RS485_MODBUS Communication

Ver3.7

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Modified Version

Version	Modified Content	Responsible person	Date
V000B000D000		Chm	2025/10/25

1. Overview

This protocol applies to the communication protocol between the grid-connected PV inverters in all power ranges of Solis and the monitoring software of the upper computer. MODBUS RTU protocol is adopted. This protocol can read the operation information of the inverter and control the operation of the inverter in real time.

Before configuring communication, please read this file in detail, which includes the four remote information of the inverter, message examples, communication parameters, and other explanations.

2. Physical interface

2.1. Adopts RS485 Receiver-Transmitter, Client-Server Model

Slave Address	1-255
Baud rate	9600bps
Parity checking	None
Data bits	8
Stop bits	1

3. Communication Description

This protocol applies to machines manufactured after mid-2023.

3.1. Data Type

U16 2-byte unsigned integer, high first and then low;

S16 2-byte signed integer, high first and then low;

U32 4-byte unsigned integer, the high byte is in front of the low byte, and the high word is in the front and the low word is behind;

S32 4-byte signed integer, the high byte is in front of the low byte, and the high word is in the front and the low word is behind;

3.2. Inter-frame interval requirement

More than 300ms communications frame of acquiring interval is required and more than 700ms communications frame of controlling interval is required. Recommended max data frame 100 bytes (50 registers)

3.3. Data Frame

Slave Address	Function code	Data	CRC Check
8-Bits	8-Bits	Nx8-Bits	16-Bits

Slave Address： It must be match with inverter address.

Function code： 03H、04H、06H and 10H are available.

Function code(Hex)	Name	Reg. Address	Function
03H	Read the holding registers	40001-49999	Read the setting content of holding registers
04H	Read the input registers	30001-39999	Read the detail information of the inverter
06H	Write a single holding register	40001-49999	Set single-byte functions
10H	Write multiple holding registers	40001-49999	Set multi-byte function

Data： Including the start register address, data length, the number of data bytes, data content. 02H low-byte and follow high-byte, others high-byte first, and follow by low

CRC Check： CRC look-up table checking mode. High-byte first, and follow by low byte.

3.4. Other Important Information

- **Reading unimplemented registers：** If a register within the valid address range is not implemented, the inverter returns 0x0000 without raising an exception.
- **Writing to unimplemented registers:** For unimplemented registers within the valid address range, the data is discarded, but a normal response is still returned.
- **Write operation limit**: Only one write action is allowed per Modbus frame; function code 06 (write single register) is recommended.
- **Broadcast silence (address 0xFF):** Slaves execute write commands sent to address 0xFF but remain silent and send no response.
- **Universal address (address 0xFE):** Slaves will respond normally to frames with address 0xFE, even if it differs from the inverter's actual address.

4. Error information and data process

Slave Response (Hex)：

Slave Address	Function code	Error code	CRC Check	
xx	xx|0x80	xx	Low Byte	High Byte
			xx	xx

When the inverter communication module detected an error other than CRC error, it must response to the master device. (High byte of function code is 1 which is adding 128 to the function code)

4.1. Error Code

0x02 illegal data address

0x03 Illegal data value

0x04 Service failure, Inverter com module can't get access to the data during execution

0x05 HMI and DSP communication failure

5. Detail description of the Protocol

5.1. Inverter Parameter Address Definition for 0x04

Reg. Address	name	Data type	Unit	Remark
35000	Inverter Type	U16		See Appendix 1
2999	Product model	U16		
3000	DSP Version	U16		Example: 0xAABB, AA represents the major version number of the slave DSP and BB represents the major version number of the main DSP.
3001	HMI Version	U16		Only the major version (low byte) number is present, with the high byte being empty.
3003	DC input type	U16		0-1 DC input 1-2 DC input

				2-3 DC input 3-4 DC input ……
3004-3005	Active Power	S32	1W	
3006-3007	Total DC output power	U32	1W	
3008-3009	Total energy	U32	1kWh	
3010-3011	Energy this month	U32	1kWh	
3012-3013	Energy last month	U32	1kWh	
3014	Energy today	U16	0.1kWh	
3015	Energy yesterday	U16	0.1kWh	
3020	HMI Version	U16		Example: 0xAABB, AA represents the minor version number and BB represents the major version number.
3021	DC voltage 1	U16	0.1V	Applicable to non-string inverters: 1. 0.7-10K single camera 2. 5-25K series 3. 25-50K series
3022	DC current1	U16	0.1A	
3023	DC voltage 2	U16	0.1V	
3024	DC current 2	U16	0.1A	
3025	DC voltage 3	U16	0.1V	
3026	DC current 3	U16	0.1A	
3027	DC voltage 4	U16	0.1V	
3028	DC current 4	U16	0.1A	
3029	Alarm code data	U16		See Appendix 2 In conjunction with the 3043 register address, it is used to subdivide the fault message display.
3033	AB line voltage / A phase voltage	U16	0.1V	

3034	BC line voltage / B phase voltage	U16	0.1V	
3035	CA line voltage / C phase voltage	U16	0.1V	
3036	A phase current	U16	0.1A	
3037	B phase current	U16	0.1A	
3038	C phase current	U16	0.1A	
3040	Standard working mode	U16		Working Mode: 00---No response mode 01---Volt–watt default 02---Volt–var 03---Fixed power factor 04---Fix reactive power 05---Power-PF 06---Rule21Volt–watt
3041	Inverter temperature	S16	0.1℃	Note：AC NTC (IGBT)
3042	Grid Frequency	U16	0.01Hz	
3043	Inverter Status	U16		See Appendix 3 In conjunction with the 3029 register address, it is used to subdivide the information display.
3044-3045	Limited active power adjustment rated power output value	S32	1W	
3046-3047	Reactive power regulation rated power output value	S32	1Var	
3049	Active power percentage value	U16	0.10%	10000<-->100% Eg. 6.12. Get Active power Percent
3051	Actual power factor adjustment	S16	0.01	800<-->0.8 Eg. 6.8. Get PF Value
3052	Reactive power percentage value	S16	0.10%	10000<-->100% Eg. 6.10. Get Reactive power Percent
3053	Standard	U16		

3055-3056	Reactive power value	S32	1Var	
3057-3058	Apparent power value	S32	1VA	
3059	Real-time power factor	S16	0.010	
3060	Inverter serial number SN_1	U16		Inverter sequence (hexadecimal display) Example: SN number: 12345679ABCDEF The value upload value for 3061 is 0x4321 The value upload value for 3062 is 0x8765 The value upload value for 3063 is 0xCBA9 The value upload value for 3064 is 0x0FED
3061	Inverter serial number SN_2	U16		
3062	Inverter serial number SN_3	U16		
3063	Inverter serial number SN_4	U16		
3071	Working Status	U16		See Appendix 3
3072	System time - year	U16		Range from 0 to 99
3073	System time - month	U16		
3074	System time - day	U16		
3075	System time - hour	U16		
3076	System time - minute	U16		
3077	System time - second	U16		
3089	Power limit switch	U16		0x55 OFF 0xAA ON
3090	Reactive power switch	U16		0x55 OFF 0xA1 ON 0xA2 ON
3094	Limiting status information	U16		See Appendix 3
3095	Fault Code 01	U16		
3096	Fault Code 02	U16		
3097	Fault Code 03	U16		
3098	Fault Code 04	U16		

3099	Fault Code 05	U16		
3100	Fault Code 06	U16		
3101	Fault Code 07	U16		
3102	Fault Code 08	U16		
3103	Warning message DSP	U16		
3104	Warning message HMI	U16		
3109	Factory-rated output power	U16	10W	
3288	PV21 current	S16	0.1A	
3289	PV22 current	S16	0.1A	
3290	PV23 current	S16	0.1A	
3291	PV24 current	S16	0.1A	
3292	PV25 current	S16	0.1A	
3293	PV26 current	S16	0.1A	
3294	PV27 current	S16	0.1A	
3295	PV28 current	S16	0.1A	
3296	PV29 current	S16	0.1A	
3297	PV30 current	S16	0.1A	
3298	Total PV current	U16	0.1V	
3299	Total PV current	S16	0.1A	
3300	PV1 current	S16	0.1A	
3301	PV2 current	S16	0.1A	
3302	PV3 current	S16	0.1A	
3303	PV4 current	S16	0.1A	
3304	PV5 current	S16	0.1A	
3305	PV6 current	S16	0.1A	
3306	PV7 current	S16	0.1A	
3307	PV8 current	S16	0.1A	
3308	PV9 current	S16	0.1A	
3309	PV10 current	S16	0.1A	
3310	PV11 current	S16	0.1A	
3311	PV12 current	S16	0.1A	
3312	PV13 current	S16	0.1A	
3313	PV14 current	S16	0.1A	

3314	PV15 current	S16	0.1A	
3315	PV16 current	S16	0.1A	
3316	PV17 current	S16	0.1A	
3317	PV18 current	S16	0.1A	
3318	PV19 current	S16	0.1A	
3319	PV20 current	S16	0.1A	
3336	PV31 current	S16	0.1A	
3337	PV32 current	S16	0.1A	
3471	Fault Code 10	U16		See Appendix 3
3472	Fault Code 11	U16		
3473	Fault Code 12	U16		
3499	MPPT 1 voltage	U16	0.1V	
3500	MPPT 2 voltage	U16	0.1V	
3501	MPPT 3 voltage	U16	0.1V	
3502	MPPT 4 voltage	U16	0.1V	
3503	MPPT 5 voltage	U16	0.1V	
3504	MPPT 6 voltage	U16	0.1V	
3505	MPPT 7 voltage	U16	0.1V	
3506	MPPT 8 voltage	U16	0.1V	
3507	MPPT 9 voltage	U16	0.1V	
3508	MPPT 10 voltage	U16	0.1V	
3509	MPPT 11 voltage	U16	0.1V	
3510	MPPT 12 voltage	U16	0.1V	
3511	MPPT 13 voltage	U16	0.1V	
3512	MPPT 14 voltage	U16	0.1V	
3513	MPPT 15 voltage	U16	0.1V	
3529	MPPT 1 current	S16	0.1A	
3530	MPPT 2 current	S16	0.1A	
3531	MPPT 3 current	S16	0.1A	
3532	MPPT 4 current	S16	0.1A	
3533	MPPT 5 current	S16	0.1A	
3534	MPPT 6 current	S16	0.1A	
3535	MPPT 7 current	S16	0.1A	
3536	MPPT 8 current	S16	0.1A	

3537	MPPT 9 current	S16	0.1A	
3538	MPPT 10 current	S16	0.1A	
3539	MPPT 11 current	S16	0.1A	
3540	MPPT 12 current	S16	0.1A	
3541	MPPT 13 current	S16	0.1A	
3542	MPPT 14 current	S16	0.1A	
3543	MPPT 15 current	S16	0.1A	
3544	MPPT 16 current	U16	0.1V	
3545	MPPT 16 current	S16	0.1A	

5.2. Inverter Parameter Address Definition for 0x03, 0x06 and 0x10

Reg. Address	name	Data type	Unit	Remark
2999	Year	U16		0-99
3000	Month	U16		
3001	Day	U16		
3002	Hour	U16		
3003	Minutes	U16		
3004	Seconds	U16		
3006	ON/OFF	U16		0xBE-ON 0xDE-OFF
3050	Reactive power limitation	S16	0.10%	10000<-- >100% Range（-60%- +60%） default：0 Only available for working mode 04 Eg. 6.11. Set Reactive Power Percent
3051	Percentage of active power	U16	0.10%	10000<-->100% Range from 0% to 110% Eg. 6.13. Set Active Power Percent
3053	Actual power factor adjustment	S16	0.01	800<-->0.800 Eg. 6.9. Set PF Value

3068	Power-off saving function	U16		BIT00： 0- Power off not saving 1- Power off saving For 3051 Reg. BIT01：Reserved BIT02： 0- Power off not saving 1- Power off saving For 3050 Reg. BIT03: 0- Power off not saving 1- Power off saving For 3053 Reg. BIT04-15：Reserved **Note: When setting to 1 here, the control command only needs to be set once as long as the power is not disconnected.**
3069	Active power switch	U16		0x55 OFF 0xAA Enable 3051 and 3080 Registers
3070	Reactive power switch	U16		0x55 OFF ； 0xA1 Enable 3050 and 3082 Registers 0xA2 Enable 3053 Register
3080	Active power set-point 1	S16	10W	Range from 0 to +32768 **See Appendix 4**
3082	Reactive power set-point 1	S16	10Var	Range from -32767 to +32768 **See Appendix 4**
3222-32	Active power set-point 2	S32	10W	**See Appendix 4**

23				Only for 320K series
3224-3225	Reactive power set-point 2	S32	10Var	**See Appendix 4** Only for 320K series

6. Example

6.1. Error Message

Request		Response	
01 04 0B B6 00 01 D2 08		01 84 02 C2 C1	
01	Slave Address	01	Slave Address
04	Function Code	84	Function Code
0B B6	Reg. Start Address（2998）	02	Err. code 02（invalid data address）
00 01	Reg. Count（1）	C2 C1	CRC Check
D2 08	CRC Check		

6.2. 04 Function Code

Request		Response	
01 04 0B B7 00 02 C3 C9		01 04 04 00 43 02 07 4A F2	
01	Slave Address	01	Slave Address
04	Function Code	04	Function Code
0B B7	Reg. Start Address（2999）	04	valid data length
00 02	Reg. Count（2）	00 43	Reg. Data1
C3 C9	CRC Check	02 07	Reg. Data2
		4A F2	CRC Check

6.3. 03 Function Code

Request		Response	
02 03 0B B7 00 03 B7 FA		02 03 06 00 0D 00 01 00 0D 88 41	
02	Slave Address	02	Slave Address
03	Function Code	03	Function Code
0B B7	Reg. Start Address（2999）	06	valid data length
00 03	Reg. Count（3）	00 0D	Reg. Data1
B7 FA	CRC Check	00 01	Reg. Data2
		00 0D	Reg. Data3

		88 41	CRC Check

6.4. 06 Function Code

Request		Response	
02 06 0B B7 00 03 7B FA		02 06 0B B7 00 03 7B FA	
02	Slave Address	02	Slave Address
06	Function Code	06	Function Code
0B B7	Reg. Start Address（2999）	0B B7	Reg. Start Address（2999）
00 03	Reg. Data（3）	00 03	Reg. Data（3）
7B FA	CRC Check	7B FA	CRC Check

6.5. 10 Function Code

Request		Response	
01 10 0B B7 00 03 06 00 13 00 02 00 14 51 65		01 10 0B B7 00 03 32 0A	
01	Slave Address	01	Slave Address
04	Function Code	10	Function Code
0B B7	Reg. Start Address（2999）	0B B7	Reg. Start Address（2999）
00 03	Reg. Count（3）	00 03	Reg. Count（3）
00 13	Reg. Data1（19）	32 0A	CRC Check
00 02	Reg. Data2（2）		
00 14	Reg. Data3（20）		
51 65	CRC Check		

6.6. General Address 0xFE

Request		Response	
FE 06 0B B7 00 03 7B FA		02 06 0B B7 00 03 7B FA	
FE	General Address	02	Slave Address
06	Function Code	06	Function Code
0B B7	Reg. Start Address（2999）	0B B7	Reg. Start Address（2999）
00 03	Reg. Data（3）	00 03	Reg. Data（3）
7B FA	CRC Check	7B FA	CRC Check

6.7. Broadcast Address 0xFF

Request	Response

FF 06 0B B7 00 03 7B FA			
FF	Broadcast Address		
06	Function Code		
0B B7	Reg. Start Address（2999）		
00 03	Reg. Data（3）		
7B FA	CRC Check		

6.8. Get PF Value

Request		Response	
01 04 0B EB 00 01 43 DA		01 04 02 03 20 B8 18	
01	Slave Address	01	Slave Address
04	Function Code	04	Function Code
0B EB	Reg. Start Address(3051)	02	valid data length
00 01	Reg. Count（1）	03 20	Reg. Data1 (800)，so PF is 0.8
C3 C9	CRC Check	B8 18	CRC Check

6.9. Set PF Value

Request		Response	
01 06 0B ED 03 20 1A F3		01 06 0B ED 03 20 1A F3	
01	Slave Address	01	Slave Address
06	Function Code	06	Function Code
0B ED	Reg. Start Address(3053)	0B ED	Reg. Start Address(3053)
03 20	Reg. Data(800) ， so PF is 0.8	03 20	Reg. Data(800) ， so PF is 0.8
1A F3	CRC Check	1A F3	CRC Check

6.10. Get Reactive Power Percent

Request		Response	
01 04 0B EC 00 01 F2 1B		01 04 02 27 10 A3 0C	
01	Slave Address	01	Slave Address
04	Function Code	04	Function Code
0B EC	Reg. Start Address(3052)	02	valid data length
00 01	Reg. Count（1）	27 10	Reg. Data1 (10000)，so 100%
F2 1B	CRC Check	A3 0C	CRC Check

6.11. Set Reactive Power Percent

Request		Response	
01 06 0B EA 27 10 B0 26		01 06 0B EA 27 10 B0 26	
01	Slave Address	01	Slave Address
06	Function Code	06	Function Code
0B EA	Reg. Start Address(3053)	0B EA	Reg. Start Address(3053)
27 10	Reg. Data(10000) ， so 100%	27 10	Reg. Data(10000) ， so 100%
B0 26	CRC Check	B0 26	CRC Check

6.12. Get Active Power Percent

Request		Response	
01 04 0B E9 00 01 E2 1A		01 04 02 27 10 A3 0C	
01	Slave Address	01	Slave Address
04	Function Code	04	Function Code
0B E9	Reg. Start Address(3049)	02	valid data length
00 01	Reg. Count（1）	27 10	Reg. Data1 (10000)，so 100%
F2 1B	CRC Check	A3 0C	CRC Check

6.13. Set Active Power Percent

Request		Response	
01 06 0B EB 27 10 E1 E6		01 06 0B EB 27 10 E1 E6	
01	Slave Address	01	Slave Address
06	Function Code	06	Function Code
0B EB	Reg. Start Address(3051)	0B EB	Reg. Start Address(3051)
03 E8	Reg. Data(10000) ， so 100%	03 E8	Reg. Data(10000) ， so 100%
E1 E6	CRC Check	E1 E6	CRC Check

1. Appendix

1.1. Appendix 1（M35000）

Reg. Value（M:35000）	Model Type	Remark
0x0000	Undefined	Not defined
0x1010/0x3F2	Single-phase inverter	For 0.7-8K1P/7-10K1P

0x1020/0x3FC	Three-phase inverter	For 5-25K3P
0x1021/0x3FD	Three-phase grid-tied string inverter	For 25-50K/50-70K/80-110K/90-136K/125K
0x1022	Three-phase grid-tied string inverter	For250K
0x1070	External EPM anti-backflow controller	/
0x1110	Single-phase inverter	For 0.7-8K1P/7-10K1P/ LED-indicator (screen-less) series
0x1111	Single-phase micro-inverter	For 0.6-0.8K1P
0x1120	Three-phase inverter	For 5-25K3P/5-30K3P(K2) screen-less series
0x1121	Three-phase grid-tied string inverter	For 25-50K/50-70K/80-110K/90-136K/125K/25-50 screen-less series /3-30K3P(K3) screen-less series
0x1123	Three-phase grid-tied string inverter	For MAX/PRO series
0x1124	Three-phase grid-tied string inverter	For 320K(overseas 350K)series
0x1125	Three-phase grid-tied string inverter	For 125-200K series
0x1126	Three-phase grid-tied string inverter	For 320K series from xi an
0x1127	Three-phase grid-tied string inverter	For 80-150K three-phase unbalanced series

1.2. Appendix 2（M3043 and M3029）

Reg. Value（M:3043(3029)）	Inverter Chinese display	Inverter English display
0000H（0000H）	Waiting	Waiting
0000H（0001H）	Controlled Off Grid	Grid Off
0000H（0002H）	Waiting Status 01	Waiting01
0001H	Open Run	OpenRun
0002H	Soft Run	SoftRun

0003H（0000H）	Grid-connected operation	Generating
0003H（xx01H）	Over-Temp limiting	LimByTemp
0003H（xx02H）	Over frequency load limiting	LimByFreq
0003H（xx04H）	Overload protection	LimByVg
0003H（xx08H）	Reactive power load limiting	LimByVar
0003H（xx10H）	Under frequency load limiting	LimByUnFr
0003H（xx20H）	Power soft run	Ramp-up
0003H（xx80H）	AC over temperature	LimByACTemp
0003H（01xxH）	DRM load limit	LimByDRM
0003H（02xxH）	PLMT load limit	LimByEPM
0004H	Off-grid operation	Off-Grid
……	……	……
F010H	Grid surge(Warning)	Surge Alarm
F011H	Fan fault (Warning Internal)	Fan Alarm
F013H	Grid surge protector abnormal	VgSpdFail
F014H	DC surge protector abnormal	DcSpdFail
F015H	Fan fault (Warning External)	Fan_H Alarm
F017H	AC Phase Ground Fault(Warning)	L&PE FAIL
F018H	DSP Communication Fault	DSP_Comm Alarm
F019H(xxxxH)	xxxx_BoostFault	xxxx_BoostFail

F01CH	IGBT temperature difference	IGBT TEMP DIF
F01DH	Zero-ground voltage anomaly	N-PE V fault
……	……	……
F030H	Bridge arm open-circuit fault	INV_Open
F031H	DC over temperature	OV-TEM04
F033H	PV current backflow alarm	PV_Cur_BackFlow
F034H	Zero bias calibration alarm	CALI_ZERO_SHIFT
F038H	PID Repairing	PID Repairing
……	……	……
F040H	CT Direction Warning	CT_Dir Fail
F041H	Meter phase sequence alarm	MET_LINE WARN
F042H	Slave phase sequence alarm	SLV_LINE WARN
……	……	……
F050H	Grid voltage imbalance alarm	GRID_VOLT_UNBALANCE_WARNING
F051H	DC switch abnormality alarm	DC_SWITCH_ABNORMAL_WARNING
……	……	……
F080H	Grid-tied inverter communication failure	PVInv-ComFail
F081H	Meter 2 failure	Meter2-Fail
F082H	Software version mis-match	Par-Ver-Mismatch
……	……	……
1010H(0000H)	Grid Over Voltage	OV-G-V

1010H(0001H)	Grid Over Voltage 01	OV-G-V01
1010H(0002H)	Grid Over Voltage 02	OV-G-V02
1010H(0003H)	Grid Over Voltage 03	OV-G-V03
1010H(0004H)	Grid Over Voltage 04	OV-G-V04
1010H(0005H)	Grid Over Voltage 05	OV-G-V05
1011H(0000H)	Grid Under Voltage	UN-G-V
1011H(0001H)	Grid Under Voltage	UN-G-V01
1011H(0002H)	Grid Under Voltage02	UN-G-V02
1012H(0000H)	Grid Over Frequency	OV-G-F
1012H(0001H)	Grid Over Frequency 01	OV-G-F01
1012H(0002H)	Grid Over Frequency 02	OV-G-F02
1013H(0000H)	Grid Under Frequency	UN-G-F
1013H(0001H)	Grid Under Frequency 01	UN-G-F01
1013H(0002H)	Grid Under Frequency 02	UN-G-F02
1014H	Grid reverse	Backfeed_Iac
1015H	No Grid	NO-Grid
1016H	Grid Unbalance	G-PHASE
1017H	Grid Frequency Fluctuation	G-F-FLU
1018H	Grid Over Current	OV-G-I
1019H	Grid current tracking fault	IGFOL-F
101AH	Grid phase	PHASE-FAULT

	abnormal	
101CH	IGBT shift fault	IGBTSift-Pro
101DH(0001H)	Static over voltage for level 1	G100-VH
101DH(0002H)	Static over voltage for level 2	G100-OV1
101DH(0003H)	Dynamic over voltage	G100-D-VH
101DH(0004H)	Static under voltage for level 1	G100-UV1
101DH(0005H)	Static under voltage for level 2	G100-VL
101DH(0006H)	Dynamic under voltage	G100-D-VL
101EH	Abnormal fluctuation in the power grid	GV-F
……	……	……
1020H(0000H)	DC Over Voltage	OV-DC
1020H(0001H)	DC Over Voltage 01	OV-DC01
1020H(0002H)	DC Over Voltage 02	OV-DC02
1020H(0003H)	PV Ground Fault	PVGndRun Fau
1020H(0004H)	DCBoost Fault	BoostFail
1021H	DC Bus Over Voltage	OV-BUS
1022H	DC Bus Unbalance	UNB-BUS
1023H(0000H)	DC Bus Under Voltage	UN-BUS
1023H(0001H)	DC Bus Under Voltage 01	UN-BUS01
1023H(0002H)	DC Bus Under Voltage 02	UN-BUS02
1024H	DC Bus Under	UNB2-BUS

	Voltage 2	
1025H	DC(Channel A) Over Current	OV-DCA-I
1026H	DC(Channel B) Over Current	OV-DCB-I
1027H	DC interference	DC-INTF.
1028H	DC reverse	Reve-DC
1029H	PV mid-point grounding	PvMidIso
102AH	The bus voltage is inconsistent	Vbus-Sam
102BH	PV port surge	PV Surge
102CH	DC over temperature fault	OV-TEM05
102DH	MPPT over voltage fault	OV-MPPT
102EH	MPPT over current fault	OC-MPPT
……	……	……
1030H	The Grid Interference Protection	GRID-INTF.
1031H	The DSP Initial Protection	INI-FAULT
1032H	Temperature Protection	OV-TEM01
1033H(0000H)	PV Insulation fault	PV ISO-PRO
1033H(0001H)	PV Insulation fault 01	PV ISO-PRO1
1033H(0002H)	PV Insulation fault 02	PV ISO-PRO2
1034H(0000H)	Leakage Current Protection	ILeak-PRO
1034H(0001H)	Leakage Current Protection 01	ILeak-PRO01

1034H(0002H)	Leakage Current Protection 02	ILeak-PRO02
1034H(0003H)	Leakage Current Protection 03	ILeak-PRO03
1034H(0004H)	Leakage Current Protection 04	ILeak-PRO04
1035H	Relay Protection	RelayChk-FAIL
1036H(0000H)	DSP_B Communication Fault	DSP-B-Com-Fau
1036H(0001H)	DSP_B Communication Fault	DSP-B-Sam-Fau
1037H	DC Injection Protection	DCInj-FAULT
1038H	12V Under Voltage Faulty	12Power-FAULT
1039H	Leakage Current Check Protection	ILeak-Check
103AH	Under temperature protection	UN-TEM
103BH	IGBT temperature difference	IGBT TEMP DIF
103CH	Second Grid INTF	GRID-DIST.02
103DH	Phase line grounding alarm	L&PE-FAULT
103EH	NTC over temperature protection	OV-TEM02
103FH	AC terminal over temperature fault	OV-TEM03
……	……	……
1040H	AFCI Check Fault	AFCI-Check
1041H	ARC Fault	ARC- FAULT
1046H	Grid INTF 02	GRID-INTF02

1047H	Grid current sampling error	IG-AD
1048H	Grid third level over voltage	OV03-G-V
……	……	……
1050H	Instantaneous overcurrent of grid side current	OV-IgTr
1051H	DC bus hardware overvoltage (inverter)	OV-BUS-H
1052H	LLC hardware overcurrent	OV-ILLC
1053H	Hard limit fault	EPM-HardLimit
1057H	Over load fault	Over-Load
1058H	DSP self-check fault	DspSelfChk
1059H	Vg sampling fault	Vg-Sample
105AH	DSP hardware fault	HardFault
……	……	……
1090H	DSP meter communication failure	DSP-MET-Fail
1091H	Communication failure	HDSP-COM-Fail
1092H	D-H communication failure	HDSP-HMI-Fail
1093H	Meter current fault	MET-CUR-FAULT
1094H	Meter voltage fault	MET-VOL-FAULT
1095H	Meter line fault	MET LIN FAULT
1096H	Meter CT direction fault	CT Dir FAULT
1097H	Salve line fault	INV LIN FAULT
……	……	……

10A0H	System fault	SYSTEM__FAULT
10A1H	Over voltage of boost capacitor	OVER_VOL_FLY_CAP
10A2H	Communication link failure protection	COM_CHAIN_BREAK_ERR
10A3H	Boost capacitor under voltage	UNDER_VOL_FLY_CAP
10A4H	Abnormal fault in DC switch control circuit	DC_SWITCH_VOLT_ERR
10A5H	Over temperature fault	OVER_TEMP_FAULT
10A6H	String current backflow fault	STRING_CURRENT_BACKFLOW_FAULT
……	……	……
10B0H	DC terminal over temperature	OV-TEMP-DC
10B1H	PCB temperature fault	OV-TEMP-PCB
10B2H	Relay temperature fault	OV-TEMP-RELAY
10B3H	Inverter inductor temperature fault	OV-TEMP-L-INV
10B4H	L2 inductance temperature fault	OV-TEMP-L2
10B5H	Output copper bar temperature fault	OV-TEMP-GRID-COPPER
……	……	……
2010H/2011H	Fail Safe	Fail Safe
2014H	DSP communication fault	DSP_Comm_FAIL
2018H	DRM connection failed	DRM_LINK_FAIL

201AH	CT connection failed	CT_FAULT
201BH	DRM controls off-grid	DRM_CTL_Off
201EH	communication identification box not connected	No-ACbox
201FH	Multiple communication source failures	MultiAC
……	……	……
2040H	EPM hard limit protection	EPM-HardLimit
2041H	AFCI communication failure	AFCI-Comm-Fail
2042H	AFCI CT Module hardware fault	AFCI-CTModule-Fail
2043H	G100 over current protection	State 2 excursion
204AH	Inverter bridge port hard limit protection	Inv-HardLimit
204BH	G100 electricity meter communication failure	G100-ComFail
204CH	G100 CT Fault	G100-CTFault
204DH	AFCI type mismatch	AFCI_Mismatch
……	……	……
2060H	DC terminal over temperature	OV-TEM04
2061H	Faulty lock	Fault Lock
2061H(0001H)	Arc fault lockout	ARCFault Lock

2061H(0002H)	Arc self-checking protection lockout	AFCIChk Lock
2061H(0003H)	PV midpoint grounding abnormality lockout	PVMid Lock
2061H(0004H)	PV insulation fault lockout	PVISO Lock
2061H(0005H)	PV grounding fault lockout	PVGND Lock
……	……	……

1.3. Appendix 3 Status Bits Definition

Reg. Address.	Type	BIT	Fault Statues	Status Code	Remark
3071	Working Status	BIT00	Normal operation	0—false 1—true	
		BIT01	Initial standby	0—false 1—true	
		BIT02	Controlled shutdown	0—false 1—true	
		BIT03	Fault shutdown	0—false 1—true	
		BIT04	Standby	0—false 1—true	
		BIT05	Derating operation	0—false 1—true	
		BIT06	Power-limit operation	0—false 1—true	
		BIT07	Over voltage reduction	0—false 1—true	
		BIT08	Grid surge	0—false 1—true	
		BIT09	Fan Fault	0—false 1—true	
			Internal fan fault		
		BIT10	External fan fault	0—false 1—true	
		BIT11	Grid surge protector abnormal	0—false 1—true	
		BIT12	DC surge protector abnormal	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Phase-ground alarm	0—false 1—true	
		BIT15	IGBT Fault	0—false 1—true	

3094	Derating /Limiting Status	BIT00	Over temperature derating	0—false 1—true	
		BIT01	Over frequency derating	0—false 1—true	
		BIT02	Over voltage derating	0—false 1—true	
		BIT03	Reactive power derating	0—false 1—true	
		BIT04	Under frequency derating	0—false 1—true	
		BIT05	Power soft run	0—false 1—true	
		BIT06	Bypass derating	0—false 1—true	
		BIT07	AC over temperature derating	0—false 1—true	
		BIT08	DRM Controlling Limit	0—false 1—true	
		BIT09	PLmt Controlling Limit	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Reserved	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3095	Fault info 1	BIT00	Grid over voltage 01	0—false 1—true	
		BIT01	Grid over voltage 01	0—false 1—true	
		BIT02	Grid over voltage 01	0—false 1—true	
		BIT03	Grid under voltage 01	0—false 1—true	
		BIT04	Grid under voltage 01	0—false 1—true	
		BIT05	Grid under voltage 01	0—false 1—true	
		BIT06	Grid over frequency 01	0—false 1—true	
		BIT07	Grid under frequency 01	0—false 1—true	
		BIT08	Grid imbalance	0—false 1—true	
		BIT09	Grid voltage missing phase	0—false 1—true	
		BIT10	Grid frequency jitter	0—false 1—true	
		BIT11	Grid phase fault	0—false 1—true	
		BIT12	No grid	0—false 1—true	
		BIT13	Grid reverse power	0—false 1—true	

		BIT14	Grid over voltage 02	0—false 1—true	
		BIT15	Over current shift fault	0—false 1—true	
3096	Fault info 2	BIT00	DC over voltage 01	0—false 1—true	
		BIT01	DC over voltage 02	0—false 1—true	
		BIT02	DC inverse fault	0—false 1—true	
		BIT03	Bus voltage is not same	0—false 1—true	
		BIT04	DC bus over voltage	0—false 1—true	
		BIT05	DC bus over voltage 01	0—false 1—true	
		BIT06	DC bus voltage imbalance	0—false 1—true	
		BIT07	DC bus under voltage 02	0—false 1—true	
		BIT08	Grid over voltage 03	0—false 1—true	
		BIT09	Grid over voltage 03	0—false 1—true	
		BIT10	Grid over voltage 03	0—false 1—true	
		BIT11	PV ground fault	0—false 1—true	
		BIT12	DC Boost Fault	0—false 1—true	
		BIT13	DC input disturbance	0—false 1—true	
		BIT14	Grid current tracking fault	0—false 1—true	
		BIT15	Grid over voltage 05	0—false 1—true	
3097	Fault info 3	BIT00	Grid over current	0—false 1—true	
		BIT01	Grid over current	0—false 1—true	
		BIT02	Grid over current	0—false 1—true	
		BIT03	DC A over current	0—false 1—true	
		BIT04	DC B over current	0—false 1—true	
		BIT05	Grid disturbance	0—false 1—true	
		BIT06	DC Injection Protection	0—false 1—true	
		BIT07	Gird over voltage 04	0—false 1—true	
		BIT08	Gird over voltage 04	0—false 1—true	
		BIT09	Gird over voltage 04	0—false 1—true	
		BIT10	Grid under voltage 02	0—false 1—true	
		BIT11	Grid under voltage 02	0—false 1—true	
		BIT12	Grid under voltage 02	0—false 1—true	
		BIT13	Gird over frequency 02	0—false 1—true	
		BIT14	Gird under frequency 02	0—false 1—true	

		BIT15	Grid level-3 over volatge	0—false 1—true	
3098	Fault info 4	BIT00	Reserved	0—false 1—true	
		BIT01	Over temperature protection	0—false 1—true	
		BIT02	Reserved	0—false 1—true	
		BIT03	Relay-check protection	0—false 1—true	
		BIT04	PV mid-point grounding fault	0—false 1—true	
		BIT05	Under temperature protection	0—false 1—true	
		BIT06	PV insulation fault 01	0—false 1—true	
		BIT07	PV insulation fault 02	0—false 1—true	
		BIT08	12V under voltage protection	0—false 1—true	
		BIT09	Residual-current protection 01	0—false 1—true	
		BIT10	Residual-current protection 02	0—false 1—true	
		BIT11	Residual-current protection 03	0—false 1—true	
		BIT12	Residual-current protection 04	0—false 1—true	
		BIT13	Residual-current self-check protection	0—false 1—true	
		BIT14	Grid disturbance 02	0—false 1—true	
		BIT15	Grid current sampling fault	0—false 1—true	
3099	Fault info 5	BIT00	Instantaneous grid-side over current	0—false 1—true	
		BIT01	Reserved	0—false 1—true	
		BIT02	LLC hardware over current	0—false 1—true	
		BIT03	Reserved	0—false 1—true	
		BIT04	Reserved	0—false 1—true	
		BIT05	Level-2 grid disturbance	0—false 1—true	

		BIT06	DSP_B communication fault	0—false 1—true	
		BIT07	DSP_B Sampling fault	0—false 1—true	
		BIT08	Arc self-checking protection	0—false 1—true	
		BIT09	Arc fault protection	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	DSP self-checking fault	0—false 1—true	
		BIT12	Vg sampling fault	0—false 1—true	
		BIT13	DSP hardware mismatch	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3100	Fault info 6	BIT00	Fail Safe	0—false 1—true	
		BIT01	DRM controlled grid-off	0—false 1—true	
		BIT02	CT connection fault	0—false 1—true	
		BIT03	DRM connection failed	0—false 1—true	
		BIT04	No AC recognition box	0—false 1—true	Multi-generator coordination with DRM-based multi-AC-source recognition to realize EPM functionality
		BIT05	Multiple AC source fault	0—false 1—true	
		BIT06	Network signal lost	0—false 1—true	
		BIT07	Payment lockout active	0—false 1—true	
		BIT08	EPM hard-limit protection	0—false 1—true	
		BIT09	AFCI communication fault	0—false 1—true	
		BIT10	AFCI CT module hardware fault	0—false 1—true	
		BIT11	G100 over current protection	0—false 1—true	
		BIT12	Reserved	0—false 1—true	

		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3101	Fault info 7	BIT00	Phase-to-ground alarm	0—false 1—true	
		BIT01	NTC over temperature protection	0—false 1—true	
		BIT02	Reserved	0—false 1—true	
		BIT03	Reserved	0—false 1—true	
		BIT04	Reserved	0—false 1—true	
		BIT05	Reserved	0—false 1—true	
		BIT06	Reserved	0—false 1—true	
		BIT07	Reserved	0—false 1—true	
		BIT08	Reserved	0—false 1—true	
		BIT09	Reserved	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Reserved	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3102	Fault info 8	BIT00	PV surge	0—false 1—true	
		BIT01	AC over temperature fault	0—false 1—true	
		BIT02	DC over temperature fault (PV)	0—false 1—true	
		BIT03	DSP Meter communication fault	0—false 1—true	
		BIT04	Master-slave communication fault	0—false 1—true	
		BIT05	D-H communication fault	0—false 1—true	
		BIT06	Meter current fault	0—false 1—true	
		BIT07	Meter voltage fault	0—false 1—true	
		BIT08	Meter phase fault	0—false 1—true	
		BIT09	Meter CT direction fault	0—false 1—true	
		BIT10	Slave phase fault	0—false 1—true	

		BIT11	MPPT port over temperature alarm	0—false 1—true	
		BIT12	EPM master fault	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3103	Warning info DSP	BIT00	Neutral-to-earth voltage alarm	0—false 1—true	
		BIT01	DC switch 1 trip alarm	0—false 1—true	
		BIT02	DC switch 2 trip alarm	0—false 1—true	
		BIT03	Reserved	0—false 1—true	
		BIT04	Reserved	0—false 1—true	
		BIT05	Reserved	0—false 1—true	
		BIT06	Reserved	0—false 1—true	
		BIT07	Reserved	0—false 1—true	
		BIT08	Reserved	0—false 1—true	
		BIT09	Reserved	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Grid voltage unbalance alarm	0—false 1—true	
		BIT13	DC switch alarm	0—false 1—true	
		BIT14	Zero-offset calibration alarm	0—false 1—true	
		BIT15	String reverse-current alarm	0—false 1—true	
3104	Warning info HMI	BIT00	Bridge arm open-circuit fault alarm	0—false 1—true	
		BIT01	DC terminal temperature alarm	0—false 1—true	
		BIT02	Reserved	0—false 1—true	
		BIT03	Reserved	0—false 1—true	
		BIT04	Reserved	0—false 1—true	
		BIT05	Reserved	0—false 1—true	
		BIT06	Reserved	0—false 1—true	

		BIT07	Reserved	0—false 1—true	
		BIT08	Reserved	0—false 1—true	
		BIT09	Reserved	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Reserved	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	ARM and DSP communication fault	0—false 1—true	
3471	Fault info 10	BIT00	System fault	0—false 1—true	
		BIT01	Boost capacitor overvoltage	0—false 1—true	
		BIT02	Communication break protection	0—false 1—true	
		BIT03	Boost capacitor under voltage	0—false 1—true	
		BIT04	DC switch control circuit fault	0—false 1—true	
		BIT05	String reverse-current fault	0—false 1—true	
		BIT06	Reserved	0—false 1—true	
		BIT07	Reserved	0—false 1—true	
		BIT08	Reserved	0—false 1—true	
		BIT09	Reserved	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Reserved	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3472	故障信息 11	BIT00	Reserved	0—false 1—true	
		BIT01	Over temperature fault	0—false 1—true	

		BIT02	Reserved	0—false 1—true	
		BIT03	Reserved	0—false 1—true	
		BIT04	Reserved	0—false 1—true	
		BIT05	Reserved	0—false 1—true	
		BIT06	Reserved	0—false 1—true	
		BIT07	Reserved	0—false 1—true	
		BIT08	MPPT over voltage fault	0—false 1—true	
		BIT09	MPPT over current fault	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Reserved	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	
3473	Fault info 12	BIT00	ARC fault lockout	0—false 1—true	
		BIT01	ARC self-checking protection lockout	0—false 1—true	
		BIT02	PV midpoint grounding fault shutdown	0—false 1—true	
		BIT03	PV insulation fault shutdown	0—false 1—true	
		BIT04	PV ground fault shutdown	0—false 1—true	
		BIT05	Reserved	0—false 1—true	
		BIT06	Reserved	0—false 1—true	
		BIT07	Reserved	0—false 1—true	
		BIT08	Reserved	0—false 1—true	
		BIT09	Reserved	0—false 1—true	
		BIT10	Reserved	0—false 1—true	
		BIT11	Reserved	0—false 1—true	
		BIT12	Reserved	0—false 1—true	
		BIT13	Reserved	0—false 1—true	
		BIT14	Reserved	0—false 1—true	
		BIT15	Reserved	0—false 1—true	

1.4. Appendix 4 Setting Instructions

Regarding the requirement of not saving settings in case of power-off:

Reg. Address	Function	Step	
3051	Active power percentage	Step1	Using 06H function code to send request to set 3069 register to AAH Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FD 00 AA 9A 61
		Step2	Using 06H function code to send request to set 3051 register to user value. For example, to send a 100 % power-limit, writing the value 10000 to register 3051 like 01 06 0B EB 27 10 E1 E6
3080	Active power value 1	Step1	Using 06H function code to send request to set 3069 register to AAH Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FD 00 AA 9A 61
		Step2	Under 320KW series inverter : Using 06H function code to send request to set 3080 register to user value. For example, to send a 100 KW power-limit, writing the value 10000 to register 3080 like 01 06 0C 08 27 10 11 64
3222-3223	Active power value 2	Step1	Using 06H function code to send request to set 3069 register to AAH Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FD 00 AA 9A 61
		Step2	Over 320KW series inverter : Using 06H function code to send request to set 3222 register to user value. For example, to send a 100 KW power-limit, writing the value 10000 to register 3222 like 01 10 0C 96 00 02 04 00 00 27 10 35 D5
3050	Reactive	Step1	Using 06H function code to send request to set 3070 register

	power percentage		to A1H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A1 2B A6
		Step2	Using 06H function code to send request to set 3050 register to user value. For example, to send a 30 % power-limit, writing the value 3000 to register 3050 like 01 06 0B EA 0B B8 AD 58
3082	Reactive power value 1	Step1	Using 06H function code to send request to set 3070 register to A1H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A1 2B A6
		Step2	Under 320KW series inverter : Using 06H function code to send request to set 3082 register to user value. For example, to send a 60 KW power-limit, writing the value 6000 to register 3080 like 01 06 0C 0A 17 70 A4 8C
3224-3225	Reactive power value 2	Step1	Using 06H function code to send request to set 3070 register to A1H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A1 2B A6
		Step2	Over 320KW series inverter : Using 10H function code to send request to set 3224 register to user value. For example, to send a 60 KW power-limit, writing the value 6000 to register 3224 like 01 10 0C 98 00 02 04 00 00 17 70 A0 71
3053	Power factor value 01	Step1	Using 06H function code to send request to set 3070 register to A2H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A2 6B A7
		Step2	Using 06H function code to send request to set 3082 register

			to user value. For example, to send a 1 power factor, writing the value 1000 to register 3053 like 01 06 0B ED 03 E8 1B 65

Regarding the requirement of saving settings in case of power-off:

Reg. Address	Function	Step	
3051	Active power percentage	Step1	Using 06H function code to send request to set 3069 register to AAH Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FD 00 AA 9A 61
		Step2	Using 06H function code to send request to set the bit0 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 01 8A 1E
		Step3	Using 06H function code to send request to set 3051 register to user value. For example, to send a 100 % power-limit, writing the value 10000 to register 3051 like 01 06 0B EB 27 10 E1 E6
		Step4	Using 06H function code to send request to reset the bit0 (Disable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE
3080	Active power value 1	Step1	Using 06H function code to send request to set 3069 register to AAH Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FD 00 AA 9A 61
		Step2	Using 06H function code to send request to set the bit0 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 01 8A 1E
		Step3	Under 320KW series inverter : Using 06H function code to send request to set 3080 register to user value. For example, to send a 100 KW power-limit, writing the value 10000 to register 3080 like 01 06 0C 08 27 10 11 64

		Step4	Using 06H function code to send request to reset the bit0 (Disable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE
3222-3223	Active power value 2	Step1	Using 06H function code to send request to set 3069 register to AAH Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FD 00 AA 9A 61
		Step2	Using 06H function code to send request to set the bit0 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 01 8A 1E
		Step3	Over 320KW series inverter : Using 06H function code to send request to set 3222 register to user value. For example, to send a 60 KW power-limit, writing the value 6000 to register 3222 like 01 10 0C 96 00 02 04 00 00 27 10 35 D5
		Step4	Using 06H function code to send request to reset the bit0 (Disable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE
3050	Reactive power percentage	Step1	Using 06H function code to send request to set 3070 register to A1H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A1 2B A6
		Step2	Using 06H function code to send request to set the bit2 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 04 4A 1D
		Step3	Using 06H function code to send request to set 3050 register to user value. For example, to send a 30 % power-limit, writing the value 3000 to register 3050 like 01 06 0B EA 0B B8 AD 58
		Step4	Using 06H function code to send request to reset the bit2 (Disable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE

3082	Reactive power value 1	Step1	Using 06H function code to send request to set 3070 register to A1H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A1 2B A6
		Step2	Using 06H function code to send request to set the bit2 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 04 4A 1D
		Step3	Under 320KW series inverter : Using 06H function code to send request to set 3082 register to user value. For example, to send a 60 KW power-limit, writing the value 6000 to register 3082 like 01 06 0C 0A 17 70 A4 8C Over 320KW series inverter : Using 06H function code to send request to set 3224 register to user value. For example, to send a 60 KW power-limit, writing the value 6000 to register 3224 like 01 10 0C 98 00 02 04 00 00 17 70 A0 71
		Step4	Using 06H function code to send request to reset the bit2 (Disable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE
3224-3225	Reactive power value 2	Step1	Using 06H function code to send request to set 3070 register to A1H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A1 2B A6
		Step2	Using 06H function code to send request to set the bit2 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 04 4A 1D
		Step3	Over 320KW series inverter : Using 10H function code to send request to set 3224 register to user value. For example, to send a 60 KW power-limit, writing the value

			6000 to register 3224 like 01 10 0C 98 00 02 04 00 00 17 70 A0 71
		Step4	Using 06H function code to send request to reset the bit2 (Disable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE
3053	Power factor value 01	Step1	Using 06H function code to send request to set 3070 register to A2H Note: value is stored at power-loss; set once and forget unless the requirement changes. Eg. 01 06 0B FE 00 A2 6B A7
		Step2	Using 06H function code to send request to set the bit3 (Enable power-off saving) of 3068 register. Eg. 01 06 0B FC 00 08 4A 18
		Step3	Using 06H function code to send request to set 3082 register to user value. For example, to send a 1 power factor, writing the value 1000 to register 3053 like 01 06 0B ED 03 E8 1B 65
		Step4	Using 06H function code to send request to reset the bit3 (Disablepower-off saving) of 3068 register. Eg. 01 06 0B FC 00 00 4B DE