	ARM EMS Port Baud Rate Setting	U16		Baud Rate List: 96 <->9600bps， 192<->19200bps， 384<->38400bps； 576<->57600bps； 1152<->115200bps； Other values invalid. Note: Currently only supported for 50 kW series energy storage units.
44205	Utility Bypass Function Switch Setting	U16		0：Disable，1：Enable； Default: Disable；
44220~ 44221	PV Storage System Grid-tied Inverter Total Capacity	U32	0.1kW	Range：10~50000(Upper limit: 5 MW)
44222	PV Storage System Grid-tied Inverter Quantity	U16		Range：0~20，default: 0

44223	PV Storage System Anti-Reverse-Flow Control Strategy	U16		1: High precision, 2: Fast, other values invalid, default 1.
44224	PV Storage System Anti-Reverse-Flow Control Mode	U16		1: Three-phase power sum mode, 2: Three-phase minimum power mode, other values invalid, default 1.
44225~ 44226	PV Storage System Total Grid-side Active Power Control Compensation	S32	1W	Range：-243750W ~ +243750W
44227~ 44228	PV Storage System Maximum Feed-in Total Active Power Setting	U32	0.001 kW	Range：0~4875kW，Default: Unit rated AC output power × 1.1
44229~ 44230	PV Storage System Maximum Feed-in Hard Limit Power Setting	U32	0.001 kW	Range：0~4875kW，Default: Unit rated AC output power × 1.1 Applicable to Australian anti-reverse-flow requirements.
44231~ 44232	PV Storage System G100-2022 Standard Total Grid-side Current Output Limit Setting	U32	0.01A	Range：0~7386A，Default: unit rated AC output current × 1.1. Applicable to UK anti-reverse-flow requirements.
44233	PV Storage System Meter 1 PT Voltage Ratio	U16		Range：1~30000
44236	PV Storage System Meter 2 PT Voltage Ratio	U16		Range：1~30000
44237	PV Storage System Meter 2 CT Ratio	U16		Range：1~30000
44238	PV Storage System Meter 2 CT Direction	U16		0: Forward (CT arrow points away from the inverter, i.e., toward the grid), 1: Reverse setting, default 0. Other values invalid.
44239	PV Storage System Meter 2 Type and Installation Location Settings	U16		High byte: Meter installation location: 0x0100 – Grid-tied inverter total output side 0x0200 – Grid load total output side Low byte: Meter type: 0x0001 – Eastron single-phase 0x0002 – Eastron three-phase 0x0003 – Chint split-phase meter

44240	TCP Port Function	U16		BIT00: DHCP setting – 0: Dynamic, 1: Static, default 0; BIT01–15: Reserved Note: Only applicable to models that support TCP port and its functions.
44241~ 44242	TCP Port IP Address	U32		Data Format Description: Example: If the IP address is 192.168.0.2, then register 44241 = 0xC0A8 (where 0xC0 in hex = 192 in decimal, 0xA8 in hex = 168 in decimal), and register 44242 = 0x0002 (where 0x00 in hex = 0 in decimal, 0x02 in hex = 2 in decimal).
44243~ 44244	TCP Port Subnet Mask	U32		Data format is the same as registers 44241~44242.
44245~ 44246	TCP Port Gateway	U32		Data format is the same as registers 44241~44242.
44247~ 44248	TCP Port DNS Server Address	U32		Data format is the same as registers 44241~44242.
44249~ 44250	TCP Port Secondary DNS Server Address	U32		Data format is the same as registers 44241~44242.
44251	Modbus TCP Connection Port Number Setting	U16		Default 502
44253	Total Grid-side Power Consumption Over-Limit Load Disconnect Enable	U16		0x01: Not Enabled, 0x02: Enabled, Default: Not Enabled. Other values invalid;
44254	Total Grid-side Power Consumption Over-Limit Load Disconnect Control	U16		0x01:smartload, 0x02: smartload & backup, Other values invalid. Default: smartload Note: Effective only when function 44253 is enabled.
44255	Generator Scheduled Maintenance Function Enable Switch	U16		0x00：Disable 0x01:Enable， Other values invalid； Default: 0x00；
44256	Generator Scheduled Maintenance Function – Interval Time	U16	1day	Range: 1-60day， Default: 15days
44257	Generator Scheduled Maintenance Function –	U16	1min	Range: 5-30min, Default:10min

	Runtime			
44258	Generator Minimum Operating Power	U16	0.1kW	Range: 0–65000; Default: 24% of unit rated power.
44268	TCP Port MAC Address Byte 1 & 2	U16		Low byte represents the 1st byte, high byte represents the 2nd byte. Example: If the MAC address is 0x00-0x80-0xE1-0x00-0x01-0x02, then the value of this register is 0x8000.
44269	TCP Port MAC Address Byte 3 & 4	U16		Low byte represents the 3rd byte, high byte represents the 4th byte. Example: If the MAC address is 0x00-0x80-0xE1-0x00-0x01-0x02, then the value of this register is 0x00E1.
44270	TCP Port MAC Address Byte 5 & 6	U16		Low byte represents the 5th byte, high byte represents the 6th byte. Example: If the MAC address is 0x00-0x80-0xE1-0x00-0x01-0x02, then the value of this register is 0x0201.
44275	DRM Mode 2 Logic Interface S1 Public Grid-Side Power Feed-in Limit Value 1	U16	0.01%	Range: 0~100%, default 0%
44276	DRM Mode 2 Logic Interface S2 Public Grid-Side Power Feed-in Limit Value 2	U16	0.01%	Range: 0~100%, default 30%
44277	DRM Mode 2 Logic Interface S3 Public Grid-Side Power Feed-in Limit Value 3	U16	0.01%	Range: 0~100%, default 60%
44278~ 44279	DRM Mode 2 Logic Interface S4 Grid-to-Battery Charg-ing Power Limit Value	U32	1W	Standalone range: 0~Pn Parallel range: 0~(Pn × number of parallel units) Default: 4.2 kW
44280	Remote Active Power Control Port Selection Command	U16		BIT00~BIT03: Power Control Port Selection 0 disabled, 1 reserved, 2 enable remote control on the AC Grid Port 3 reserved,

				4 enable remote control on the Battery Port 5~15 invalid BIT04~BIT07: PV Control 0 invalid（Default） 1 PV shutdown BIT08~BIT15: reserved Note: If no valid command "2" or AC active power command or battery power command is received within a specified time period, this register will revert to 0. The "specified time" is defined by register 43282, with a default of 5 minutes.
44281	Remote Reactive Power Control Port Selection Command	U16		BIT00~BIT03:Reactive Power Control Port Selection 0 disabled, 1 reserved, 2 enable remote control on the AC Reactive Power Grid Port 3 reserved, 4~15 invalid BIT13~BIT15: reserved Note: If no valid command "2" is received within a specified time period, this register will revert to 0. The "specified time" is defined by register 43282, with a default of 5 minutes.
44282~44283	Power Control Battery Power Value	S32	1W	+: charge battery -: discharge battery
44284~44285	Power Control AC Power Value	S32	1W	+: export to grid -: import from grid
44286~44287	Power Control Reactive Power Value	S32	1Var	+: Inductive reactive power (lagging, absorbed by the load) -: capacitive reactive power (leading, supplied to the load)

6. Protocol Usage Example

Taking the energy storage inverter with communication address 1 as an example, the communication data is in Hexadecimal (Hex) format.

6.1. Reading Operational Information

(1) Obtain the Main DSP Firmware Version Information

The host computer reads register address 33001 and takes the low-order byte as the major version number, and reads register address 33021 and takes the low-order byte as the minor version number. Example communication data:

Host computer sends: 01 04 80 E9 00 01 C9 FE，Inverter replies: 01 04 02 00 0D 78 F5

Host computer sends: 01 04 80 FD 00 01 89 FA，Inverter replies: 01 04 02 00 05 79 33

Based on the operational logic and the data above, and referring to the corresponding register "Description," the Main DSP Firmware Version is determined to be "0D05".

(2) Obtain the Energy Storage Inverter Serial Number (SN)

Corresponding to register addresses 33004~33019. Example communication data:

Host computer sends: 01 04 80 EC 00 10 19 F3，

Inverter replies: 01 04 20 31 30 33 31 37 33 30 32 35 34 33 30 30 38 38 34 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 A0 7A

Based on the corresponding register "Description," the Serial Number (SN) is “1031730254300884”.

(3) Obtain the Over-Discharge SOC Setting Parameter

Corresponding to register address 43011. Example communication data:

Host computer sends: 01 03 A8 03 00 01 54 6A，Inverter replies: 01 03 02 00 14 B8 4B

Based on the corresponding register "Description," the Over-Discharge SOC setting value is 20%.

6.2. Setting Operational Parameters

(1) Power On

Corresponding to register address 43007. Example communication data:

Host computer sends: 01 06 A7 FF 00 BE 1A FE，Inverter replies: 01 06 A7 FF 00 BE 1A FE

(2) Set Date and Time

Set the date and time to "January 6, 2026, 17:31:30". Corresponding to register addresses 43000~43005. Example communication data:

Host computer sends: 01 10 A7 F8 00 06 0C 00 1A 00 01 00 06 00 11 00 1F 00 1E D0 03

Inverter replies: 01 10 A7 F8 00 06 E2 8E

7. Appendix

7.1. Appendix 1（M35000）

Register Value（M:35000）	Inverter Model	Remarks
0x0000	/	Undefined
0x2030	5G/S5 Series Single-Phase Low-Voltage Battery Energy Storage Unit	/
0x2031	5G/S5 Series Single-Phase AC-Coupled	/
0x2060	5G Series Three-Phase High-Voltage Battery Energy Storage Unit	/
0x2070	S6 Series Three-Phase High-Voltage Battery 5-12kW Energy Storage Unit	/
0x2071/0x2171	S6 Series Three-Phase High-Voltage Battery 12-20kW Energy Storage Unit	/
0x2172	S6 Series Three-Phase Low-Voltage Battery 10-15kW Energy Storage Unit	/
0x2073/0x2173/0x2273	S6 Series Three-Phase High-Voltage Battery 50kW Energy Storage Unit	/
0x2074	S6 Series Three-Phase High-Voltage 5-10kW AC-Coupled Pro	
0x2080	S6 Series Single-Phase High-Voltage Battery US Version Energy Storage Unit	/
0x2181	S6 Series Single-Phase Low-Voltage Battery 12-16kW US Version Energy Storage Unit	/
0x2183	S6 Series Low-Voltage Battery 5-8kW Brazil Split-Phase Energy Storage Unit	
0x2090/0x2190	S6 Series Single-Phase Low-Voltage Battery 3-18kW Energy Storage Unit	\
0x2091	S6 Series Single-Phase Low-Voltage Battery AC-Coupled	\
0x3010	S5 Series Single-Phase Low-Voltage Battery Off-Grid Energy Storage Unit	\
0x3020/0x3120	S6 Series Single-Phase Low-Voltage Battery Off-Grid Energy Storage Unit	\

7.2. Appendix 2（M33092）

Register Value（M:33092）	National Standard	
	Three-Phase Energy Storage	Single-Phase Energy Storage
01H	G59/3	G59/3
02H	UL480-13(60Hz480V) (Specification: Low-Voltage, 60Hz, 270V)	UL240-13
03H	VDE0126(380V)	VDE0126
04H	Reserve	Reserve
05H	Reserve	Reserve
06H	CQC-380A	CQC（B）
07H	EN50438IE	EN50438IE
08H	UL-380V(60Hz380V) Note: Low-Voltage UL-220V(60Hz220V)	UL-208V
09H	MEX-CFE	MEX-CFE
0AH	User-Defined	User-Defined
0BH	VDE4105(380V)	VDE4105
0CH	DK1	DK1
0DH	EN50549PO	EN50549PO
0EH	EN50549NL	EN50549NL
0FH	EN50549ES(Estonia)	EN50549ES
10H	EN50438L	EN50438L
11H	UL-480V-A	UL-240V-A
12H	UL-380V-A	UL-208V-A
13H	BRAZIL	BRAZIL
14H	Reserve	Reserve
15H	Reserve	Reserve
16H	G83/1	G83/1
17H	RD1699	RD1699
18H	IEC61727	IEC61727
19H	GN-380L	G83/1-A
1AH	CQC-480A	GNB
1BH	GN-HV-L	GNC
1CH	G59/3-A	NewZeal
1DH	4105/480(480V)	G83/3
1EH	Reserve	Chile
1FH	NewZeal	NRS097
20H	Reserve	Philippin
21H	CQC-540A	N4105-BEL
22H	GN-540L	IEC61727L
23H	N4105-BEL	KS1

24H	CHILE	France
25H	NRS097	ISONE240
26H	GN380L-A	ISONE208
27H	GNHVL-A	ISONE240A
28H	NRS480	ISONE208A
29H	CQC380DZ	GN300V
2AH	GN380DZL	MEA(THAILAND)
2BH	ISONE480	R21P3-240
2CH	ISONE480A	R21P3-208
2DH	KS1	R21P3-24A
2EH	R21P3-480	R21P3-20A
2FH	R21P3-48A	Sri Lanka
30H	Philippin	PEA(THAILAND)
31H	France	Reserve
32H	Sri Lanka	Mala230LV
33H	MEA	Indon230V
34H	PEA	G98
35H	Mala230MV	G99
36H	Mala230LV	GEN50
37H	Mala277LV	GEN60
38H	Mala277MV	TW220(TAIWAN)
39H	Indon230V	TW110(TAIWAN)
3AH	Dubai-A(Dubai Medium Voltage)	DK230V
3BH	Dubai-B(Dubai Low Voltage)	Barbados
3CH	DEWA277MV	BRAZIL-H
3DH	G98	G99-N
3EH	G99	CEI 0-21(Italy)
3FH	BDEW230V	MEX-220V (MEX-110V Note: Low-Voltage Display)
40H	BDEW277V	MEX220-A (MEX110-A Note: Low-Voltage Display)
41H	GEN50	SG1
42H	GEN60	Reserve
43H	Reserve	Reserve
44H	KS2(South Korea Non-Standard)	EN50549
45H	TW220(TAIWAN)	PH-L(Philippin)
46H	DK277V	C10/11(Belgium)
47H	DK230V	DK2
48H	Barbados	G98-NI
49H	IEC61727L	G99-NI
4AH	SG1（Singapore）	IRAN(Iran)

4BH	G99N	EIFS-SW(Sweden)
4CH	MEX-480V (MEX-220V Note: Low-Voltage Dis-play)	R14-240A（Hawaii）
4DH	MEX480V-A (MEX220V-A Note: Low-Voltage Display)	R14-208A（Hawaii）
4EH	Reserve	TOR(Austria)
4FH	Reserve	R14-240（Hawaii）
50H	Reserve	R14-208（Hawaii）
51H	Reserve	Reserve
52H	EN50549	GREECE (Greece)
53H	CEI 0-21(Italy)	HK220(Hong Kong)
54H	PH-L(Philippin)	RENBLAD(Norway 342)
55H	C10/11(Belgium)	4777-A (AS4777-2020A)
56H	DK2	4777-B
57H	G98-NI	4777-C
58H	G99-NI	4777-N (New Zealand)
59H	IRAN(Iran)	NTS631
5AH	EIFS-SW(Sweden)	UL-240-18 (Note: UL-1574 Requirements A refers to the older standard UL 1547-2014. A2 refers to the newer standard UL 1547-2018.)
5BH	KS3	UL-208-18
5CH	TOR(Austria)	EN50549IE
5DH	BRAZIL-H	VIETNAM
5EH	Reserve	Reserve
5FH	Reserve	PN-50549 (Poland)
60H	Reserve	ESB-Micro (Note: New Ireland EN50549)
61H	G99-B	ESB-Mini (Note: New Ireland EN50549)
62H	Reserve	Israel(Israel)
63H	Reserve	R14H-240（Hawaii）
64H	GREECE	R14H-208（Hawaii）
65H	HK220(Hong Kong)	EN50549FI(Finland)
66H	REN342(RENBLAD Norway 342)	BRA-N220 (BRA-N22L

		Note: Low-Voltage Display)
67H	CEI 0-16	EN50549TR(土耳其 50549-1)
68H	NTS631	MEX-22N
69H	4777-A (AS477-2020)	LTU-1 (Lithuania 50549-1)
6AH	4777-B	GNHN(For Henan Grid)
6BH	4777-C	ES-L-N（Spain）
6CH	4777-N(NEW ZEALAND)	MEX-CFE-SP(Split-Phase Grid)
6DH	4777-A-H	JAM-230(Jamaica)
6EH	4777-B-H	Custom50（Specification: For 50Hz Grid）
6FH	4777-C-H	Custom60（Specification: For 50Hz Grid）
70H	4777-N-H	Reserve
71H	UL480-18 (Note: UL-1574 Requirements A refers to the older standard UL 1547-2014. A2 refers to the newer standard UL 1547-2018.)	HUN-1 (Hungarian standards)
72H	EN50549IE	LUMA-240（Puerto Rico_ODM）
73H	EN50549-2	Czech（Czech）
74H	VIETNAM	R21-208
75H	VDE4110	R21-240
76H	GNSD-A380	SI-1
77H	GNSD-A-HV	NA-EEA（Switzerland）
78H	GNSD-A540	Qatar(Qatar)
79H	GNSD-B380	CYP(Cyprus)
7AH	GNSD-B-HV	ROU（Romania）
7BH	GNSD-B540	Egypt（Egypt）
7CH	PN-50549(Poland)	Reserve
7DH	ESB-Micro	Reserve
7EH	ESB-Mini	Reserve
7FH	Israel(Israel)	Reserve
80H	Egypt (Egypt)	Reserve
81H	KS3-LVRT	Reserve
82H	CQC3310	Reserve
83H	EN50549FI(Finland)	Reserve
84H	BRA-N380 (BRA-N38L Note: Low-Voltage Display)	Reserve
85H	EN50549TR(Turkey 50549-1)	Reserve
86H	TR-2(Turkey 50549-2)	Reserve

87H	SI-1（Slovenia 50549-1）	Reserve
88H	SI-2（Slovenia 50549-2）	Reserve
89H	PH-480(Philippines High Voltage)	Reserve
8AH	VN-480（Vietnam High Voltage）	Reserve
8BH	LTU-1(Lithuania 50549-1)	Reserve
8CH	LTU-2(Lithuania 50549-2)	Reserve
8DH	Reserve	Reserve
8EH	Reserve	Reserve
8FH	MEX-48N(MEX-22N Note: Low-Voltage Display)	Reserve
90H	Reserve	Reserve
91H	Reserve	Reserve
92H	Reserve	Reserve
93H	Reserve	Reserve
94H	Reserve	Reserve
95H	Reserve	Reserve
96H	Reserve	Reserve
97H	Reserve	Reserve
98H	Reserve	Reserve
99H	Reserve	Reserve
9AH	Reserve	Reserve
9BH	Reserve	Reserve
9CH	ES-L-N（Spain）	Reserve
9DH	DK1-L-400	Reserve
9EH	DK2-L-400	Reserve
9FH	DK1-M-400	Reserve
A0H	DK2-M-400	Reserve
A1H	TOR-MV(Austria)	Reserve
A2H	Czech （Specification: For Czech 2023 A1/A2）	Reserve
A3H	Reserve	Reserve
A4H	Reserve	Reserve
A5H	Reserve	Reserve
A6H	Reserve	Reserve
A7H	Reserve	Reserve
A8H	G99 NI-B	Reserve
A9H	HUN(Hungary)	Reserve
AAH	FI-1(Finnish standards)	Reserve
ABH	IEC61727H(Indian High-Voltage standards)	Reserve
ACH	Reserve	Reserve
ADH	Reserve	Reserve

AEH	BRAZIL-HV (For 125K-HV)	Reserve
AFH	Czech-MV （Czech）	Reserve
B0H	Custom50（Specification: For 50Hz Grid）	Reserve
B1H	Custom60（Specification: For 50Hz Grid）	Reserve
B2H	G29319-38	Reserve
B3H	G29319-48	Reserve
B4H	G29319-54	Reserve
B5H	G19964-38	Reserve
B6H	G19964-48	Reserve
B7H	G19964-54	Reserve
B8H	Qatar	Reserve
B9H	R21-208	Reserve
BAH	R21-240	Reserve
BBH	R21-480	Reserve
BCH	Bra-480(Brazil Old Standard)	Reserve
BDH	NA-EEA-A（Switzerland）	Reserve
BEH	NA-EEA-B（Switzerland）	Reserve
BFH	SriLankaN	Reserve
C0H	PH-L-480	Reserve
C1H	ISR-M(Israel Medium-Voltage Grid)	Reserve
C2H	CYP-230(Cyprus)	Reserve
C3H	POL-M-400(Poland Medium-Voltage Standards)	Reserve
C4H	PH-M-380(Philippines Medium-Voltage)	Reserve
C5H	ROU-380（Romania）	Reserve
C6H	G10186（New National Standard）	Reserve
100H	MEX-220V(Note: Low-Voltage Display)	Reserve
101H	MEX220V-A(Note: Low-Voltage Display)	Reserve
102H	MEX-22N(Note: Low-Voltage Display)	Reserve

7.3. Appendix 3（M33095）

Register Value (M:33095(33070))	Inverter Chinese Display	Inverter English Display
0000H（0000）	等待状态	Waiting
0000H（0001）	控制离网	Grid Off
0000H（0002）	等待状态 01	Waiting01
0001H	开环运行	OpenRun
0002H	软起运行	SoftRun
0003H（0000）	并网运行	Generating
0003H（xx01）	过温限载	LimByTemp
0003H（xx02）	过频限载	LimByFreq
0003H（xx04）	过压限载	LimByVg
0003H（xx08）	无功限载	LimByVar
0003H（xx10）	欠频限载	LimByUnFr
0003H（xx20）	功率软起	Ramp-up
0003H（xx40）	有旁路过载	Overload
0003H（xx80）	交流端子过温限载	LimByACTemp
0003H（01xx）	DRM 限载	LimByDRM
0003H（02xx）	PLMT 限载	LimByEPM
0004H	离网运行	Off-Grid
……	……	……
F010H	电网浪涌	Surge Alarm
F011H	风扇故障(内部风扇)	Fan Alarm
F013H	电网防雷异常	VgSpdFail
F014H	直流防雷异常	DcSpdFail
F015H	风扇故障(外部风扇)	Fan_H Alarm
F016H	熔丝异常	FuseFail
F017H	相线接地告警	L&PE FAIL
F019H(0000)	0000_Boost 异常	0000_BoostFail
F01AH	发电机启动异常	Gen_Start_Fail
F01BH	发电机停止异常	Gen_Stop_Fail
F01CH	IGBT 温度差异	IGBT TEMP DIF
F01DH	零地电压异常	N-PE V fault
F01EH	PV 与电池功率不匹配	PV-Batt-Mismatch
F01FH	发电机电压相位异常	Gen-Phase-Err
……	……	……
F020H	电池告警（警示）01	BMS_ALARM(WARN)01
F021H	电池告警（警示）02	BMS_ALARM(WARN)02
F022H	电池告警（警示）03	BMS_ALARM(WARN)03
F023H	电池告警（警示）04	BMS_ALARM(WARN)04
F024H	电池告警（警示）05	BMS_ALARM(WARN)05
F025H	电池告警（警示）06	BMS_ALARM(WARN)06

F026H	电池告警（警示）07	BMS_ALARM(WARN)07
F027H	电池告警（警示）08	BMS_ALARM(WARN)08
F028H	电池告警（警示）09	BMS_ALARM(WARN)09
F029H	电池告警（警示）10	BMS_ALARM(WARN)10
F02AH	电池告警（警示）11	BMS_ALARM(WARN)11
F02BH	电池告警（警示）12	BMS_ALARM(WARN)12
F02CH	电池告警（警示）13	BMS_ALARM(WARN)13
F02DH	电池告警（警示）14	BMS_ALARM(WARN)14
……	……	……
F035H	AC Coupling 锁定	AC Coupling Lock
F036H	AC Coupling 暂停	AC Coupling Stop
F037H	Backup 断路器过载	BK-CB-Ovload
……	……	……
F040H	CT 方向告警	CT_Dir Fail
F041H	电表相序告警	MET_LINE WARN
F042H	从机相序告警	SLV_LINE WARN
……	……	……
F050H	电网电压不平衡告警	GRID_VOLT_UNBALANCE_WARNING
F051H	直流开关异常告警	DC_SWITCH_ABNORMAL_WARNING
……	……	……
F080H	并网逆变器通讯失败	PVInv-ComFail
F081H	电表 2 异常告警	Meter2-Fail
F082H	并机主从机软件版本不一致	Par-Ver-Mismatch
F083H	卸载(说明：总网侧取电超限负载断开)	Load-CutOff
F084H	卸载锁定	Load-CutOff-Lock
……	……	……
1010H(0000)	电网过压	OV-G-V
1010H(0001)	电网过压 01	OV-G-V01
1010H(0002)	电网过压 02	OV-G-V02
1010H(0003)	电网过压 03	OV-G-V03
1010H(0004)	电网过压 04	OV-G-V04
1010H(0005)	电网过压 05	OV-G-V05
1011H(0000)	电网欠压	UN-G-V
1011H(0001)	电网欠压 01	UN-G-V01
1011H(0002)	电网欠压 02	UN-G-V02
1012H(0000)	电网过频	OV-G-F
1012H(0001)	电网过频 01	OV-G-F01
1012H(0002)	电网过频 02	OV-G-F02
1013H(0000)	电网欠频	UN-G-F
1013H(0001)	电网欠频 01	UN-G-F01

1013H(0002)	电网欠频 02	UN-G-F02
1014H	电网逆流	Backfeed_Iac
1015H	无电网	NO-Grid
1016H	电网不平衡	G-PHASE
1017H	电网频率抖动	G-F-FLU
1018H	电网过流	OV-G-I
1019H	电网电流跟踪故障	IGFOL-F
101AH	电网相位异常	PHASE-FAULT
101CH	过流筛选故障	IGBTSift-Pro
101DH(0001)	静态 1 级过压	G100-VH
101DH(0002)	静态 2 级过压	G100-OV1
101DH(0003)	动态过压	G100-D-VH
101DH(0004)	静态 1 级欠压	G100-UV1
101DH(0005)	静态 2 级欠压	G100-VL
101DH(0006)	动态欠压	G100-D-VL
101EH	电网波动异常	GV-F
……	……	……
1020H(0000)	直流过压	OV-DC
1020H(0001)	直流过压 01	OV-DC01
1020H(0002)	直流过压 02	OV-DC02
1020H(0003)	PV 接地故障	PVGndRun Fau
1020H(0004)	DCBoost 故障	BoostFail
1021H	直流母线过压	OV-BUS
1022H	直流母线不均压	UNB-BUS
1023H(0000)	直流母线欠压	UN-BUS
1023H(0001)	直流母线欠压 01	UN-BUS01
1023H(0002)	直流母线欠压 02	UN-BUS02
1024H	直流母线不均压 2	UNB2-BUS
1025H	直流 A 路过流	OV-DCA-I
1026H	直流 B 路过流	OV-DCB-I
1027H	直流输入扰动	DC-INTF.
1028H	直流反接故障	Reve-DC
1029H	PV 中点接地故障	PvMidIso
102AH	母线电压不一致	Vbus-Sam
102BH	PV 端口浪涌	PV Surge
102CH	直流过温故障	OV-TEM05
102DH	MPPT 过压故障	OV-MPPT
102EH	MPPT 过流故障	OC-MPPT
……	……	……
1030H	电网扰动	GRID-INTF.
1031H	DSP 初始化保护	INI-FAULT
1032H	过温保护	OV-TEM01
1033H(0000)	PV 绝缘故障	PV ISO-PRO

1033H(0001)	PV 绝缘故障 01	PV ISO-PRO1
1033H(0002)	PV 绝缘故障 02	PV ISO-PRO2
1034H(0000)	漏电流保护	ILeak-PRO
1034H(0001)	漏电流保护 01	ILeak-PRO01
1034H(0002)	漏电流保护 02	ILeak-PRO02
1034H(0003)	漏电流保护 03	ILeak-PRO03
1034H(0004)	漏电流保护 04	ILeak-PRO04
1035H	Relay 检测保护	RelayChk-FAIL
1036H(0000)	DSP_B 通讯异常	DSP-B-Com-Fau
1036H(0001)	DSP_B 采样异常	DSP-B-Sam-Fau
1037H	直流分量过大	DCInj-FAULT
1038H	12V 欠压保护	12Power-FAULT
1039H	漏电流自检保护	ILeak-Check
103AH	欠温保护	UN-TEM
103BH	IGBT 温度差异	IGBT TEMP DIF
103CH	二级电网扰动	GRID-DIST.02
103DH	相线接地告警	L&PE-FAULT
103EH	NTC 过温保护	OV-TEM02
103FH	AC 端子过温故障	OV-TEM03
……	……	……
1040H	电弧自检保护	AFCI-Check
1041H	电弧保护	ARC- FAULT
1046H	电网扰动 02	GRID-INTF02
1047H	电网电流采样异常	IG-AD
1048H	电网三级过压	OV03-G-V
……	……	……
1050H	网侧电流瞬时过流	OV-IgTr
1051H	直流母线硬件过压	OV-BUS-H
1052H	LLC 硬件过流	OV-ILLC
1053H	硬限制故障	EPM-HardLimit
1057H	负载过载故障	Over-Load
1058H	DSP 自检异常	DspSelfChk
1059H	Vg 采样异常	Vg-Sample
105AH	DSP 硬件不匹配	HardFault
105DH	直流母线硬件过压(储能)	OV-BUS-H(Energy Storage Unit)
……	……	……
1800H(0000)	直流平均值过流	OV-DC-I
1800H(0005)	直流 5 路平均值过流	OV-DC05-I
1800H(0006)	直流 6 路平均值过流	OV-DC06-I
1800H(0007)	直流 7 路平均值过流	OV-DC07-I
1800H(0008)	直流 8 路平均值过流	OV-DC08-I
1800H(0009)	直流 9 路平均值过流	OV-DC09-I
1800H(000A)	直流 10 路平均值过流	OV-DC10-I

1801H(0000)	直流输入过压	OV-DC
1801H(0005)	直流 5 输入过压	OV-DC05
1801H(0006)	直流 6 输入过压	OV-DC06
1801H(0007)	直流 7 输入过压	OV-DC07
1801H(0008)	直流 8 输入过压	OV-DC08
1801H(0009)	直流 9 输入过压	OV-DC09
1801H(000A)	直流 10 输入过压	OV-DC10
……	……	……
2010H/2011H	Fail Safe	Fail Safe
2012H	电池通讯故障	Batt_Comm_FAIL
2014H	DSP 通讯故障	DSP_Comm_FAIL
2018H	DRM 连接失败	DRM_LINK_FAIL
201AH	CT 连接异常	CT_FAULT
201BH	DRM 控制离网	DRM_CTL_Off
……	……	……
2040H	EPM 硬限制保护	EPM-HardLimit
2041H	AFCI 板通讯异常	AFCI-Comm-Fail
2042H	AFCI 板 CT 模组硬件异常	AFCI-CTModule-Fail
2043H	G100 过流保护	State 2 excursion
2044H	多主机设置异常	MulMaster-Set-Err
2045H	SPH 通信异常	SPH-Comm-Fail
2046H	并机从机通信异常 (从机未接收到主机数据)	Slv-Comm-Err
2047H	配电盘过流	Panel Ov-C
2048H	电池低电量(离网状态下)	Low Battery
204AH	逆变器桥口硬限制保护	Inv-HardLimit
204BH	G100 电表通信故障	G100-ComFail
204CH	G100 CT 故障	G100-CTFault
204DH	AFCI 板类型不匹配	AFCI_Mismatch
……	……	……
2804H	电池 1 接线匹配异常。	Batt1-Wire-Err
2805H	电池 2 接线匹配异常。	Batt2-Wire-Err

7.4. Appendix 4：Status Bit Definitions

Register Address	Type	BIT Position	Fault Status	Status Code
33121	Working Status Bit Definitions	BIT00	Normal Operation (Device Status / Overall Operating Status)	0— No 1—YES
		BIT01	Initial Standby (Device Status)	0— No 1—YES
		BIT02	Shutdown	0— No 1—YES
		BIT03	Fault (Device Fault Status / Overall Operating Status)	0— No 1—YES
		BIT04	Standby (Device Status)	0— No 1—YES
		BIT05	Derated Operation (due to temperature, frequency, etc.)	0— No 1—YES
		BIT06	Limited Power Operation (due to external factors)	0— No 1—YES
		BIT07	Bypass Overload	0— No 1—YES
		BIT08	Load Fault (Load Normalcy Status)	0 — Normal 1 — Fault
		BIT09	Grid Fault (Grid Normalcy Status)	0 — Normal 1 — Fault
		BIT10	Battery Fault (Battery Normalcy Status)	0 — Normal 1 — Fault
		BIT11	Reserve	0— No 1—YES
		BIT12	Grid Surge (Combined with register 33339 to form Inverter Warning)	0— No 1—YES
		BIT13	Fan Fault (Combined with register 33339 to form Inverter Warning)	0— No 1—YES
		BIT14	External Fan Fault (Combined with register 33339 to form Inverter Warning)	0— No 1—YES
		BIT15	Fault Shutdown	0—No 1—YES
33339	Inverter Warning	BIT00	Generator Start-up Abnormal / Generator Start Failure	0—Normal 1—Alarm
		BIT01	Generator Stop Abnormal / Generator Stop Failure	0—Normal 1—Alarm
		BIT02	PV and Battery Power Mismatch	0—Normal 1—Alarm
		BIT03	Generator Voltage/Phase Ab-	0—Normal

			normality	1—Alarm
		BIT04	SolisHub-DSP Communication Fault	0—Normal 1—Alarm
		BIT05	AC-Coupling Locked	0—Normal 1—Alarm
		BIT06	AC-Coupling Suspended	0—Normal 1—Alarm
		BIT07	Backup Circuit Breaker Overload	0—Normal 1—Alarm
		BIT08	Grid-Tied Inverter Communication Failure	0—Normal 1—Alarm
		BIT09	Energy Meter 2 Abnormality Alarm	0—Normal 1—Alarm
		BIT10	Master/Slave Software Version Incompatibility	0—Normal 1—Alarm
		BIT11	Unload (Total Grid-Side Power Draw Exceeds Limit, Load Disconnected)	0—Normal 1—Alarm
		BIT12	Unload Locked (Total Grid-Side Power Draw Exceeds Limit, Load Disconnected)	0—Normal 1—Alarm
		BIT13	Reserve	\
		BIT14	Reserve	\
		BIT15	Reserve	\
		BIT02	Reserve	0— No 1—YES

7.5. Appendix 5：Low-Voltage Battery Number

No.	Register 43009	Battery Type	Remarks
1	0x0000	No Battery	
2	0x0001	PYLON_LV (PYLON Low-Voltage Battery)	
3	0x0002	Reserve	
4	0x0003	B_BOX_LV (BYD Low-Voltage Battery)	
5	0x0004	Dyness LV	(For S5 AC-Coupled, 0x0004 indicates LG Low-Voltage Battery)
6	0x0005	PureDrive Low-Voltage Battery	
7	0x0006	LG Chem LV LG Low-Voltage Battery	(For S5 AC-Coupled, 0x0006 indicates Dyness Low-Voltage Battery)
8	0x0007	AoBo Low-Voltage Battery	
9	0x0008	JiaWei Low-Voltage Battery	
10	0x0009	WECO Low-Voltage Battery	
11	0x000A	FreedomWon Low-Voltage Battery	
12	0x000B	Soluna Low-Voltage Battery	
13	0x000C	GSL Low-Voltage Battery	
14	0x000D	Rita Low-Voltage Battery	
15	0x000E	GS Energy Risen Low-Voltage Battery	
16	0x000F	Alpha LV Watt	
17	0x0010	UZ ENERGY CATL	
18	0x0011	ATL Low-Voltage Battery	
19	0x0012	Zeta Low-Voltage Battery	
20	0x0013	Highstar Low-Voltage Battery	
21	0x0014	KODAK Low-Voltage Battery	
22	0x0015	FOX Low-Voltage Battery	
23	0x0016	EXIDE Low-Voltage Battery	
24	0x0017	HD Energy Low-Voltage Battery	
25	0x0018	Pytes Low-Voltage Battery	
26	0x0019	ARVIO Low-Voltage Battery	
27	0x001A	PAND Low-Voltage Battery	
28	0x001B	WANKE Low-Voltage Battery	
29	0x001C	Dowell Low-Voltage Battery	
30	0x001D	ROSEN ESS Rongsheng Battery	
31	0x001E	ZRGP ZHONGRUI LVNENG Low-Voltage Battery	
32	0x001F	Narada Battery	
33	0x0020	BST Low-Voltage Battery	
34	0x0021	Cegasa Low-Voltage Battery	

35	0x0022	Meterboost	
36	0x0023	MOURA	
37	0x0024	Tecloman Low-Voltage Battery	
38	0x0025	Upower UE-H	
39	0x0026	Upower UE-I	
40	0x0027	SUNWODA Low-Voltage Battery	
41	0x0028	CFE Low-Voltage Battery	
42	0x0029	DMEGC Low-Voltage Battery	
43	0x002A	J-Pack-LV JA Solar Hibo Low-Voltage Battery	
44	0x002B	HY4850 Guizhou Jiaying Low-Voltage Battery	
45~62		Reserve	
63~82	0x003E~0x0052	0x003E -> Greenrich 0x003F -> PYTES_LV Reserve064~081	
83	0x0053	Reserve082	
84	0x0054	JA-L JA Solar Low-Voltage Battery	
85	0x0055	CLENERGY Low-Voltage Battery	
86	0x0056	Solis-Alpha Low-Voltage Battery	
98	0x0061	Solis Low-Voltage Battery	
99	0x0062	Lithium Battery LV(RS485)	
100	0x0063	General-LiBat-LV Generic Low-Voltage Lithium Battery	
101	0x0064	Lead Acid Battery	
102	0x0065	48V-LiBat-LV	
103	0x0066	51.2V-LiBat-LV	

7.6. Appendix 6：High-Voltage Battery Number

No.	Register 43009	Battery Type	Remarks
1	0x0000	No Battery	
2	0x0100	PYLON_HV High-Voltage Battery	
3	0x0200	Reserve	
4	0x0300	B_BOX_HV BYD High-Voltage Battery	
5	0x0400	LG_HV LG High-Voltage Battery	
6	0x0500	SOLUNA_HV DLG High-Voltage Battery	
7	0x0600	Dyness HV	
8	0x0700	Aoboet HV	
9	0x0800	WECO HV	
10	0x0900	Alpha HV	
11	0x0A00	GS Energy	
12	0x0B00	BYD-HVS/HVM/HVL	
13	0x0C00	Jinko High-Voltage Battery	

14	0x0D00	FOX High-Voltage Battery	
15	0x0E00	LG_16H High-Voltage Battery	
16	0x0F00	PureDrive High-Voltage Battery	
17	0x1000	UZ ENERGY High-Voltage Battery	
18	0x1100	Reserve	
19	0x1200	Reserve	
20	0x1300	Fortress High-Voltage Battery	
21	0x1400	AMPACE_HV	
22	0x1500	WTS High-Voltage Battery (BYD Manufacturer)	
23	0x1600	J-PACK-HV	
24	0x1700	SUNWODA HV	
25~38		Reserve	
39	0x2600	LG Enblock S	
40	0x2700	JA-H High-Voltage Battery	
41	0x2800	BMZ-HV	
42	0x2900	HomeGrid High-Voltage Battery	Temporarily used for S6 Single-Phase High-Voltage US Version Energy Storage Unit
43	0x2A00	Greenrich High-Voltage Battery	Temporarily used for S6 Three-Phase 50kW Energy Storage Unit
44	0x2B00	BAT High-Voltage Battery	
45	0x2C00	Gotion High-Voltage Battery	Temporarily used for S6 Three-Phase 50kW Energy Storage Unit
46~98		Reserve	
99	0x6200	Solis High-Voltage Battery	
100	0x6300	General-LiBat-HV Generic High-Voltage Lithium Battery	

7.7. Appendix 7：Energy Storage Control Switch Status Description

Energy Storage Control Switch Status	BIT00	Self-Consumption Mode Switch	0—OFF 1—ON
	BIT01	Optimized Revenue V1 Enable Switch	0—OFF 1—ON
	BIT02	Off-Grid Mode Switch	0—OFF 1—ON
	BIT03	Battery Wake-up Switch	0-Disabled 1-Enabled
	BIT04	Backup Battery Enable Switch	0—OFF 1—ON
	BIT05	Allow/Disallow Grid Power for Battery Charging	0—Disallow 1—Allow
	BIT06	Feed-in Priority Mode Switch	0—OFF 1—ON
	BIT07	Nighttime Battery Over-Discharge Retention Enable Switch	0—OFF 1—ON
	BIT08	Deactivated	0—OFF 1—ON
	BIT09	Deactivated	0—OFF 1—ON
	BIT10	Battery Conditioning Enable Switch	0—OFF 1—ON
	BIT11	Peak-Shaving Mode Switch	0—OFF 1—ON
	BIT12	Reserve	0—OFF 1—ON
	BIT13	Reserve	0—OFF 1—ON
	BIT14	Reserve	0—OFF 1—ON
	BIT15	Reserve	0—OFF 1—ON