Upper Computer Software Operation Manual

One. Real-Time Monitoring

BMS monito	ring sy	/stem (1	76 x 3	33) (V3	8.81 2021-1	1-29)								Click swtch	"Open" on Seria	button to al port an) d –	o x
Real time monitorin	9 Par	allel monit	oring	Real time	e data Parar	neter inforr	nation Syst	tem conf	iguration	Data rec	ord	Alarm record		choos	e correct	t port		
				Pac	ck No	o. 0	1					СОМ		Serial port Pack quantity	2 s	ierial number		Open
Battery information	n				Temperatur	e (°C)					_			Fack address		Fack No. JU	· · · · · ·	Locking
Pack volt	tage	0.000	V		T01	0.0		T18	0.0			System Status						
Pack cur	rrent	0.000	А		T02	0.0		T19	0.0		1	CFET On	Charge		Heating		🖂 AC in	
9	50C	0	%		T03	0.0		T20	0.0			E Eulleharaa	DisCharge		Dissipate h	ieat		
-	он	n	2		т04	0.0		T 21	0.0			Alarra Chabas	j rie chaig	e)	Buzzei			
Besidual con	noitu	0.000	Ah		TOP	0.0		T22	0.0			Pack-UV		Г	ChallT			
Hesidual capa	acity	0.000	An		105	0.0		122	0.0			Pack-OV	Cell-OV		Cha-OT			
Full capa	acity	0.000	Ah		106	0.0		123	0.0			Cell-UT	Env-UT	Г	Mos-UT		CFET E	rror
Chg-Dsg c	ycle	0			T07	0.0		T24	0.0			Cell-OT	🗌 Env-OT	Γ	Mos-0T		🗆 DFET E	rror
Outside volt	tage	0.000	V		T08	0.0		T25	0.0			SOC-Low	🗌 Chg-OC	Γ	Dsg-OC-1			
Positive insula	ation	0.0	kΩ		т 09	0.0		T26	0.0			Protect Status						
Negative insula	ation	0.0	kΩ		T10	0.0		T27	0.0			Pack-UVP	Cell-UVP	Г —	Chg-UTP		Dsg-UT	Р
Cell voltage (mV)	_		_		1						_	Pack-OVP	Cell-OVP		Chg-OTP			P
MaxV			в	alance St	atus	MinV			Balance	e Status		I LAGULP	Env-UTP		Mos-UTP			P-1 P-2
V01	0	1		OFF		V89	0		OF	FF		Inversed Ch	harger	,	1103 011		1 D3900	. 2
V02	0	1		OFF		V90	-			-			-					
1/02				057		1/01	0		0									
V03	U		_	orr		vər	U		U	-r								
V04	0	1		UFF		V92	0		OF				1					
V05	0)		OFF		V93	0		OF	-F		Englig	h/Chinese Switch					
V06	0)		OFF		V94	0		OF	FF		Lingits	sil cimese switch	En	ter pa	issword	: AF123	3456
V07	0	1		OFF		V95	0		OF	FF			¥			1		
V08	0			OFF		V96	0		OF	F		C Chinese	 English 	Please inpu	t a password			Change
												1 启用]	⁹⁷⁴ 控制测试可以	点击单项测试!				

1. Select the serial port number available for connection, and then click "Open Serial port" button. 2. Set the number of packs to 8, and the battery string address can range from 1 to 8.

3. The PACK number is the DIP switch address of the battery pack. In order to avoid misoperation, it is better to click the "Lock" button.

Note: All operations in Parameter Information, data record, Alarm Record, Parameter Information are for the battery Pack selected in the Pack number drop-down box.

3. System status displays real-time basic action information of BMS;

4, alarm and protection status is BMS real-time alarm and protection information;

5, the detection state is the BMS board real-time self-test fault prompt;6. Control status indicates the enabled function module.

7. Control test: you can click open or close, now only open CFET/DFET, enable charging current limit control; Note: When there is discharge current no

Can turn off charging CFET, when there is charging current can not turn off discharging DFET; Charge current limiting open to reach the current limiting open conditions, but can be turned off, turned off

If this function is enabled, the current limiting condition is judged again.

8. To switch between Chinese and English, please click to close the software and open it again to avoid garbled code.

9, Password input box after entering the password can control the test, parameter setting and system configuration operations. Note: Initial password: AF123456; You can also set

Update the password, enter and click the change button; Then exit the software before opening is to enter a new password.



Two.Parallel Monitoring

()) m	40 to t			
W BN	/IS monitoring sys	tem (176 x 33) (V3.81 202
Real ti	me monitoring Parall	el mon	itoring Real	time data F
Seq	Name	Unit	PackNo.01	PackNo.02
1	Pack voltage	V		
2	Pack current	А		
3	SOC	%		
4	SOH	%		
5	Residual capacity	Ah		
6	Design capacity	Ah		
7	Cycle times			
8	Min∀	mV		
9	MaxV	mV		
10	Outside voltage	V		
11	Positive insulation	kΩ		
12	Negative insulation	kΩ		
13	T1	°C		
14	T2	°C		
15	T3	°C		
16	T4	°C		
17	T5	°C		
18	T6	°C		
19	T7	°C		
20	T8	°C		
21	Т9	°C		
22	T10	°C		
23	T11	°C		
24	T12	°C		
25	T13	°C		
26	T14	°C		
27	T15	°C		
28	T16	°C		
,				

Each column shows the information about the total voltage, current, temperature, and cell voltage of a battery pack. You can check the data of all battery packs in a column.

Three、Real Time Data

2	BMS I	monitoring system ((176 x 33) (V3	3.81 2021-11-2	29)								-		×
Re	al time r	nonitoring Parallel mor	hitoring Real tim	e data Paramet	er informa	tion Sys	tem configuration Data	a record Alarm recor	d						
P	ackNo	Time	Pack voltage(V)	Pack current(A)	SOC%	SOH%	Residual capacity(Ah)	Design capacity(Ah)	Cycle times	MinV(mV)	MaxV(mV)	Outside voltage(V)	Positive insulation(k Ω)	Negative ins	ulatior
Г															
	—														
<u>I</u> P	ackNo.C	1 PackNo.02													

1. Display record: record the data of each battery pack collected in real time

2. Automatic saving: When the certain recorded data are reaches , it will be automatically saved into an EXCEL file.

3. Automatic scrolling: When the recorded data is added to the full screen, the cursor will croll to the new columns

4. PackNo.01-PackNo.08 Indicates the recorded data of the corresponding battery pack.

5. Right click the mouse on the interface to pop up the following picture:



Data Export: Saves the current data as an EXCEL file. Data Clearance: Clear up the collected data.

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Four, Parameters Information

BMS monitoring system (176 x 33) (V3.81 2021-11-29)

Real time monitoring Parallel monitoring Real time data	raiameteri	ritoiniation System	configuration Data	record Alarm record				
Parameter name	Unit	Minimum	Maximum	Parameter values	Function control		_	_
RS485 address				0	Enable CFET	Enable heating	Enable Led	Enable dormancy
Battery node number		1	176	0	Enable DFET	Enable Radiating	🔲 Enable Buzzer	🔲 Enable Charge limited
Design capacity	mAh			0	Alarm control	Enable Coll IV		Enable EnvillT
Sampling resistance(75mV)	A			0				
Balance starting voltage	mV			0	Enable Pack-UV	Enable Cell-UV		Enable Env-UT
Balance starting pressure difference	mV			0	Enable Chg-UI I	Enable Dsg-UT	Enable Lhg-UL	
Cell high voltage alarm	mV			0	Enable Chg-OT I	Enable Dsg-OT	Enable Dsg-OC 1	
Cell high voltage alarm recovery	mV			0	Protection control			
Cell low voltage alarm	mV			0	Enable Pack-UVP	Enable Cell-UVP	Enable FET-UTP	🔲 Enable Env-UTP
Cell low voltage alarm recoveru	mV			0	Enable Pack-OVP	Enable Cell-OVP	Enable FET-OTP	🔲 Enable Env-OTP
Deals well-see high well-see alarm				0	Enable Chg-UTP	Enable Dsg-UTP	🔲 Enable Dsg-OCP 1	Enable Chg-OCP
Pack voltage night voltage alann				0	Enable Chg-OTP	Enable Dsg-OTP	🔲 Enable Dsg-OCP 2	
Pack voltage high voltage alarm recovery	mV			U	Other control			
Pack voltage low voltage alarm	mV			0	Balance mode Disable	balancing	▼ S	CP 100 - mV
Pack voltage low voltage alarm recovery	mV			0		balanoing		
High temperature alarm	°C			0	Restore default parame	toro		
Low temperature alarm	°C			0	Trestore deradic parame	ners.		
Discharge current alarm	mΑ			0				
Discharge current alarm recovery	mA			0				
Charging current alarm	mΑ			0				
Charging current alarm recovery	mΑ			0				
Voltage difference alarm	mV			0				
Voltage difference alarm recoveru	mV			n	Read	Write	Import	Export

1. New data can be entered in the parameter value column of the left table. Other columns cannot be entered.

2. Function control: represents the basic function Settings of the BMS board.

3, alarm and protection control: Set BMS board function on or off.

4, other control: select the balance mode (there are forbidden balance, charging balance,

charging static balance, charging static discharge balance of the four modes) and

Short circuit protection current (short circuit protection voltage/sampling resistance).

5. Protocol type: Select the inverter protocol according to the inverter; RS485 supports six protocols and CAN supports 10 protocols.

6. Read parameters: Read data from the device to the computer and display it in the table on the left. 7. Write parameter: write the data in the left table to the device.

8. Export parameters: Export the data in the left table to a file.

9. Import parameters: Import the exported parameter file into the table on the left, which is mainly used for maintenance and plate replacement.

10. Restore default parameters: If this item is selected, no matter what value is entered in the table on the left, the device will be restored to the factory setting when clicking "Write Parameter" Set parameters.

Five 、Data Record

🕖 BN	IS monito	oring system (176 x 3	3) (V3.81	2021-11-29))														-		ı ×
Real tin	ne monitorir	ng Parallel monitoring	Real time da	ta Parameter	information	System c	onfiguration I	Data record A	arm record	IFFT(C)	Trace.	Itater	Tacci	TARCOL	TECCU	Terra	ITZGCI	Trency	Tatica	Tiocol	THERM
Jed	Tackino	11116	Mode	voikage(v)	Carrent(A)	300(%)	iviiriv (iiiv.)	Maxv(IIIV)	Env(O)	i Ei(0)	11(0)	12(0)	13(0)	14(0)	13(0)	10(0)	11(0)	10(0)	13(0)	110(0)	111(0)11.
—																					
Re	ad	Stop Del	Lete	Export																	
							[



- 1. Read: Read the data records saved on the device.
- Stop: Stop the ongoing data reading process.
 Delete: clears the current read data.
- 4. Export: Export the read device data records to a file.

Six, Alarm Record

🕖 BN	1S monito	oring system (176 x 3	3) (V3.81	2021-11-29	9)									-		×
Real tir	ne monitorir	ng Parallel monitoring	Real time da	ta Parameter	r information	System o	onfiguratio	n Data record Alarm record								
Seq	PackNo	Time	Mode	Voltage(V)	Current(A)	SOC(%)	Alarm	Alarm information	MinV(mV)	MaxV(mV)	Env(°C)	FET(°C)	T1(°C)	T2(°C) T3	(°C) 14	(°C)
Re	ad	Stop Del	lete	Export												
		1					-									

- 1. Read: Read the data records saved on the device.
- Stop: Stop the ongoing data reading process.
 Delete: clears the current read data.
- 4. Export: Export the read device data records to a file.

Seven, System Confuguration

BMS monitoring system (176)	(33) (V3.81 2021-11-29)				_	×
Real time monitoring Parallel monitoring	Real time data Parameter info	ormation System configuration	Data record Alarm record			
Date time Equipment time 2022-10-14	• 23:36:59 ÷ ▼ Use system	date Read				
Capacity Design capacity	(mAh)					
Full capacity	(mAh)	Read				
Residual capacity	(mAh)					
Production Information						
Bar Code		Read				
Discharge						
Capacity accumulating 0.0	[Ah]	Read				
Power accumulating 0.00	(kWh)					

1. Data: read and set the date of the device.



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2. Storage: We will not store data by default. If you want to save data, you need to fill in data in the "Data interval" item Data is saved based on the interval. You are advised not to set the interval too small because the storage space on the board

is limited. "Delete Data" and "Delete Alarm"

Erase past data records and alarm records (erase the data store on the board).

3. Capacity: Read and set the capacity of the battery pack corresponding to the device to facilitate the calculation of other data.

4. Charge and discharge cycle: read and set the number of charge and discharge cycles of battery packs. The system accumulates from this data

I'm going to use.

5. Production information: The code information set by the manufacturer board can also be modified into its own code with a maximum of 30 characters.

6, voltage calibration: only useful for old products, new products are not used;

7, current calibration: now only open zero calibration, read the calibration value, fill in 0 in the box behind, click calibration, if wrong, please click reset after

The calibration.

8, temperature calibration: the front box is the read temperature, the back box fill in the actual temperature, and then click the calibration, if the error, please click reset

In the calibration.

9. Product information: The user reads and sets the company name, module name, version number, battery type, serial number and remarks of the device (the longes Both are 30 characters long).

10, forced hibernation is the upper computer to send instructions to shut down the BMS board.

11, firmware upgrade button like is a serial port upgrade function module, CAN upgrade without this function button.