

Adressregister und Anwendungsdetails

Address	variable	Belong	Data	Data	Remarks					
Register		to R/W	format	Model						
	Household Meter									
	Grid	Meter Con	fig							
0000H	Grid Meter CT Enable	R/W	Occupy 2byte	unsigned short	1/bit					
0001H	Grid Meter CT Rate	R/W	Occupy 2byte	unsigned short	1/bit					
	Grid Me	eter Running	g Data							
0010H	Total energy feed to grid(Grid)	RO	Occupy	unsigned	0.01kWh/bit					
0011H			4 byte	int	U.UTKWII/DIL					
0012H 0013H	Total energy consume from grid(Grid)	RO	Occupy 4 byte	unsigned int	0.01kWh/bit					
0014H	Voltage of A phase(Grid)	RO	Occupy 2byte	unsigned short	1V					
0015H	Voltage of B phase(Grid)	RO	Occupy 2byte	unsigned short	1V					
0016H	Voltage of C phase(Grid)	RO	Occupy 2byte	unsigned short	1V					
0017H	Current of A phase(Grid)	RO	Occupy 2byte	short	0.1A					
0018H	Current of B phase(Grid)	RO	Occupy 2byte	short	0.1A					
0019H	Current of C phase(Grid)	RO	Occupy 2byte	short	0.1A					
001AH	Frequent(Grid)	RO	Occupy 2byte	unsigned short	0.01Hz					
001BH 001CH	Active power of A phase(Grid)	RO	Occupy 4 byte	int	1W/bit					
001DH 001EH	Active power of B phase(Grid)	RO	Occupy 4 byte	int	1W/bit					
001FH 0020H	Active power of C phase(Grid)	RO	Occupy 4 byte	int	1W/bit					
0021H 0022H	Total Active power(Grid Meter)	RO	Occupy 4byte	int	1W/bit					
0023H 0024H	Reactive power of A phase(Grid)	RO	Occupy 4 byte	int	1var					



000511	D .: (D) (C)	D.C.		٠.	
0025H 0026H	Reactive power of B phase(Grid)	RO	Occupy 4 byte	int	1var
0027H	Reactive power of C phase(Grid)	RO	Occupy	int	
0028H			4 byte		1var
0029H	Total reactive power(Grid)	RO	Occupy	int	1
002AH			4 byte		1var
002BH	Apparent power of A phase(Grid)	RO	Occupy	int	4) (4)
002CH			4 byte		1VA
002DH	Apparent power of B phase(Grid)	RO	Occupy	int	1\/A
002EH			4 byte		1VA
002FH	Apparent power of C phase(Grid)	RO	Occupy	int	1VA
0030H			4 byte		1 1/7
0031H	Total apparent power(Grid)	RO	Occupy	int	1VA
0032H			4 byte		I VA
0033H	Power factor of A phase(Grid)	RO	Occupy	short	0.01
			2byte		0.01
0034H	Power factor of B phase(Grid)	RO	Occupy	short	0.01
			2byte		0.01
0035H	Power factor of C phase(Grid)	RO	Occupy	short	0.01
			2byte		0.01
0036H	Total Power factor(Grid)	RO	Occupy	short	0.01
			2byte		0.01
	PV	Meter confi	ig		
0080H	PV Meter CT Enable	R/W	Occupy	unsigned	1/bit
			2byte	short	1/010
0081H	PV Meter CT Rate	R/W	Occupy	unsigned	1/bit
			2byte	short	., 5.0
	PV Met	ter Running			
0090H	Total energy feed to Grid(PV)	RO	Occupy	unsigned	0.01kWh/bit
0091H			4 byte	int	
0092H	Total energy consume from	RO	Occupy	unsigned	0.01kWh/bit
0093H	Grid(PV)		4 byte	int	
0094H	Voltage of A phase(PV)	RO	Occupy	unsigned	1V
	▼		2byte	short	
0095H	Voltage of B phase(PV)	RO	Occupy	unsigned	1V
			2byte	short	
0096H	Voltage of C phase(PV)	RO	Occupy	unsigned	1V
			2byte	short	
0097H	Current of A phase(PV)	RO	Occupy	short	0.1A
			2byte		
0098H	Current of B phase(PV)	RO	Occupy	short	0.1A
			2byte		



0099H	Current of C phase(PV)	RO	Occupy 2byte	short	0.1A
009AH	Frequent(PV)	RO	Occupy 2byte	unsigned short	0.01HZ
009BH	Active power of A phase(PV)	RO	Occupy	int	1W/bit
009CH			4 byte		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
009DH	Active power of B phase(PV)	RO	Occupy	int	1W/bit
009EH			4 byte		TVV/DIC
009FH	Active power of C phase(PV)	RO	Occupy	int	1W/bit
00A0H			4 byte		TVV/ DIC
00A1H	Total Active power(PV Meter)	RO	Occupy	int	1W/bit
00A2H			4byte		TVV/DIC
00A3H	Reactive power of A phase(PV)	RO	Occupy	int	1var
00A4H			4 byte		TVai
00A5H	Reactive power of B phase(PV)	RO	Occupy	int	1var
00A6H			4 byte		ivai
00A7H	Reactive power of C phase(PV)	RO	Occupy	int	1var
00A8H			4 byte		Ivai
00A9H	Total reactive power(PV)	RO	Occupy	int	1vor
00AAH			4 byte		1var
00ABH	Apparent power of A phase(PV)	RO	Occupy	int	1)//
00ACH			4 byte		1VA
00ADH	Apparent power of B phase(PV)	RO	Occupy	int	4) (4)
00AEH			4 byte		1VA
00AFH	Apparent power of C phase(PV)	RO	Occupy	int	4) (4
00B0H			4 byte		1VA
00B1H	Total apparent power(PV)	RO	Occupy	int	4) (4
00B2H			4 byte		1VA
00B3H	Power factor of A phase(PV)	RO	Occupy	short	0.01
			2byte		0.01
00B4H	Power factor of B phase(PV)	RO	Occupy	short	0.01
			2byte		0.01
00B5H	Power factor of C phase(PV)	RO	Occupy	short	0.01
			2byte		0.01
00B6H	Total Power factor(PV)	RO	Occupy	short	0.01
			2byte		0.01
	Hou	sehold Batt	ery		
0100H	Battery voltage	RO	Occupy	unsigned	0.1V/bit
			2 byte	short	0.1V/DIL
0101H	Battery current	RO	Occupy	short	0.1A/bit
			2 byte		U. IAYDIL



0102H	Battery SOC	RO	Occupy	unsigned	
	,		2 byte	short	0.1/bit
0103H	Battery status	RO	Occupy 2 byte	unsigned short	Note1
0104H	Battery relay status	RO	Occupy	unsigned short	Note2
0105H	Pack ID of min cell voltage	RO	2 byte Occupy	unsigned	
	- Tuest 12 or mini con ronage		2 byte	short	0.001V/bit
0106H	Cell ID of min cell voltage	RO	Occupy	unsigned	0.001V/bit
			2 byte	short	0.0017/01
0107H	Min cell voltage	RO	Occupy	unsigned	0.001V/bit
040011	D 1 1D 6	20	2 byte	short	
0108H	Pack ID of max cell voltage	RO	Occupy	unsigned short	0.001V/bit
0109H	Call ID of may call yeltage	RO	2 byte Occupy		
0109H	Cell ID of max cell voltage	KO	2 byte	unsigned short	0.001V/bit
010AH	Max cell voltage	RO	Occupy	unsigned	<u> </u>
010/111	Wax een voltage	1.0	2 byte	short	0.001V/bit
010BH	Pack ID of min cell temperature	RO	Occupy	unsigned	
	·		2 byte	short	0.1°C/bit
010CH	Cell ID of min cell temperature	RO	Occupy	unsigned	0.1%C/b:t
			2 byte	short	0.1°C/bit
010DH	Min cell temperature	RO	Occupy	short	0.1°C/bit
			2 byte		0.1 C/ 510
010EH	Pack ID of max cell temperature	RO	Occupy 2 byte	unsigned short	0.1°C/bit
010FH	Cell ID of max cell temperature	RO	Occupy	unsigned	0.1°C/bit
			2 byte	short	0.1 C/bit
0110H	Max cell temperature	RO	Occupy	short	0.1°C/bit
			2 byte		0.1 C/bit
0111H	Battery max charge current	RO	Occupy	unsigned	0.1A/bit
			2 byte	short	,
0112H	Battery max discharge current	RO	Occupy	unsigned	0.1A/bit
044311	D. (1)	DO.	2 byte	short	
0113H	Battery charge cut-off voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
0114H	Battery discharge cut-off voltage	RO	Occupy	unsigned	0.4)//1-1:
			2 byte	short	0.1V/bit
0115H	BMU software version	RO	Occupy	unsigned	
			2 byte	short	
0116H	LMU software version	RO	Occupy	unsigned	
			2 byte	short	
0117H	ISO software version	RO	Occupy	unsigned	



			2 1-1	-l ut	
04407	1	D.C.	2 byte	short	D //
0118H	Battery num	RO	Occupy	unsigned	Battery module
			2 byte	short	number
0119H	Battery capacity	RO	Occupy	unsigned	0.1kWh/bit
			2 byte	short	
011AH	Battery type	RO	Occupy	unsigned	Note3
			2 byte	short	110100
011BH	Battery SOH	RO	Occupy	unsigned	0.1/bit
			2 byte	short	0.17.010
011CH	Battery warning	RO	Occupy	unsigned	Note28
011DH			4 byte	int	Note26
011EH	Battery fault	RO	Occupy	unsigned	Nistad
011FH			4 byte	int	Note4
0120H	Battery charge energy	RO	Occupy	unsigned	0.41.141.41.4
0121H			4 byte	int	0.1kWh/bit
0122H	Battery discharge energy	RO	Occupy	unsigned	
0123H			4 byte	int	0.1kWh/bit
0124H	Battery energy charge from grid	RO	Occupy	unsigned	
0125H			4 byte	int	0.1kWh/bit
0126H	Battery Power	RO	Occupy	short	1W/bit (
			2 byte		-: Charge
					+: Discharge)
0127H	Battery remaining time	RO	Occupy	unsigned	
			2 byte	short	1min/bit
0128H	Battery Implementation Charge	RO	Occupy	unsigned	0.1/bit(Rate_SOC-
	soc		2 byte	short	UPS SOC)
0129H	Battery Implementation Discharge	RO	Occupy	unsigned	0.1/bit(Rate_SOC-
	soc		2 byte	short	UPS SOC)
012AH	Battery Remaining Charge SOC	RO	Occupy	unsigned	0.1/bit(Rate SOC-
0.12	January Holliams Grange Co		2 byte	short	Remain SOC)
012BH	Battery Remaining Discharge SOC	RO	Occupy	unsigned	0.1/bit(Remain SOC
012511	Battery Remaining Discharge 300		2 byte	short	- UPS SOC)
012CH	Battery Max charge power	RO	Occupy	unsigned	0.0_000,
012011	Battery Wax charge power	I NO	2 byte	short	1W/bit
012DH	Battery Max Discharge power	RO	Occupy	unsigned	
012011	battery wax discharge power	I NO		short	1W/bit
012511	Patton, MOS Control	D /\A/	2 byte		
012EH	Battery MOS Control	R/W	Occupy	unsigned	0:Open, 1:Close
012511	Pottom, COC Calibration	DC.	2 byte	short	
012FH	Battery SOC Calibration	RO	Occupy	unsigned	0:Disable, 1: Enable
012011	Battara Cinal	DC.	2 byte	short	
0130H	Battery Single cut error code	RO	Occupy	unsigned	
		1.5	2 byte	short	
0131H	Battery fault1	RO	Occupy	unsigned	
0132H			4 byte	int	



012211	Pottom, foult?	DO.	Occupy	uncianod	
0133H	Battery fault2	RO	Occupy	unsigned	
0134H	B 11 6 112		4 byte	int	
0135H	Battery fault3	RO	Occupy	unsigned · .	
0136H			4 byte	int	
0137H	Battery fault4	RO	Occupy	unsigned	
0138H			4 byte	int	
0139H	Battery fault5	RO	Occupy	unsigned	
013AH			4 byte	int	
013BH	Battery fault6	RO	Occupy	unsigned	
013CH			4 byte	int	
013DH	Battery warning1	RO	Occupy	unsigned	
013EH			4 byte	int	
013FH	Battery warning2	RO	Occupy	unsigned	
0140H			4 byte	int	
0141H	Battery warning3	RO	Occupy	unsigned	
0142H			4 byte	int	
0143H	Battery warning4	RO	Occupy	unsigned	
0144H			4 byte	int	
0145H	Battery warning5	RO	Occupy	unsigned	
0146H			4 byte	int	
0147H	Battery warning6	RO	Occupy	unsigned	
0148H			4 byte	int	
	Ho	usehold In	verter		
0400H	Inverter_Voltage_L1	RO	Occupy	unsigned	0.4) (# ')
			2 byte	short	0.1V/bit
0401H	Inverter_Voltage_L2	RO	Occupy	unsigned	0.4144.5
			2 byte	short	0.1V/bit
0402H	Inverter Voltage L3	RO	Occupy	unsigned	
`			2 byte	short	0.1V/bit
0403H	Inverter Current L1	RO	Occupy	short	
			2 byte		0.1A/bit
0404H	Inverter_Current_L2	RO	Occupy	short	
			2 byte		0.1A/bit
0405H	Inverter_Current_L3	RO	Occupy	short	
			2 byte		0.1A/bit
0406H	Inverter Power L1	RO	Occupy	int	
0407H			4 byte	-	1W/bit
0408H	Inverter Power L2	RO	Occupy	int	
0409H			4 byte		1W/bit
040AH	Inverter_Power_L3	RO	Occupy	int	
040BH			4 byte		1W/bit
0-10011			- byte		



040CH 040DH	Inverter_Power_Total	RO	Occupy 4 byte	int	1W/bit
040EH	Inverter_Backup_Voltage_L1	RO	Occupy 2 byte	unsigned short	0.1V/bit
040FH	Inverter_Backup_Voltage_L2	RO	Occupy 2 byte	unsigned short	0.1V/bit
0410H	Inverter_Backup_Voltage_L3	RO	Occupy 2 byte	unsigned short	0.1V/bit
0411H	Inverter_Backup_Current_L 1	RO	Occupy 2 byte	unsigned short	0.1A/bit
0412H	Inverter_Backup_Current_L2	RO	Occupy 2 byte	unsigned short	0.1A/bit
0413H	Inverter_Backup_Current_L3	RO	Occupy 2 byte	unsigned short	0.1A/bit
0414H 0415H	Inverter_Backup_Power_L1	RO	Occupy 4 byte	unsigned int	1W/bit
0416H 0417H	Inverter_Backup_Power_L2	RO	Occupy 4 byte	unsigned int	1W/bit
0418H 0419H	Inverter_Backup_Power_L3	RO	Occupy 4 byte	unsigned int	1W/bit
041AH 041BH	Inverter_Backup_Power_Total	RO	Occupy 4 byte	unsigned int	1W/bit
041CH	Inverter Grid Frequency	RO	Occupy 2 byte	unsigned short	0.01Hz/bit
041DH	PV1 Voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
041EH	PV1 Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
041FH 0420H	PV1 power	RO	Occupy 4 byte	unsigned int	1w/bit
0421H	PV2 Voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
0422H	PV2 Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
0423H 0424H	PV2 power	RO	Occupy 4 byte	unsigned int	1w/bit
0425H	PV3 Voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
0426H	PV3 Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
0427H 0428H	PV3 power	RO	Occupy 4 byte	unsigned int	1w/bit



0429H	PV4 Voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
042AH	PV4 Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
042BH 042CH	PV4 power	RO	Occupy 4 byte	unsigned int	1w/bit
042DH	PV5 Voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
042EH	PV5 Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
042FH 0430H	PV5 power	RO	Occupy 4 byte	unsigned int	1w/bit
0431H	PV6 Voltage	RO	Occupy 2 byte	unsigned short	0.1V/bit
0432H	PV6 Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
0433H 0434H	PV6 power	RO	Occupy 4 byte	unsigned int	1w/bit
0435H	INV Temperature	RO	Occupy 2 byte	unsigned short	0.1°C/bit
0436H 0437H	Inverter warning1	RO	Occupy 4 byte	unsigned int	Reserve
0438H 0439H	Inverter warning2	RO	Occupy 4 byte	unsigned int	Reserve
043AH 043BH	Inverter fault1	RO	Occupy 4 byte	unsigned int	Note 20
043CH 043DH	Inverter fault2	RO	Occupy 4 byte	unsigned int	Note26
043EH 043FH	Inverter Totol PV Energy	RO	Occupy 4 byte	unsigned int	0.1kWh/bit
0440H	Inverter work mode	RO	Occupy 2 byte	unsigned short	Note5
0441H	Inverter Bat voltage	RO	Occupy 2byte	unsigned short	1V/bit
0442H	Inverter Bat Current	RO	Occupy 2 byte	unsigned short	0.1A/bit
0443H	Inverter Bat Power	RO	Occupy 2 byte	int	1W/bit
0444H 0445H	Inverter Total React power	RO	Occupy 4 byte	int	1W/bit
0446H 0447H	Inverter Total Apparent power	RO	Occupy 4 byte	int	1W/bit



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0448H	Inverter Frequency	RO	Occupy	unsigned	0.01Hz/bit
			2 byte	short	
04549H	Inverter Backup Frequency	RO	Occupy	unsigned	0.01Hz/bit
			2 byte	short	0.01112/1010
044AH	Inverter Power factor	RO	Occupy	short	0.01 //- 14
			2 byte		0.01/bit
044BH	Inverter fault extend1	RO	Occupy	unsigned	
044CH			4 byte	int	
044DH	Inverter fault extend2	RO	Occupy	unsigned	Note27
044EH	inverter laure external	110	4 byte	int	
	Incompanies de la companies	DO.	•		
044FH	Inverter fault extend3	RO	Occupy	unsigned	Reserve
0450H			4 byte	int	
0451H	Inverter fault extend4	RO	Occupy	unsigned	Reserve
0452H			4 byte	int	Reserve
	Household Inve	erter Extend	Running Da	ata	
0500H~		RO			
063FH	Reserve				
003111					
	l I	nverter info			
0640H~	Inverter master software version	RO	Occupy	unsigned	
0644H	inverter master software version	NO	10byte	char	
	lucanta a de la sefera de la seria del seria della ser	DO.	•		
0645H~	Inverter slave software version	RO	Occupy	unsigned	
0649H			10byte	char	
064AH~	Inverter SN	RO	Occupy	unsigned	
0653H			20byte	char	
	System(Only a	applicable t	HHE MEC)	
0700H	Feed into grid percent	R/W	Occupy	unsigned	404 41 11
			2 byte	short	1%/bit
0701H	System fault	RO	Occupy	unsigned	
	System radit		. ,	int	Note6
0702H	Control time (A)	D //A/	4 byte		Data farma 11
0703H	System_time: (year)-(month)	R/W	Occupy	unsigned	Data format hex;
	<u> </u>		2 byte	short	0xYYMM,
					example: Send
					0x1109;
					year:0x11(2017)
					month:0x09(09);
0704H	System_time: (day)-(hour)	R/W	Occupy	unsigned	Data format hex;
	, , , , , , , , , , , , , , , , , , , ,	,	2 byte	short	0xDDHH,
			_ 5y tc	311011	example: Send
					· ·
					0x1109;
					day:0x11(The 17



_				1	
					day)
					hour:0x09(09);
0705H	System_time: (minute)-(second)	R/W	Occupy	unsigned	Data format hex;
			2 byte	short	0xmmss,
					example: Send
					0x1109;
					min:0x11(17)
					second:0x09(09);
0706H	EMS SN byte1-2	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x414C==' AL'
0707H	EMS SN byte3-4	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
0708H	EMS SN byte5-6	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
0709H	EMS SN byte7-8	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
070AH	EMS SN byte9-10	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
070BH	EMS SN byte11-12	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
070CH	EMS SN byte13-14	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
070DH	EMS SN byte15-16	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
070EH	EMS DO0	WO	Occupy	unsigned	Bypass Control
			2 byte	short	function
070FH	EMS DO1	WO	Occupy	unsigned	System fault
			2 byte	short	output.
0710H	EMS DIO	RO	Occupy	unsigned	EPO, Battery MOS
			2 byte	short	cut off.
0711H	EMS DI1	RO	Occupy	unsigned	Reserved
			2 byte	short	Neser ved
0712H	UPS Reserve Soc	R/W	Occupy	unsigned	0.1%/bit
			2 byte	short	0.176/DIL
0713H	Time discharge start time1	R/W	Occupy	unsigned	1h/bit
			2 byte	short	III/DIL
0714H	Time discharge stop time1	R/W	Occupy	unsigned	1h/bit
			2 byte	short	THIOR
0715H	Time discharge start time2	R/W	Occupy	unsigned	1h/bit
			2 byte	short	HIJUIL
0716H	Time discharge stop time2	R/W	Occupy	unsigned	1h/bit
			2 byte	short	THYDIC
0717H	Charge Cut Soc	R/W	Occupy	unsigned	0.1%/bit
			2 byte	short	0.170/DIL



0718H	Time charge start time1	R/W	Occupy 2 byte	unsigned short	1h/bit
0719H	Time charge stop time1	R/W	Occupy 2 byte	unsigned short	1h/bit
071AH	Time charge start time2	R/W	Occupy 2 byte	unsigned short	1h/bit
071BH	Time charge stop time2	R/W	Occupy 2 byte	unsigned short	1h/bit
071CH	System mode	R/W	Occupy 2 byte	unsigned short	1/bit
071DH	System laguage	R/W	Occupy 2 byte	unsigned short	1/bit
071EH 071FH	PV Capacity of pv inverter	R/W	Occupy 4 byte	unsigned int	1W/bit
0720H 0721H	PV Inverter Totol PV Energy	R/W	Occupy 4 byte	unsigned int	0.1kWh/bit
0722H	Dispatch Start	R/W	Occupy 2 byte	unsigned short	1:start; 0: stop
0723H 0724H	Dispatch Active power	R/W	Occupy 4 byte	int	1W/bit Offset:32000 charge:<32000 discharge:>32000
0725H 0726H	Dispatch Reactive power	R/W	Occupy 4 byte	int	1var/bit Offset:32000 charge:<32000 discharge:>32000
0727H	Dispatch Mode	R/W	Occupy 2 byte	unsigned short	Note7
0728H	Dispatch SOC	R/W	Occupy 2 byte	unsigned short	0.4%/bit example: Send SOC=95,correspon ding to the SOC of 38%.
0729H	EMS Version High	RO	Occupy 2 byte	unsigned short	
072AH	EMS Version Middle	RO	Occupy 2 byte	unsigned short	
072BH	EMS Version Low	RO	Occupy 2 byte	unsigned short	
	Echone	et Config (Ja			
072CH	User Mode	R/W	Occupy	unsigned	0: Green mode
			2 byte	short	1: Economic model
			2 5 9 10	311011	2: Secure mode
072DH	Battery Mode	R/W	Occupy	unsigned	0: Auto mode
טובטח	Dattery Mode	ry vv	Оссиру	unsigned	o. Auto mode



			2 byte	short	1: Charge mode
					2: Discharge mode
					3: Standby mode
072EH	Set Battery Power	R/W	Occupy	short	1W/bit
			2 byte		Charge mode or
					Dis charge mode
					Set Battery Power
072FH	Set Inverter output Power	R/W	Occupy	unsigned	Set Photovoltaic
			2 byte	short	(pv) power
0730H	Echonet Enable	R/W	Occupy	unsigned	0:Disable 1:Enable
			2 byte	short	U.DISADIE T.ENADIE
		System Info			
0740H	System_time: (year)-(month)	R/W	Occupy	unsigned	Data format hex;
			2 byte	short	0xYYMM,
					example: Send
					0x1109;
					year:0x11(2017)
					month:0x09(09);
0741H	System_time : (day)-(hour)	R/W	Occupy	unsigned	Data format hex;
			2 byte	short	0xDDHH,
					example: Send
					0x1109;
					day:0x11(The 17
					day)
					hour:0x09(09);
0742H	System_time : (minute)-(second)	R/W	Occupy	unsigned	Data format hex;
			2 byte	short	0xmmss,
					example: Send
					0x1109;
					min:0x11(17)
					second:0x09(09);
0743H	EMS SN byte1-2	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x414C==' AL'
0744H	EMS SN byte3-4	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
0745H	EMS SN byte5-6	RO	Occupy	unsigned	EMS SN :ASCII
		1	2 byte	short	0x3132==' 12'
0746H	EMS SN byte7-8	RO	Occupy	unsigned	EMS SN :ASCII
		1	2 byte	short	0x3132==' 12'
0747H	EMS SN byte9-10	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
0748H	EMS SN byte11-12	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
0749H	EMS SN byte13-14	RO	Occupy	unsigned	EMS SN :ASCII



					<u></u>
			2 byte	short	0x3132==' 12'
074AH	EMS SN byte15-16	RO	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
074BH	EMS Version High	R	Occupy	unsigned	
			2 byte	short	
074CH	EMS Version Middle	R	Occupy	unsigned	
			2 byte	short	
074DH	EMS Version Low	R	Occupy	unsigned	
			2 byte	short	
074EH	Protocol Version	RO	Occupy	unsigned	
			2 byte	short	
		System Con	fig		
H0080	MAX Feed into grid percent	R/W	Occupy	unsigned	1%/bit
			2 byte	short	1707 010
0801H	PV Capacity Storage	R/W	Occupy	unsigned	1W/bit
0802H			4 byte	int	TVV/ DIC
0803H	PV Capacity of Grid Inverter	R/W	Occupy	unsigned	1W/bit
0804H			4 byte	int	
0805H	System mode	R/W	Occupy	unsigned	1: AC Mode
			2 byte	short	2: DC Mode
					3: Hybird Mode
0806H	Meter CT Select	R/W	Occupy	unsigned	电表安装选项:
			2 byte	short	0:Grid&PV use CT;
					1:Grid use CT、PV
		,			use Meter;
					2:Grid use Meter、
					PV use CT;
					3: Grid&PV use
					Meter;
0807H	Battery Ready	R/W	Occupy	unsigned	0: OFF
			2 byte	short	1: ON
H8080	IP Method	R/W	Occupy	unsigned	0: DHCP
			2 byte	short	1: STATIC
0809H	Local IP	R/W	Occupy	unsigned	0xC0, 0xA8,
HA080			4 byte	short	0x01, 0x01
					192.168.1.1
080BH	Subnet Mask	R/W	Occupy	unsigned	0xFF, 0xFF,
080CH			4 byte	short	0xFF, 0x01
					255.255.255.1
080DH	Gateway	R/W	Occupy	unsigned	0xC0, 0xA8,
080EH			4 byte	short	0x01, 0x01
				1	192.168.1.1
080FH	Modbus Address	R/W	Occupy	unsigned	default 0x55



			2 byte	short	
0810H	Modbus Baud rate	R/W	Occupy	unsigned	0: 9600
		'	2 byte	short	1: 115200 (only
			- 3,33		for household)
					2: 256000 (only
					for household)
					3: 19200(only for
					industry)
0811H	Three phase unbalance mode	R/W	Occupy	unsigned	0 : Disable
	enable	'	2 byte	short	1 : Enable
			,		
	Time	period cor	itrol		<u> </u>
084FH	Time period control flag	R/W	Occupy	unsigned	0 : Disable Time
			2 byte	short	period control
					1: Enable Charge
					Time period control
					2: Enable
					discharge Time
					period control
					3: Enable Time
					period control
0850H	UPS Reserve Soc	R/W	Occupy	unsigned	0.40/ //-:+
			2 byte	short	0.1%/bit
0851H	Time discharge start time1 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	111/DIL [0-25]
0852H	Time discharge stop time1 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	111/011 [0-25]
0853H	Time discharge start time2 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	11/010 [0 25]
0854H	Time discharge stop time2 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	myore [o 25]
0855H	Charge Cut Soc	R/W	Occupy	unsigned	0.1%/bit
			2 byte	short	0.170/ 010
0856H	Time charge start time1 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	, 5.10 [0 25]
0857H	Time charge stop time1 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	, 510 [5 25]
0858H	Time charge start time2 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	, 5.10 [5 25]
0859H	Time charge stop time2 hours	R/W	Occupy	unsigned	1h/bit [0-23]
			2 byte	short	, 5.0 [0 25]
085AH	Time discharge start time1 minutes	R/W	Occupy	unsigned	1min/bit [0-59]
			2 byte	short	
085BH	Time discharge stop time1 minutes	R/W	Occupy	unsigned	1min/bit [0-59]



			2 byte	short	
085CH	Time discharge start time2 minutes	R/W	Occupy	unsigned	4 . 4 . 50 . 501
			2 byte	short	1min/bit [0-59]
085DH	Time discharge stop time2 minutes	R/W	Occupy	unsigned	
	grant grant	,	2 byte	short	1min/bit [0-59]
085EH	Time charge start time1 minutes	R/W	Occupy	unsigned	
OOSEIT	Time charge start time i filmates	1,4,4	2 byte	short	1min/bit [0-59]
085FH	Time charge stop time1 minutes	R/W	Occupy	unsigned	
003111	Time charge stop time i minutes	IX/ VV	2 byte	short	1min/bit [0-59]
0860H	Time shares start time? minutes	R/W	<u> </u>		
000011	Time charge start time2 minutes	K/VV	Occupy	unsigned	1min/bit [0-59]
006411	T' 1	D 044	2 byte	short	
0861H	Time charge stop time2 minutes	R/W	Occupy	unsigned	1min/bit [0-59]
			2 byte	short	
		Dispatch			
0880H	Dispatch Start	R/W	Occupy	unsigned	1:start; 0: stop
			2 byte	short	1.Start, 0. Stop
0881H	Dispatch Active power	R/W	Occupy	Int	1W/bit
0882H			4byte		Offset:32000
					charge:<32000
					discharge:>32000
0883H	Dispatch Reactive power	R/W	Occupy	Int	1var/bit
0884H			4byte		Offset:32000
					charge:<32000
					discharge:>32000
0885H	Dispatch Mode	R/W	Occupy	unsigned	
		,	2 byte	short	Note7
0886H	Dispatch SOC	R/W	Occupy	unsigned	0.4%/bit
			2 byte	short	example: Send
			_ 5) (5	55	SOC=95,correspon
					ding to the SOC of
					38%.
0887H	Dispatch Time	R/W	Occupy	unsigned	3370.
0888H	Disputerr Time		4 byte	int	1s/bit
000011	▼		+ Dyte	1110	
		ALIV			
		AUX			
08B0H	EMS DO0	WO	Occupy	unsigned	Bypass Control
			2 byte	short	function(only for
					household)
08B1H	EMS DO1	WO	Occupy	unsigned	System fault
			2 byte	short	output. (only for
					household)
08B2H	EMS DO2	WO	Occupy	unsigned	YK_pcs_epo(only
					_i,i, - (0,)



			2 byte	short	for industry)
08B3H	EMS DO3	wo	Occupy	unsigned	YK_switch_brake_op
002311			2 byte	short	en(only for
			Layte	311011	industry)
08B4H	EMS DO4	wo	Occupy	unsigned	YK_switch_brake_cl
005 111	LWS DO I	""	2 byte	short	ose(only for
			Layte	311011	industry)
08B5H	EMS DO5	wo	Occupy	unsigned	YK_dg_on_off_contr
002311			2 byte	short	ol(only for industry)
08B6H	EMS DO6	wo	Occupy	unsigned	YK bms fault feedb
002011			2 byte	short	ack(only for
			_ Syte	311011	industry)
08B7H	EMS DO7	wo	Occupy	unsigned	DO-8(only for
002711	Livis Boy	""	2 byte	short	industry)
08B8H	EMS DO8	wo	Occupy	unsigned	madsity)
ООВОГТ	LIVIS DOG	100	2 byte	short	
08B9H	EMS DO9	wo	Occupy	unsigned	
000311	LIVIS DOS	VVO	2 byte	short	
08BAH	EMS DO10	wo	Occupy	unsigned	
OODAII	LIVIS DOTO	VVO	2 byte	short	
08BBH	EMS DO11	wo	Occupy		
UODDII	EIVIS DOTT	VVO	2 byte	unsigned short	
08BCH	EMS DO12	wo		unsigned	
ООВСП	EIWIS DOTZ	VVO	Occupy 2 byte	short	
08BDH	EMS DO13	wo	Occupy	unsigned	
OODDII	LIVIS DO 15	1,00	2 byte	short	
08BEH	EMS DO14	wo	Occupy	unsigned	
000211	2.,000,1		2 byte	short	
08BFH	EMS DO15	wo	Occupy	unsigned	
002.11	2.00		2 byte	short	
08C0H	EMS DIO	RO	Occupy	unsigned	EPO, Battery MOS
			2 byte	short	cut off. (only for
					household)
08C1H	EMS DI1	RO	Occupy	unsigned	Reserved(only for
			2 byte	short	household)
08C2H	EMS DI2	RO	Occupy	unsigned	
			2 byte	short	
08C3H	EMS DI3	RO	Occupy	unsigned	YX_fire_fault(only
			2 byte	short	for industry)
08C4H	EMS DI4	RO	Occupy	unsigned	YX_gas_blow_out(o
			2 byte	short	nly for industry)
08C5H	EMS DI5	RO	Occupy	unsigned	YX_fire_systerm_fau
			2 byte	short	It(only for industry)
08C6H	EMS DI6	RO	Occupy	unsigned	YX_pcs_epo(only
	•	i	•	_	



			2 byte	short	for industry)
08C7H	EMS DI7	RO			•
06C/H	EIVIS DI7	RO	Occupy	unsigned	YX_spd_signal(only
00.5011	5146 010	50	2 byte	short	for industry)
08C8H	EMS DI8	RO	Occupy	unsigned	YX_water_signal(onl
			2 byte	short	y for industry)
08C9H	EMS DI9	RO	Occupy	unsigned	YX_door_signal(onl
			2 byte	short	y for industry)
08CAH	EMS DI10	RO	Occupy	unsigned	YX_shunt_trip_feed
			2 byte	short	back(only for
					industry)
08CBH	EMS DI11	RO	Occupy	unsigned	
			2 byte	short	
08CCH	EMS DI12	RO	Occupy	unsigned	
			2 byte	short	
08CDH	EMS DI13	RO	Occupy	unsigned	
			2 byte	short	
08CEH	EMS DI14	RO	Occupy	unsigned	YX_systerm_epo(onl
			2 byte	short	y for industry)
08CFH	EMS DI15	RO	Occupy	unsigned	
			2 byte	short	
	Sys	tem Running	Data	•	
08D0H	PV Inverter Energy	RO	Occupy	unsigned	0.413441.41.5
08D1H			4 byte	int	0.1kWh/bit
08D2H	The system total PV energy	RO	Occupy	unsigned	
08D3H			4 byte	int	0.1kWh/bit
08D4H	System fault	RO	Occupy	unsigned	
08D5H			4 byte	int	Note6
		Safety TES	Γ		
1000H	Grid Regulation	R/W	Occupy	unsigned	
`			2 byte	short	Note8
1001H	Safety Test Enable	R/W	Occupy	unsigned	Safety Test Enable
		1,411	2 byte	short	0 : Disable
			- 2,00	5	1 : Enable
1002H	Safety Mode Enable	R/W	Occupy	unsigned	
1002H	23.00, 1.000 21.0010	''	4 byte	int	Note9
1004H	Starting_slope	R/W	Occupy	unsigned	
	3.00pc	.,,,,,	2 byte	short	0.01%Pn/min
1005H	Phase state	R/W	Occupy	unsigned	0: advance 1:
100311	i nase state	13/ ۷۷	2 byte	short	phase lag
1006H	PF Value	R/W	Occupy	short	priase lay
10000	ri value	17/ ٧٧		SHULL	0.01
100711	Vale MATT Charling	D (A)	2 byte		0.11/
1007H	Volt-WATT Starting	R/W	Occupy	unsigned	0.1V



			2 byte	short	
100011	Valt WATT Ctan	D AA/			
1008H	Volt-WATT Stop	R/W	Occupy 2 byte	unsigned short	0.1V
1009H	Set Battery Power	R/W	Occupy	short	1W/bit
			2 byte		Set Battery Power
100AH	Set Inverter power	R/W	Occupy	unsigned	1W/bit
			2 byte	short	Set the inverter
					output power
100BH	Ovp	R/W	Occupy	unsigned	0.414
			2 byte	short	0.1V
100CH	OvpT	R/W	Occupy	unsigned	
	·	,	2 byte	short	1ms
100DH	Ovp10	R/W	Occupy	unsigned	
		1,411	2 byte	short	0.1V
100EH	Ovp10T	R/W	Occupy	unsigned	
TOOLIT	CVPIOT	17,44	2 byte	short	1s
100FH	Uvp	R/W	Occupy	unsigned	
ТООГП	ΟVP	IN/ VV		short	0.1V
101011	11 	DAA	2 byte		
1010H	UvpT	R/W	Occupy	unsigned	1ms
101111		2.01	2 byte	short	
1011H	Uvp2	R/W	Occupy	unsigned	0.1V
			2 byte	short	
1012H	Uvp2T	R/W	Occupy	unsigned	1ms
			2 byte	short	
1013H	Ofp	R/W	Occupy	unsigned	0.01Hz
			2 byte	short	01011.12
1014H	OfpT	R/W	Occupy	unsigned	1ms
			2 byte	short	11113
1015H	Ofp2	R/W	Occupy	unsigned	0.01Hz
			2 byte	short	0.01112
1016H	Ofp2T	R/W	Occupy	unsigned	4
			2 byte	short	1ms
1017H	Ufp	R/W	Occupy	unsigned	0.0411
			2 byte	short	0.01Hz
1018H	UfpT	R/W	Occupy	unsigned	
			2 byte	short	1ms
1019H	Ufp2	R/W	Occupy	unsigned	
- - - •	r-		2 byte	short	0.01Hz
101AH	Ufp2T	R/W	Occupy	unsigned	
	0.621	1,7,00	2 byte	short	1ms
101BH	Ufp2T	R/W	Occupy	unsigned	
ווטוטו	σιμει	IN/ VV	2 byte	short	1ms
			2 Dyte	SHOLL	11115
		ATE TEST			



110011	Pasat Mada	WO	Occurs	uncianad	0: None
1100H	Reset Mode	WO	Occupy	unsigned	0: None
			2 byte	short	1: Energy Reset
					2: Meter Reset
					4: Factory Reset
					8: restart EMS
1101H	EMS SN byte1-2	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x414C==' AL'
1102H	EMS SN byte3-4	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1103H	EMS SN byte5-6	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1104H	EMS SN byte7-8	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1105H	EMS SN byte9-10	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1106H	EMS SN byte11-12	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1107H	EMS SN byte13-14	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1108H	EMS SN byte15-16	R/W	Occupy	unsigned	EMS SN :ASCII
			2 byte	short	0x3132==' 12'
1109H	EMS MAC byte1-2	R/W	Occupy	unsigned	EMS MAC :HEX
			2 byte	short	0x70B3=0x70,0xB3
110AH	EMS MAC byte3-4	R/W	Occupy	unsigned	EMS MAC : HEX
			2 byte	short	0xD57A=0xD5,0x7A
110BH	EMS MAC byte5-6	R/W	Occupy	unsigned	EMS MAC : HEX
			2 byte	short	0x2C11=0x2C,0x11
110CH	Pointing to the server	R/W	Occupy	unsigned	0: Formal Server
			2 byte	short	1: RD test
					2: Production test
					3: Encryption
					4: OEM ZOE
					5: OEM ZOE test
110DH	Network type	R/W	Occupy	unsigned	
			2 byte	short	
110EH	System laguage	R/W	Occupy	unsigned	0:English
			2 byte	short	1: German
110FH	Inverter model	R/W	Occupy	unsigned	0:INVERTER_NULL,
			2 byte	short	1:KELONG TYPE,
					2:SET_TYPE,
					3:GINLONG_TYPE,
					4:ALPHAESS TYPE,
					5:GOODWE TYPE,
1110H	Single Board Test Enable	WO	Occupy	unsigned	1:Enable
1	, J	1 -		5	ı



			2 byte	short	
1111H	Single Board Test Result	RO	Occupy	unsigned	
111111	Single board rest nesult		4 byte	int	
1113H	OEM Flag	R/W			0.VlphaESS
1113H	OEM Flag	K/VV	Occupy	unsigned	0:AlphaESS
			2 byte	short	1:ZOE
		CT calibration	on	ı	T
11B9H	Grid voltage	RO	Occupy	unsigned	0.1V/Bit
			2byte	short	0, 2
11BAH	Grid CT Current	RO	Occupy	short	0.1A/Bit
			2byte		0.17/1010
11BBH	PV CT Current	RO	Occupy	short	0.1A/Bit
			2byte		0.1A/Bit
11BCH	Grid CT Power	RO	Occupy	short	1\A//Di+
			2byte		1W/Bit
11BDH	PV CT Power	RO	Occupy	short	4144/D's
			2byte		1W/Bit
11BEH	Volt calibration point1	R/W	Occupy	unsigned	
	·		2byte	short	0.01V/Bit
11BFH	Volt calibration coef1	R/W	Occupy	short	
			2byte		0.0001/Bit
11C0H	Volt calibration offset1	R/W	Occupy	short	
			2byte		0.01V/Bit
11C1H	Volt calibration point2	R/W	Occupy	unsigned	
	TOTAL STATE OF THE	1,4,11	2byte	short	0.01V/Bit
11C2H	Volt calibration coef2	R/W	Occupy	short	
	13.13.13.13.13.13.13.13.13.13.13.13.13.1	.,,,,,,	2byte	3.1010	0.0001/Bit
11C3H	Volt calibration offset2	R/W	Occupy	short	
110311	VOIC COMBIGUION ONSCIZ	17,44	2byte	311011	0.01V/Bit
11C4H	Grid current calibration point1	R/W	Occupy	unsigned	
11C4F	Gild current cambration point	IN VV	2byte	short	0.1A/Bit
11/1	Crid current calibratics and	D ///	-		
11C5H	Grid current calibration coef1	R/W	Occupy	short	0.0001/Bit
110011	Cold company calls of the	D 044	2byte	-l- '	
11C6H	Grid current calibration offset1	R/W	Occupy	short	0.1A/Bit
44.6=		D 0	2byte		
11C7H	Grid current calibration point2	R/W	Occupy	unsigned	0.1A/Bit
			2byte	short	
11C8H	Grid current calibration coef2	R/W	Occupy	short	0.0001/Bit
			2byte		,
11C9H	Grid current calibration offset2	R/W	Occupy	short	0.1A/Bit
			2byte		
11CAH	Grid current calibration point3	R/W	Occupy	unsigned	0.1A/Bit



			2byte	short	
11CBH	Grid current calibration coef3	R/W	Occupy 2byte	short	0.0001/Bit
11CCH	Grid current calibration offset3	R/W	Occupy 2byte	short	0.1A/Bit
11CDH	Grid current calibration point4	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11CEH	Grid current calibration coef4	R/W	Occupy 2byte	short	0.0001/Bit
11CFH	Grid current calibration offset4	R/W	Occupy 2byte	short	0.1A/Bit
11D0H	Grid current calibration point5	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11D1H	Grid current calibration coef5	R/W	Occupy 2byte	short	0.0001/Bit
11D2H	Grid current calibration offset5	R/W	Occupy 2byte	short	0.1A/Bit
11D3H	Grid power calibration point1	R/W	Occupy 2byte	unsigned short	1W/Bit
11D4H	Grid power calibration coef1	R/W	Occupy 2byte	short	0.0001/Bit
11D5H	Grid power calibration offset1	R/W	Occupy 2byte	short	1W/Bit
11D6H	Grid power calibration point2	R/W	Occupy 2byte	unsigned short	1W/Bit
11D7H	Grid power calibration coef2	R/W	Occupy 2byte	short	0.0001/Bit
11D8H	Grid power calibration offset2	R/W	Occupy 2byte	short	1W/Bit
11D9H	Grid power calibration point3	R/W	Occupy 2byte	unsigned short	1W/Bit
11DAH	Grid power calibration coef3	R/W	Occupy 2byte	short	0.0001/Bit
11DBH	Grid power calibration offset3	R/W	Occupy 2byte	short	1W/Bit
11DCH	Grid power calibration point4	R/W	Occupy 2byte	unsigned short	1W/Bit
11DDH	Grid power calibration coef4	R/W	Occupy 2byte	short	0.0001/Bit
11DEH	Grid power calibration offset4	R/W	Occupy 2byte	short	1W/Bit
11DFH	Grid power calibration point5	R/W	Occupy 2byte	unsigned short	1W/Bit



11E0H	Grid power calibration coef5	R/W	Occupy 2byte	short	0.0001/Bit
11E1H	Grid power calibration offset	R/W	Occupy 2byte	short	1W/Bit
11E2H	PV current calibration point1	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11E3H	PV current calibration coef1	R/W	Occupy 2byte	short	0.0001/Bit
11E4H	PV current calibration offset1	R/W	Occupy 2byte	short	0.1A/Bit
11E5H	PV current calibration point2	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11E6H	PV current calibration coef2	R/W	Occupy 2byte	short	0.0001/Bit
11E7H	PV current calibration offset2	R/W	Occupy 2byte	short	0.1A/Bit
11E8H	PV current calibration point3	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11E9H	PV current calibration coef3	R/W	Occupy 2byte	short	0.0001/Bit
11EAH	PV current calibration offset3	R/W	Occupy 2byte	short	0.1A/Bit
11EBH	PV current calibration point4	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11ECH	PV current calibration coef4	R/W	Occupy 2byte	short	0.0001/Bit
11EDH	PV current calibration offset4	R/W	Occupy 2byte	short	0.1A/Bit
11EEH	PV current calibration point5	R/W	Occupy 2byte	unsigned short	0.1A/Bit
11EFH	PV current calibration coef5	R/W	Occupy 2byte	short	0.0001/Bit
11F0H	PV current calibration offset5	R/W	Occupy 2byte	short	0.1A/Bit
11F1H	PV power calibration point1	R/W	Occupy 2byte	unsigned short	1W/Bit
11F2H	PV power calibration coef1	R/W	Occupy 2byte	short	0.0001/Bit
11F3H	PV power calibration offset1	R/W	Occupy 2byte	short	1W/Bit
11F4H	PV power calibration point2	R/W	Occupy 2byte	unsigned short	1W/Bit
11F5H	PV power calibration coef2	R/W	Occupy 2byte	short	0.0001/Bit



11F6H	PV power calibration offset2	R/W	Occupy 2byte	short	1W/Bit
11F7H	PV power calibration point3	R/W	Occupy 2byte	unsigned short	1W/Bit
11F8H	PV power calibration coef3	R/W	Occupy 2byte	short	0.0001/Bit
11F9H	PV power calibration offset3	R/W	Occupy 2byte	short	1W/Bit
11FAH	PV power calibration point4	R/W	Occupy 2byte	unsigned short	1W/Bit
11FBH	PV power calibration coef4	R/W	Occupy 2byte	short	0.0001/Bit
11FCH	PV power calibration offset4	R/W	Occupy 2byte	short	1W/Bit
11FDH	PV power calibration point5	R/W	Occupy 2byte	unsigned short	1W/Bit
11FEH	PV power calibration coef5	R/W	Occupy 2byte	short	0.0001/Bit
11FFH	PV power calibration offset5	R/W	Occupy 2byte	short	1W/Bit
		EMS Debu	9		
1200H~	Debug	RO			
1227H					
	Industry R	<mark>emote Conti</mark>	ol Paramete	r	T
4000H	Energy dispatching mode	R/W	Occupy 2 byte	unsigned short	0: AC dispatching 1: DC dispatching
4001H	AC control mode	R/W	Occupy	unsigned	0: Fixed active
400011	Ac	D 04/	2 byte	short	power
4002H 4003H	AC power setting	R/W	Occupy 4 byte	int	1W/Bit
4004H	DC control mode	R/W	Occupy	unsigned	0: Fixed current
		1,4,11	2 byte	short	1: Fixed power
4005H	DC current setting	R/W	Occupy	int	·
4006H			4 byte		0.1A/Bit
4007H	DC power setting	R/W	Occupy	int	1W/Bit
4008H			4 byte		I VV/ DIC
4009H	Mode on/off	R/W	Occupy	unsigned	0: Mode off
			2 byte	short	1: Mode on
400AH	Grid interconnection mode	R/W	Occupy	unsigned	0: Grid-tied
			2 byte	short	1: Off-grid
400BH	Clear fault	R/W	Occupy	unsigned	0: False



400CH Emergency power off R/W 400DH Start up mode R/W 400EH Reactive power control mode R/W 400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved 407FH	2 byte Occupy 4 byte Occupy	short unsigned short unsigned short unsigned short short	1: True 0: False 1: True 0: Auto 1: Manual 0: Fixed PF 1: Fixed reactive power 0.01/Bit
400DH Start up mode R/W 400EH Reactive power control mode R/W 400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	2 byte Occupy 2 byte Occupy 2 byte Occupy 2 byte Occupy 4 byte Occupy	short unsigned short unsigned short short	1: True 0: Auto 1: Manual 0: Fixed PF 1: Fixed reactive power
400EH Reactive power control mode R/W 400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	Occupy 2 byte Occupy 2 byte Occupy 2 byte Occupy 4 byte Occupy	unsigned short unsigned short	0: Auto 1: Manual 0: Fixed PF 1: Fixed reactive power
400EH Reactive power control mode R/W 400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	2 byte Occupy 2 byte Occupy 2 byte Occupy 4 byte Occupy	short unsigned short short	1: Manual 0: Fixed PF 1: Fixed reactive power
400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	Occupy 2 byte Occupy 2 byte Occupy 4 byte Occupy	unsigned short short	0: Fixed PF 1: Fixed reactive power
400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	Occupy 2 byte Occupy 2 byte Occupy 4 byte Occupy	short	1: Fixed reactive power
400FH PF setting R/W 4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	Occupy 2 byte Occupy 4 byte Occupy	short	power
4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	2 byte Occupy 4 byte Occupy		
4010H~ Reactive power setting R/W 4011H 4012H~ Reserved	2 byte Occupy 4 byte Occupy		0.01/Bit
4011H 4012H~ Reserved	Occupy 4 byte Occupy	Int	0.01/Bit
4011H 4012H~ Reserved	4 byte Occupy	Int	
4012H~ Reserved	Occupy		
			1var/Bit
407FH			
	220 byte		
Industry Local Control	Parameter		
4080H System model R/W	Occupy	unsigned	0: Storion-T30
	2 byte	short	1: Storion-T50
			2: Storion-T100
			3: Storion-T150
			4: Storion-TB250
			5: Storion-TB500
4081H Send closing relay instruction (send R/W	Occupy	unsigned	0: False
end mark automatic cleanup)	2 byte	short	1: True
4082H Maximum power through meter R/W	Occupy	unsigned	1\A//Di+
4083H	4 byte	int	1W/Bit
4084H Charging power during charging R/W	Occupy	unsigned	4)A//D:+
4085H period	4 byte	int	1W/Bit
4086H Load cut soc R/W	Occupy	unsigned	10/ /D:+
	2 byte	short	1%/Bit
4087H Load tied soc R/W	Occupy	unsigned	40/ /B':
	2 byte	short	1%/Bit
4088H AC access type R/W	Occupy	unsigned	0: generator
	2 byte	short	1: grid
4089H Generator mode enable R/W	Occupy	unsigned	0: False
	2 byte	short	1: True
408AH Startup mode(Generator) R/W	Occupy	unsigned	0: SOC
	2 byte	short	1: Time period
			2: Manual
408BH Start SOC(SOC mode) R/W	Occupy	unsigned	10/ /Di+
	2 byte	short	1%/Bit
408CH Stop SOC(SOC mode) R/W	Occupy	unsigned	10/ /Di+
	2 byte	short	1%/Bit
408DH Start time(Time period mode) R/W	Occupy	unsigned	1h/Bit



			2 byte	short	
408EH	Stop time(Time period mode)	R/W	Occupy	unsigned	
	cop ame (mis period mede)		2 byte	short	1h/Bit
408FH	Power output mode(Generator)	R/W	Occupy	unsigned	1: GC charge
			2 byte	short	2: GC rated
4090H	Charge power set(Generator)	R/W	Occupy	unsigned	4144/001
4091H			4 byte	int	1W/Bit
4092H	Rated power(Generator)	R/W	Occupy	unsigned	1\A//D:+
4093H			4 byte	int	1W/Bit
4094H	Rated output percent(Generator)	R/W	Occupy	unsigned	1%/Bit
			2 byte	short	1707 DIC
4095H	Pmeter offset enable	R/W	Occupy	unsigned	0: False
			2 byte	short	1: True
4096H	Pmeter offset power setting	R/W	Occupy	unsigned	1W/Bit
4097H			4 byte	int	100,510
4098H	Start time1(Pmeter offset)	R/W	Occupy	unsigned	1h/Bit
			2 byte	short	1.9 2.0
4099H	End time1(Pmeter offset)	R/W	Occupy	unsigned	1h/Bit
			2 byte	short	
409AH	Start time2(Pmeter offset)	R/W	Occupy	unsigned	1h/Bit
			2 byte	short	
409BH	End time2(Pmeter offset)	R/W	Occupy	unsigned	1h/Bit
			2 byte	short	
409CH	Peak shaving and valley filling	R/W	Occupy	unsigned	0: False
100511	enable	2011	2 byte	short	1: True
409DH	Peak value setting	R/W	Occupy	unsigned · .	1W/Bit
409EH	V. II.	D 044	4 byte	int	
409FH	Valley value setting	R/W	Occupy	unsigned	1W/Bit
40A0H	Dalle	D AA/	4 byte	int	
40A1H	Delta	R/W	Occupy	unsigned	1W/Bit
40A2H	Dook showing start time 1	D AA/	4 byte	int	
40A3H	Peak shaving start time1	R/W	Occupy 2 byte	unsigned short	1h/Bit
40A4H	Peak shaving end time1	R/W	Occupy	unsigned	
40/411	reak snaving end time i	I V VV	2 byte	short	1h/Bit
40A5H	Peak shaving start time2	R/W	Occupy	unsigned	
70/7011	Teak shaving start timez	17,44	2 byte	short	1h/Bit
40A6H	Peak shaving end time2	R/W	Occupy	unsigned	1h/Bit
. 0, .011	- canada g and anner	'''	2 byte	short	
40A7H	Valley filling start time1	R/W	Occupy	unsigned	1h/Bit
		.,,,,	2 byte	short	
		+	Occupy unsigned 1h/Bit		
40A8H	Valley filling end time2	R/W	Occupy	unsigned	



		1	1	ı	1
40A9H	Valley filling start time2	R/W	Occupy 2 byte	unsigned short	1h/Bit
40AAH	Valley filling end time2	R/W	Occupy 2 byte	unsigned short	1h/Bit
40ABH	SOC directional calibration enable	R/W	Occupy	unsigned	0: False
			2 byte	short	1: True
40ACH	Calibration value	R/W	Occupy 2 byte	unsigned short	1%/Bit
40ADH	Pv inverter type	R/W	Occupy	unsigned	
			2 byte	short	
40AEH	Pv inverter num	R/W	Occupy 2 byte	unsigned short	
40AFH	Air condition type	R/W	Occupy	unsigned	
TOAITI	All condition type	TO VV	2 byte	short	
400011	Air condition num	D AA			
40B0H	Air condition num	R/W	Occupy	unsigned	
			2 byte	short	
40B1H	PV combiner box type	R/W	Occupy	unsigned	
			2 byte	short	
40B2H	PV combiner box num	R/W	Occupy	unsigned	
			2 byte	short	
40B3H	Local remote mode	R/W	Occupy	unsigned	0: Local
			2 byte	short	1: Remote
40B4H	EMS communication timeout	R/W	Occupy	unsigned	
			2 byte	short	1s/bit
40B5H~	Reserved		Occupy		
40FFH			150 byte		
			.55 57 55		
	Indust	try Air Cond	dition		
410011		1	1		O. atomallar
4100H	Working status(AirCon01)	RO	Occupy	unsigned	0: standby
			2 byte	short	1: run
4101H	Condenser temperature(AirCon01)	RO	Occupy 2 byte	short	0.1℃/Bit
4102H	Indoor temperature(AirCon01)	RO	Occupy	short	0.1°C/Bit
			2 byte		
4103H	Indoor humidity(AirCon01)	RO	Occupy 2 byte	unsigned short	1%/Bit
4104H	exhaust temperature(AirCon01)	RO	Occupy	short	0.1°C/Bit
			2 byte		·
4105H	Ac input voltage(AirCon01)	RO	Occupy 2 byte	unsigned short	0.1V/Bit
4106H	Ac input current(AirCon01)	RO	Occupy	short	0.1A/Bit
			2 byte		0.400/5
4107H	Refrigeration stopping point	RO	Occupy	short	0.1°C/Bit



	(AirCon01)		2 byte		
4108H	Refrigeration return difference	RO	Occupy	short	
	(AirCon01)		2 byte		0.1℃/Bit
4109H	Heating stop point(AirCon01)	RO	Occupy	short	
	3 ,		2 byte		0.1°C/Bit
410AH	Heating return difference	RO	Occupy	short	
	(AirCon01)		2 byte		0.1℃/Bit
410BH	High humidity warning point	RO	Occupy	unsigned	
	(AirCon01)		2 byte	short	1%/Bit
410CH	High temperature warning point	RO	Occupy	short	
	(AirCon01)		2 byte		0.1°C/Bit
410DH	Low temperature warning point	RO	Occupy	short	
	(AirCon01)		2 byte		0.1℃/Bit
410EH	Fault info1(AirCon01)	RO	Occupy	unsigned	
410FH			4 byte	int	Note16
4110H	Fault info2(AirCon01)	RO	Occupy	unsigned	
4111H			4 byte	int	
4112H	Electric heater state(AirCon01)	RO	Occupy	unsigned	0: stop
			2 byte	short	1: run
4113H	Compressor state(AirCon01)	RO	Occupy	unsigned	0: stop
			2 byte	short	1: run
4114H~	Reserved(AirCon01)		Occupy		
413FH			88 byte		
4140H~	Reserved(AirCon02)		Occupy		
417FH			128 byte		
4180H~	Reserved(AirCon03)		Occupy		
41BFH			128 byte		
41C0H~	Reserved(AirCon04)		Occupy		
41FFH			128 byte		
	Indus	try Diesel	Engine		
4200H	Line voltage between A to B	RO	Occupy	unsigned	0.43776.4
4201H	(Diesel Engine01)		4 byte	int	0.1V/Bit
4202H	Line voltage between B to C	RO	Occupy	unsigned	0.43776;
4203H	(Diesel Engine01)		4 byte	int	0.1V/Bit
4204H	Line voltage between C to A	RO	Occupy	unsigned	0.1\//D:+
4205H	(Diesel Engine01)		4 byte	int	0.1V/Bit
4206H	Phase A current(Diesel Engine01)	RO	Occupy	short	0.1 A /D:+
			2 byte		0.1A/Bit
4207H	Phase B current(Diesel Engine01)	RO	Occupy	short	0.1 A /D:+
			2 byte		0.1A/Bit
4208H	Phase C current(Diesel Engine01)	RO	Occupy	short	0.1A/Bit
	_		2 byte		
4209H	Frequency(Diesel Engine01)	RO	Occupy	unsigned	0.01Hz/Bit



			2 byte	short	
420AH	Phase A active power	RO	Occupy	int	
420BH	(Diesel Engine01)		4 byte		1W/Bit
420CH	Phase B active power	RO	Occupy	int	
420DH	(Diesel Engine01)		4 byte		1W/Bit
420EH	Phase C active power	RO	Occupy	int	4144/B':
420FH	(Diesel Engine01)		4 byte		1W/Bit
4210H	Phase A reactive power	RO	Occupy	int	1 /Dit
4211H	(Diesel Engine01)		4 byte		1var/Bit
4212H	Phase B reactive power	RO	Occupy	int	1var/Bit
4213H	(Diesel Engine01)		4 byte		TVal/bit
4214H	Phase C reactive power	RO	Occupy	int	1var/Bit
4215H	(Diesel Engine01)		4 byte		IVal/DIL
4216H	Phase A apparent power	RO	Occupy	int	1VA/Bit
4217H	(Diesel Engine01)		4 byte		TVA/DIC
4218H	Phase B apparent power	RO	Occupy	int	1VA/Bit
4219H	(Diesel Engine01)		4 byte		I VA/ DIC
421AH	Phase C apparent power	RO	Occupy	int	1VA/Bit
421BH	(Diesel Engine01)		4 byte		TVA/ DIC
421CH	Phase A factor(Diesel Engine01)	RO	Occupy	short	0.01/Bit
			2 byte		0.01/1010
421DH	Phase B factor(Diesel Engine01)	RO	Occupy	short	0.01/Bit
			2 byte		0.01/1010
421EH	Phase C factor(Diesel Engine01)	RO	Occupy	short	0.01/Bit
			2 byte		0.01/1010
421FH	Total active power(Diesel Engine01)	RO	Occupy	int	1W/Bit
4220H			4 byte		TVV/ DIC
4221H	Total reactive power	RO	Occupy	int	1var/Bit
4222H	(Diesel Engine01)		4 byte		TValybit
4223H	Total apparent power	RO	Occupy	int	1VA/Bit
4224H	(Diesel Engine01)		4 byte		1 47 (7 51)
4225H	Total factor(Diesel Engine01)	RO	Occupy	short	0.01/Bit
			2 byte		0.017 510
4226H	Oil pressure(Diesel Engine01)	RO	Occupy	short	1kPa/Bit
			2 byte		TRI U/ DIE
4227H	Coolant temperature	RO	Occupy	short	0.1°C/Bit
	(Diesel Engine01)		2 byte		5 5, 5
4228H	Engine temperature	RO	Occupy	short	0.1°C/Bit
	(Diesel Engine01)		2 byte		
4229H	Fuel temperature(Diesel Engine01)	RO	Occupy	short	0.1℃/Bit
			2 byte		
422AH	Engine speed(Diesel Engine01)	RO	Occupy	unsigned	1rpm/Bit
			2 byte	short	



422BH	Power generation energy	RO	Occupy	unsigned	
422CH	(Diesel Engine01)	INO	4 byte	int	1kVAh/Bit
422DH	Coolant level(Diesel Engine01)	RO	Occupy	unsigned	
422011	Coolant level(Diesel Engineor)	INO	2 byte	short	1%/Bit
422EH	Fuel level(Diesel Engine01)	RO	Occupy	unsigned	
72211	r der level(Dieser Engineer)	INO	2 byte	short	1%/Bit
422FH	Engine battery voltage	RO	Occupy	unsigned	
122111	(Diesel Engine01)		2 byte	short	0.1V/Bit
4230H	Fault info1(Diesel Engine01)	RO	Occupy	unsigned	
4231H	radic ime ((2)ese: 2.iginee i)		4 byte	int	
4232H	Fault info2(Diesel Engine01)	RO	Occupy	unsigned	
4233H	radit imez(biese: zingmee i)		4 byte	int	
4234H	Fault info3(Diesel Engine01)	RO	Occupy	unsigned	
4235H	radic imes(2.ese. 2.igines i)	1.0	4 byte	int	
4236H	Fault info4(Diesel Engine01)	RO	Occupy	unsigned	
4237H	radit ime ((2)ese: 2ngmeen)		4 byte	int	
4238H~	Reserved(Diesel Engine01)		Occupy		
427FH	The state of the s		144 byte		
4280H~	Reserved(Diesel Engine02)		Occupy		
42FFH	g ii,		256 byte		
4300H~	Reserved(Diesel Engine03)		Occupy		
437FH	, , ,		256 byte		
4380H~	Reserved(Diesel Engine04)		Occupy		
43FFH			256 byte		
4400H~	Reserved(Diesel Engine05)		Occupy		
447FH			256 byte		
4480H~	Reserved(Diesel Engine06)		Occupy		
44FFH			256 byte		
	Industry	PV Combi	ner Box		
4500H	Switch state of each branch	RO	Occupy	unsigned	
4501H	(PV Combiner Box01)		4 byte	int	
4502H	Box temperature	RO	Occupy	short	0.405 (D)
	(PV Combiner Box01)		2 byte		0.1°C/Bit
4503H	Total bus voltage	RO	Occupy	unsigned	0.41//D:+
	(PV Combiner Box01)		2 byte	short	0.1V/Bit
4504H	Total power generation	RO	Occupy	unsigned	1\A//Di+
4505H	(PV Combiner Box01)		4 byte	int	1W/Bit
4506H	PV1 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	I VV/ DIL
4507H	PV2 power(PV Combiner Box01)	RO	Occupy	unsigned	1\M//Ri+
			2 byte	short	1W/Bit
4508H	PV3 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	I VV/ DIL



4509H	PV4 power(PV Combiner Box01)	RO	Occupy	unsigned	
450511	F V4 power (F V Combiner Boxo I)	KO	2 byte	short	1W/Bit
450AH	PV5 power(PV Combiner Box01)	RO	Occupy	unsigned	
430/11	r v 5 power (r v Combiner Boxo i)	I NO	2 byte	short	1W/Bit
450BH	PV6 power(PV Combiner Box01)	RO	Occupy	unsigned	
430011	r vo power (r v combiner boxo i)	I NO	2 byte	short	1W/Bit
450CH	PV7 power(PV Combiner Box01)	RO	Occupy	unsigned	
430011	FV7 power(FV Combiner Box01)	KO	2 byte	short	1W/Bit
450DH	PV8 power(PV Combiner Box01)	RO	Occupy	unsigned	
430011	F vo power (F v Combiner Boxo i)	KO	2 byte	short	1W/Bit
450EH	PV9 power(PV Combiner Box01)	RO	Occupy	unsigned	
430EH	PV9 power(PV Combiner Box01)	NO NO	2 byte	short	1W/Bit
450511	DV10 novembros Boy01)	DO.			
450FH	PV10 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
451011	D)/11(D)/ C	DO.	2 byte	short	
4510H	PV11 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
454411	5)40 (5)45 1: 5 04)	20	2 byte	short	
4511H	PV12 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	
4512H	PV13 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	
4513H	PV14 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	,
4514H	PV15 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	,
4515H	PV16 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	1447 510
4516H	PV17 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	TVV/ DIC
4517H	PV18 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	TVV/DIC
4518H	PV19 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
	· ·		2 byte	short	T VV/ DIL
4519H	PV20 power(PV Combiner Box01)	RO	Occupy	unsigned	1)A//D:+
			2 byte	short	1W/Bit
451AH	PV21 power(PV Combiner Box01)	RO	Occupy	unsigned	1\A//Di+
			2 byte	short	1W/Bit
451BH	PV22 power(PV Combiner Box01)	RO	Occupy	unsigned	1)A//D:4
			2 byte	short	1W/Bit
451CH	PV23 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	
451DH	PV24 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
	,		2 byte	short	
451EH	PV25 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit
			2 byte	short	
				5.10.0]



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451FH	PV26 power(PV Combiner Box01)	RO	Occupy 2 byte	unsigned short	1W/Bit		
4520H	PV27 power(PV Combiner Box01)	RO	Occupy	unsigned short	1W/Bit		
4521H	PV28 power(PV Combiner Box01)	RO	2 byte Occupy	unsigned			
			2 byte	short	1W/Bit		
4522H	PV29 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit		
			2 byte	short	100,510		
4523H	PV30 power(PV Combiner Box01)	RO	Occupy	unsigned	1W/Bit		
452411	D/21	DO.	2 byte	short			
4524H	PV31 power(PV Combiner Box01)	RO	Occupy 2 byte	unsigned short	1W/Bit		
4525H	PV32 power(PV Combiner Box01)	RO					
4323FI	PV32 power(PV Combiner Box01)	KO	Occupy	unsigned short	1W/Bit		
452611	Fault info1/DV/Combiner Roy01)	DO.	2 byte				
4526H 4527H	Fault info1(PV Combiner Box01)	RO	Occupy	unsigned			
	Pagewood (DV Combiner Boy01)		4 byte	int			
4528H~	Reserved (PV Combiner Box01)		Occupy				
453FH	D 1(D)(C 1: D 02)		48 byte				
4540H~	Reserved (PV Combiner Box02)		Occupy				
457FH	D 1(D)(C 1: D 02)		128 byte				
4580H~ 45BFH	Reserved (PV Combiner Box03)		Occupy 128 byte				
45C0H~	Reserved (PV Combiner Box04)		Occupy				
45FFH	Reserved (1 v combiner boxo-)		128byte				
4600H~	Reserved (PV Combiner Box05)		Occupy				
463FH	reserved (i v combiner boxes)		128 byte				
4640H~	Reserved (PV Combiner Box06)		Occupy				
467FH	,		128 byte				
4680H~	Reserved (PV Combiner Box07)		Occupy				
46BFH			128 byte				
46C0H~	Reserved (PV Combiner Box08)		Occupy				
46FFH			128 byte				
4700H~	Reserved (PV Combiner Box09)		Occupy				
473FH			128 byte				
4740H~	Reserved (PV Combiner Box10)		Occupy				
477FH	·		128 byte				
4780H~	Reserved (PV Combiner Box11)		Occupy				
47BFH			128 byte				
47C0H~	Reserved (PV Combiner Box12)		Occupy				
47FFH			128 byte				
			-				
Industry PV Inv							
4800H	PV1 power (PV INV01)	RO	Occupy	unsigned	1W/Bit		
	1				I.		



			2 byte	short	
4801H	PV2 power (PV INV01)	RO	Occupy	unsigned	
	,		2 byte	short	1W/Bit
4802H	PV3 power (PV INV01)	RO	Occupy	unsigned	
	,		2 byte	short	1W/Bit
4803H	PV4 power (PV INV01)	RO	Occupy	unsigned	
			2 byte	short	1W/Bit
4804H	PV5 power (PV INV01)	RO	Occupy	unsigned	4111/51
			2 byte	short	1W/Bit
4805H	PV6 power (PV INV01)	RO	Occupy	unsigned	414/P':
			2 byte	short	1W/Bit
4806H	PV7 power (PV INV01)	RO	Occupy	unsigned	414/P':
			2 byte	short	1W/Bit
4807H	PV8 power (PV INV01)	RO	Occupy	unsigned	4141/D:t
			2 byte	short	1W/Bit
4808H	PV9 power (PV INV01)	RO	Occupy	unsigned	1)A//D:t
			2 byte	short	1W/Bit
4809H	PV10 power (PV INV01)	RO	Occupy	unsigned	1\A//D:+
			2 byte	short	1W/Bit
480AH	PV11 power (PV INV01)	RO	Occupy	unsigned	1\A//D:+
			2 byte	short	1W/Bit
480BH	PV12 power (PV INV01)	RO	Occupy	unsigned	1\A//D:+
			2 byte	short	1W/Bit
480CH	Phase A voltage (PV INV01)	RO	Occupy	unsigned	0.41//D:+
			2 byte	short	0.1V/Bit
480DH	Phase B voltage (PV INV01)	RO	Occupy	unsigned	0.1V/Bit
			2 byte	short	U.TV/DIL
480EH	Phase C voltage (PV INV01)	RO	Occupy	unsigned	0.1V/Bit
			2 byte	short	0.1V/Bit
480FH	Phase A current (PV INV01)	RO	Occupy	short	0.1A/Bit
			2 byte		0.177.010
4810H	Phase B current (PV INV01)	RO	Occupy	short	0.1A/Bit
			2 byte		0.174 010
4811H	Phase C current (PV INV01)	RO	Occupy	short	0.1A/Bit
			2 byte		0.1A) DIC
4812H	Frequency (PV INV01)	RO	Occupy	unsigned	0.01HZ
			2 byte	short	0.01112
4813H	Total active power (PV INV01)	RO	Occupy	int	1W/Bit
4814H			4 byte		
4815H	Total reactive power (PV INV01)	RO	Occupy	int	1var/Bit
4816H			4 byte		i vai / Dit
4817H	Total apparent power (PV INV01)	RO	Occupy	int	1VA/Bit
4818H			4 byte		1 V/ Y DIC



4819H	Total factor (PV INV01)	RO	Occupy 2 byte	short	0.01/Bit
481AH	Feed energy to grid in today (PV INV01)	RO	Occupy 2 byte	unsigned int	1kWh/Bit
481BH	Workmode (PV INV01)	RO	Occupy 2 byte	unsigned short	
481CH	Internal temperature (PV INV01)	RO	Occupy 2 byte	short	0.1°C/Bit
481DH 481EH	Total feed energy to grid (PV INV01)	RO	Occupy 4 byte	unsigned int	1kWh/Bit
481FH 4820H	Fault info1 (PV INV01)	RO	Occupy 4 byte	unsigned int	Note17
4821H 4822H	Fault info2 (PV INV01)	RO	Occupy 4 byte	unsigned int	
4823H~ 483FH	Reserved (PV INV01)		Occupy 58 byte		
4840H~ 487FH	(Same as above) (PV INV02)		Occupy 128 byte		
4880H~ 48BFH	(Same as above) (PV INV03)		Occupy 128 byte		
48C0H~ 48FFH	(Same as above) (PV INV04)		Occupy 128 byte		
4900H~ 493FH	(Same as above) (PV INV05)		Occupy 128 byte		
4940H~ 497FH	(Same as above) (PV INV06)		Occupy 128 byte		
4980H~ 49BFH	(Same as above) (PV INV07)		Occupy 128 byte		
49C0H~ 49FFH	(Same as above) (PV INV08)		Occupy 128 byte		
4A00H~ 4A3FH	(Same as above) (PV INV09)		Occupy 128 byte		
4A40H~ 4A7FH	(Same as above) (PV INV10)		Occupy 128 byte		
4A80H~ 4ABFH	(Same as above) (PV INV11)		Occupy 128 byte		
4AC0H~ 4AFFH	(Same as above) (PV INV12)		Occupy 128 byte		
4B00H~ 4B3FH	(Same as above) (PV INV13)		Occupy 128 byte		
4B40H~ 4B7FH	(Same as above) (PV INV14)		Occupy 128 byte		
4B80H~ 4BBFH	(Same as above) (PV INV15)		Occupy 128 byte		



4BC0H~	(Same as above) (PV INV16)		Occupy		
4BFFH			128 byte		
	Indus	try Fire Co	ntrol		
4C00H~	Reserved		Occupy		
4C0FH			32 byte		
	Industry	Reserved	Device		
4C10H~	Reserved		Occupy		
4CFFH			480 byte		
	Inc	lustry Mete	er		
4D00H	CT Enable(Grid meter)	R/W	Occupy	unsigned	1/bit
			2byte	short	17510
4D01H	CT Rate(Grid meter)	R/W	Occupy	unsigned	1/bit
			2byte	short	1,510
4D02H	PT Enable(Grid meter)	R/W	Occupy	unsigned	1/bit
			2byte	short	1,510
4D03H	PT Rate(Grid meter)	R/W	Occupy	unsigned	1/bit
			2byte	short	.,
4D04H	Total energy feed to grid(Grid	RO	Occupy	unsigned	0.01kWh/bit
4D05H	meter)		4 byte	int	
4D06H	Total energy consume from	RO	Occupy	unsigned	0.01kWh/bit
4D07H	grid(Grid meter)		4 byte	int	,
4D08H	Voltage of A phase(Grid meter)	RO	Occupy	unsigned	1V/bit
			2 byte	short	,
4D09H	Voltage of B phase(Grid meter)	RO	Occupy	unsigned	1V/bit
			2 byte	short	
4D0AH	Voltage of C phase(Grid meter)	RO	Occupy	unsigned	1V/bit
15.0511			2 byte	short	
4D0BH	Current of A phase(Grid meter)	RO	Occupy	short	0.1A/bit
4D0CH	Covered of Body and Covidence to a	DO.	2 byte	-14	
4D0CH	Current of B phase(Grid meter)	RO	Occupy	short	0.1A/bit
4D0DH	Current of C phase (Crid motor)	RO	2 byte	short	
4D0DH	Current of C phase(Grid meter)	NO	Occupy 2 byte	SHULL	0.1A/bit
4D0EH	Frequent(Grid meter)	RO	Occupy	unsigned	
4D0EU	Trequent(Grid meter)	NO	2 byte	short	0.01HZ
4D0FH	Active power of A phase(Grid	RO	Occupy	int	
4D0F11	meter)		4 byte	1110	1W/bit
4D11H	Active power of B phase(Grid	RO	Occupy	int	
4D12H	meter)		4 byte		1W/bit
4D13H	Active power of C phase(Grid	RO	Occupy	int	
4D14H	meter)	5	4 byte		1W/bit
		l	. ~,		



45.45.4	[
4D15H 4D16H	Total Active power(Grid Meter)	RO	Occupy 4 byte	int	1W/bit
4D17H 4D18H	Reactive power of A phase(Grid meter)	RO	Occupy 4 byte	int	1var/bit
4D19H	Reactive power of B phase(Grid	RO	Occupy	int	
4D19H 4D1AH	meter)	KO	4 byte	IIIC	1var/bit
	,	DO.	•	int	
4D1BH 4D1CH	Reactive power of C phase(Grid	RO	Occupy	int	1var/bit
	meter)	DO.	4 byte	:a	
4D1DH	Total reactive power(Grid meter)	RO	Occupy	int	1var/bit
4D1EH		20	4 byte		
4D1FH	Apparent power of A phase(Grid	RO	Occupy	int	1VA/bit
4D20H	meter)		4 byte		
4D21H	Apparent power of B phase(Grid	RO	Occupy	int	1VA/bit
4D22H	meter)		4 byte		·
4D23H	Apparent power of C phase(Grid	RO	Occupy	int	1VA/bit
4D24H	meter)		4 byte		,
4D25H	Total apparent power(Grid meter)	RO	Occupy	int	1VA/bit
4D26H			4 byte		1 17 9 510
4D27H	Power factor of A phase(Grid meter)	RO	Occupy	short	0.01/bit
			2 byte		0.017.010
4D28H	Power factor of B phase(Grid meter)	RO	Occupy	short	0.01 /bit
			2 byte		0.01/bit
4D29H	Power factor of C phase(Grid meter)	RO	Occupy	short	0.04 # ::
			2 byte		0.01/bit
4D2AH	Total Power factor(Grid meter)	RO	Occupy	short	0.04 # 1:
			2 byte		0.01/bit
4D2BH~	Reserved(Grid meter)		Occupy		
4D7FH			170 byte		
4D80H	CT Enable(Pv meter)	R/W	Occupy	unsigned	
		·	2byte	short	1/bit
4D81H	CT Rate(Pv meter)	R/W	Occupy	unsigned	
			2byte	short	1/bit
4D82H	PT Enable(Pv meter)	R/W	Occupy	unsigned	
		,	2byte	short	1/bit
4D83H	PT Rate(Pv meter)	R/W	Occupy	unsigned	
			2byte	short	1/bit
4D84H	Total energy feed to grid(Pv meter)	RO	Occupy	unsigned	
4D85H	gradient and a gradient meter)		4 byte	int	0.01kWh/bit
4D86H	Total energy consume from grid(Pv	RO	Occupy	unsigned	
4D87H	meter)		4 byte	int	0.01kWh/bit
4D88H	Voltage of A phase(Pv meter)	RO	Occupy	unsigned	
150011	rotage of A phase(i v incter)	1.0	2 byte	short	1V/bit
			Luyte	311011	



4D89H	Voltage of B phase(Pv meter)	RO	Occupy 2 byte	unsigned short	1V/bit
4D8AH	Voltage of C phase(Pv meter)	RO	Occupy 2 byte	unsigned short	1V/bit
4D8BH	Current of A phase(Pv meter)	RO	Occupy 2 byte	short	0.1A/bit
4D8CH	Current of B phase(Pv meter)	RO	Occupy 2 byte	short	0.1A/bit
4D8DH	Current of C phase(Pv meter)	RO	Occupy 2 byte	short	0.1A/bit
4D8EH	Frequent(Pv meter)	RO	Occupy 2 byte	unsigned short	0.01HZ
4D8FH 4D90H	Active power of A phase(Pv meter)	RO	Occupy 4 byte	int	1W/bit
4D91H 4D92H	Active power of B phase(Pv meter)	RO	Occupy 4 byte	int	1W/bit
4D93H 4D94H	Active power of C phase(Pv meter)	RO	Occupy 4 byte	int	1W/bit
4D95H 4D96H	Total Active power(Pv meter)	RO	Occupy 4byte	int	1W/bit
4D97H 4D98H	Reactive power of A phase(Pv meter)	RO	Occupy 4 byte	int	1var/bit
4D99H 4D9AH	Reactive power of B phase(Pv meter)	RO	Occupy 4 byte	int	1var/bit
4D9BH 4D9CH	Reactive power of C phase(Pv meter)	RO	Occupy 4 byte	int	1var/bit
4D9DH 4D9EH	Total reactive power(Pv meter)	RO	Occupy 4 byte	int	1var/bit
4D9FH 4DA0H	Apparent power of A phase(Pv meter)	RO	Occupy 4 byte	int	1VA/bit
4DA1H 4DA2H	Apparent power of B phase(Pv meter)	RO	Occupy 4 byte	int	1VA/bit
4DA3H 4DA4H	Apparent power of C phase(Pv meter)	RO	Occupy 4 byte	int	1VA/bit
4DA5H 4DA6H	Total apparent power(Pv meter)	RO	Occupy 4 byte	int	1VA/bit
4DA7H	Power factor of A phase(Pv meter)	RO	Occupy 2byte	short	0.01/bit
4DA8H	Power factor of B phase(Pv meter)	RO	Occupy 2 byte	short	0.01/bit
4DA9H	Power factor of C phase(Pv meter)	RO	Occupy 2 byte	short	0.01/bit
4DAAH	Total Power factor(Pv meter)	RO	Occupy	short	0.01/bit



			2 byte		
4DABH~	Reserved(Pv meter)		Occupy		
4DFFH	,		170 byte		
4E00H	CT Enable(hv gw meter)	R/W	Occupy	unsigned	4.0.5
			2 byte	short	1/bit
4E01H	CT Rate(hv gw meter)	R/W	Occupy	unsigned	1 /b:+
			2 byte	short	1/bit
4E02H	PT Enable(hv gw meter)	R/W	Occupy	unsigned	1/bit
			2 byte	short	17610
4E03H	PT Rate(hv gw meter)	R/W	Occupy	unsigned	1/bit
			2 byte	short	., 2
4E04H	Total energy feed to grid(hv gw	RO	Occupy	unsigned	0.01kWh/bit
4E05H	meter)		4 byte	int	
4E06H	Total energy consume from grid(hv	RO	Occupy	unsigned	0.01kWh/bit
4E07H	gw meter)	56	4 byte	int	
4E08H	Voltage of A phase(hv gw meter)	RO	Occupy	unsigned	1V/bit
450011	Valtage of Dark and his mission and a	DO	2 byte	short	
4E09H	Voltage of B phase(hv gw meter)	RO	Occupy	unsigned short	1V/bit
4E0AH	Voltage of C phase(hv gw meter)	RO	2 byte Occupy	unsigned	
4LUAI1	voltage of C phase(fiv gw ffieter)	KO	2 byte	short	1V/bit
4E0BH	Current of A phase(hv gw meter)	RO	Occupy	short	
120511	carrent of 7, priase(in giv incles)		2 byte	511011	0.1A/bit
4E0CH	Current of B phase(hv gw meter)	RO	Occupy	short	
			2 byte		0.1A/bit
4E0DH	Current of C phase(hv gw meter)	RO	Occupy	short	0.4 A //- :-
			2 byte		0.1A/bit
4E0EH	Frequent(hv gw meter)	RO	Occupy	unsigned	0.01HZ
			2 byte	short	0.01HZ
4E0FH	Active power of A phase(hv gw	RO	Occupy	int	1W/bit
4E10H	meter)		4 byte		TW/ Bit
4E11H	Active power of B phase(hv gw	RO	Occupy	int	1W/bit
4E12H	meter)		4 byte		
4E13H	Active power of C phase(hv gw	RO	Occupy	int	1W/bit
4E14H	meter)		4 byte		
4E15H	Total Active power(hv gw meter)	RO	Occupy	int	1W/bit
4E16H	Positive power of A where the	DC.	4 byte	int	
4E17H 4E18H	Reactive power of A phase(hv gw meter)	RO	Occupy 4 byto	int	1var/bit
4E18H 4E19H	Reactive power of B phase(hv gw	RO	4 byte Occupy	int	
4E19H 4E1AH	meter)	NO	4 byte	IIIC	1var/bit
4E1BH	Reactive power of C phase(hv gw	RO	Occupy	int	
4E1CH	meter)		4 byte	iiic	1var/bit
.21011		1	. Syte	1	<u> </u>



	T	1	1	1	
4E1DH 4E1EH	Total reactive power(hv gw meter)	RO	Occupy 4 byte	int	1var/bit
4E1FH 4E20H	Apparent power of A phase(hv gw meter)	RO	Occupy 4 byte	int	1VA/bit
	,	DO.		tore	
4E21H	Apparent power of B phase(hv gw	RO	Occupy	int	1VA/bit
4E22H	meter)	50	4 byte		
4E23H	Apparent power of C phase(hv gw	RO	Occupy	int	1VA/bit
4E24H	meter)	50	4 byte		
4E25H	Total apparent power(hv gw meter)	RO	Occupy	int	1VA/bit
4E26H			4 byte		
4E27H	Power factor of A phase(hv gw	RO	Occupy	short	0.01/bit
	meter)		2 byte		
4E28H	Power factor of B phase(hv gw	RO	Occupy	short	0.01/bit
	meter)		2 byte		
4E29H	Power factor of C phase(hv gw	RO	Occupy	short	0.01/bit
	meter)		2 byte		0.0.1, 2.10
4E2AH	Total Power factor(hv gw meter)	RO	Occupy	short	0.01/bit
			2 byte		0.017.610
4E2BH~	Reserved(hv gw meter)				
4E7FH					
4E80H	CT Enable(ess gw meter)	R/W	Occupy	unsigned	1/bit
			2 byte	short	I/DIL
4E81H	CT Rate(ess gw meter)	R/W	Occupy	unsigned	1 / -:+
			2 byte	short	1/bit
4E82H	PT Enable(ess gw meter)	R/W	Occupy	unsigned	4 /1-14
			2 byte	short	1/bit
4E83H	PT Rate(ess gw meter)	R/W	Occupy	unsigned	4.4.5
			2 byte	short	1/bit
4E84H	Total energy feed to grid(ess gw	RO	Occupy	unsigned	
4E85H	meter)		4 byte	int	0.01kWh/bit
4E86H	Total energy consume from grid(ess	RO	Occupy	unsigned	
4E87H	gw meter)		4 byte	int	0.01kWh/bit
4E88H	Voltage of A phase(ess gw meter)	RO	Occupy	unsigned	
			2 byte	short	1V/bit
4E89H	Voltage of B phase(ess gw meter)	RO	Occupy	unsigned	
		_	2 byte	short	1V/bit
4E8AH	Voltage of C phase(ess gw meter)	RO	Occupy	unsigned	
120/11			2 byte	short	1V/bit
4E8BH	Current of A phase(ess gw meter)	RO	Occupy	short	
720011	carrent of A phase(ess gw meter)	, no	2 byte	SHOLL	0.1A/bit
4E8CH	Current of B phase(ess gw meter)	RO	Occupy	short	
410017	Carrent of b phase(ess gw ffieter)	NO	2 byte	SHULL	0.1A/bit
4E8DH	Current of C phaso(ass any mater)	RO		short	
4E0UH	Current of C phase(ess gw meter)	KU	Occupy	SHOLL	0.1A/bit
1			2 byte		1



4E8EH	Frequent(ess gw meter)	RO	Occupy 2 byte	unsigned short	0.01HZ
4E8FH 4E90H	Active power of A phase(ess gw meter)	RO	Occupy 4 byte	int	1W/bit
4E91H	Active power of B phase(ess gw	RO	Occupy	int	
4E92H	meter)	NO .	4 byte	IIIC	1W/bit
4E93H	Active power of C phase(ess gw	RO	Occupy	int	
4E94H	meter)		4 byte		1W/bit
4E95H	Total Active power(ess gw meter)	RO	Occupy	int	
4E96H	, and the second second		4 byte		1W/bit
4E97H	Reactive power of A phase(ess gw	RO	Occupy	int	
4E98H	meter)		4 byte		1var/bit
4E99H	Reactive power of B phase(ess gw	RO	Occupy	int	
4E9AH	meter)		4 byte		1var/bit
4E9BH	Reactive power of C phase(ess gw	RO	Occupy	int	
4E9CH	meter)		4 byte		1var/bit
4E9DH	Total reactive power(ess gw meter)	RO	Occupy	int	
4E9EH	, , ,		4 byte		1var/bit
4E9FH	Apparent power of A phase(ess gw	RO	Occupy	int	43.48.41.5
4EA0H	meter)		4 byte		1VA/bit
4EA1H	Apparent power of B phase(ess gw	RO	Occupy	int	4) (0 (1)
4EA2H	meter)		4 byte		1VA/bit
4EA3H	Apparent power of C phase(ess gw	RO	Occupy	int	4) (A (I-))
4EA4H	meter)		4 byte		1VA/bit
4EA5H	Total apparent power(ess gw meter)	RO	Occupy	int	1)/A /b;+
4EA6H			4 byte		1VA/bit
4EA7H	Power factor of A phase(ess gw	RO	Occupy	short	0.01/bit
	meter)		2 byte		0.01/610
4EA8H	Power factor of B phase(ess gw	RO	Occupy	short	0.01/bit
	meter)		2 byte		0.01/610
4EA9H	Power factor of C phase(ess gw	RO	Occupy	short	0.01/bit
	meter)		2 byte		0.017510
4EAAH	Total Power factor(ess gw meter)	RO	Occupy	short	0.01/bit
	*		2 byte		0.017.510
4EABH~	Reserved(ess gw meter)		Occupy		
4EFFH			170 byte		
4F00H~	Reserved(Meter05)		Occupy		
4F7FH			256 byte		
4F80H~	Reserved(Meter06)		Occupy		
4FFFH			256 byte		
5000H~	Reserved(Meter07)		Occupy		
507FH			256 byte		
5080H~	Reserved(Meter08)		Occupy		
50FFH			256 byte		



5100H~	Reserved(Meter09)		Occupy		
517FH			256 byte		
5180H~	Reserved(Meter10)		Occupy		
51FFH	,		256 byte		
	li li	ndustry ST	5		
5200H	Line voltage between A to B(Grid)	RO	Occupy	unsigned	2 41 4 7 1
	_		2 byte	short	0.1V/Bit
5201H	Line voltage between B to C(Grid)	RO	Occupy	unsigned	
			2 byte	short	0.1V/Bit
5202H	Line voltage between C to A(Grid)	RO	Occupy	unsigned	0.41471
			2 byte	short	0.1V/Bit
5203H	Phase A current(Grid)	RO	Occupy	short	
			2 byte		1A/Bit
5204H	Phase B current(Grid)	RO	Occupy	short	
			2 byte		1A/Bit
5205H	Phase C current(Grid)	RO	Occupy	short	
			2 byte		1A/Bit
5206H	Frequency(Grid)	RO	Occupy	unsigned	0.0411. (51)
			2 byte	short	0.01Hz/Bit
5207H	Phase A active power(Grid)	RO	Occupy	int	4111/51
5208H			4 byte		1W/Bit
5209H	Phase B active power(Grid)	RO	Occupy	int	4111/51
520AH			4 byte		1W/Bit
520BH	Phase C active power(Grid)	RO	Occupy	int	4111/51
520CH			4 byte		1W/Bit
520DH	Phase A reactive power(Grid)	RO	Occupy	int	4 (D)
520EH			4 byte		1var/Bit
520FH	Phase B reactive power(Grid)	RO	Occupy	int	4 (D)
5210H			4 byte		1var/Bit
5211H	Phase C reactive power(Grid)	RO	Occupy	int	1 /Dit
5212H	· ·		4 byte		1var/Bit
5213H	Phase A apparent power(Grid)	RO	Occupy	int	1) /A /D:+
5214H			4 byte		1VA/Bit
5215H	Phase B apparent power(Grid)	RO	Occupy	int	1)/A /D:+
5216H			4 byte		1VA/Bit
5217H	Phase C apparent power(Grid)	RO	Occupy	int	1)/A /D:+
5218H			4 byte		1VA/Bit
5219H	Phase A factor(Grid)	RO	Occupy	short	0.01 /Pi+
			2 byte		0.01/Bit
521AH	Phase B factor(Grid)	RO	Occupy	short	0.01 /Bit
			2 byte		0.01/Bit
521BH	Phase C factor(Grid)	RO	Occupy	short	0.01/Bit



			2 byte		
521CH	Total active power(Grid)	RO	Occupy	int	
521DH	Total delive power (e.i.a)		4 byte		1W/Bit
521EH	Total reactive power(Grid)	RO	Occupy	int	
521FH			4 byte		1var/Bit
5220H	Total apparent power(Grid)	RO	Occupy	int	41.44.45.
5221H			4 byte		1VA/Bit
5222H	Total PF (Grid)	RO	Occupy	short	0.01/0:4
			2 byte		0.01/Bit
5223H	Line voltage between A to B(Load)	RO	Occupy	unsigned	0.1V/Bit
			2 byte	short	0.1V/Bit
5224H	Line voltage between B to C(Load)	RO	Occupy	unsigned	0.1V/Bit
			2 byte	short	0.177510
5225H	Line voltage between C to A(Load)	RO	Occupy	unsigned	0.1V/Bit
			2 byte	short	0.11/Bit
5226H	Phase A current(Load)	RO	Occupy	short	1A/Bit
			2 byte		
5227H	Phase B current(Load)	RO	Occupy	short	1A/Bit
			2 byte		,
5228H	Phase C current(Load)	RO	Occupy	short	1A/Bit
			2 byte		,
5229H	Frequency(Load)	RO	Occupy	unsigned	0.01Hz/Bit
			2 byte	short	,
522AH	Phase A active power(Load)	RO	Occupy	int	1W/Bit
522BH			4 byte		,
522CH	Phase B active power(Load)	RO	Occupy	int	1W/Bit
522DH			4 byte		
522EH	Phase C active power(Load)	RO	Occupy	int	1W/Bit
522FH			4 byte		
5230H	Phase A reactive power(Load)	RO	Occupy	int	1var/Bit
5231H			4 byte		
5232H	Phase B reactive power(Load)	RO	Occupy	int	1var/Bit
5233H			4 byte		
5234H	Phase C reactive power(Load)	RO	Occupy	int	1var/Bit
5235H	51 4 4 5	50	4 byte		
5236H	Phase A apparent power(Load)	RO	Occupy	int	1VA/Bit
5237H	Phone Programme (1)	DC.	4 byte	:a	
5238H	Phase B apparent power(Load)	RO	Occupy	int	1VA/Bit
5239H	Phase Compared to accord and	DC.	4 byte	:	
523AH	Phase C apparent power(Load)	RO	Occupy	int	1VA/Bit
523BH	Dhasa A factor/Load	P.C.	4 byte	ch o ::±	
523CH	Phase A factor(Load)	RO	Occupy	short	0.01/Bit
			2 byte		



			-		<u> </u>
523DH	Phase B factor(Load)	RO	Occupy 2 byte	short	0.01/Bit
523EH	Phase C factor(Load)	RO	Occupy 2 byte	short	0.01/Bit
523FH	Total active power(Load)	RO	Occupy	int	1W/Bit
5240H			4 byte		
5241H	Total reactive power(Load)	RO	Occupy	int	1var/Bit
5242H			4 byte		TVally Bit
5243H	Total apparent power(Load)	RO	Occupy	int	1VA/Bit
5244H			4 byte		TVAYDIC
5245H	Total PF (Load)	RO	Occupy 2 byte	short	0.01/Bit
5246H	Communication timeout	RO	Occupy	unsigned	
			2 byte	short	1s/Bit
5247H	Fault info1	RO	Occupy	unsigned	
5248H			4 byte	int	Note18
5249H	Fault info2	RO	Occupy	unsigned	
524AH	radic iiiio2	1,10	4 byte	int	Note19
524BH~	Reserved		Occupy	,,,,	
52BFH	Reserved		234 byte		
JEDITI			234 byte		
	Ind	ustry PCS(D	CAC)		
FOCOLL				uncianod	
52C0H	AC line voltage A to B	RO	Occupy 2 byte	unsigned short	0.1V/Bit
52C1H	AC line voltage B to C	RO	Occupy	unsigned	0 4) / /D:t
			2 byte	short	0.1V/Bit
52C2H	AC line voltage C to A	RO	Occupy	unsigned	0.4) / / D'.
			2 byte	short	0.1V/Bit
52C3H	Phase A current	RO	Occupy	short	
			2 byte		1A/Bit
52C4H	Phase B current	RO	Occupy	short	
			2 byte		1A/Bit
52C5H	Phase C current	RO	Occupy	short	
			2 byte		1A/Bit
52C6H	Frequency	RO	Occupy	unsigned	
5=55.1					0.0411 (0):
	l			_	0.01Hz/Bit
52C7H			2 byte	short	
52C7H 52C8H	Phase A active power	RO	2 byte Occupy	_	1W/Bit
52C8H	Phase A active power	RO	2 byte Occupy 4 byte	short int	1W/Bit
52C8H 52C9H			2 byte Occupy 4 byte Occupy	short	
52C8H 52C9H 52CAH	Phase A active power Phase B active power	RO RO	2 byte Occupy 4 byte Occupy 4 byte	short int int	1W/Bit
52C8H 52C9H 52CAH 52CBH	Phase A active power	RO	2 byte Occupy 4 byte Occupy 4 byte Occupy Cocupy	short int	1W/Bit
52C8H 52C9H 52CAH	Phase A active power Phase B active power	RO RO	2 byte Occupy 4 byte Occupy 4 byte	short int int	1W/Bit



52CEH			4 byte		
	Dhaga Bugastina namar	DO.		:4	
52CFH	Phase B reactive power	RO	Occupy	int	1var/Bit
52D0H			4 byte		
52D1H	Phase C reactive power	RO	Occupy	int	1var/Bit
52D2H			4 byte		, .
52D3H	Phase A apparent power	RO	Occupy	int	1VA/Bit
52D4H			4 byte		TVTYDIC
52D5H	Phase B apparent power	RO	Occupy	int	1VA/Bit
52D6H			4 byte		IVAYDIL
52D7H	Phase C apparent power	RO	Occupy	int	1) /A /D:+
52D8H			4 byte		1VA/Bit
52D9H	Phase A factor	RO	Occupy	short	0.04 (5)
			2 byte		0.01/Bit
52DAH	Phase B factor	RO	Occupy	short	
			2 byte		0.01/Bit
52DBH	Phase C factor	RO	Occupy	short	
			2 byte		0.01/Bit
52DCH	Total active power	RO	Occupy	int	
52DDH	Total active power	110	4 byte	inc	1W/Bit
52DEH	Total reactive power	RO	Occupy	int	
52DFH	Total reactive power	NO	4 byte	III.C	1var/Bit
52E0H	Total apparent power	RO	Occupy	int	
52E1H	Total apparent power	NO	4 byte	IIIC	1VA/Bit
52E2H	Total factor	RO	Occupy	short	
JZLZII	Total factor	KO	2 byte	SHOLL	0.01/Bit
52E3H	Accumulative charged energy	RO	Occupy	unsigned	
52E4H	Accumulative charged energy through AC port	KO	4 byte	int	1kWh/Bit
		DO.	·		
52E5H	Accumulative discharged energy	RO	Occupy	unsigned	1kWh/Bit
52E6H	through AC port	50	4 byte	int	
52E7H	Module temperature	RO	Occupy	short	0.1℃/Bit
			2 byte		
52E8H	Ambient temperature	RO	Occupy	short	0.1°C/Bit
			2 byte		·
52E9H	Grid interconnection mode	RO	Occupy	unsigned	0: Grid-tied
			2 byte	short	1: Off-grid
52EAH	Start stop state	RO	Occupy	unsigned	0: Mode off
			2 byte	short	1: Mode on
52EBH	Fault state	RO	Occupy	unsigned	0: Normal
			2 byte	short	1: Alert
					2: Fault
52ECH	Control mode	RO	Occupy	unsigned	1: Local manual
			2 byte	short	2: Local auto
					3: Remote
52EDH	Fault info1	RO	Occupy	unsigned	Note20
L					. –



52EEH4 byteint52EFH 52F0HFault info2ROOccupy 4 byteunsigned int52F1H 52F1HFault info3ROOccupy 4 byteunsigned int52F2HROOccupy 4 byteunsigned int52F3H 52F3HFault info4ROOccupy 4 byteunsigned int52F5H 52F5HStatus info1ROOccupy 4 byteunsigned int	
52F0H4 byteintNote2152F1H 52F2HFault info3ROOccupy 4 byteunsigned intNote2252F3H 52F4HFault info4ROOccupy 4 byteunsigned intNote2352F5HStatus info1ROOccupyunsigned	
52F0H 52F1H 52F1H Fault info3 RO Occupy 4 byte int Note22 4 byte int Note22 52F3H Fault info4 Fault info4 Fault info4 S2F4H RO Occupy Unsigned 4 byte int Note23	
52F2H4 byteintNote2252F3HFault info4ROOccupyunsigned52F4H4 byteint52F5HStatus info1ROOccupyunsigned	
52F2H	
52F4H 4 byte int Note23 52F5H Status info1 RO Occupy unsigned	
52F4H 4 byte int 52F5H Status info1 RO Occupy unsigned	
52F6H 4 byte int	
52F7H Status info2 RO Occupy unsigned	
52F8H 4 byte int	
52F9H Status info3 RO Occupy unsigned	
52FAH 4 byte int	
52FBH Status info4 RO Occupy unsigned	
52FCH 4 byte int	
52FDH Status info5 RO Occupy unsigned	
52FEH 4 byte int	
52FFH Status info6 RO Occupy unsigned	
5300H 4 byte int	
5301H Status info7 RO Occupy unsigned	
5302H 4 byte int	
5303H Status info8 RO Occupy unsigned	
5304H 4 byte int	
5305H Status info9 RO Occupy unsigned	
5306H 4byte int	
5307H Status info10 RO Occupy unsigned	
5308H 4 byte int	
5309H Daily accumulative charged energy RO Occupy unsigned 1kWh/B	:+
530AH through AC port 4 byte int	oit
530BH Daily accumulative discharged RO Occupy unsigned 1kWh/B	i+
530CH energy through AC port 4 byte int	oit.
530DH~ Reserved Occupy	
537FH 230 byte	
Industry PCS(DCDC)	
5380H Start stop state RO Occupy unsigned 0: Mod	le off
2 byte short 1: Mod	le on
5381H Fault state RO Occupy unsigned 0: Norr	mal
2 byte short 1: Alert	t
2: Fault	t
2. 1441	
5382H Battery power RO Occupy int	



			2 byte	short	
5385H	Battery current	RO	Occupy	short	
			2 byte		1A/Bit
5386H	Battery charged energy	RO	Occupy	unsigned	
5387H			4 byte	int	1kWh/Bit
5388H	Battery discharged energy	RO	Occupy	unsigned	41.44 (5)
5389H			4 byte	int	1kWh/Bit
538AH	PV power	RO	Occupy	int	414//5":
538BH			4 byte		1W/Bit
538CH	PV voltage	RO	Occupy	unsigned	0.1\//D:+
			2 byte	short	0.1V/Bit
538DH	PV current	RO	Occupy	short	1A/Bit
			2 byte		TAYBIL
538EH	PV total energy	RO	Occupy	unsigned	1kWh/Bit
538FH			4 byte	int	TRVVII/DIC
5390H	Fault info1	RO	Occupy	unsigned	Note24
5391H			4 byte	int	NOCE
5392H	Fault info2	RO	Occupy	unsigned	Note25
5393H			4 byte	int	1101023
5394H	Fault info3	RO	Occupy	unsigned	
5395H			4 byte	int	
5396H	Fault info4	RO	Occupy	unsigned	
5397H			4 byte	int	
5398H	Status info1	RO	Occupy	unsigned	
5399H			4 byte	int	
539AH	Status info2	RO	Occupy	unsigned	
539BH			4 byte	int	
539CH	Status info3	RO	Occupy	unsigned	
539DH			4 byte	int	
539EH	Status info4	RO	Occupy	unsigned	
539FH			4 byte	int	
53A0H	Status info5	RO	Occupy	unsigned	
53A1H		1	4 byte	int	
53A2H	Status info6	RO	Occupy	unsigned	
53A3H	6	DO.	4 byte	int	
53A4H	Status info7	RO	Occupy	unsigned	
53A5H	Status info 0	DC.	4 byte	int	
53A6H	Status info8	RO	Occupy	unsigned	
53A7H	Status info0	DC.	4 byte	int	
53A8H	Status info9	RO	Occupy	unsigned	
53A9H	Status info10	RO	4 byte	int	
53AAH	Status info10	KO	Occupy	unsigned	
53ABH			4 byte	int	



53ACH~	Reserved		Occupy		
53FFH			168 byte		
	Industry Battery(Parallel clus	ster informa	ation)	
5400H	Topbmu SN byte1~4	RO	Occupy	unsigned	
5401H			4 byte	int	
5402H	Topbmu SN byte5~8	RO	Occupy	unsigned	
5403H			4 byte	int	
5404H	Topbmu SN byte9~12	RO	Occupy	unsigned	
5405H			4 byte	int	
5406H	Topbmu SN byte13~16	RO	Occupy	unsigned	
5407H			4 byte	int	
5408H	Topbmu soft version	RO	Occupy	unsigned	0.01/1-1-
			2 byte	short	0.01/bit
5409H	Topbmu protocol version	RO	Occupy	unsigned	
			2 byte	short	
540AH	Topbmu hard version	RO	Occupy	unsigned	
			2 byte	short	0.01/bit
540BH	Topbmu max charge current	RO	Occupy	unsigned	
			2 byte	short	0.1A /bit
540CH	Topbmu max discharge current	RO	Occupy	unsigned	0.44 // :
			2 byte	short	0.1A /bit
540DH	Topbmu status flag	RO	Occupy	unsigned	Nata 10
			2 byte	short	Note10
540EH	Topbmu max pole temperature	RO	Occupy	short	0.1°C/bit -40
			2 byte		0.1 C/bit -40
540FH	Topbmu voltage	RO	Occupy	unsigned	0.1 V/bit
			2 byte	short	U.I V/DIL
5410H	Topbmu current	RO	Occupy	short	0.1 A/bit
			2 byte		0.1 Aybit
5411H	Topbmu insulated resistance	RO	Occupy	unsigned	1 kΩ/bit
			2 byte	short	1 KS2/DIL
5412H	Topbmu SOC	RO	Occupy	unsigned	0.4 %/bit
			2 byte	short	0.4 70/011
5413H	Topbmu SOH	RO	Occupy	unsigned	0.4 %/bit
			2 byte	short	0. 4 /0/DIL
5414H	Topbmu min cell voltage	RO	Occupy	unsigned	0.001v/bit
			2 byte	short	5.00 i v/ Dit
5415H	Topbmu min cell voltage ID	RO	Occupy	unsigned	
			2 byte	short	
5416H	Topbmu max cell voltage	RO	Occupy	unsigned	0.001v/bit
			2 byte	short	5.55 TV/ DIC
5417H	Topbmu max cell voltage ID	RO	Occupy	unsigned	



			2 byte	short	
5418H	Topbmu min cell temperature	RO	Occupy	short	
3	Topoma min con temperature		2 byte	31.0.0	0.1°C/bit -40
5419H	Topbmu min cell temperature ID	RO	Occupy	unsigned	
			2 byte	short	
541AH	Topbmu max cell temperature	RO	Occupy	short	0.1%C/bit 40
			2 byte		0.1°C/bit -40
541BH	Topbmu max cell temperature ID	RO	Occupy	unsigned	
			2 byte	short	
541CH	Topbmu max pole temperature ID	RO	Occupy	unsigned	
			2 byte	short	
541DH	Topbmu version	RO	Occupy	unsigned	22:TOPBMU-
			2 byte	short	M48112-S/0:无
					TOPBMU
					42: TOPBMU-
					M38344-S/57:
					TOPBMU-M48240-S
541EH	Topbmu BMU version	RO	Occupy	unsigned	15: BMU-
	,		2 byte	short	HV900112/26:
					BMU-
					HV50056/38:BMU-
					HV900105/50:HV90
					0120/41: BMU-
					HV90086/56:HV900
					120-HE
541FH	Topbmu ISO version	RO	Occupy	unsigned	14: LMU-M48112-
			2 byte	short	S/25: LMU-M4856-
					S/37:LMU-M38210-
					S/49:M19360-
					S/40: LMU-
					M38344-S/55:
					LMU-M48240-S
5420H	Topbmu LMU version	RO	Occupy	unsigned	14: LMU-M48112-
			2 byte	short	S/25: LMU-M4856-
					S/37:LMU-M38210-
					S/49:M19360-
					S/40: LMU-
					M38344-S/55:
					LMU-M48240-S
5421H	Topbmu reset log	RO	Occupy	unsigned	Note11
			2 byte	short	110011
5422H	Topbmu restarts number	RO	Occupy	unsigned	
			2 byte	short	
5423H	Topbmu clusters number	RO	Occupy	unsigned	



			2 byte	short	
5424H	Fault info1	RO	Occupy	unsigned	
5424H	radit iiiiO1	KO	4 byte	int	
5426H	Fault info2	RO	_		
5426H 5427H	Fault Inio2	RO	Occupy	unsigned int	
	Facilities 2	DO.	4 byte		
5428H	Fault info3	RO	Occupy	unsigned	
5429H	E III CA	20	4 byte	int	
542AH	Fault info4	RO	Occupy	unsigned 	
542BH			4 byte	int	
542CH~	Reserved		Occupy		
547FH			168 byte		
	Industry Batte				
5480H	Toperror charge over current cluster	RO	Occupy	unsigned	
5481H	high		4 byte	int	
5482H	Toperror charge over current cluster	RO	Occupy	unsigned	
5483H	low		4 byte	int	
5484H	Toperror discharge over current	RO	Occupy	unsigned	
5485H	cluster high		4 byte	int	
5486H	Toperror discharge over current	RO	Occupy	unsigned	
5487H	cluster low		4 byte	int	
5488H	Toperror pole over current cluster	RO	Occupy	unsigned	
5489H	high		4 byte	int	
548AH	Toperror pole over current cluster	RO	Occupy	unsigned	
548BH	low		4 byte e	int	
548CH	Toperror cell over temperature	RO	Occupy	unsigned	
548DH	cluster high		4 byte	int	
548EH	Toperror cell over temperature	RO	Occupy	unsigned	
548FH	cluster low		4 byte	int	
5490H	Toperror charge low temperature	RO	Occupy	unsigned	
5491H	cluster high		4 byte	int	
5492H	Toperror charge low temperature	RO	Occupy	unsigned	
5493H	cluster low		4 byte	int	
5494H	Toperror discharge low	RO	Occupy	unsigned	
5495H	temperature cluster high		4 byte	int	
5496H	Toperror discharge low	RO	Occupy	unsigned	
5497H	temperature cluster low		4 byte	int	
5498H	Toperror cell over voltage cluster	RO	Occupy	unsigned	
5499H	high		4 byte	int	
549AH	Toperror cell over voltage cluster	RO	Occupy	unsigned	
549BH	low		4 byte	int	
549CH	Toperror cell under voltage cluster	RO	Occupy	unsigned	
549DH	high		4 byte	int	
549EH	Toperror cell under voltage cluster	RO	Occupy	unsigned	
J 13E11	1 Toponion con anaci voltage cluster		Эссиру	ansigned	1



549FH	low		4 byte	int	
54A0H	Toperror cell temperature	RO	Occupy	unsigned	
54A1H	difference cluster high		4 byte	int	
54A2H	Toperror cell temperature	RO	Occupy	unsigned	
54A3H	difference cluster low		4 byte	int	
54A4H	Toperror cell voltage difference	RO	Occupy	unsigned	
54A5H	cluster high		4 byte	int	
54A6H	Toperror cell voltage difference	RO	Occupy	unsigned	
54A7H	cluster low		4 byte	int	
54A8H	Toperror insulation cluster high	RO	Occupy	unsigned	
54A9H			4 byte	int	
54AAH	Toperror insulation cluster low	RO	Occupy	unsigned	
54ABH			4 byte	int	
54ACH	Toperror LMU communication	RO	Occupy	unsigned	
54ADH	failure cluster high		4 byte	int	
54AEH	Toperror LMU communication	RO	Occupy	unsigned	
54AFH	failure cluster low		4 byte	int	
54B0H	Toperror temperature sensor failure	RO	Occupy	unsigned	
54B1H	cluster high		4 byte	int	
54B2H	Toperror temperature sensor failure	RO	Occupy	unsigned	
54B3H	cluster low		4 byte	int	
54B4H	Toperror Wireharness failure cluster	RO	Occupy	unsigned	
54B5H	high		4 byte	int	
54B6H	Toperror Wireharness failure cluster	RO	Occupy	unsigned	
54B7H	low		4 byte	int	
54B8H	Toperror high voltage box	RO	Occupy	unsigned	
54B9H	communication failure cluster high		4 byte	int	
54BAH	Toperror high voltage box	RO	Occupy	unsigned	
54BBH	communication failure cluster low		4 byte	int	
54BCH	Toperror total pressure detect	RO	Occupy	unsigned	
54BDH	cluster high		4 byte	int	
54BEH	Toperror total pressure detect	RO	Occupy	unsigned	
54BFH	cluster low		4 byte	int	
54C0H	Toperror relay failure cluster high	RO	Occupy	unsigned	
54C1H			4 byte	int	
54C2H	Toperror relay failure cluster low	RO	Occupy	unsigned	
54C3H			4 byte	int	
54C4H	Toperror cluster excision cluster	RO	Occupy	unsigned	
54C5H	high		4 byte	int	
54C6H	Toperror cluster excision cluster low	RO	Occupy	unsigned	
54C7H			4 byte	int	
54C8H	Toperror ISO communication failure	RO	Occupy	unsigned	
54C9H	cluster high		4 byte	int	



54CAH	Toperror ISO communication failure	RO	Occupy	unsigned		
54CBH	cluster low	KO	4 byte	int		
54CCH	Toperror LMU SN repeat cluster	RO	Occupy	unsigned		
54CDH	high	NO .	4 byte	int		
54CEH	Toperror LMU SN repeat cluster low	RO	Occupy	unsigned		
54CFH	Toperror Livio Six repeat cluster low	NO .	4 byte	int		
54D0H	Toperror LMU ID repeat cluster high	RO	Occupy	unsigned		
54D1H	Toperror Livio 12 repeat claster riight	I NO	4 byte	int		
54D2H	Toperror LMU ID repeat cluster low	RO	Occupy	unsigned		
54D3H	10 po. 10 12 10 pout olusion 10 11		4 byte	int		
54D4H	Toperror LMU ID discontinuity	RO	Occupy	unsigned		
54D5H	cluster high		4 byte	int		
54D6H	Toperror LMU ID discontinuity	RO	Occupy	unsigned		
54D7H	cluster low		4 byte	int		
54D8H	Toperror current sensor failure	RO	Occupy	unsigned		
54D9H	cluster high		4 byte	int		
54DAH	Toperror current sensor failure	RO	Occupy	unsigned		
54DBH	cluster low		4 byte	int		
54DCH	Toperror no LMU failure clus <i>t</i> er	RO	Occupy	unsigned		
54DDH	high		4 byte	int		
54DEH	Toperror no LMU failure cluster low	RO	Occupy	unsigned		
54DFH			4 byte	int		
54E0H	Toperror no bottom failure cluster	RO	Occupy	unsigned		
54E1H	high		4 byte	int		
54E2H	Toperror no bottom failure cluster	RO	Occupy	unsigned		
54E3H	low		4 byte	int		
54E4H	Toperror force close relay failure	RO	Occupy	unsigned		
54E5H	cluster high		4 byte	int		
54E6H	Toperror force close relay failure	RO	Occupy	unsigned		
54E7H	cluster low		4 byte	int		
54E8H	Toperror force close relay mode	RO	Occupy	unsigned		
54E9H	cluster high		4 byte	int		
54EAH	Toperror force close relay mode	RO	Occupy	unsigned		
54EBH	cluster low		4 byte	int		
54ECH	Toperror factory test mode cluster	RO	Occupy	unsigned		
54EDH	high		4 byte	int		
54EEH	Toperror factory test mode cluster	RO	Occupy	unsigned		
54EFH	low		4 byte	int		
54F0H	Toperror bmu warn and state	RO	Occupy	unsigned	Note12	
54F1H	cluster		4 byte	short	1401612	
54F2H~	Reserved		Occupy			
557FH			284 byte			
	Industry Battery(Single cluster information)					

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5580H	Bmu01 SN byte1~4	RO	Occupy	unsigned	
5581H			4 byte	int	
5582H	Bmu01 SN byte5~8	RO	Occupy	unsigned	
5583H			4 byte	int	
5584H	Bmu01 SN byte9~12	RO	Occupy	unsigned	
5585H			4 byte	int	
5586H	Bmu01 SN byte13~16	RO	Occupy	unsigned	
5587H			4 byte	int	
5588H	Bmu01 soft version	RO	Occupy	unsigned	0.01/bit
			2 byte	short	0.01/010
5589H	Bmu01 hard version	RO	Occupy	unsigned	0.01/bit
			2 byte	short	0.01/ 510
558AH	Bmu01 state	RO	Occupy	unsigned	Note13
			2 byte	short	Trote 15
558BH	Bmu01 cluster voltage	RO	Occupy	unsigned	0.1 V/bit
			2 byte	short	0.1 V/Bit
558CH	Bmu01 cluster current	RO	Occupy	short	0.1 A/bit
			2 byte		0.1 Aybit
558DH	Bmu01 insulated resistance	RO	Occupy	unsigned	1 kΩ/bit
			2 byte	short	1 KS2/DIL
558EH	Bmu01 SOC	RO	Occupy	unsigned	0.4 %/bit
			2 byte	short	0.4 70/DIL
558FH	Bmu01 SOH	RO	Occupy	unsigned	0.4 %/bit
			2 byte	short	0.4 70/DIC
5590H	Bmu01 LMU communication failure	RO	Occupy	unsigned	
5591H	high		4 byte	int	
5592H	Bmu01 LMU communication failure	RO	Occupy	unsigned	
5593H	low		4 byte	int	
5594H	Bmu01 temperature sensor failure	RO	Occupy	unsigned	
5595H	high		4 byte	int	
5596H	Bmu01 temperature sensor failure	RO	Occupy	unsigned	
5597H	low		4 byte	int	
5598H	Bmu01 wireharness failure high	RO	Occupy	unsigned	
5599H			4 byte	int	
559AH	Bmu01 wireharness failure low	RO	Occupy	unsigned	
559BH			4 byte	int	
559CH	Bmu01 equalization failure high	RO	Occupy	unsigned	
559DH			4 byte	int	
559EH	Bmu01 equalization failure low	RO	Occupy	unsigned	
559FH			4 byte	int	
55A0H	Bmu01 equalization mos failure	RO	Occupy	unsigned	
55A1H	high		4 byte	int	
55A2H	Bmu01 equalization mos failure low	RO	Occupy	unsigned	
55A3H			4 byte	int	



55A4H	Bmu01 ISO soft version	RO	Occupy 2 byte	unsigned short	0.01
55A5H	Bmu01 ISO hard version	RO	Occupy 2 byte	unsigned short	0.01
55A6H	Bmu01 Passive equalization high	RO	Occupy	unsigned	
55A7H	Januar I assir s equalization ingli		4 byte	int	
55A8H	Bmu01 Passive equalization low	RO	Occupy	unsigned	
55A9H	· ·		4 byte	int	
55AAH	Bmu01 BOOST equalization high	RO	Occupy	unsigned	
55ABH			4 byte	int	
55ACH	Bmu01 BOOST equalization low	RO	Occupy	unsigned	
55ADH	·		4 byte	int	
55AEH	Bmu01 BUCK equalization high	RO	Occupy	unsigned	
55AFH			4 byte	int	
55B0H	Bmu01 BUCK equalization low	RO	Occupy	unsigned	
55B1H	·		4 byte	int	
55B2H	Bmu01 LMU number	RO	Occupy	unsigned	
			2 byte	short	
55B3H	Bmu01 single cut fault code	RO	Occupy	unsigned	N · 44
			2 byte	short	Note14
55B4H	Bmu01 reset log	RO	Occupy	unsigned	N . 45
			2 byte	short	Note15
55B5H	Bmu01 restarts number	RO	Occupy	unsigned	
			2 byte	short	
55B6H	Bmu01 version	RO	Occupy	unsigned	15: BMU-
	. 6		2 byte	short	HV900112/26:
					BMU-
					HV50056/38:BMU-
					HV900105/50:HV90
					0120/41: BMU-
					HV90086
55B7H	Bmu01 min cell voltage	RO	Occupy	unsigned	0.001V
			2 byte	short	0.001
55B8H	Bmu01 min cell voltage ID	RO	Occupy	unsigned	
			2 byte	short	
55B9H	Bmu01 max cell voltage	RO	Occupy	unsigned	0.001V
			2 byte	short	0.001 V
55BAH	Bmu01 max cell voltage ID	RO	Occupy	unsigned	
			2 byte	short	
55BBH	Bmu01 min cell temperature	RO	Occupy	short	
			2 byte		
55BCH	Bmu01 min cell temperature ID	RO	Occupy	unsigned	0.1°C/bit -40
			2 byte	short	0.1 C/DIL -40
55BDH	Bmu01 max cell temperature	RO	Occupy	short	



			2 byte		
55BEH	Bmu01 max cell temperature ID	RO	Occupy	unsigned	
	·		2 byte	short	0.1°C/bit -40
55BFH~	Reserved(Bmu01)		Occupy		
55FFH			130 byte		
5600H~	Bmu02(Same as above)		Occupy		
567FH			256 byte		
5680H~	Bmu03(Same as above)		Occupy		
56FFH			256 byte		
5700H~	Bmu04(Same as above)		Occupy		
577FH			256 byte		
5780H~	Bmu05(Same as above)		Occupy		
57FFH			256 byte		
5800H~	Bmu06(Same as above)		Occupy		
587FH			256 byte		
5880H~	Bmu07(Same as above)		Occupy		
58FFH			256 byte		
5900H~	Bmu08(Same as above)		Occupy		
597FH			256 byte		
5980H~	Bmu09(Same as above)		Occupy		
59FFH			256 byte		
5A00H~	Bmu10(Same as above)		Occupy		
5A7FH			256 byte		
5A80H~	Bmu11(Same as above)		Occupy		
5AFFH			256 byte		
5B00H~	Bmu12(Same as above)		Occupy		
5B7FH			256 byte		
5B80H~	Bmu13(Same as above)		Occupy		
5BFFH			256 byte		
5C00H~	Bmu14(Same as above)		Occupy		
5C7FH			256 byte		
5C80H~	Bmu15(Same as above)		Occupy		
5CFFH			256 byte		
5D00H~	Bmu16(Same as above)		Occupy		
5D7FH			256 byte		
5D80H~	Bmu17(Same as above)		Occupy		
5DFFH			256 byte		
5E00H~	Bmu18(Same as above)		Occupy		
5E7FH			256 byte		
5E80H~	Bmu19(Same as above)		Occupy		
5EFFH			256 byte		
5F00H~	Bmu20(Same as above)		Occupy		
5F7FH			256 byte		



5F80H~	Bmu21(Same as above)	Occupy	
5FFFH		256 byte	
6000H~	Bmu22(Same as above)	Occupy	
607FH		256 byte	
6080H~	Bmu23(Same as above)	Occupy	
60FFH		256 byte	
6100H~	Bmu24(Same as above)	Occupy	
617FH		256 byte	
6180H~	Bmu25(Same as above)	Occupy	
61FFH		256 byte	
6200H~	Bmu26(Same as above)	Occupy	
627FH		256 byte	
6280H~	Bmu27(Same as above)	Occupy	
62FFH		256 byte	
6300H~	Bmu28(Same as above)	Occupy	
637FH		256 byte	
6380H~	Bmu29(Same as above)	Occupy	
63FFH		256 byte	
6400H~	Bmu30(Same as above)	Occupy	
647FH		256 byte	
6480H~	Bmu31(Same as above)	Occupy	
64FFH		256 byte	
6500H~	Bmu32(Same as above)	Occupy	
657FH		256 byte	
6580H~	Bmu33(Same as above)	Occupy	
65FFH		256 byte	
6600H~	Bmu34(Same as above)	Occupy	
667FH		256 byte	
6680H~	Bmu35(Same as above)	Occupy	
66FFH		256 byte	
6700H~	Bmu36(Same as above)	Occupy	
677FH		256 byte	
6780H~	Bmu37(Same as above)	Occupy	
67FFH		256 byte	
6800H~	Bmu38(Same as above)	Occupy	
687FH		256 byte	
6880H~	Bmu39(Same as above)	Occupy	
68FFH		256 byte	
6900H~	Bmu40(Same as above)	Occupy	
697FH		256 byte	
6980H~	Bmu41(Same as above)	Occupy	
69FFH		256 byte	
6A00H~	Bmu42(Same as above)	Occupy	
6A7FH		256 byte	



6A80H~	Bmu43(Same as above)	Occupy	
6AFFH		256 byte	
6B00H~	Bmu44(Same as above)	Occupy	
6B7FH		256 byte	
6B80H~	Bmu45(Same as above)	Occupy	
6BFFH		256 byte	
6C00H~	Bmu46(Same as above)	Occupy	
6C7FH		256 byte	
6C80H~	Bmu47(Same as above)	Occupy	
6CFFH		256 byte	
6D00H~	Bmu48(Same as above)	Occupy	
6D7FH		256 byte	
6D80H~	Bmu49(Same as above)	Occupy	
6DFFH		256 byte	
6E00H~	Bmu50(Same as above)	Occupy	
6E7FH		256 byte	
6E80H~	Bmu51(Same as above)	Occupy	
6EFFH		256 byte	
6F00H~	Bmu52(Same as above)	Occupy	
6F7FH		256 byte	
6F80H~	Bmu53(Same as above)	Occupy	
6FFFH		256 byte	
7000H~	Bmu54(Same as above)	Occupy	
707FH		256 byte	
7080H~	Bmu55(Same as above)	Occupy	
70FFH		256 byte	
7100H~	Bmu56(Same as above)	Occupy	
717FH		256 byte	
7180H~	Bmu57(Same as above)	Occupy	
71FFH		256 byte	
7200H~	Bmu58(Same as above)	 Occupy	
727FH		 256 byte	
7280H~	Bmu59(Same as above)	 Occupy	
72FFH		 256 byte	
7300H~	Bmu60(Same as above)	 Occupy	
737FH		256 byte	
7380H~	Bmu61(Same as above)	Occupy	
73FFH		 256 byte	
7400H~	Bmu62(Same as above)	 Occupy	
747FH		 256 byte	
7480H~	Bmu63(Same as above)	 Occupy	
74FFH		256 byte	
7500H~	Bmu64(Same as above)	Occupy	
757FH		256 byte	



	Industry device communication state				
A000H~	EMS lost		Occupy	unsigned	
A001H			4 byte	int	
A002H~	BMS lost	RO	Occupy	unsigned	
A003H			4 byte	int	
A004H~	PV INV Lost	RO	Occupy	unsigned	
A005H			4 byte	int	
A006H~	Pv_jb_lost	RO	Occupy	unsigned	
A007H			4 byte	int	
A008H~	EVChargerLost	RO	Occupy	unsigned	
A009H			4 byte	int	
A00AH~	Dccp_lost	RO	Occupy	unsigned	
A00BH			4 byte	int	
A00CH~	Grid meter lost	RO	Occupy	unsigned	
A00DH			4 byte	int	
A00EH~	PV meter lost	RO	Occupy	unsigned	
A00FH			4 byte	int	
A010H~	CP meter lost	RO	Occupy	unsigned	
A011H			4 byte	int	
A012H~	Ess_gw_meter_lost	RO	Occupy	unsigned	
A013H			4 byte	int	
A014H~	Wn_gw_meter_lost	RO	Occupy	unsigned	
A015H			4 byte	int	
A016H~	Load_gw_meter_lost	RO	Occupy	unsigned	
A017H			4 byte	int	
A018H~	Ess_in_gw_meter lost	RO	Occupy	unsigned	
A019H			4 byte	int	
A01AH~	Hv_gw_meter lost	RO	Occupy	unsigned	
A01BH			4 byte	int	
A01CH~	Pcs lost	RO	Occupy	unsigned	
A01DH			4 byte	int	
A01EH~	Pds_lost	RO	Occupy	unsigned	
A01FH			4 byte	int	
A020H~	Sts_lost	RO	Occupy	unsigned	
A021H			4 byte	int	
A022H~	Air_condition_lost	RO	Occupy	unsigned	
A023H			4 byte	int	
A024H~	Dg_lost	RO	Occupy	unsigned	
A025H			4 byte	int	
A026H~	Reserved		Occupy		
A07FH			180 byte		







5.Annex

Note1: Battery status

	Description			
Value	Charge	Discharge		
0	0	0		
1	0	1		
256	1	0		
257	1	1		
512	2	0		
513	2	1		

Note2: Battery relay status

Value	Description
0	Charge discharge relays are disconnected
1	Only discharge relay is closed
2	Only charge relay is closed
3	Charge and discharge relays are closed

Note3: Battery type

Battery_ID	Battery product model
2	M4860
3	M48100
13	48112-P
16	Smile5-BAT
24	M4856-P
27	Smile-BAT-10.3P
30	Smile-BAT-10.1P
33	Smile-BAT-5.8P
34	Smile-BAT5-JP
35	Smile-BAT-13.7P

Note4: battery fault

Fault		Description			
code	de Platform EMS2.5		EMS3.5/EMS3.6		
Bit	t 0		Temperature sensor error		
Bit 1			Mos error		
Bit	t 2	Cell Temp Differ	Circuit breaker open		



Bit 3	Balancer Fault	Dial switching mode inconsistence
Bit 4	Charge Over Current	Slave battery communication lost
Bit 5	Balancer Mos Fault	Sn missing
Bit 6	Dischage Over Current	Master battery communication lost
Bit 7	Pole Over Temp	Firmware versions inconsistence
Bit 8	Cell Over Volt	Multi master error
Bit 9	Cell Volt Differ	Mos high temperature
Bit 10	Discharge Low Temp	Insulation fault
Bit 11		Total pressure abnormal
Bit 12	Cell Low Volt	Mos feedback failure
Bit 13	ISO Comm Fault	Prefi lled failure
Bit 14	LMU SN Repeat	17823 communication failure
Bit 15		17841 communication failure
Bit 16	IR Fault	Mos temperature sensor error
Bit 17	LMU Comm Fault	
Bit 18	Cell Over Temp	
Bit 19	BMU Comm Fault	
Bit 20		
Bit 21	Charge Low Temp	
Bit 22		
Bit 23	Volt Detect Fault	
Bit 24	Wire Harness Fault	
Bit 25		
Bit 26	Relay Fault	
Bit 27	LMU ID Repeat	
Bit 28	LMU ID Discontinuous	
Bit 29	Current Sensor Fault	
Bit 30		
Bit 31	Temp Sensor Fault	

Note5: Inverter work mode

Value	Description
0	Wait Mode
1	Online Mode
2	UPS Mode
3	Bypass Mode
4	Fault Mode
5	DC Mode
6	SelfTest Mode
7	Check Mode
8	Update Master Mode
9	Update Slave Mode
10	Update ARM Mode



Note6: System fault

System 1				
	Description			
Platform	EM2.5/EMS3.5/EMS3.6	AE		
it 0	Network_Card_Fault			
it 1	Rtc_Fault			
sit 2	EEprom_Fault			
Sit 3	INV_Comms_Error			
it 4	Grid_Meter_Lost			
Sit 5	PV_Meter_Lost	Meter Not Set		
it 6	BMS_Lost			
Sit 7	UPS_Battery_Volt_Low	SD not inserted or SD write error		
it 8	Backup_Overload			
it 9	INV_Slave_Lost			
it 10	INV_Master_Lost			
it 11	Parallel_Comm_Error			
it 12	Parallel_Mode_Differ			
it 13	Flash_Fault			
it 14	SDRAM error			
it 15	Extension CAN error			
it 16	inv type not specified			
it 17				
it 18		DG_PV_Conflict		
it 19		PV_INV_Fault:n		
it 20		AirConFault		
it 21				
it 22				
it 23		GC_Fault		
it 24				
it 25		OverCurr		
it 26		PcsModeFault		
it 27		BatEnergyLow		
it 28				
it 29				
it 30				
it 31				
	-	Platform EM2.5/EMS3.5/EMS3.6 Sit 0 Network_Card_Fault Sit 1 Rtc_Fault Sit 2 EEprom_Fault Sit 3 INV_Comms_Error Sit 4 Grid_Meter_Lost Sit 5 PV_Meter_Lost Sit 6 BMS_Lost Sit 7 UPS_Battery_Volt_Low Sit 8 Backup_Overload Sit 9 INV_Slave_Lost Sit 10 INV_Master_Lost Sit 11 Parallel_Comm_Error Sit 12 Parallel_Mode_Differ Sit 13 Flash_Fault SDRAM error Sit 14 SDRAM error Sit 15 Extension CAN error Sit 16 inv type not specified Sit 17 Sit 18 Sit 19 Sit 20 Sit 21 Sit 23 Sit 24 Sit 25 Sit 25 Sit 26 Sit 27 Sit 28 Sit 29 Si		

Note7: Dispatch Mode

Mode value	Description
1	Battery only charges from PV;
2	State of Charge control;
3	Load Following;
4	Maximise Output;



5	Normal Mode;
6	Optimise Consumption;
7	Maximise Consumption
8	ECO Mode
9	FCAS Mode
10	PV Power Setting

Note8: Grid_Regulation

Notes: Grid_Regulati		Grid_Regulation		
Safety code	AL	AE		
0	VDE0126-50Hz			
1	VDE4105/11.18			
2	AS4777.2			
3	G83_2			
4	C10/C11			
5	TOR Erzeuger			
6	EN50549-NL			
7	EN50549-DK			
8	CEB			
9	CEI-021			
10	NRS097-2-1			
11	EN50549-GR			
12	UTE_C15_712			
13	IEC61727			
14	G59_3			
15	RD1699			
16	G99			
17				
18	VDE0126-60Hz			
19	AS4777.2-SA			
20	G98			
21	EN50549-CZ			
22	PEA			
23	MEA			
24	BISI			
25	JET-GR Series			
26				
27				
28	50Hz Default			
29	60Hz Default			
30	WAREHOUSE			
31	AS4777.2-NZ			
32	Korea			



33	G98/G99-IE	
34	NC Rfg	
35	UL 1741	
36	UL1741-Rule 21	
37	UL1741-Hawaiian	

Note9: Safety Mode Enable

Bit NO	Name	Description	
Bit0	Volt-WATT Mode	olt-watt response mode	
Bit1	Volt-VAR Mode	Volt-var response mode	
Bit2	Volt-Freq Mode	Volt-Freq response mode	
Bit3	Power Factor Curve Mode	Fixed power factor mode	
Bit4	Volt-WATT when Charging Mode	Characteristic power factor curve for $\cos \phi$ (P)	
Bit5	Reactive power mode	Reactive power control mode	
Bit6			
Bit7			
Bit8			
Bit9			
Bit10			
Bit11			
Bit12			
Bit13			
Bit14			
Bit15			

Note10: Topbmu Zstatus flag

Bit NO	Name	Description			
Bit0	Charge flag	00: forbid 01:allow		W	10:force
Bit1					charge
Bit2	Discharge flag	0:forbid		1:allow	V
Bit3	SOC calibration mode	0:exit		1: entr	у
Bit4~7	reserve				

Note11: Topbmu reset log

MOLETT.	Topolita reset tog	
Bit NO	Name	Description
Bit0	Error code	Power on reset
Bit1		Under voltage reset
Bit2		Main reset pin reset
Bit3		Soft reset
Bit4		Configuration mismatch reset
Bit5		Watchdog timer reset
Bit6~7	type	1:reset
Bit8~15	reset log	1~20



Note12: Toperror bmu warn and state cluster

Bit NO	Name	Description		
Bit0	Bmu SN repeat	0:normal	1:fault	
Bit1	Bmu ID repeat	0:normal	1:fault	
Bit2	Bmu ID discontinuity	0:normal	1:fault	
Bit3	Lmu number inconsistent	0:normal	1:fault	
Bit4	EMS communication lose	0:normal	1:fault	
Bit5	total pressure anomaly detection	0:normal	1:fault	
Bit6	Parallel failure detection	0:normal	1:fault	
Bit7	No bmu warning	0:normal	1:fault	
Bit8	Ems communication lose enable	0:disable	1:enable	
	flag			
Bit9	LMU Version inconsistency	0: consistent	1: inconsistent	
Bit10	ISO Version inconsistency	0: consistent	1: inconsistent	
Bit11	BMU Version inconsistency	0: consistent	1: inconsistent	
Bit12~15	reserve			

Note13: Bmu-X state

Bit NO	Name	Description	
Bit0	Main relay status	0:off	1:on
Bit1	Precharge relay status	0:off	1:on
Bit2	Status of breaker	0:off	1:on
Bit3	Negative relay status	0:off	1:on
Bit4~7	reserve		

Note14: Bmu-X single cut fault code

MOLETA:	Billu-X single cut lauit code					
Bit NO	Name	Description				
Bit0~1	Resection state	00:normal	10:si	ngle cut	11:th	ree cut
Bit3~8	single cut fault code	0:normal		12:topb	mu	
`				commun	nicate fa	ail
		1: Pole over temperature		13:temp	senso	r fail
		2: cell over temperature		14:relay	fail	
		3: charge low temperature	;	15:pcs	comr	nunicate
				fail		
		4: discharge low temperat	ure	16: U	nder	voltage
				shutdow	ın failuı	re
		5: Temperature difference		17: to	otal	pressure
				anomaly	detect	tion
		6: cell over voltage		18: ISC	comr	nunicate
				lose		
		7: cell low voltage		19:LMU	SN rep	eat
		8: charge over current		20:LMU	ID repo	eat



	9: discharge over current	21:LMU	ID
		discontinuity	
	10: Insulation fail	22:current sensor fail	
	11: LMU communicate fail	23:EMS communica	ite
		lose	

Note15: Bmu-X reset log

Bit NO	Name	Description
Bit0	Error code	Power on reset
Bit1		Under voltage reset
Bit2		Main reset pin reset
Bit3		Soft reset
Bit4		Configuration mismatch reset
Bit5		Watchdog timer reset
Bit6∼7	type	1:reset

Note16: Industry air condition alarm

envicool MC30-50:

Bit NO	Name	Description
Bit0	High temperature alarm	0:normal 1:fault
Bit1	Low temperature alarm	0:normal 1:fault
Bit2	High humidity alarm	0:normal 1:fault
Bit3	Low humidity alarm	0:normal 1:fault
Bit4	Coil freeze failure	0:normal 1:fault
Bit5	Exhaust high temperature	0:normal 1:fault
Bit6	Coil temperature sensor failure	0:normal 1:fault
Bit7	Outdoor temperature sensor failure	0:normal 1:fault
Bit8	Condensation temperature sensor failure	0:normal 1:fault
Bit9	Internal temperature sensor failure	0:normal 1:fault
Bit10	Exhaust gas temperature sensor failure	0:normal 1:fault
Bit11	Humidity sensor failure	0:normal 1:fault
Bit12	Internal fan failure	0:normal 1:fault
Bit13	External fan failure	0:normal 1:fault
Bit14	Compressor failure	0:normal 1:fault
Bit15	Electric heating failure	0:normal 1:fault
Bit16	Emergency fan failure	0:normal 1:fault
Bit17	High voltage alarm	0:normal 1:fault
Bit18	Low voltage alarm	0:normal 1:fault
Bit19	Flooding alarm	0:normal 1:fault
Bit20	Smoke alarm	0:normal 1:fault
Bit21	Access control alarm	0:normal 1:fault
Bit22	High voltage lock	0:normal 1:fault



Bit23	Low pressure lock	0:normal	1:fault
Bit24	Exhaust lock	0:normal	1:fault
Bit25	AC overvoltage	0:normal	1:fault
Bit26	AC undervoltage	0:normal	1:fault
Bit27	AC power-down	0:normal	1:fault
Bit28	Lack of phase	0:normal	1:fault
Bit29	Abnormal frequency	0:normal	1:fault
Bit30	Reverse phase	0:normal	1:fault
Bit31	DC overvoltage	0:normal	1:fault

envicool MC125HCNC1A:

Bit NO	Name	Description
Bit0	High Temp alarm	0:normal 1:fault
Bit1	Internal fan failure alarm	0:normal 1:fault
Bit2	External fan failure alarm	0:normal 1:fault
Bit3	Compressor failure alarm	0:normal 1:fault
Bit4	InsideTemp. sensor failure	0:normal 1:fault
Bit5	High pressure	0:normal 1:fault
Bit6	Low Temp alarm	0:normal 1:fault
Bit7	Dc overvoltage alarm	0:normal 1:fault
Bit8	Dc undervoltage alarm	0:normal 1:fault
Bit9	Ac overvoltage alarm	0:normal 1:fault
Bit10	Ac undervoltage alarm	0:normal 1:fault
Bit11	AC power supply	0:normal 1:fault
Bit12	Evaporator Temp sensor failure	0:normal 1:fault
Bit13	Condenser Temp sensor failure	0:normal 1:fault
Bit14	Outside Temp sensor failure	0:normal 1:fault
Bit15	Evaporator Frost Protection	0:normal 1:fault
Bit16	High Pressure Locked	0:normal 1:fault
Bit17~31	reserve	

Note17: Industry pv inv fault (goodwe)

Bit NO	Name	Description
Bit0	GFCI Device Check Failure	0:normal 1:fault
Bit1	AC HCT Check Failure	0:normal 1:fault
Bit2	reserve	
Bit3	DCI Consistency Failure	0:normal 1:fault
Bit4	GFCI Consistency Failure	0:normal 1:fault
Bit5	NA	
Bit6	GFCI Device Failure	0:normal 1:fault
Bit7	Relay Device Failure	0:normal 1:fault
Bit8	AC HCT Failure	0:normal 1:fault
Bit9	Utility Loss	0:normal 1:fault



Bit10	Gournd I Failure	0:normal	1:fault
Bit11	DC Bus High	0:normal	1:fault
Bit12	Internal Fan Failure	0:normal	1:fault
Bit13	Over Temperature	0:normal	1:fault
Bit14	Auto Test Failure	0:normal	1:fault
Bit15	PV Over Voltage	0:normal	1:fault
Bit16	External Fan Failure	0:normal	1:fault
Bit17	Vac Failure	0:normal	1:fault
Bit18	Isolation Failure	0:normal	1:fault
Bit19	DC Injection High	0:normal	1:fault
Bit20	reserve		
Bit21	reserve		
Bit22	Fac Consistency Failure	0:normal	1:fault
Bit23	Vac Consistency Failure	0:normal	1:fault
Bit24	reserve		
Bit25	Relay Check Failure	0:normal	1:fault
Bit26	reserve		
Bit27	reserve		
Bit28	reserve		
Bit29	Fac Failure	0:normal	1:fault
Bit30	EEPROM R/W Failure	0:normal	1:fault
Bit31	Internal Communication Failure	0:normal	1:fault

Note18: Industry sts fault info1

Bit NO	Name	Description
Bit0	grid voltage reversed	0:normal 1:fault
Bit1	grid AC voltage phase lost	0:normal 1:fault
Bit2	off-grid AC voltage reversed	0:normal 1:fault
Bit3	off-grid AC voltage phase lost	0:normal 1:fault
Bit4	Calibration parameter abnormal	0:normal 1:fault
Bit5	Sampling zero abnormal	0:normal 1:fault
Bit6	Overload alarm	0:normal 1:fault
Bit7	Ambient over temperature	0:normal 1:fault
Bit8	PLL fault	0:normal 1:fault
Bit9	Grid voltage asymmetric	0:normal 1:fault
Bit10	Grid under voltage	0:normal 1:fault
Bit11	Grid over voltage	0:normal 1:fault
Bit12	Grid under frequency	0:normal 1:fault
Bit13	Grid over frequency	0:normal 1:fault
Bit14	Frequently switching fault	0:normal 1:fault
Bit15	Grid power down	0:normal 1:fault
Bit16	emergency stopped(EPO)	0:normal 1:fault



Bit17	15V auxiliary power fault	0:normal	1:fault
Bit18	24V auxiliary power fault	0:normal	1:fault
Bit19	CAN A comm fault	0:normal	1:fault
Bit20	CAN B comm fault	0:normal	1:fault
Bit21	RS-485 comm fault	0:normal	1:fault
Bit22	DSP initializing fault	0:normal	1:fault
Bit23	grid interconnection switch open circuit	0:normal	1:fault
Bit24	grid interconnection switch short fault	0:normal	1:fault
Bit25	Overload timeout fault	0:normal	1:fault
Bit26	Synchronous signal 1 fault	0:normal	1:fault
Bit27	Ambient temp. sensor fault	0:normal	1:fault
Bit28	Cabinet temp. sensor fault	0:normal	1:fault
Bit29	Cabinet over temperature	0:normal	1:fault
Bit30	Module over temperature	0:normal	1:fault
Bit31	Fan fault	0:normal	1:fault

Note19: Industry sts fault info2

Bit NO	Name	Description
Bit0	DSP version fault	0:normal 1:fault
Bit1	CPLD version fault	0:normal 1:fault
Bit2	Bypass fault	0:normal 1:fault
Bit3	SPT fault	0:normal 1:fault
Bit4	Module temp. sensor fault	0:normal 1:fault
Bit5	Grid voltage distortion	0:normal 1:fault
Bit6	reserve	

Note20: Industry dcac fault info1

Bit NO	Name	Description
Bit0	AC-Group: AC bus over voltage	0:normal 1:fault
Bit1	AC-Group: AC bus over frequency	0:normal 1:fault
Bit2	AC-Group: AC bus under voltage	0:normal 1:fault
Bit3	AC-Group: islanding protection	0:normal 1:fault
Bit4	AC-Group: DC input over voltage	0:normal 1:fault
Bit5	AC-Group: On/Off-grid toggling error	0:normal 1:fault
Bit6	AC-Group: AC phase reversed	0:normal 1:fault
Bit7	AC-Group: DC input under voltage	0:normal 1:fault
Bit8	AC-Group: Overload alarm	0:normal 1:fault
Bit9	AC-Group: AC bus voltage Abnormal	0:normal 1:fault
Bit10	AC-Group: AC phase lost	0:normal 1:fault
Bit11	AC-Group: AC bus voltage asymmetric	0:normal 1:fault
Bit12	AC-Group: AC bus under frequency	0:normal 1:fault



Bit13	AC-Group: Battery under energy	0:normal	1:fault
Bit14	AC-Group: DC input over current	0:normal	1:fault
Bit15	AC-Group: Off-grid Volt phase reversed	0:normal	1:fault
Bit16	AC-Group: PLL fault	0:normal	1:fault
Bit17	AC-Group: Ambient over temperature	0:normal	1:fault
Bit18	AC-Group: Ambient temp. sensor fault	0:normal	1:fault
Bit19	AC-Group: Cabinet temp. sensor fault	0:normal	1:fault
Bit20	AC-Group: Cabinet over temperature	0:normal	1:fault
Bit21	AC-Group: Off-grid voltage phase lost	0:normal	1:fault
Bit22	AC-Group: AC current harmonic Abnormal	0:normal	1:fault
Bit23~31	reserve		

Note21: Industry dcac fault info2

Bit NO	Name	Description
Bit0	AC-Group: 24V auxiliary power fault	0:normal 1:fault
Bit1	AC-Group: emergency stopped(EPO)	0:normal 1:fault
Bit2	AC-Group: Grounding fault	0:normal 1:fault
Bit3	AC-Group: DC bus over voltage	0:normal 1:fault
Bit4	AC-Group: Module over temperature	0:normal 1:fault
Bit5	AC-Group: Module current asymmetric	0:normal 1:fault
Bit6	AC-Group: Fan fault	0:normal 1:fault
Bit7	AC-Group: DC relay open circuit	0:normal 1:fault
Bit8	AC-Group: Calibration parameter Abnormal	0:normal 1:fault
Bit9	AC-Group: Bus voltage unbalanced	0:normal 1:fault
Bit10	AC-Group: Fuse blown	0:normal 1:fault
Bit11	AC-Group: DSP initializing fault	0:normal 1:fault
Bit12	AC-Group: DC soft start failed	0:normal 1:fault
Bit13	AC-Group: CAN A comm fault	0:normal 1:fault
Bit14	AC-Group: DC input reversed	0:normal 1:fault
Bit15	AC-Group: AC current DC component Abnormal	0:normal 1:fault
Bit16	AC-Group: Transformer over temp.	0:normal 1:fault
Bit17	AC-Group: U2 comm. 2 Abnormal	0:normal 1:fault
Bit18	AC-Group: Tripped by BMS or DC switch	0:normal 1:fault
Bit19	AC-Group: SPD fault	0:normal 1:fault
Bit20	AC-Group: Overload timeout fault	0:normal 1:fault
Bit21	AC-Group: AC soft start failed	0:normal 1:fault
Bit22	AC-Group: Synchronous signal 1 fault	0:normal 1:fault
Bit23	AC-Group: DSP version fault	0:normal 1:fault
Bit24	AC-Group: AC relay open circuit	0:normal 1:fault
Bit25	AC-Group: Sampling zero Abnormal	0:normal 1:fault
Bit26	AC-Group: U2 comm. 1 Abnormal	0:normal 1:fault
Bit27	AC-Group: 15V auxiliary power fault	0:normal 1:fault



Bit28	AC-Group: Module ID reduplicated	0:normal	1:fault
Bit29	AC-Group: RS485 comm. fault	0:normal	1:fault
Bit30	AC-Group: CAN B comm. fault	0:normal	1:fault
Bit31	AC-Group: Restart too much	0:normal	1:fault

Note22: Industry dcac fault info3

Bit NO	Name	Description
Bit0	AC-Group: CPLD version fault	0:normal 1:fault
Bit1	AC-Group: Hardware version fault	0:normal 1:fault
Bit2	AC-Group: DC relay short circuit	0:normal 1:fault
Bit3	AC-Group: DC bus under voltage	0:normal 1:fault
Bit4	AC-Group: AC relay short circuit	0:normal 1:fault
Bit5	AC-Group: Synchronous signal 2 fault	0:normal 1:fault
Bit6	AC-Group: Parameter mismatch	0:normal 1:fault
Bit7	AC-Group: CAN C comm. fault	0:normal 1:fault
Bit8	AC-Group: Ambient humidity too high	0:normal 1:fault
Bit9	AC-Group: BMS voltage Abnormal	0:normal 1:fault
Bit10	AC-Group: BMS current Abnormal	0:normal 1:fault
Bit11	AC-Group: BMS temperature Abnormal	0:normal 1:fault
Bit12	AC-Group: BMS shutdown	0:normal 1:fault
Bit13	AC-Group: Insulation detection Abnormal	0:normal 1:fault
Bit14	AC-Group: Hardware sampling Abnormal	0:normal 1:fault
Bit15	AC-Group: Remote comm. Lost	0:normal 1:fault
Bit16~31	reserve	

Note23: Industry dcac fault info4

Bit NO	Name	Description
Bit0	PCS: Pv under voltage	0:normal 1:fault
Bit1	PCS: Pv over voltage	0:normal 1:fault
Bit2	PCS: Pv contactor short circuit	0:normal 1:fault
Bit3	PCS: Pv contactor open circuit	0:normal 1:fault
Bit4	PCS: PE-N contactor short circuit	0:normal 1:fault
Bit5	PCS: PE-N contactor open circuit	0:normal 1:fault
Bit6	PCS: Neutral contactor short circuit	0:normal 1:fault
Bit7	PCS: Neutral contactor open circuit	0:normal 1:fault
Bit8	PCS: Grid access abnormal	0:normal 1:fault
Bit9	PCS: Grid power down	0:normal 1:fault
Bit10	PCS: Grid voltage distortion	0:normal 1:fault
Bit11	PCS: input dry contact 4 failed	0:normal 1:fault
Bit12	PCS: input dry contact 5 failed	0:normal 1:fault
Bit13	reserve	



Bit14	reserve		
Bit15	reserve		
Bit16	fault status	0:normal	1:fault
Bit17	Rack Func board Alarm	0:normal	1:fault
Bit18	Rack Func board fault	0:normal	1:fault
Bit19~31	reserve		

Note24: Industry dcdc fault info1

Bit NO	Name	Description
Bit0	DC-Group: DC bus over voltage	0:normal 1:fault
Bit1	DC-Group: DC bus under voltage	0:normal 1:fault
Bit2	DC-Group: DC input over voltage	0:normal 1:fault
Bit3	DC-Group: DC input under voltage	0:normal 1:fault
Bit4	DC-Group: DC input over current	0:normal 1:fault
Bit5	DC-Group: DC input power down	0:normal 1:fault
Bit6	DC-Group: Restart too much	0:normal 1:fault
Bit7	DC-Group: Battery relay short circuit	0:normal 1:fault
Bit8	DC-Group: PV under energy	0:normal 1:fault
Bit9	DC-Group: Battery under energy	0:normal 1:fault
Bit10	DC-Group: ambient temperature overheat	0:normal 1:fault
Bit11	DC-Group: Tripped by BMS or DC switch	0:normal 1:fault
Bit12	DC-Group: U2 comm. 1 Abnormal	0:normal 1:fault
Bit13	DC-Group: cabinet temperature overheat	0:normal 1:fault
Bit14	DC-Group: cabinet temperature sensor fault	0:normal 1:fault
Bit15	DC-Group: ambient temperature sensor fault	0:normal 1:fault
Bit16	DC-Group: Module current asymmetric	0:normal 1:fault
Bit17	reserve	
Bit18	DC-Group: 24V auxiliary power fault	0:normal 1:fault
Bit19	DC-Group: emergent stopped(EPO)	0:normal 1:fault
Bit20	DC-Group: Grounding fault	0:normal 1:fault
Bit21	DC-Group: Bus voltage unbalanced	0:normal 1:fault
Bit22	DC-Group: Module over temperature	0:normal 1:fault
Bit23	DC-Group: Fan fault	0:normal 1:fault
Bit24	DC-Group: Battery relay open circuit	0:normal 1:fault
Bit25	DC-Group: Calibration parameter Abnormal	0:normal 1:fault
Bit26	DC-Group: Fuse blown	0:normal 1:fault
Bit27	DC-Group: DSP initializing fault	0:normal 1:fault
Bit28	DC-Group: Battery soft start failed	0:normal 1:fault
Bit29	DC-Group: CAN A comm. fault	0:normal 1:fault
Bit30	DC-Group: Bus relay open circuit	0:normal 1:fault
Bit31	DC-Group: Bus soft start failed	0:normal 1:fault



Note25: Industry dcdc fault info2

Bit NO	Name	Description
Bit0	DC-Group: DSP verision fault	0:normal 1:fault
Bit1	DC-Group: CPLD version fault	0:normal 1:fault
Bit2	DC-Group: Parameter mismatch	0:normal 1:fault
Bit3	DC-Group: Hardware version fault	0:normal 1:fault
Bit4	DC-Group: RS485 communication fault	0:normal 1:fault
Bit5	DC-Group: CAN B comm. fault	0:normal 1:fault
Bit6	DC-Group: Module ID reduplicated	0:normal 1:fault
Bit7	DC-Group: 15V auxiliary power fault	0:normal 1:fault
Bit8	DC-Group: Bus relay short circuit	0:normal 1:fault
Bit9	DC-Group: BMS voltage Abnormal	0:normal 1:fault
Bit10	DC-Group: BMS current Abnormal	0:normal 1:fault
Bit11	DC-Group: BMS temperature Abnormal	0:normal 1:fault
Bit12	DC-Group: BMS shutdown	0:normal 1:fault
Bit13	DC-Group: Insulation detection Abnormal	0:normal 1:fault
Bit14~31	reserve	

Note26: Household Inverter fault code(Only for EMS3.5/EMS3.6)

Code Bit	Inverter Fault1	Inverter Fault2
Bit 0	Grid_OVP	bat2_discharge_ocp
Bit 1	Grid_UVP	bat1_hw_ocp
Bit 2	Grid_OFP	bat2_hw_ocp
Bit 3	Grid_UFP	inv_otp
Bit 4	phase_locked_fault	inv_ovp
Bit 5	bus_ovp1	inv_uvp
Bit 6	bus_ovp2	output_dc_over_current
Bit 7	insulation_fault	inv_ocp
Bit 8	gfci_fault	inv_hw_ocp
Bit 9	gfci_test_fault	output_dc_over_voltage
Bit 10	grid_relay_fault	output_short
Bit 11	over_temperature	output_overload
Bit 12	pv_reverse	apu_uvp
Bit 13	bat_reverse	bat_relay_fault
Bit 14	m_s_com_fault	dc_input_disturbance
Bit 15	display_com_fault	grid_disturbance
Bit 16	chip1_upgrade_fault	gird_unbalance
Bit 17	mppt1_ovp	freq_jitter
Bit 18	mppt1_sw_ocp	grid_overcurrent
Bit 19	mppt1_hw_ocp	grid_current_track_fault
Bit 20	mppt1_otp	backup_ovp
Bit 21	mppt2_ovp	dc_bus_unbalancevolt



Bit 22	mppt2_sw_ocp	dc_bus_undervolt
Bit 23	mppt2_hw_ocp	dc_bus_unbalancevolt2
Bit 24	mppt2_otp	igbt_over_current
Bit 25	bat_ovp	grid_disturbance2
Bit 26	bat_uvp	afci_check_protect
Bit 27	battery_lose	grid_current_sampling_abnormal
Bit 28	bat_otp	dsp_selfcheck
Bit 29	bat1_charge_ocp	grid_short_time_over_current
Bit 30	bat1_discharge_ocp	bat_overvolt_hardware_fault
Bit 31	bat2_charge_ocp	zero_ground_fault

Note27: Household Inverter fault extend code(Only for EMS3.5/EMS3.6)

Note27: Household Inverter fault extend code(Only for EMS3.5/EMS3.6)			
Code Bit	Inverter Extend Fault1	Inverter Extend Fault2	
Bit 0	ac_hct_check_failure		
Bit 1	dci_consistency_failure		
Bit 2	gfci_consistency_failure		
Bit 3	relay_device_failure		
Bit 4	ac_hct_failure		
Bit 5	gournd_i_failure		
Bit 6	utility_phase_failure		
Bit 7	utility_loss		
Bit 8	internal_fan_failure		
Bit 9	fac_consistency_failure		
Bit 10	vac_consitency_failure		
Bit 11	phase_angle_failure		
Bit 12	dsp_communication_failure		
Bit 13	eeprom_rw_failure		
Bit 14	vac_failure		
Bit 15	fac_failure		
Bit 16	external_fan_failure		
Bit 17			
Bit 18			
Bit 19			
Bit 20			
Bit 21			
Bit 22			
Bit 23			
Bit 24			
Bit 25			
Bit 26			
Bit 27			
Bit 28			
Bit 29			



Bit 30	
Bit 31	

Note28: Battery warning

Warning	Description		
code	Platform	EMS2.5	EMS3.5/EMS3.6
Bit 0			Temperature imbalance
Bit 1			Over temperature
Bit 2			Discharge low temperature
Bit 3			Charge low temperature
Bit 4			Discharge over current
Bit 5			Charge over current
Bit 6			Cell over voltage
Bit 7			Cell low voltage
Bit 8			No soc calibration
Bit 9			
Bit 10			
Bit 11			
Bit 12			
Bit 13			
Bit 14			
Bit 15			
Bit 16			
Bit 17			
Bit 18			
Bit 19			
Bit 20			
Bit 21			
Bit 22			
Bit 23			
Bit 24			
Bit 25			
Bit 26			
Bit 27			
Bit 28			
Bit 29			
Bit	30		
Bit 31			