MODBUS RTU й 相储能通信规准

(::权所\$, 翻::必究3

更改½录

文以27			
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1. 概述

本协管浸用于vNo ii 相储能逆<mark>划</mark>器 o κ f机监控和 DSP 之间的通信协管。采用 MODBUS RTU 通"规律。本协管可x实时读xFI 证别器的运行信息和对逆划器控制操作。

2. 物理接口

2.1. 采用 RS485/RS232, X异步收发方式, ▲从模式, 固定波特率°

----波特率:9600bps

----奇偶校验f: None

----数据*f*:8 ----停‡*f*:1

2.2. ·U间间隔时间要求

3. 数据·U格式

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

Feld Slave-Adresse: ist die entsprechende Slave-Adresse, sie muss mit der Slave-Adresse der inversen Maschine übereinstimmen ° Feld Funktionscode: ist der Funktionscode, derzeit sind nur die Funktionscodes 03H und 10H verfügbar

Function code(Hex)	中文Q	Adresse	能
		senden	
02H	读开,输入状态		读故障信息寄叫器内容
03H	读保持寄川器	0~59/500~2000	读设置寄川器内容
04H	读输入寄叫器		读逆划器信息内容
05H	写可个线圈		开,机设置 能
06H	写四个保持寄山器		设置图半节 能
10H	写多个保持寄山器	60-499	设置多半节 能

Data 域:包括起始寄叫器地址,数据长度,数据举节个数,数据内容°都是高举节在前, № 举节在○^{T°}

CRC Check 域: CRC 查表校验方式, № **节在前高**节在 「*

4. 错误信息及数据的处理

从机回复(16 蠟制):

Slave Address	Function code	Error code	CRC (Check
XX	xx 0x80	XX	No 半 节	高半节
			XX	XX

逆兒器通"模块检测到除了 CRC 码出错水外的错误时,必须向▲机回衮信息, 能码的最高f置 X 1, ¶在 ▲机发衮的 能码的基础 K 128° 逆兒器通"模块响应回衮的错误码:

0x01 非法的 能码 服 器 H 了解 能码

0x02 非法的数据地址 ο请求\$>

0x03 非法的数据值 ○请求\$>

0x04服 故障 逆划器通"模块在执行过程中无法对出数据故障

5. 详细协管描述

0-59 寄山器地址 A 可读寄山器类型, 0x03 能码。

60-499 寄山器地址X可读写寄山器类型, 0x10 能码°

500-2000 寄山器地址 A 可读寄山器类型, **0x03** 能码[°]

5.1. 03 读固\$属性;,对应 能码 **0x03**,地址范围 **0~59**

Addr	Register meaning	R/W	data range	unit	note
		l	L		
	设备类型	R			0X0200 组串机 inverter
000	Device type				0X0300 অ 相储能机 hybird
000					0X0400 微逆机 MI microinverter
					0X0500 й相储能机 phase3 hybird
001	Modbus address	R	[1,247]		
	通 " 协 管 : 本	R	'0'~'9'; 'A'~'Z'		固件所遵从的本协管的:本,如 0x 0102
002	Communication protocol		$A \sim Z$		л表 1.2 .:
	version				
003	SN byte 01	R	'0'~'9'; 'A'~'Z'		The serial number is ten ASCII characters,
	SN byte 02				If "AH12345678",
004	SN byte 03	R	'0'~'9';		Byte 01 is 0x41 (A),
004	SN byte 04] ['	'A'∼'Z'		The 02nd byte is 0x48 (H),
	SN byte 05	R	'0'~'9';		The 09th byte is 0x37 (7),
005	SN byte 06		'A'~'Z'		The tenth byte is 0x38 (8).
	SN byte 07	R	'0'~'9';		
006	SN byte 08		'A'~'Z'		
	SN byte 09	R	'0'~'9';		
007	SN byte 10		'A'~'Z'		
	率等¾	R	0x0000		
008	Rated Power				
	保留半	R	0x0000		
009	undefined				
	保留士	R			
010	undefined				

	控制板辅。可f机软件	R	0XFFFF		Bit0-7 启程序 bootloader software
	· 本a				Bit8-15 辅程序 Assistant program
011	Assistant program version				
	控制板启程序:本ª				
	bootloader software				
	version				
	预留	R			
012	undefine				
	预留	R			
013	undefine				
	控制板固件: 本-半段 2	R			
	Control panel firmware				
014	version-2				
	控制板固件:本-▲:本	R			
	Control panel firmware				
015	master version				
	通"板固件 : 本- * 段 1	R			
016	Comm panel firmware				
016	version-1				
	通"板固件 : 本- 半 段 2	R			
	Comm panel firmware				
017	version-2				
	通"板固件.:本-▲.:本	R			
	Comm panel firmware				
018	master version				
	安规类型	R			
019	Safety type				
	额定 率№≃	R		0.1W	
020	Rated power low word				
	额定 率高*	R		0.1W	
021	Rated power high word				
	MPPT 路数及相数	R	[1,8]/[1,3]		MI 0x0503: five-mppts three-phase
	MPPT number and				
022	phases				
	并网电压等%Rated Grid	R	[0-3]		0: 127/220V 1: 220/380V
023	Voltage				
024	ZEGU ON I				
00.5	预留 SN byte 01				
025	预留 SN byte 02				
000	预留 SN byte 03				
026	预留 SN byte 04				
027	预留 SN byte 05				
027	预留 SN byte 06				第 6 页 共 47

	预留 SN byte 07		
028	预留 SN byte 08		
029	预留 SN byte 09		
	预留 SN byte 10		
030			
031			
059			

5.1. 10 可读写可**划**属性;,对应 能码是 **0x10**°

Addr	Register meaning	R/W	data range	unit	note
				•	
	t程体定使能	R/W			0x0002
60	Remote Lock				0x0000 开机 turn on
	开机自检时间	R/W	[0,1000]	s	MI (bylo -1)
61	self-check time				
	系统时间第 1 半节	R/W	[0,255]	<u>°</u>	MI x 20 00 『ম基值
	system time byte 01			Year	Based on the year 2000
62	系统时间第 2 半节	R/W	[1,12]	\$	
	system time byte 02			Month	
	系统时间第 3 半节	R/W	[1,31]	日	
	system time byte 03			Day	
63	系统时间第 4 半节	R/W	[0,23]	时	
	system time byte 04			Hour	
	T T	R/W	[0,59]	Minute	
	system time byte 05				
64	系统时间第 6 半节	R/W	[0,59]	秒	
	system time byte 06			Sec	
	绝缘阻抗 π 限				
	Minimum insulation				
65	impedance	R/W	[100,20000]	0.1KΩ	

	预留				
66	Undefine				
	预留				
67	Undefine				
	预留				
68	Undefine				
	· 预留				
69	Undefine				
	预留				
70	Undefine				
	预留				
71	Undefine				
	预留				
72	Undefine				
	预留				
73	Undefine				
	通"地址				
74	Communication address	R	0x0000	-	
	通"波特率				
	Communication baud rate				
75	MI:Zigbee or PLC	R	0x0000	-	
	预留				
76	Undefine	R/W			
	\$ 率调节				如 800 表示调节到 80.0% MI
77	Active power regulation	R/W	[0,1200]	0.1%/1%	If 800, adjust to 80.0%
	无 率调节				如 800 表示调节到 80.0%
78	1 8	R/W	[0,1200]	0.1%	If 800, adjust to 80.0%
	视在 率调节				如 800 表示调节到 80.0%
79	Apparent power regulation	R/W	[0,1200]	0.1%	If 800, adjust to 80.0%
					0:〃机 1:开机MI2:〃机
	开办机使能				
80	Switch on and off enable	R/W	[0,1]	<u> </u>	0: power off 1: power on
_	恢复出厂使能	L.			
81	Factory reset enable	R/W	[0,1]		0: disable 1: enable
0.5	自检时间	D /	FO 17		
82	Self-checking time	R/W	[0,1]	-	0-360 seconds
0.2	孤岛保^使能	D /***	FO 17		
83	Island protection enable	R/W	[0,1]	1	0: disable 1: enable
	MPPT路数	D /337	[O 1]		
0.4	MPPT number	R/W	[0,1]	-	0: disable 1: enable
84	CEDI使能			1	
0.5	GFDI crable	D /W/	[O 1]		0: disable 1: enable
85	GFDI enable	R/W	[0,1]		o. disable 1: enable

86					
80	DICO 体织				
07	RISO 使能	D /XX	FO 13		0 1: 11 1 11
87	RISO enable	R/W	[0,1]		0: disable 1: enable
)/ I= I= \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\				1, 中国
	并网标准				2,巴西
88	GridStandard	R/W	[0,20]		3, 印度
					4, EN50438
					5,其他
89					
	№压穿越使能				
90	Low voltage across enable				0: disable 1: enable
	控制板EEPROM 初始使				
	能				0: ↓常工作 work normal
	MCU-EEPROM initial				1: 初始化控制板 EEPROM init mcu
91	enabled	R/W	[0,2]	_	eeprom
	通"板EEPROM 初始使				
	台上				0: ↓常 work normal
	Comm-EEPROM initial				1:初始化通"板 EEPROM init comm
92	enabled	R/W			eeprom
		10 11			Bit0 开测试使能(使能蠢 · T面的才 \$ 效)
					Test enable=1 if use later bit
	控制板测试控制指÷				Bit1 开逆 纪 器全部风扇 open all fan
	1工14.10人以16人1工14.11日 •				Bit4 开启Gen信 继电器 open Gen
93	Factory only				•
93	ractory only				singal relay Bit0 开测试使能(使能蠢「面的才\$效)
					Bit0 开测试使能(使能蠢 T面的才\$效) Test enable=1 if use later bit
					Bit2 闪显示板的所\$LED,蜂蜜器,背
					3,显示红黄蓝
					Flash display board for all LEDs, honey
					maker, backlight, display red, yellow and
					blue
					Bit3 开启D电池接口测试
	VZ W TS MAY NO TO TO THE				Open lithium battery interface test
	通"板测试控制指÷	L.			Bit5 重启液晶程序
94	Factory only	R/W	[0,3]	+	Restart lcd
95	15 1 = 11 · 3 · 3	1	-		
	发电量修↓系数				100 mean 1
96	PowerWH Factor	R/W		-0.01	111 mean 1.11
	Solar输入从SPU				
97	TEST MODE				
	电池充电类型	R/W	-	-	0x0000 Lead-Battery, four-stage charging
	Control Mode				method
98				<u></u>	0x0001 Lithium battery
99	Equalization V	R/W	[3800,6100]	0.01V	1480 means 14.8v
	万		•		第 9 页 共 47

100	Absorption V	R/W	[3800,6100]	0.01V	1440 means 14.4v
101	Float V	R/W	[3800,6100]	0.01V	1440 means 14.4v
	电池容量	R/W	[0,2000]	1 Ah	200 means 200AH
102	Batt Capacity				
103	Empty_v	R/W		0.01V	
	最小limit起作用 率	R/W			
104	ZeroExport power				
	均衡充几天执行一%	R/W	[0 90]	Day	
105	Equalization day cycle				
	均衡充执行时间	R/W	[0 20]	0.5Hour	辨率 0.5小时
	Equalization time				Resolution 0.5 h
					[0-20]对应 0-10小时
106					但是发MCU是[0-100]
	温度补偿值	R/W	[0,50]	1mV/℃	Ċ\$↓负的int型 Signed int
107	TEMPCO				
	电池最大充电电流	R/W	[0,185]	1A	0-185A
108	Max A Charge				
	电池最大放电电流	R/W	[0,185]	1A	0-185A
109	Max A discharge				
	保留	R/W			
110	undefined				
	电池工作根据电压뼯是容	R/W			根据电压 According to the voltage
	量				根据容量 According to the capacity
	battery operates according				2 没\$电池 no battery
111	to voltage or capacity				
	D电池唤醒标志 f	R/W			0 enabled
	Lithium battery wake up				1 Disable
112	sign bit				
	电池内阻值	R/W	[0,6000]	\mathbf{m}^{Ω}	
113	battery resistance value				
	电池充电效率	R/W	[0-100]	0.1%	983表示98.3%
114	Battery charging efficiency				983 is 98.3%
	电池容量ShutDown	R/W	[0,100]	1%	№容量截‡点
115	battery capacity ShutDown				Low capacity cutoff point
	电池容量Restart	R/W	[0,100]	1%	保^恢复点
116	battery capacityRestart				Protection recovery point
	电池容量LowBatt	R/W	[0,100]	1%	
117	battery capacityLowBatt				
	电池电压ShutDown	R/W	[3800,6100]	0.01V	№保^点 cutoff 41V
118	battery voltageShutDown				Low protection point cutoff 41V
	电池电压Restart	R/W	[3800,6100]	0.01V	Reboot /recover 52V
119	battery voltageRestart				

	电池电压LowBatt	R/W	[3800,6100]	0.01V	放电深度 46V Discharge
120	battery voltageLowBatt	10 11	[5000,0100]		depth 46V
120	发电机最大运行时间				120表示12小时
	Maximum operating time of			orr mours	120 is 12 hours
	generator				120 15 12 110415
121	发电机冷K时间			0.1 hours	120表示12小时
122	Generator cooling time				120 is 12 hours
	- E	R/W	[0000 6300]	0.01V	电池电压小于蠢个值发电机开启充电
	Generator charging Starting		[]		The battery voltage is less than this value
123	voltage point				
		R/W	[0000 6300]	1%	电池容量小于蠢个值发电机开启充电
	Generator charging starting				The battery capacity is less than this value
124	capacity point				
		R/W	[0000 185]	1A	发电机对电池充电电流
	Generator charges the		_		The generator charges the battery
125	battery current				
	市电充电启电压点	R/W	[0000 6300]	0.01v	
	Grid charging Start voltage				
126	point o				
	市电充电启容量点	R/W	[0000 6300]	1%	
	Grid charging start				
127	capacity point				
	市电对电池充电电流	R/W	[0000 185]	1A	市电对电池充电电流
	Grid charge the battery				Grid charge the battery current
128	current				
	发电机充电使能	R/W			
	Generator is charged to				
129	enable				
	市电充电使能	R/W			
130	Grid is charged to enable				
131		R/W	5000-6500		5000-6500
		R/W			前提是235 ^a 寄叫器已经使能1
	能				The premise is that register 234 has enabled
	Force on generator as load				1
	function				0 н强制 Do not force
132					1 强制 force
	发电机输入作系负载输出	R/W			0 只作X发电机输入 only Gen use
	使能				1 智能负载输出 only smart load output
	generator input is enabled				2 使能作系逆ਈ器输入 only microinverter
133	as the load output				input
	发电机负载OFF电压	R/W	[3800 6300]	0.01V	
	SmartLoad OFF batt				
134	Voltage				

	发电机负载OFF电量	R/W	[0000 100]	1%	
135	SmartLoad OFF batt		[
133	发电机负载ON电压	R/W	[3800 6300]	0.01V	
	SmartLoad ON batt	10 11		0.01	
136	Voltage				
130	发电机负载ON电量	R/W	[0000 100]	1%	
137	SmartLoad ON batt	IC VV	[0000 100]	1 70	
	输出电压等%设定	R/W			0 表示220V means 220V
136		IX/ VV			1 表示230V means 230V
	Output voltage level setting				
					2 表示240V means 240V
					3 表示120V means 120V
	7 4 W 1 18 W 18 1 1 4				4 133VAC
	开启发电机的最小solar	R/W	[0,8000]	1W	
	率				
	minimum solar power	1			
139	required to start a generator				
	发电机并网信 ^a				
140	Gen_Grid_Signal On				
	能量管理模式				Bit0-1 10 电池优] 模式 battery first
	Energy management model				mode
	model				11 负载优]模式 load first mode
					Bit2-3 表示被单并网 率 7 衡 能
					Represents passive grid-connected power
					balance function
					10 н开启 colse
					11 开启 open
					Bit4-5 表示▲ 。并网 率7 衡 能
					Represents active grid-connection power
					balance function
					10 н开启 close
141					11 开启 open
-	limit控制 能	R/W		0/1	0x00 使能 আ 电
	limit control function			J, 1	sell electricity enabled
	Time Control Tunonon				0x01 使能内置 built-in enabled
					0x02 使能外置
142					extraposition enabled
142	限制并网最大 率输出	R/W	[0,8000]	1W	J 表总 率
			[0,8000]	vv	
	Limit the maximum power				Represents total power
1.42	output of the grid	1			
143	connection				

	外置电流传感器方向	R/W	[xx,00]	1W	[11][12]
	External current sensor		L 7:-3		
	clamp phase				
144					
	伏আ电	R/W			0x00ý伏нআ电 solar Don't sell 0x01j
145	Solar sell				伏 আ 电 solar sell
	高¾削峰填谷 能使能	R/W			Bit0 0 disable
	Time of Use Selling				1 enable
	enabled				Bit1 Monday
					0-disable 1-enable
146					Bit2 Tuesday
					•••••
					Bit7 Sunday
147	й 相ABC电网相序设定	R/W			0 0 120 240
	Grid Phase				1 0 240 120
	阿 中特子叶河上1	D /XI	[0000 2250]		2359表示时间23:59
1.40		R/W	[0000 2359]		2359 來小內 同23 : 39 2359 means time 23:59
148	Sell mode time point 1	D /XX	[0000 2250]		
		R/W	[0000 2359]		Time
	Sell mode time point 2				
149		D /337	[0000 2250]		
150	আ 电模式时间点3 Sell mode time point 3	R/W	[0000 2359]		
130		R/W	[0000 2359]		
151	Sell mode time point 4		[0000 2337]		
	_	R/W	[0000 2359]		
152	Sell mode time point5				
	•	R/W	[0000 2359]		
153	Sell mode time point6				
	如电模式时间点1 率	R/W	[0008 0000]	1W	它到电池最大放电 率影响 Affected by
154	Sell mode time point 1				the maximum discharge power of the battery
	如电模式时间点2 率	R/W	[0008 0000]	1W	Power
155	Sell mode time point 2				
		R/W	[0008 8000]	1W	
156	率				
	Sell mode time point 3				本 12 頁 サ 47

		L		1	1
1.55	可 电模式时间点 4	R/W	[0008 0000]	1W	
157	率				
	Sell mode time point 4				
	আ 电模式时间点 5	R/W	[0008 0000]	1W	
158	率				
	Sell mode time point 5	5			
	আ 电模式时间点 6	R/W	[0000 8000]	1W	
159	率				
	Sell mode time point 6	5			
	আ 电模式时间点 1电	R/W	[0000 6300]	0.01V	2 到电池电压的影响
160	压				Is affected by the battery voltage
	Sell mode time point 1				
	可 电模式时间点 2电	R/W	[0000 6300]	0.01V	Voltage
161	压				
	Sell mode time point 2	2			
	†	R/W	[0000 6300]	0.01V	
162	压				
	Sell mode time point 3				
		R/W	[0000 6300]	0.01V	
163	压	10 11		0.01 (
	Sell mode time point 4				
		R/W	[0000 6300]	0.01V	
164	压	IC/ VV	[0000 0300]	0.01 V	
10.	Sell mode time point 5				
	可 电模式时间点 6电	R/W	[0000 6300]	0.01V	
165	压	IC/ VV	[0000 0300]	0.01 V	
103	Sell mode time point 6	-			
		R/W	[0,100]	1%	Soc
166	1容量 1 capacity	IX/ VV	[0,100]	1 /0	Soc
167	2容量 2 capacity	R/W	[0,100]	1%	
168	1 1	R/W	[0,100]	1%	
	3容量 3 capacity 4容量 4 capacity	R/W		1%	
			[0,100]	_	
170	5容量 5 capacity	R/W	[0,100]	1%	
171	6容量 6 capacity	R/W	[0,100]	1%	
	时间点1充电使能	R/W	[0,1]		Bit0 表示电网充电使能 grid charging
	Time point 1 charge enable				enable
					Bitl 表示发电机充电使能 gen charging
172					enable
	时间点2充电使能	R/W	[0,1]		N ₀ κ
	Time point 2 charge enable				
1.50					
173					
	时间点3充电使能	R/W	[0,1]		No K
174	Time point 3 charge enable				
1,,	时间点4充电使能	R/W	[0,1]		<u>Νο</u> κ
175	Time point 4 charge enable	17/ AA	[0,1]		112 10
1,3	时间点5充电使能	R/W	ΓO 13		N <u>o</u> ĸ
176		r√ w	[0,1]		IAA I
1/0	Time point 5 charge enable				

	时间点6充电使能	R/W	[0,1]	N <u>o</u> K
177	Time point 6 charge enable			

接刺板特殊 能f 1 Microinverter export to grid cutoff Wicroinverter export to grid washed in the filter Wicroinverter export to grid sable Wicroinverter export 10: Disable Wicroinverter export in the filter Wicroinverter export 10: Disable Wicroinverter export 10: Disable Wicroinverter export 10: Disable Wicroinverter export 10: Disable Wicroin pakeshaving d		坎剉板铁碟	R/W	ro 11	重要 ◆ 如 动 λ 面 f 校 判 1.1.1.
cutoff cutof				[U,1]	
Polywork-01Nowork-10Disable-11Enable Bit0-1 10:Disable 11:enable Bit2-3 10:Gen peak-shaving disable 11:Gen peak-shaving enable Bit4-5: 10:Grid peak-shaving disable 11:Grid peak-shaving disable 11:Grid peak-shaving enable Bit6-7 10:On Grid always on disable 11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable 11:external relay disable 11:D电池丢失报故障 disable Loss of lithium battery report fault disable 11:D电池丢失报故障 enable Loss of lithium battery report fault enable Loss of lithium battery report fault enable Externl ct direction check disable 11: enable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable Force					
ble Bit0-1 10:Disable 11:enable Bit2-3 10:Gen peak-shaving disable 11:Gen peak-shaving enable Bit4-5: 10:Grid peak-shaving disable 11:Grid peak-shaving enable Bit6-7 10:On Grid always on disable 11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable 11:D电池丢失报故障 disable Loss of lithium battery report fault disable 11:D电池丢失报故障 enable Loss of lithium battery report fault enable External ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable		cutoff			
Part					
Bit2-3 10:Gen peak-shaving disable 11:Gen peak-shaving enable Bit4-5: 10:Grid peak-shaving enable Bit4-5: 10:Grid peak-shaving enable 11:Grid peak-shaving enable Bit6-7 10:On Grid always on disable 11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable Loss of lithium battery report fault enable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					Bit0-1 10:Disable
11:Gen peak-shaving enable Bit4- 5: 10:Grid peak-shaving disable 11:Grid peak-shaving disable 11:Grid peak-shaving enable Bit6-7 10:On Grid always on disable 11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable Loss of lithium battery report fault enable Loss of lithium battery report fault enable External ct direction check disable 11: enable External ct direction check disable 11: enable Bit2-3 10: 强制离网工作 disable Forced off-grid work disable Forced off-grid work disable Forced off-grid work disable Forced off-grid work disable Dit 2 Dit 3 Dit 4 Dit 4 Dit 5 Dit 6 Dit					11:enable
Bit4- 5: 10:Grid peak-shaving disable 11:Grid peak-shaving enable Bit6-7 10:On Grid always on disable 11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable Pe制板特殊 能f 2 1,外置CT自检测方向 2,强制脱网 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					Bit2-3 10:Gen peak-shaving disable
Part					11:Gen peak-shaving enable
Bit6-7 10:On Grid always on disable 11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable 整制板特殊 能f 2 1,外置CT自检测方向 2,强制脱网 [0,1] Bit0-1 10:外置CT自检测方向 disable External ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					Bit4- 5: 10:Grid peak-shaving disable
11:On Grid always on enable Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable P控制板特殊 能f 2 1,外置CT自检测方向 2,强制脱网 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable External ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					11:Grid peak-shaving enable
Bit8-9 10:external relay disable 11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable 控制板特殊 能f 2 1,外置CT自检测方向 2,强制脱网 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable External ct direction check disable 11: enable Bit2-3 10: 强制离网工作 disable Forced off-grid work disable					Bit6-7 10:On Grid always on disable
11:external relay disable Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable 整制板特殊 能 2 1,外置CT自检测方向 2,强制脱网 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					11:On Grid always on enable
Bit10-11 10: D电池丢失报故障 disable Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable Print					Bit8-9 10:external relay disable
Loss of lithium battery report fault disable 11: D电池丢失报故障 enable Loss of lithium battery report fault enable Exhttps: Loss of lithium battery report fault enable Loss of lithium battery report fault enable Loss of lithium battery report fault enable Loss of lithium battery report fault disable 10: 外置CT自检测方向 disable Externl ct direction check disable 11: enable Bit2-3 10: 强制离网工作 disable Forced off-grid work disable					11:external relay disable
11: D电池丢失报故障 enable Loss of lithium battery report fault enable 控制板特殊 能 2 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					Bit10-11 10: D电池丢失报故障 disable
Loss of lithium battery report fault enable 控制板特殊 能					Loss of lithium battery report fault disable
控制板特殊 能 f 2 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable					11: D电池丢失报故障 enable
控制板特殊 能 f 2 R/W [0,1] Bit0-1 10:外置CT自检测方向 disable Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable	170				Loss of lithium battery report fault enable
1,外置CT自检测方向 2,强制脱网 Externl ct direction check disable 11: enable Bit2-3 10:强制离网工作 disable Forced off-grid work disable	1/8	均割板性群 能f 2	D/XI	[0.1]	Bit0.1 10. 外置CT自检测方向 disable
2,强制脱网			IX/ VV	[0,1]	
Bit2-3 10:强制离网工作 disable Forced off-grid work disable					
Forced off-grid work disable		2, 13 141 106 121			
					_
					11 - Chaole
179					

	恢复并网时间	R/W	[10 300]		
	Restore connection time	10. **	[10 300]		
	restore connection time				
180	. Lille Domes .				
		R/W	[0 1]		0x00 成闭 Close
181	Solar Arc Fault Mode				0x01 开启 open
	并网标准	R/W	[0 1]		0=通用标准 general standard
	Grid Mode				1= UL1741&IEE1547
					2= CPUC RULE21
					3= SRD-UL1741
182					•••••
	电网频率设置	R/W	[0 1]		0x00 50HZ
183	Grid Frequency				0x01 60hz
		R/W	[0 3]		0x00 ष相 默认220V
	Grid Type				Single-phase 240 v / 230 v / 220 v
	□在是 ŭ 相,无效				0x01 表示两相120V/240V
					Stands for two-phase 120V/240V
					0x02 表示 й 相系统208V 120度120V
					Represents the three-phase system 208V 120
					degrees 120V
184					0X03 120V Single Phase
	电网高压保^点	R/W	[1800 2700]	0.1V	
185	Grid Vol High				
	3. 7 2 2	R/W	[1800 2700]	0.1V	
186	Grid Vol Low				
	电网频率高保^点	R/W	[4500 6500]	0.01Hz	
187	Grid Hz High				
	电网频率№保^点	R/W	[4500 6500]	0.01Hz	
188	Grid Hz Low				
	发电机连接到电网输入端		[1 0]		0 disable
	The generator is connected				l enabled
	to the grid input				
	1 0	R/W	[0 16000]	1w	
191	GRID peak shaving Power	R/W	[0 16000]	1w	
192	Smart Load Open Delay	R/W	[1 120]	1Minute	
	输出PF值设定(\$调节	R/W	[800 1200]		800表示调整到80% 1200标识调整到120%
	Output PF value Settings				800 for 80%, 1200 for 120%
193					
	外部继电器 <i>f</i>	R/W	[0 0xFFFF]		Bit0-8 对应8个继电器f
194	External relay bit				Bit0-8 corresponds to 8 relay bits
	ARC_facTory_B高f	R/W	[0,65535]		高f和地f组合,x数值显示¶可
195	ARC facTory B high word				High and status combination, with numerical

No f 198 Low word ARC_facTor 199 ARC_facTor No f 200 Low word ARC_facTor No f 201 ARC_facTor No f 202 Low word ARC_facTor No f 203 ARC_facTor No f 204 Low word ARC_facTor No f 205 ARC_facTor No f 206 Low word ARC_facTor ARC_facTor No f 207 word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volt 放电电压 211 discharge volt 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap				display can be
196 Low word ARC_facTory No f 198 Low word ARC_facTory No f 199 ARC_facTory No f 200 Low word ARC_facTory No f 201 ARC_facTory No f 202 Low word ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory No f 207 Word ARC_facTory No f 208 Low word ARC_facTory 207 word No f 208 Low word ARC_facTory ARC_facTory ARC_facTory ARC_facTory No f 208 Low word Dys_delay tire 209 充电电压 210 charging voltation 放电电压 211 discharge voltation 次电限流 212 charging curry 放电限流 213 Discharge curry 対电限流 214 real time Cap	R/W	[0,65535]		
ARC_facTory No f 198 Low word ARC_facTory No f 199 ARC_facTory No f 200 Low word ARC_facTory No f 201 ARC_facTory No f 202 Low word ARC_facTory No f 203 ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory No f 207 word ARC_facTory 207 word No f 208 Low word ARC_facTory 207 word No f 208 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volts 放电电压 211 discharge volts 次电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap		[0,00000]		
197 ARC_facTory		[0,65535]		
No f 198 Low word ARC_facTor 199 ARC_facTor No f 200 Low word ARC_facTor No f 201 ARC_facTor No f 202 Low word ARC_facTor No f 204 Low word ARC_facTor No f 205 ARC_facTor No f 206 Low word ARC_facTor ARC_facTor 207 Word ARC_facTor 207 word No f 208 Low word ARC_facTor 207 word No f 208 Low word ARC_facTor 207 word No f 208 Low word ARC_facTor ARC_facTor 207 word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volt 放电电压 211 discharge volt 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	acTory I high word	[0,00000]		
Low word ARC_facTory No f 200 Low word ARC_facTory No f 201 ARC_facTory No f 202 Low word ARC_facTory No f 203 ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory No f 207 word ARC_facTory No f 208 Low word Ups_delay tire 209 充电电压 210 charging volta 放电电压 211 discharge volta 放电电压 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap	R/W	[0,65535]		
ARC_facTory No f 200 Low word ARC_facTory No f 201 ARC_facTory No f 202 Low word ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory No f 207 word ARC_facTory 207 word No f 208 Low word ARC_facTory 207 word No f 208 Low word ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volts 放电电压 211 discharge volts 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap		[0,00000]		
199 ARC_facTory No f 200 Low word ARC_facTory No f 201 ARC_facTory No f 202 Low word ARC_facTory No f 203 ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory No f 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volta 放电电压 211 discharge volta 放电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap		[0,65535]		
No f 200 Low word ARC_facTor 201 ARC_facTor No f 202 Low word ARC_facTor 203 ARC_facTor No f 204 Low word ARC_facTor No f 205 ARC_facTor No f 206 Low word ARC_facTor ARC_facTor ARC_facTor 207 word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volt 放电电压 211 discharge volt 充电限流 212 charging curr 放电限流 213 Discharge curr 当前容量 real time Cap	acTory F high word	[, , , , , , , , , , , , , , , , , , ,		
200 Low word ARC_facTor ARC_facTor No f 201 Low word ARC_facTor ARC_facTor No f 203 ARC_facTor No f 204 Low word ARC_facTor No f 205 ARC_facTor No f 206 Low word ARC_facTor ARC_facTor 207 word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volt 放电电压 211 discharge volt 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap	R/W	[0,65535]		
201 ARC_facTory No f 202 Low word ARC_facTory No f 203 ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volta 放电电压 211 discharge volta 放电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap				
201 ARC_facTory No f 202 Low word ARC_facTory No f 203 ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volta 放电电压 211 discharge volta 放电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap	acTory D高f R/W	[0,65535]		
202 Low word ARC_facTor ARC_facTor No f 204 Low word ARC_facTor ARC_facTor No f 205 ARC_facTor No f 206 Low word ARC_facTor ARC_facTor 207 word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volt 放电电压 211 discharge volt 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 real time Cap	acTory D high word			
ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory ARC_facTory ARC_facTory arc 207 word No f 208 Low word Ups_delay tiry 209 充电电压 210 charging volts 放电电压 211 discharge volts 充电限流 212 charging curry 放电限流 213 Discharge curry 当前容量 214 real time Cap	R/W	[0,65535]		
203 ARC_facTory No f 204 Low word ARC_facTory No f 205 ARC_facTory No f 206 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volts 放电电压 211 discharge volts 充电限流 212 charging curry 放电限流 213 Discharge curry 当前容量 real time Cap	word			
No f 204 Low word ARC_facTor 205 ARC_facTor No f 206 Low word ARC_facTor ARC_facTor ARC_facTor 207 word No f 208 Low word Ups_delay tir 209 充电电压 charging volt 放电电压 211 discharge vol 充电限流 212 charging curr 放电限流 213 Discharge curr 当前容量 real time Cap	acTory_T高f R/W	[0,65535]		
204 Low word ARC_facTor ARC_facTor No f 206 Low word ARC_facTor ARC_facTor ARC_facTor 207 word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volt 放电电压 211 discharge vol 充电限流 212 charging curr 放电限流 213 Discharge curr 当前容量 real time Cap	acTory_T high word			
ARC_facTory No f 206 Low word ARC_facTory ARC_facTory ARC_facTory ARC_facTory word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volts 放电电压 211 discharge volt 充电限流 212 charging curry 放电限流 213 Discharge curry 当前容量 214 real time Cap	R/W	[0,65535]		
205 ARC_facTory No f 206 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209	word			
No f 206 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volts 放电电压 discharge volts 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	acTory_C高f R/W	[0,65535]		
206 Low word ARC_facTory ARC_facTory 207 word No f 208 Low word Ups_delay tire 209 充电电压 210 charging volts 放电电压 211 discharge volt 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	acTory_C high word			
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ARC_facTory word No f 208 Low word Ups_delay tir 209 充电电压 210 charging volts 放电电压 211 discharge volt 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	word			
207 word No f 208 Low word Ups_delay tin 209 充电电压 210 charging volta 放电电压 211 discharge volta 充电限流 212 charging curr 放电限流 213 Discharge curr 当前容量 214 real time Cap	acTory_Frz高f R/W	[0,65535]		
Nº f 208 Low word Ups_delay tir 209	acTory_Frz high			
Discharge curbanks 208 Low word Ups_delay ting 209 充电电压 210 charging volts 放电电压 discharge volts 充电限流 212 charging curra 放电限流 213 Discharge curra 当前容量 214 real time Cap				
Ups_delay tin 209 充电电压 210 charging volta 放电电压 211 discharge vol 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	R/W	[0,65535]		
209 充电电压 210 charging volta 放电电压 211 discharge vol 充电限流 212 charging curro 放电限流 213 Discharge curro 当前容量 214 real time Cap				
充电电压 charging volta 放电电压 211 discharge volta 充电限流 212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	lay time R/W		1S	0 Standard
210 charging volta 放电电压 211 discharge vol 充电限流 212 charging curro 放电限流 213 Discharge cur 当前容量 214 real time Cap	F		0.04==	1 1S
放电电压 discharge vol 充电限流 212 charging curr 放电限流 213 Discharge cur 当前容量 214 real time Cap			0.01V	
211 discharge vol 充电限流 212 charging curre 放电限流 213 Discharge cur 当前容量 214 real time Cap			0.0177	
充电限流 212 charging curr 放电限流 213 Discharge cur 当前容量 214 real time Cap			0.01V	
212 charging curre 放电限流 213 Discharge curre 当前容量 214 real time Cap	-		1.4	
放电限流 213 Discharge cur 当前容量 214 real time Cap			1A	
213 Discharge cur 当前容量 214 real time Cap			1A	
当前容量 214 real time Cap			IA.	
214 real time Cap			1%	
			1 /0	
当前用法			0.01V	
			0.01	
216 当前电流			1A	
当前电压 215 real time volta	压 R/W e voltage		0.01V	

	real time current				
		R/W		0.1C	1000对应0度 1200表示20.0度 800表示
	real time temp				-20.0C
	1				1000 corresponds to 0 degrees
					1200 means 20.0 degrees
217					800 means -20.0C
	离网充电限流 最大 值	R/W		1A	
	Maximum charge current				
	limit				
	离网放电限流 最大值	R/W			
	Maximum discharge current				
219	limiting				
	D电池告警 f	R/W			0x0001
	Lithium battery alarm				
220	position				
	D电池故障 f	R/W	[0,65535]		
	Lithium battery fault				
221	location				
	D电池标志2	R/W	[0,65535]		Bit0 空缺 Vacancy
222	Lithium battery symbol 2				Bit1 强夺标志 Strong impact marks
	D电池类型	R/W			0x0000 中 <i>ジ</i> 派能 德朗能D
	Lithium battery type				PYLON SOLAX
					通用CAN协管
					0x0001 天邦达RS485modbus协管
					0x0002 KOK协管
					0x0003 keith
					0X0004 拓派协管
					0X0005 派能485协管
					0X0006 杰力斯485协管
					0X0007 欣旺达485协管
					0X0008 欣瑞能485协管
					0X0009 天邦达485协管
					0X000A 晟高电气can协管
223	note Nelson and				
	D电池SOH				
	Lithium battery SOH				
225					
226	Harmata LCD ()	D /337	FO 13		
	16	R/W	[0,1]		D:0.1 H-C145H-
		R/W			Bit0-1 时间校时
	Comm board setting				D:22.2
	function				Bit2-3 beep
228					Bit4-5 AM/PM

	1			D. C. 7
				Bit6-7 Auto dim
				-00无作 no work
				-01无作 no work
				-10失能 disable
				-11使能 enable
229				
230				
231				
232				
233				
234				
235				
236				
237				
238				
239		D/W		10045 LWb)
240	蠟入厂内初测程序	R/W		=12345 蟣入
241				
242				
243				
244				
245				
246				
247				
248				
249				
250				
251				
252				
253				
254				
255				
256				
257				
258				
259				
260				
261				
262				
263				
264				
265				
266				

267			
268			
	Grid1_I		
1	Grid2_I		
271	Grid3_I		
272	Grid_V_L1		
	Grid_V_L2		
	Grid_V_L3		
	Limit1_I		
•	Limit2_I		
	Limit3_I		
	PV1_V		
	PV1_I		
	PV2_V		
	PV2_I		
	INV_A_I		
	INV_B_I		
	INV_C_I		
	INV_A_V		
	INV_B_V		
	INV_C_V		
	BAT_I		
289	BAT_V		
290			
291			
292			
293			
294			
295			
296			
297			
298			
299			
300			
301			
302			
303			
304			
305			
306			
307			
308			
309			

	Solar做Wind输入使能	R/W	[0,1]		Bit0 Solar1
	Solar makes Wind input	10 11	[0,1]		Bit1 Solar2
310	enable				Siti Solai2
311	Voltage 1	R/W	[500,5000]	0.1V	
312	Voltage 2	R/W	[e c c,e c c c]	0.1V	
313	Voltage 3	R/W		0.1V	
314	Voltage 4	R/W		0.1V	
315	Voltage 5	R/W		0.1V	
316	Voltage 6	R/W		0.1 V	
317	Voltage 7	R/W		0.1V	
318	Voltage 8	R/W		0.1 V	
319	Voltage 9	R/W		0.1 V	
320	Voltage 10	R/W		0.1 V 0.1 V	
321	Voltage 11	R/W		0.1 V 0.1 V	
321		R/W	+	0.1 V 0.1 V	
323	Voltage 12 Current 1	R/W	[0-200]	0.1 v 0.1A	
323	Current 2	R/W	[0-200]	0.1A 0.1A	
325	Current 3	R/W		0.1A 0.1A	
-	Current 4	R/W		0.1A 0.1A	
326		_		0.1A 0.1A	
327	Current 5	R/W			
328	Current 6	R/W		0.1A	
329	Current 7	R/W		0.1A	
330	Current 8	R/W		0.1A	
331	Current 9	R/W		0.1A	
332	Current 10	R/W		0.1A	
333	Current 11	R/W		0.1A	
334	Current 12	R/W		0.1A	
	预留				
335	Undefine				
	并联1				
336	Parallel-1				
	并联2				
337	Parallel-2				
	预留				
338	Undefine				
	预留				
339	Undefine				
	水最大 可电率		R/W	1W	
340	Max Solar Sell Power				
	预留				
341	Undefine				
	预留				
342	Undefine				

	预留				
242	Undefine				
343		D /11/			DITOO.
	电网信总监侧方式 Grid check from Meter or CT	R/W			BIT00: 0:CT
	drid check from Weter or er				1: Meter
344					BIT01: -BIT15: undefine
345					
346					
		R/W		30<>	U16
347	CT ratio			30:1	
348	外置Meter CTਈ比 Meter CT ratio	R/W		30<> 30:1	U16
349	Meter C1 ratio			30.1	
349	L Charge⊶的输入斜率控制	D /W/	[0 500]	W	逐周期 率划化
250	Chargeo—时期八新华驻制 →数	K/ W	[0-500]	VV	
350		D /XX	[0.500]	14/	Cycle by cycle power variation
0=4	Charge⊶的输入斜率控制	R/W	[0-500]	W	逐周期率划化
351	负数			1	Cycle by cycle power variation
	离网过载 电压小于180V				
	持续时间				
360					
	州№压高压穿越	R/W	[0,1]		0: disable 1: enable
	CA_LHVRT使能				
380	California low pressure high	L			
	pressure through				
	CA_LHVRT enable				
381	CA_HV2	R/W	[1000,3000]		
382	CA_HV1	R/W			
383	CA_LV1	R/W			
384	CA_LV2	R/W			
385	CA_LV3	R/W			
386	CA_HV2_Time	R/W	[0,300]		0 is 0.16S
387	CA HV1 Time	R/W	_		
388	CA LV1 Time	R/W			
389	CA LV2 Time	R/W			
390	CA LV3 Time	R/W			
	州 № 频 高 频 穿 越				
	CA LHFRT使能				
391	California low frequency				
371	high frequency traverses				
	CA LHFRT enable				
392	_	R/W	[4500,6500]	0.01Hz	
392	CA_III Z	IV/ VV	[-1300,0300]	U.UITZ	

393	CA_HF1	R/W			
394	CA_LF1	R/W			
395	CA_LF2	R/W			
396	CA_HF2_Time	R/W	[0,300]		
397	CA_HF1_Time	R/W			
398	CA_LF1_Time				
399	CA_LF2_Time				
	州CA_QV使能				
400	California CA_QV enable				
401	CA_QV_V1		[1000,3000]		
402	CA_QV_V2				
403	CA_QV_V3				
404	CA_QV_V4		[-44,+44]	0.01	
405	CA_QV_Q1				
406	CA_QV_Q2				
407	CA_QV_Q3				
408	CA_QV_Q4				
409	州CA_FW使能				
409	California CA_FW enable				
410	CA_Fstart				
411	CA_Fstop				
	州CA_VW使能				
412	California CA_VW				
	enable				
413	CA_Vstart				
414	CA_Vstop				
415	√常 κ 升斜率	R/W	[1 100]	1%	
713	Normal upward slope				
416	软启 升速率	R/W	[1 100]	1%	
710	Soft start rise rate				
417	QV Response time	R/W	[0,90]	S	
418	VW Response time	R/W	[0,60]	S	
419	FW Response time				

5.2. 03 只读实时属性;,对应 能码是 **0x03**°

Addr	Register meaning	R/W	data range	unit	note
		•			
500	运行状态 run state	R	[0,5]	-	0000 待机 standby 0001 自检 selfcheck 0002 ↓常 normal 0003 告警 alarm 0004 故障 fault

			1	1	
	逆紀器电网侧当日\$ 发电				
	量				
	active power generation of				
501	,	R	[-32768,32767]	0.1kWh	
	逆紀器电网侧当日无 发电				
	量				
	reactive power generation of				
502	today	R	[-32768,32767]	0.1kVarh	
	当日并网时间				
503	Grid connection time of today	R	[0,65535]	S	
	逆划器电网侧总\$ 发电量				
	N <u>o</u> **				
	active power generation of				
50 A		R	[0 0EEEEEEE]	0 11-3371-	
	逆紀器电网侧总\$ 发电量		[0,0xFFFFFFFF]	U.IKWN	
	高半				
505	active power generation of	R			
- 303	total high byte				
	逆幻器电网侧总无 发电量				
	N <u>o</u> *				
	reactive power generation of				
506	total low byte				
	逆划器电网侧总无 发电量				
	高 半				
	reactive power generation of				
507	total high byte				
	total high byte				Debug only 调试用,无意义
					Bit0:内部风扇叫在f:1\$ 0无
508	逆划器状态<i>f</i> 1	R			Bit1:外部风扇叫在 <i>f</i> :1\$ 0无
		R			Debug only 调试用,无意义
510	定い命小心 / 1	11			Debug only 阿枫田,儿忌又
511					
512					
513	中河水口大山具				
	电池当日充电量			0.11	
514	Today charge of the battery			0.1kwh	
	电池当日放电量				
	Today discharge of the				
515	battery			0.1kwh	
	电池累计充电量№≃				
	Total charge of the battery				
516	low byte			0.1kwh	

	上》用 N 子上目之 n			
517	电池累计充电量高半			0.1kwh
317	Total charge of the battery			U.IKWII
	high byte			
	电池累计放电量№≃			
510	Total discharge of the battery			0.11 1
518	low byte			0.1kwh
	电池累计放电量高半			
	Total discharge of the battery			
519	high byte			0.1kwh
	电网当日购电量			
520	Day_GridBuy_Power Wh			0.1kwh
	电网当日如电量			
521	Day_GridSell_Power Wh			0.1kwh
	电网累计购电量№半			
	Total_GridBuy_Power			
522	Wh_low word			0.1kwh
	电网累计购电量高辛			
	Total_GridBuy_Power			
523	Wh_high word			0.1kwh
	电网累计可电量№辛			
	Total_GridSell_Power			
524	Wh_low word			0.1kwh
	电网累计可电量高半			
	Total_GridSell_Power			
525	Wh_high word			0.1kwh
	当日用电量			
526	Day_Load_Power Wh			0.1kwh
	累计用电量№≃			
	Total_Load_Power Wh_low			
527	word			0.1kwh
	累计用电量高半			
	Total_Load_Power			
528	Wh_high word			0.1kwh
	当日总PV发电量			
529	<u> </u>	R	[0,65535]	0.1kWh
	当日PV-1发电量			
530	Day_PV-1_Power Wh			0.1kWh
	当日PV-2发电量			
531	Day_PV-2_Power Wh			0.1kWh
500	当日PV-3发电量			0.1177
532	Day_PV-3_Power Wh			0.1kWh

	当日PV-4发电量				
533	Day_PV-4_Power Wh			0.1kWh	
333	历史PV发电量№ ×			0.114 ****11	
534	Total PV_power Wh_low	R		0.1kWh	
334	word	IX.		U.IK WII	
	历史PV发电量高 *				
	Total PV_power Wh_high				
535	word	R		0.1kWh	
536					
537					
538					
	发电机日工作时间				
530	Generator working hours per			0.11	
539	day			0.1h	
	DC ਈ 压器温度 (DCTransformer				
540		R	[0,3000]	0.1℃	偏移1000
	散热f温度				
541	Heat sink temperature		[0,3000]	0.1℃	
542	预留温度1		[0,3000]	0.1℃	
342	undefine 预留温度2		[0,3000]	0.1 C	
543		R	[0,3000]	0.1℃	
	预留温度3				
544	undefine	R	[0,3000]	0.1℃	
545					
546					
547					
	通"板的故障状态				Bit0 Flash chip error
548	Failure status of communication board	R	[0,0xFFFF]		Bit1 time error Bit2 EEPROM error
346	Communication board	I C	[0,0X1111]		Bit0 拉弧通"标志 Arc pull
					communication sign
	MCU测试标志f				Bit1 可并联CAN通" Parallel CAN
549	MCU test flag				communication
					Bit8 D电接口RS485 Lithium electric interface RS485
					Bit9 D电接口CAN Lithium electric
					interface CAN
	LCD测试标志 <i>f</i>				Bit10 按键1234 key1234
550		R	0x0000		Bit11 液晶中断状态 lcd interrupt status
551	开,机状态	R			No4f表示开α信 ^a
	Turn off/on status				
					0000 本机 power off
					0001 开机 power on

	A.C.何以处 由 思 4.D. 一	l .	1		
552	AC侧继电器状态	R			0 off
	AC realy status				1 on
					Bit0 INV继电器 INV relay
					Bit1 负载继电器 预留 undefine
					Bit2 电网继电器 grid relay
					Bit3 发电机继电器 gen relay
					Bit4 电网供电继电器 grid give
					power to relay
					Bit5 ç接点 Dry contact
	the the light to the				Bit0: reserved
553		R	[0,65535]		Bit1:风扇故障 FAN_WARN Bit2:电网相f错误 grid phase wrong
	Warning message word 1				Bit3:
	告警信息第 2 半				
554	Warning message word 2	R	[0,65535]		
	故障信息第 1 半				
555		R	[0,65535]		
	故障信息第 2半				1
556		R	[0,65535]		
	I adit illioillation word 2			1	1
557	故障信息第 3 举	R	[0,65535]		
331	i adit ililorifiation word 5		[0,0000]	+	-
550	故障信息第 4 🛎	D	[0.65525]		见故障信息编码表
558	i aut illioilliation word 4	R	[0,65535]	 	
559	预留			1	
560	预留				
	调试数据				
561	Debug Data				
	561-583 一共23 个调				
	试数据				
	调试数据				
583		R	0x0000		
	预留				
584	undefine				
	预留				
585	undefine			1	
		R 0	[0,3000]	0.1℃	
586	battery temperature	D 1			
		R 1		0.01V	
587	battery voltage	- c	50.105		
_		R 2	[0,100]	1%	
588	battery capacity				
		R 3			
589	undefined				

	电池输出 率	R4			S16
500		17.4		1W	310
590	Battery output power				
	电池输出电流	R5		0.01A	S16
591	Battery output current			0.0111	
	电池校↓♂的容量	6			
592	Corrected AH		[0,3000]	1AH	100 is 100AH
593	_	7			
594		8			
—		9			
595					
596		10			
597		11			
	电网侧相电压A Grid	R12		0.1V	
598	phase voltage A			0.1 V	
700	电网侧相电压B Grid	R13		0.1V	
599	phase voltage B			V.2 ,	
600	电网侧相电压C Grid	R14		0.1V	
000	phase voltage C 电网侧线电压AB	D15			3.5 kg
601	Grid line voltage AB	R15		0.1V	预留
	电网侧线电压BC	R16			
602	Grid line voltage BC	KIO		0.1V	
	电网侧线电压CA	R17		0.137	
603	Grid line voltage CA			0.1V	
	电网侧内侧A相 率				S16
	A phase power on the inner	R18		1W	
604	side of the grid				
	电网侧内侧B相 率 B phase power on the inner	R19		1337	S16
605	side of the grid			1W	
000	电网侧内侧C相 率	R20			S16
	C phase power on the inner	1020		1W	510
606	side of the grid				
	电网侧-内侧总\$ 率Total				
	active power from side to side	R21		1W	
607	of the grid				
	电网侧-内侧总视在 率	Daa		1337	预留
608	Grid side - inside total apparent power	R22		1W	
000		23			
609	Grid-side frequency				
	电网侧内侧电流A	D24		0.014	S16
610	grid side inner current A	R24		0.01A	
	电网侧内侧电流B	R25		0.01A	S16
611	grid side inner current B			0.0171	
612	电网侧内侧电流C	R26		0.01A	S16
612	grid side inner current C 电网外置-电流A			-	016
613	电网外直-电流A Out-of-grid - current A	R27		0.01A	S16
013	电网外置-电流B	R28		<u> </u>	S16
614	Out-of-grid - current B	1320		0.01A	010
	<u>U</u>	L	<u> </u>	1	1

			T	T	T
(15	电网外置-电流C	R29		0.01A	S16
615	Out-of-grid - current C				
616	电网外置- 率A Out-	R30		1W	S16
010	of-grid -power A 电网外置- 率B	D21			016
617	电网外直- 平B Out-of-grid -power B	R31		1W	S16
017	电网外置- 率C Out-	D22			S16
618	of-grid -power C	R32		1W	510
010	电网外置-总\$率				S16
619	Out-of-grid –total power	R33		1W	510
620	电网外置-总视在 率	R34		1VA	S16
020	Out-of-grid –total apparent	1001		1 7 7 1	
	power				
	并网 率因数 PF				
	FM 华凶蚁 FF Grid-connected power factor	R35			
621	PF	IX33	R/W	[0,1000]	真实值*1000
021	电网侧A相 率	36	10 **	[0,1000]	
	Grid side A-phase power	50		1W	жлй个寄叫器根据内置外置设置的化
622	Grid side 11 phase power			1 **	The following three registers vary according
022					to the built-in and external Settings
622	电网侧B相 率	37		1W	
623	Grid side B-phase power	38			
624	电网侧C相 率	38		1W	
024	Grid side C-phase power 电网侧-总\$率	39			
625	Grid side total power			1W	
	Grid side total power	40			
626					
	逆赶器输出相电压A				
	Inverter output phase	R41		0.1V	
627	voltage A				
	逆划器输出相电压B				
	Inverter output phase	R42		0.1V	
(20					
628	voltage B				
	逆划器输出相电压C				
	Inverter output phase	R43		0.1V	
629	voltage C				
		44			S16
	逆 <mark>ਈ</mark> 器输出相电流A				
	Inverter output phase			0.01A	
630	current A				
030		45			016
	逆ਈ器输出相电流B				S16
	Inverter output phase			0.01A	
631	current B				
	逆ਈ器输出相电流C	46			S16
	Inverter output phase			0.01A	
632	current C				
	逆ਈ器输出相 率A	R47		1337	S16
622	Inverter output phase			1W	
633	power A			<u> </u>	

Inverter output phase R48 IW S16		· · · · · · · · · · · · · · · · · · ·			017
2月 10 10 10 10 10 10 10 1		逆的器输出相 率B	D 40	1337	S16
逆型結論出射 率C	(24		K48	1 W	
Inverter output phase power	034		40		
10 10 10 10 10 10 10 10			49	1337	\$16
逆型器输出总多 率 Inverter output total Iw Iw Iw Inverter output total Iw Iw Iw Iw Iv Iw Iv Iv	625			1 W	
Inverter output total power pow	633				
Description			R50		S16
選到器輸出意視在 率 Inverter output total IW IW IV IV IV IV IV IV		<u> </u>		1W	
Inverter output total apparent power 10	636				
Sample		逆 器输出总视在 率	51		S16
2018				1W	
100 100	637				
1		逆划器频率	52	0.0111	U16
Samura	638	Inverter frequency		0.01HZ	
UPS负裁侧相 率A	639		53		
UPS load-side phase power	037	LIDC名共侧扫 克A	54		1117
Magnetic Magnetic				1337	016
UPS 负载侧相 率B UPS load-side phase power B UPS load-side phase power B UPS load-side phase power B UPS load-side phase power C UPS load-side phase power C UPS load-side phase power C UPS load-side phase power D UPS load-side phase power D UPS load-side phase power D UPS load-side phase voltage A D UPS load-side power D UPS load-side power D UPS load-side power D UPS load-side phase voltage A D UPS load phase voltage A D UPS load phase voltage B D UPS load phase voltage B D UPS load phase voltage C UPS load phase current A no use D UPS load phase current B no use D UPS load phase power A B Load phase power A B Load phase power B B R65 Load phase power B D UPS load phase power B B R65 Load phase power B D UPS load load load load load lower B D UPS load load load load load load load load	640	· ·		1 W	
UPS load-side phase power B	040		55		
B			55	1777	U16
UPS负载侧相 率C UPS load-side phase power C UPS load-side phase power C UPS load-side total power	641	1		1 W	
UPS load-side phase power 1W	641		5.0		
C		OI ON AND THE	56		U16
UPS负载侧总 率C				1W	
1	642				
UPS load-sidetotal power		UPS负载侧总 率C	57	1337	U16
Coad phase voltage A D.1V D.1V	643	UPS load-sidetotal power		1 ٧٧	
Description		负载测相电压A	D50	0.137	U16
5	644	Load phase voltage A	K38	0.1 V	
1.1			D.50	0.177	U16
646 Load phase voltage C 60 0.1V U16 647 Load phase current A no use R61 0.01A S16 648 Load phase current B no use R62 0.01A S16 649 Load phase current B no use \$\text{0.01A}\$ \$\text{S16}\$ 649 Load phase current C no use \$\text{0.01A}\$ \$\text{S16}\$ 650 Load phase power A \$\text{R64}\$ \$\text{1W}\$ \$\text{S16}\$ 651 Load phase power B \$\text{R65}\$ \$\text{1W}\$ \$\text{S16}\$ 652 Load phase power C \$\text{R66}\$ \$\text{1W}\$ \$\text{S16}\$ 653 Load totalpower \$\text{R67}\$ \$\text{1W}\$ \$\text{S16}\$ 653 Load phase apparent power undefine \$\text{R68}\$ \$\text{S16}\$ 654 undefine \$\text{Uoad frequency} \$\text{0.01Hz} 655 Load frequency \$\text{0.01Hz}	645	Load phase voltage B	R59	0.1 V	
Columbrate Co			60		1116
5数測电流A 无效 R61 0.01A S16 54数測电流B 无效 54数測电流C 无效 Coad phase current B no use 5数測电流C 无效 Load phase current C no use 5数側相 率A Load phase power A 1w S16 550	646			0.1V	
Load phase current A no use			D61		\$16
648 负载测电流B 无效 Load phase current B no use 0.01A \$16 649 负载测电流C 无效 Load phase current C no use 0.01A \$16 650 负载侧相 率A Load phase power A R64 1W \$16 651 Load phase power B R65 1W \$16 652 Load phase power C R66 1W \$16 653 Load totalpower R67 1W \$16 653 Load totalpower R68 1W \$16 654 Load phase apparent power undefine TW \$16 655 Load frequency R69 0.01Hz 655 Load frequency 70	647			0.01A	510
Load phase current B no use	017	-			016
649 负载测电流C 无效 Load phase current C no use 0.01A S16 650 负载侧相 率A D 载侧相 率B Load phase power B R64 1W S16 651 Load phase power B R65 1W S16 652 Load phase power C D 载侧总\$ 率 Load totalpower R66 1W S16 653 Load totalpower R67 1W S16 654 Load phase apparent power undefine 1W S16 654 Load frequency R69 0.01Hz 655 Load frequency 70 0.01Hz	648			0.01A	510
Load phase current C no use	040	-			016
650 负载侧相 率A 负载侧相 率B Load phase power B R64 1W S16 651 Load phase power B R65 1W S16 652 Load phase power C R66 1W S16 653 Load phase power C R67 1W S16 653 Load totalpower S16 负载侧总视在 率 预留 Load phase apparent power undefine R68 S16 654 Undefine 0.01Hz 655 Load frequency 0.01Hz	640			0.01A	210
Load phase power A Description Descri	049	-			017
651 负载侧相 率B 负载侧相 率C Load phase power C R65 1W S16 652 Load phase power C R66 1W S16 653 Load totalpower R67 1W S16 653 Load totalpower R68 S16 Load phase apparent power undefine N68 N68 N68 654 Load frequency R69 N01Hz 655 Load frequency N0 N0	650		K64	1W	816
Load phase power B	050				
Description	651		R65	1W	S16
Load phase power C	651				
652 Load phase power C 负载侧总\$ 率 R67 Load totalpower S16 负载侧总视在 率 预留 Load phase apparent power undefine S16 654 UW 655 R69 Load frequency 0.01Hz			R66	1W	S16
653 Load totalpower IW 负载侧总视在 率 预留 Load phase apparent power undefine S16 654 Undefine IW 655 Load frequency 0.01Hz 656 70	652			1	
653 Load totalpower 负载侧总视在 率 预留 Load phase apparent power undefine S16 654 Undefine 负载频率 Load frequency R69 0.01Hz 0.01Hz			R67	1 W/	S16
Load phase apparent power undefine 1W 54	653	*		1 44	
Load phase apparent power undefine 54		负载侧总视在 率 预留	R68		S16
655 Load frequency 656 70				1W	
655 Load frequency 0.01Hz 656 70	654	undefine			
655 Load frequency 0.01Hz 656 70		负载频率	R69	0.04	
656	655			0.01Hz	
030			70		
657	657		/1		

658		72			
659		73			
660		74			
000	Gen端口的相电压A	75			
661	Phase voltage of Gen port A			0.1V	
		76		0.1V	
662	Phase voltage of Gen port B	77		0.1 V	
	Och All Third Table	77		0.1V	
663	Phase voltage of Gen port C				
664	Gen端口的 率A Phase power of Gen port A	R78		1W	
004		79			
665	Phase power of Gen port B			1W	
	Gen端口的 率C	80		1W	
666	Phase power of Gen port C	0.1		1 **	
667	Gen端口的总 率 total power of Gen port	81		1W	
668	1 1	82			
669		83			
		84			
670		85			
671					
	PV1输入 率	R86		1W	
672	PV1 input power	D07			
	PV2输入 率	R87		1W	
673	PV2 input power	D 00			
	PV3输入 率	R88		1W	
674	PV3 input power	700			
	PV4输入 率	R89		1W	
675	PV4 input power				
	直流电压1				
676	Dc voltage 1	R90	[0,65535]	0.1V	
	直流电流1				
677	Dc current 1	R91	[0,65535]	0.1A	
	直流电压2	D.C.	FO (577277	0.177	
678	Dc voltage 2	R92	[0,65535]	0.1V	
	直流电流2				
679	Dc current 2	R93	[0,65535]	0.1A	
	直流电压3				
680	Dc voltage 3	R94	[0,65535]	0.1V	
	直流电流3				
681	Dc current 3	R95	[0,65535]	0.1A	
	直流电压4				
682	Dc voltage 4	R96	[0,65535]	0.1V	
	直流电流4				
683	Dc current 4	R97	[0,65535]	0.1A	
	预留				第 22 五 井 47

	预留			
	预留			
1000	电网信息监测方式 Grid power check mode	R		BIT00: 0 : CT 1 : Meter BIT01-BIT15: undefine

5.3. 03 电池只读;

Addr	Register meaning	R/W	data range	unit	note				
2000-2	2000-2999 X D电池寄 川 器								
	电池 ID								
	圣阳电池								
500	1 a 1 半节	R	'0'- '9' 'A'-		ASCII 半 符				
	1 * 2 * 节		'Z'						
501	1 * 3 ** 节	R							
	1 a 4 半节								
502	1 a 5 半节								
	1 a 6 辛节								
	1 a 7 半 节								

1	E02		7	1	
1	503	1 a 8 辛节			
505 1° 11 単背 1° 12 単背 R 506 2° 1 単符 2° 2 単符 R 507 2° 3 単符 508 2° 5 単符 509 2° 7 単节 2° 9 単符 2° 10 単符 511 2° 11 単节 512 3° 1 単节 3° 3 単节 R 513 3° 3 単节 3° 4 単节 R 514 3° 5 単节 3° 8 単节 ASCII 単符 516 3° 7 単节 3° 1 世节 3° 1 世节 517 3° 1 1 単节 3° 1 2 単节 R 518 4° 1 単节 R 4° 2 単节 R 519 4° 3 単节 R 4° 4 世节 R 4° 4 世节 4° 4 世节 R	504	1 * 9 * 节	<u> </u>		
1		1 a 10 半节			
506 2° 1 单节 R 'O'- '9' 'A'- '2' ASCII 单符 507 2° 3 单节 R 508 2° 5 单节 ************************************	505	1 a 11 半节			
506		1 a 12 半节			
2° 2 ± 节	506	2 a 1 半 节	R		ASCII 半 符
507		2 a 2 * 节		'Z'	
2°4 本节 508 2°5 本节 2°6 本节 509 2°7 本节 2°8 本节 2°8 本节 510 2°9 本节 2°10 本节 2°11 本节 511 2°12 本节 512 3°1 本节 3°2 本节 R 513 3°3 本节 3°4 本节 ASCII 本符 514 3°5 本节 3°6 本节 3°8 本节 515 3°9 本节 3°10 本节 3°10 本节 517 3°11 本节 3°12 本节 R 4°2 本节 R 4°2 本节 R 4°2 本节 R 4°3 本节 R 4°4 ** A** 4°4 ** A** 4°5 ** R 4°5 ** A** 4°6 ** A** 4°6 ** A** 4°6 ** A** 4°7 ** A** 4°7 ** A** 4°6 ** A** 4°7 ** A** 4°7 ** A**<	507	2 a 3 本 节	R		
2 n 6 = 节		2ª 4 半 节			
2 a 6 全 节 2 a 7 左 节 509 2 a 7 左 节 2 a 8 左 节 2 a 10 左 节 510 2 a 10 左 节 511 2 a 11 左 节 512 3 a 1 左 节 3 a 2 左 节 2 a 2 左 节 513 3 a 3 左 节 3 a 4 左 节 3 a 4 左 节 514 3 a 5 左 节 3 a 6 左 节 3 a 7 左 节 515 3 a 7 左 节 516 3 a 9 左 节 517 3 a 11 左 节 518 4 a 1 左 节 4 a 2 左 节 R 519 4 a 3 左 节 4 a 3 左 节 R 4 a 4 左 节 R	508	2°5 半 节			
2		2ª6半节			
2° 8 = 节 R 510 2° 9 = 节 2° 10 = 节 R 511 2° 11 = 节 512 3° 1 = 节 3° 2 = 节 R 513 3° 3 = 节 3° 3 = 节 R 3° 4 = 节 ASCII = 符 514 3° 5 = 节 3° 6 = 节 3° 6 = 节 515 3° 7 = 节 3° 8 = 节 3° 10 = 节 516 3° 11 = 节 3° 12 = 节 ASCII = 符 518 4° 1 = 节 4° 2 = 节 R 4° 4° 3 = 节 R 4° 4° 4 = 节 R 4° 4° 4 = 节 R 4° 4° 4 = 节 R	509	2 * 7 * 节			
2a 10 = 节 511 2a 11 = 节 2a 12 = 节 R 512 3a 1 = 节 3a 2 = 节 R 513 3a 3 = 节 3a 4 = 节 R 514 3a 5 = 节 3a 6 = 节 3a 7 = 节 515 3a 7 = 节 3a 9 = 节 3a 10 = 节 517 3a 11 = 节 3a 12 = 节 R 518 4a 1 = 节 4a 2 = 节 R 4a 4 = 节 R 4a 4 = 节 R	003	2 * 8 * 节			
2 a 10 = 节 2 a 11 = 节 511 2 a 12 = 节 512 3 a 1 = 节 R *O'- *9' *A'- *A'- *ASCII = **? 513 3 a 2 = 节 R 514 3 a 4 = 节 R 515 3 a 5 = 节 ASCII = **? 516 3 a 7 = 节 ASCII = **? 517 3 a 11 = 节 ASCII = **? 518 4 a 1 = 节 R *O'- *9' *A'- *A'- *ASCII = **? 519 4 a 3 = 节 R 4 a 4 = 节 R *O'- *9' *A'- *A'- *ASCII = **? 4 a 4 = 节 R *O'- *9' *A'- *A'- *ASCII = **? 4 a 4 = 节 R *O'- *9' *A'- *A'- *ASCII = **? 5 19 4 a 3 = 节 R 4 a 4 = ** R *O'- *9' *A'- *A'- *A'- *A'- *A'- *A'- *A'- *A'	510	2 * 9 * 节			
2a 12 = 节 R '0'- '9' 'A'- '2' ASCII = 符 512 3a 2 = 节 R '0'- '9' 'A'- '2' ASCII = 符 513 3a 3 = 节 R R ASCII = 符 514 3a 5 = 节 ASCII = 符 ASCII = 符 515 3a 7 = 节 ASCII = 符 ASCII = 符 516 3a 9 = 节 ASCII = 符 517 3a 11 = 节 ASCII = 符 518 4a 1 = 节 R '0'- '9' 'A'- '2' ASCII = 符 519 4a 3 = 节 R ASCII = 符	010	2 * 10 半节			
2° 12 半节 R (0'- '9' 'A'- '2') ASCII 半符 512 3° 2 半节 R (0'- '9' 'A'- '2') ASCII 半符 513 3° 3 ** 节 R R R 514 3° 4 ** 节 S S S 515 3° 7 ** 节 S S S 516 3° 9 ** 节 S S S S S 517 3° 10 ** 节 S	511	2 * 11 半节			
512 3 a 2 = 节 72* 513 3 a 3 = 节 R 514 3 a 5 = 节 8 515 3 a 7 = 节 3 a 8 = 节 516 3 a 9 = 节 3 a 10 = 节 517 3 a 11 = 节 3 a 12 = 节 518 4 a 1 = 节 R '0' - '9' 'A' - '2' ASCII = 符 519 4 a 3 = 节 R 4 a 4 = 节 R R	911	2 a 12 半 节			
3° 2 半节 '2' 513 3° 3 半节 R 514 3° 5 半节 8 515 3° 7 半节 8 516 3° 9 半节 3° 10 半节 517 3° 10 半节 8 518 4° 1 半节 R '0'- '9' 'A'- ASCII ** 519 4° 3 ** † R 4° 4 ** ** † R	512	3 * 1 * 节	R	'0'- '9' 'A'-	ASCII 半 符
513 3 a 4 本 节 514 3 a 5 本 节 515 3 a 7 本 节 516 3 a 9 本 节 517 3 a 10 本 节 518 4 a 1 本 节 4 a 2 本 节 R 519 4 a 3 本 节 4 a 4 本 节 R 4 a 5 本 节 R	012	3 * 2 * 节		'Z'	
3 a 4 本节 514 3 a 5 本节 3 a 6 本节 515 3 a 7 本节 3 a 8 本节 3 a 9 本节 516 3 a 9 本节 3 a 10 本节 3 a 11 本节 3 a 12 本节 ASCII 本符 518 4 a 1 本节 R 4 a 2 本节 R 4 a 4 本节 R	513	3 3 辛节	R		
314 3a 6 举节 515 3a 7 举节 3a 8 举节 516 3a 10 举节 517 3a 11 举节 3a 12 举节 518 4a 1 举节 4a 2 举节 519 4a 3 举节 4a 4 举节 ASCII 举符 ASCII 举符	010	3 * 4 ** 节			
3a 6 举节 515 3a 7 举节 3a 8 举节 516 3a 10 举节 517 3a 11 举节 3a 12 举节 518 4a 1 举节 4a 2 举节 519 4a 3 举节 4a 4 举节 ASCII 举符 ASCII 举符	514	3 8 5 辛节			
3a 8 半节 516 3a 9 半节 3a 10 半节 517 3a 11 半节 3a 12 半节 518 4a 1 半节 4a 2 半节 72 ASCII 半符 ASCII 半符 R 4a 4 * 4 * * 节 ABCII * * * * * * * * * * * * * * * * * *	011	3 8 4 4 节			
3a 8 半节 516 3a 9 半节 3a 10 半节 517 3a 11 半节 3a 12 半节 R 4a 1 半节 4a 2 半节 ASCII 半符 4a 3 半节 4a 4 半节 R	515	3			
3a 10 举节 517 3a 11 举节 3a 12 举节 518 4a 1 举节 4a 2 举节 R 4a 3 举节 R 4a 4 举节 R ASCII 举符	010	3 * 8 辛节			
3 a 10 举节 3 a 11 举节 517 3 a 11 举节 3 a 12 举节 R 518 4 a 1 举节 4 a 2 举节 R 519 4 a 3 举节 4 a 4 举节 R	516	3 * 9 * 节			
3 a 12 坐节 R '0'- '9' 'A'- ASCII 举符 518 4 a 1 举节 R '0'- '9' 'A'- ASCII 举符 519 4 a 3 举节 R 4 a 4 举节 A a 5 ** 节	910	3 * 10 辛节			
3 a 12 坐节 R '0'- '9' 'A'- ASCII 举符 518 4 a 1 举节 R '0'- '9' 'A'- ASCII 举符 519 4 a 3 举节 R 4 a 4 举节 A a 5 ** 节	517	3 * 11 举节			
518 4a 2 ** 节 'Z' 519 4a 3 ** 节 R 4a 4 ** 节 A * 5 ** 节	011				
4 ^a 2 ** 节 'Z' 519 4 ^a 3 ** 节 R 4 ^a 4 ** 节 A ^a 5 ** 节	518		R	'0'- '9' 'A'-	ASCII 半 符
519 4 a 3 坐 节 R 4 a 4 坐 节 A a 5 平 节				'Z'	
4 ^a 4 * 节	519	4ª 3 ** 节	R		
1ª 5 7 					
040	520				
4 ^a 6 半 节	040		1		
4ª 7 × 节					

521	4ª8 半 节]		
E00	4°9 半 节			
522	4 a 10 半 节			
523	4 a 11 半节			
	4 a 12 × 节			
F0.4	5°1半节	R	'0'- '9' 'A'-	ASCII 半 符
524	5°2 * 节		'Z'	
525	5°3 半 节	R		
	5 ° 4 ** 节	=		
526	5 * 5 * 节			
320	5 * 6 * 节			
527	5°7 半 节			
021	5 * 8 辛节			
528	5 * 9 * 节			
520	5 ° 10 半节			
529	5 a 11 半 节			
0_0	5 a 12 半 节			
530	6 a 1 半 节	R	'0'- '9' 'A'-	ASCII 半 符
	6°2 半 节		'Z'	
531	6°3 半 节	R		
	6 a 4 * 节			
532	6°5 半 节			
	6ª6 半 节			
533	6ª 7 半 节			
	6°8 半 节			
534	6°9 × 节			
551	6° 10 半 节			
535	6° 11 半 节			
	6 a 12 半 节			
536	7°1 半节	R	'0'- '9' 'A'-	ASCII 二 符
	7°2 * 节		'Z'	
537	7°3 辛节	R		
	7°4 半 节			
538	7°5 举节	-		
	7°6 辛节			
	7ª 7 半 节			

539			1	
000	7 ^a 8 半 节			
540	7 ^a 9 半 节	_		
	7 a 10 半 节			
541	7 a 11 半 节			
	7 ^a 12 半 节			
542	8 a 1 半节	R	'0'- '9' 'A'-	ASCII 辛符
	8 a 2 半节		'Z'	
543	8 * 3 ** 节	R		
	8 a 4 半 节			
544	8 a 5 半 节			
	8 a 6 辛节			
545	8 a 7 * 节			
	8 a 8 二 节			
546	8 8 9 半节			
	8 * 10 辛节			
547	8 a 11 半节			
	8 * 12 ** 节			
548	9 a 1 半节	R	'0'- '9' 'A'-	ASCII 半 符
	9 a 2 * 节		'Z'	
549	9 a 3 * 节	R		
0.10	9 a 4 ** 节			
550	9 a 5 半 节			
	9 a 6 二 节			
551	9ª 7 半 节			
001	9ª8 半 节			
552	9 8 9 辛节			
002	9 a 10 半节			
553	9ª 11 半 节			
	9 a 12 半 节			
554	10° 1 * 节	R	'0'- '9' 'A'-	ASCII 兰 符
001	10 * 2 * 节		ʻZ'	
555	10 * 3 * 节	R		
	10 a 4 * 节			
556	10 ° 5 半节			
	10 * 6 * 节			
	10°7 ** 节			

557		7	I I	1
997	10 * 8 **节			
558	10 a 9 半 节	_		
	10 a 10 半 节			
559	10° 11 半 节			
	10 a 12 半 节			
560	11 a 1 半节	R	'0'- '9' 'A'-	ASCII 半 符
	11 a 2 半 节		ʻZ'	
561	11 a 3 半 节	R		
	11 a 4 半节			
562	11 a 5 半 节			
	11 a 6 二 节			
563	11 a 7 二 节			
	11 a 8 二 节			
564	11 a 9 半 节			
001	11 a 10 半 节			
565	11 a 11 半 节			
000	11 a 12 半 节			
566	12 a 1 半节	R	'0'- '9' 'A'-	ASCII 半 符
000	12 a 2 半节		'Z'	
567	12 ° 3 半节	R		
001	12 ° 4 半 节			
568	12 ° 5 半 节			
000	12 ° 6 半节			
569	12 ° 7 半节			
003	12 a 8 半节			
570	12 a 9 半节			
010	12 a 10 二 节			
571	12 a 11 二 节			
371	12 a 12 二 节			
572	13 a 1 半节	R	'0'- '9' 'A'-	ASCII 半 符
314	13 a 2 半 节		'Z'	
573	13 a 3 半 节	R		
	13 a 4 半 节			
574	13 a 5 半 节			
574	13 a 6 半 节	1		
	13 a 7 半 节			
	' ''	<u> </u>		

575			1	1	1]
373	13 a 8 半 节					
576	13 ° 9 半 节		-			
	13 a 10 ===					
577	13 a 11 == =		-			
	13 a 12 == =	节 				
578	14 a 1 半节		R	'0'- '9' 'A'-		ASCII 半 符
	14 a 2 半 节	î		'Z'		
579	14 ª 3 半 节	î	R			
	14 a 4 二 世	î				
580	14 a 5 半 节	î				
	14 a 6 二 共	î				
581	14 a 7 半 节	î				
001	14 a 8 二 世	î				
582	14 a 9 半 节	î				
302	14 a 10 ===					
583	14 a 11 ===	节				
303	14 a 12 ===	节				
584	15 a 1 半 节	ĵ	R	'0'- '9' 'A'-		ASCII 半 符
301	15 a 2 二 共	î	-	'Z'		
585	15 ° 3 半 节		R			
303	15 a 4 半 节	î				
586	15 ° 5 半 节	î				
300	15 a 6 半 节	ĵ				
587	15 ° 7 半 节					
307	15 a 8 半 节	î	-			
588	15 ° 9 半 节					
900	15 a 10 ===		-			
589	15 a 11 == =					
969	15 a 12 ===		-			
600		Module			0.01V	
		Voltage				
601		Module			0. 1A	
	PACK1	Current Temperater				1250 mean 25.0℃
602	INONI	-AVE				2200 1100111 20100
603		SOC			0.1	

	1	ъ .	1	I	0.1177	T
604		Remain			0. 1AH	
		Capacity				
605		Total			0. 1AH	
	1	Capacity				
606		Charge			0.01V	
		Voltage				
607		Charge			0. 1A	
		Current				
608		Discharge			0. 1A	
000		Current				
609		Max Cell V			0.01V	
610		Min Cell V			0.01V	
611		Cycle			1	
011		number				
612		Warming				
613		Fault				
		Module				
614		Voltage				
		Module				
615		Current				
		Temperater				
616		-AVE				
617		SOC				
		Remain				
618		Capacity				
		Total				
619		Capacity				
	PACK2	Charge				
620		Voltage				
		Charge				
621		Current				
		Discharge				
622		Current				
623		Max Cell V				
624		Min Cell V				
		Cycle				
625		number				
626		Warming				
627]	Fault				
		Module				
628		Voltage				
	DAORO	Module				
629	PACK3	Current				
1	1	1	1	1	1	1

]	Tomponeton				
620		Temperater				
630		-AVE				
631	<u> </u>	SOC			 	
		Remain				
632	-	Capacity				
		Total				
633	<u> </u>	Capacity				
		Charge				
634		Voltage				
		Charge				
635		Current				
		Discharge				
636		Current				
637		Max Cell V				
638		Min Cell V				
		Cycle				
639		number				
640		Warming				
641		Fault				
		Module				
642		Voltage				
		Module				
643		Current				
		Temperater				
644		-AVE				
645		SOC				
		Remain				
646		Capacity				
	-	Total				
647		Capacity				
	PACK4	Charge				
648	THOM	Voltage				
	1	Charge				
649		Current				
	1	Discharge				
650		Current				
651	1	Max Cell V				
652	-	Min Cell V				
	-	Cycle				
653		number				
654	-	Warming				
655	-	Fault				
099		r au1 t				

		Modul:		
GEG	DACKE	Module		
656	PACK5	Voltage		
657		Module		
		Current		
		Temperater		
658		-AVE		
659		SOC		
		Remain		
660		Capacity		
		Total		
661		Capacity		
		Charge		
662		Voltage		
		Charge		
663		Current		
		Discharge		
664		Current		
665		Max Cell V		
666		Min Cell V		
		Cycle		
667		number		
668		Warming		
669		Fault		
		Module		
670		Voltage		
		Module		
671		Current		
		Temperater		
672		-AVE		
673		SOC		
		Remain		
674		Capacity		
		Total		
675		Capacity		
	PACK6	Charge		
676	THONG	Voltage		
		Charge		
677		Current		
		Discharge		
678		Current		
679		Max Cell V		
680		Min Cell V		
000		MIII CEII A		

]	Cycle				
681		number				
682	-	Warming				
683	-	Fault				
000		Module				
684		Voltage				
004		Module				
685		Current				
000		Temperater				
686		-AVE				
687		SOC				
007		Remain				
688		Capacity				
000	-	Total				
689						
009		Capacity				
690	PACK7	Charge				
690	<u> </u>	Voltage				
CO1		Charge				
691	<u> </u>	Current				
692		Discharge Current				
693	-	Max Cell V				
	<u> </u>	Max Cell V Min Cell V				
694	<u> </u>	}				
COF		Cycle				
695 696	<u> </u>	number				
	<u> </u>	Warming				
697		Fault				
698		Module				
698	<u> </u>	Voltage				
600		Module				
699	<u> </u>	Current				
700		Temperater -AVE				
700	-	SOC				
701						
700		Remain				
702	-	Capacity				
703	PACK8	Total				
103	-	Capacity				
704		Charge				
704	-	Voltage				
705		Charge Current				
100	-	-				
706		Discharge				
706		Current			第 43 页	++ 47

707]	Max Cell V				
708						
		Min Cell V				
709		Cycle				
		number				
710		Warming				
711		Fault				
		Module				
712		Voltage				
		Module				
713		Current				
		Temperater				
714		-AVE				
715		SOC				
		Remain				
716		Capacity				
		Total				
717		Capacity				
	PACK9	Charge				
718		Voltage				
		Charge				
719		Current				
		Discharge				
720		Current				
721		Max Cell V				
722		Min Cell V				
		Cycle				
723		number				
724		Warming				
725		Fault				
		Module				
726		Voltage				
		Module				
727		Current				
		Temperater				
728		-AVE				
729		SOC				
		Remain				
730	PACK10	Capacity				
	Inomio	Total				
731		Capacity				
		Charge				
732		Voltage				
102	<u> </u>	TOTTUE	 <u> </u>	 1		

	1		I	F		
		Charge				
733		Current				
		Discharge				
734		Current				
735		Max Cell V				
736		Min Cell V				
		Cycle				
737		number				
738		Warming				
739		Fault				
		Module				
740		Voltage				
		Module				
741		Current				
		Temperater				
742		-AVE				
743		SOC				
		Remain				
744		Capacity				
		Total				
745		Capacity				
	PACK11	Charge				
746		Voltage				
		Charge				
747		Current				
		Discharge				
748		Current				
749		Max Cell V				
750		Min Cell V				
		Cycle				
751		number				
752		Warming				
753		Fault				
		Module				
754		Voltage				
	1	Module				
755		Current				
	1	Temperater				
756		-AVE				
757	1	SOC				
	PACK12	Remain				
758		Capacity				
	1	<u> </u>	1	 -		

	1		T	1	
		Total			
759		Capacity			
		Charge			
760		Voltage			
761		Charge			
		Current			
		Discharge			
762		Current			
763		Max Cell V			
764		Min Cell V			
		Cycle			
765		number			
766		Warming			
767		Fault			
		Module			
768		Voltage			
		Module			
769		Current			
		Temperater			
770		-AVE			
771		SOC			
		Remain			
772		Capacity			
		Total			
773		Capacity			
	PACK13	Charge			
774		Voltage			
		Charge			
775		Current			
	1	Discharge			
776		Current			
777	1	Max Cell V			
778	1	Min Cell V			
	•	Cycle			
779		number			
780	1	Warming			
781	1	Fault			
		Module			
782		Voltage			
	1	Module			
783		Current			
		Temperater			
784		-AVE			
		11.12	<u> </u>	1	

785	PACK14	SOC		
		Remain		
786		Capacity		
		Total		
787		Capacity		
		Charge		
788		Voltage		
		Charge		
789		Current		
		Discharge		
790		Current		
791		Max Cell V		
792		Min Cell V		
		Cycle		
793		number		
794		Warming		
795		Fault		
		Module		
796		Voltage		
		Module		
797		Current		
		Temperater		
798		-AVE		
799		SOC		
		Remain		
800		Capacity		
		Total		
801		Capacity		
	PACK15	Charge		
802		Voltage		
		Charge		
803		Current		
		Discharge		
804		Current		
805		Max Cell V		
806		Min Cell V		
		Cycle		
807		number		
808		Warming		
809		Fault		

5.4. 内型%录表

	内叫½录表									
Addr.	寄叫器含义	R/W	Range	Unit	note					
1000	逆划器故障信息	R			长度范围是 500					
••••		R								
•••••		R								
1499		R								

5.5. 故障』₁码

告警J码

Error code	Description /描述	Solutions/解7方案
W01	风扇故障	
W02	相f错误	

故障J码: Fault Code

Error code	Description /描述	Solutions/解7方案
	·	DC/DC softstart fault
F07	DC/DC_Softsart_Fault	Check the battery fuse;
	DC/DC 软起故障	2. Restart and check whether it is in normal;
		3. Seek help from us, if can't go back to noarmal state
		Auxiliary power supply failure
F10	AuxPowerBoard_Failure	Wait for minutes then check;
FIU	辅电源故障	2. Remove wifi plug or other communicator;
		3. Seek help from us, if can't go back to noarmal state
	Working mode change	Inverter work mode changed
F13	模式 换	1. wait for a minute and check;
	挨 八	2. Seek help from us, if can't go back to normal state.
		AC side over current fault
F18	AC over current fault	Please check whether the backup load power and common
	of hardware	load power are within the range;
	硬件交流过流	2. Restart and check whether it is in normal;
		3. Seek help from us, if can not go back to normal state.
F20		DC side over current fault
	DC over current fault of	Check PV module connect and battery connect;
	the hardware	2. Turn off the DC switch and AC switch and then wait one
	硬件直流过流	minute,then turn on the DC/AC switch again;
		3. Seek help from us, if can not go back to normal state.

	1	
F22	Tz_EmergSStop_Fault 急停故障(逆ਈ器被鉢定3	Tz_EmergSStop_Fault Seek help from us,This failure hardly happens.
F23	AC leakage current is transient over current 瞬时漏电流故障	Leakage current fault 1. Check the cable of PV module and inverter; 2. Restart inverter; 3. Seek help from us, if can not go back to normal state.
F24	DC insulation impedance failure 方阵绝缘阻抗故障	PV isolation resistance is too low 1. Check the connection of PV panels and inverter is firmly and correctly; 2. Check whether the PE cable of inverter is connected to ground; 3. Seek help from us, if can not go back to normal state.
F26	The DC busbar is unbalanced 直流母线 н 7衡	 Please wait for a while and check whether it is normal; If still same, and turn off the DC switch and AC switch and wait for one minute and then turn on the DC/AC switch; Seek help from us, if can not go back to normal state.
F29	Parallel_CANBus_Fault 并联通"故障	This fualt only for inverters working in parallel mode 1. Check the parallel setting according to the instructions; 2. Check the connection of the CANBus; 3. Seek help from us
F35	No AC grid 无市电	No Utility 1. Please confirm grid is lost or not; 2. Check the grid connection is good or not; 3. Check the switch between inverter and grid is on or not; 4. Seek help from us, if can not go back to normal state.
F41	Parallel_system_Stop 并联系统停机故障	In parallel system,due to other inverter faults. 1. Wait for minutes then check all inverters in this parallel system; 2. If inverter can't go back to normal state, record fault codes of all inverters, then seek help from us.
F42	AC line low voltage 线电压过№故障	Grid voltage fault 1. Check the AC voltage is in the range of standard voltage in specification; 2. Check whether grid AC cables are firmly and correctly connected; 3. Seek help from us, if can not go back to normal state.
F46/F49	Bcakup_Battery_Fault 备份电池故障	Backup battery fault. 1. Check the battery capacity; 2. Check the connection between batteries and inverters; 3. If inverter can't go back to normal after load reduction, seek help from us

F47	AC over frequency 交流过频	Grid frequency out of range 1. Check the frequency is in the range of specification or not; 2. Check whether AC cables are firmly and correctly connected; 3. Seek help from us, if can not go back to normal state.
F48	AC lower frequency 交流¢頻	Grid frequency out of range 1. Check the frequency is in the range of specification or not; 2. Check whether AC cables are firmly and correctly connected; 3. Seek help from us, if can not go back to normal state.
F56	DC busbar voltage is too low 母线电压过№	Battery voltage low 1. Check whether battery voltage is too low; 2. If the battery voltage is too low, using PV or grid to charge the battery; 3. Seek help from us, if can not go back to normal state.
F58	BMS communication fault BMS 通"故障	
F63	ARC fault 拉弧故障	ARC fault detection is only for US market; Check PV module cable connection and clear the fault; Seek help from us, if can not go back to normal state.
F64	Heat sink high temperature failure 散热器温度过高	Heat sink temperature is too high 1. Check whether the work environment temperature is too high; 2. Turn off the inverter for 10mins and restart; 3. Seek help from us, if can not go back to normal state.

6. 附录

- 6.1. 附录一:
- 6.2. 附录二:
- **6.3.** 附录 й:
- 6.4. 附录四
- 6.5. 附录五: