

QUICK INSTALLATION GUIDE

LiFePO4

B-LFP48-100

This Quick Installation Guide contains important information regarding the proper installation of your BSLBATT Golf Cart lithium battery. This QIG applies to BSLBATT Golf Cart lithium batteries.

PRINCIPLE DESCRIPTION

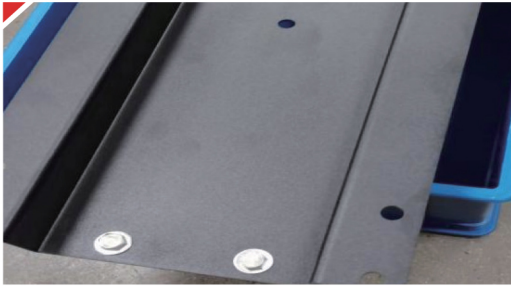
1. The battery pack is composed of 32 units 52Ah lithium iron phosphate batteries in series and parallel, with a specification of 51.2V104Ah.
2. The battery pack contains BMS (battery management system), which monitors the voltage of each single cell in real time, as well as the regional temperature and current conditions, and controls the charging and discharging process.
3. When charging, the BMS controls the pull-in and separation of the charging relay, and communicates with the charger through CAN (an automotive communication specification) to exchange battery information and charging information in real time.
4. When discharging, the BMS controls the pull-in and separation of the dry contact signal relay inside the box, and reminds the low-power through the alarm signal. And reserved CAN signal interface (can exchange data with the vehicle controller, this CAN communication port can also be used for BMS program refresh and upgrade).
5. The battery pack has a display (external 485 signal) interface, which can be connected to the power and data display instrument, touch the debugging screen; it can also provide remote communication services through an external signal conversion module.
6. The battery pack has its own fuse to protect the battery and electrical equipment when the external short circuit occurs.
7. The battery pack uses quick-plug connectors externally, including power circuit and signal circuit.



	NAME	PARAMETER	
1	BAT-	M8*15mm	Battery string charge and discharge negative port
2	Switch	locking press button	Battery string power switch
A	Comm	GX16-4	Charging communication interface
B	Screen	GX16-6	Display screen interface
C	C BAT+	M8*15mm	Positive battery pack charging port
D	D BAT+	M8*15mm	Positive battery string discharge port

INSTALLATION STEPS

- 1** Fix the battery pack and fixing bracket



- 2** Put the battery pack in the corresponding position of the bracket and fix it with the screw



- 3** Connect the corresponding power output line, input line and communication output line according to the mark

- 3.1** Connect the charging and discharging common negative pole and lock it tightly



- 3.2** Dock the charging positive pole and lock



- 3.3** Connect the positive electrode of discharge and lock



- 3.4** Dock the charging communication cable (the charging communication connector is GX16-4P female plug)



- 3.5** Dock display communication line (display communication line is GX16-6P female plug)



- 3.6** Check whether the screw of each connecting wire is locked; after completion, it can be tested



SCREEN OPERATION

Screen display

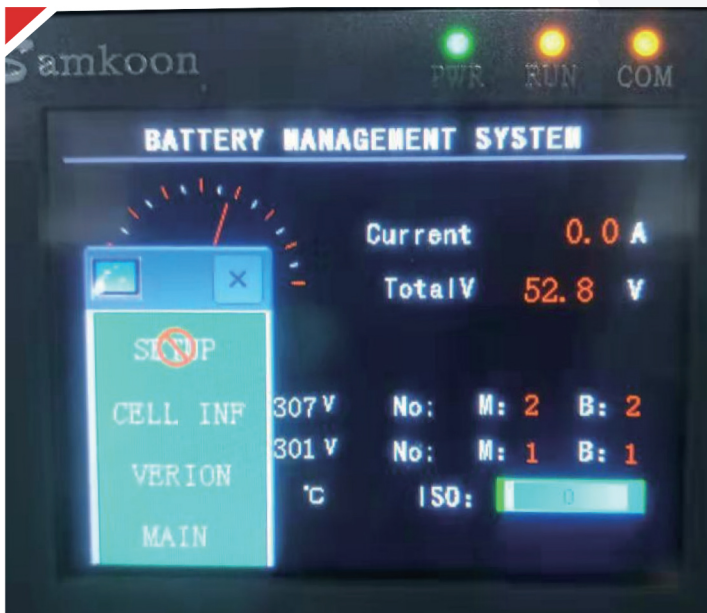
The debugging screen is connected to the (J6) port, turn on the switch, the debugging screen is powered on and display the main interface.

Main interface shows integrated display of total voltage, real-time current, real-time capacity, maximum and minimum cell voltage and temperature.



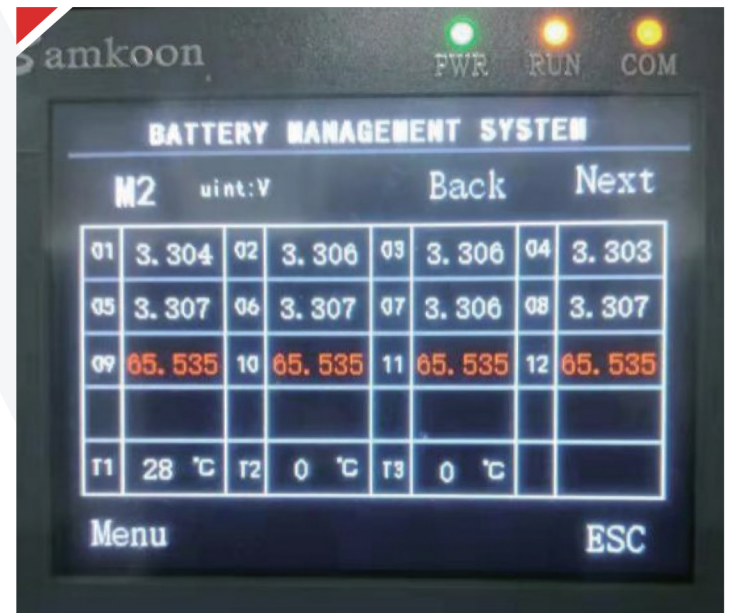
1 Main menu page

Click "Menu" to enter the main menu interface. This page is the operation channel, you can enter several interfaces of "settings", "Single cell information" and "version information".



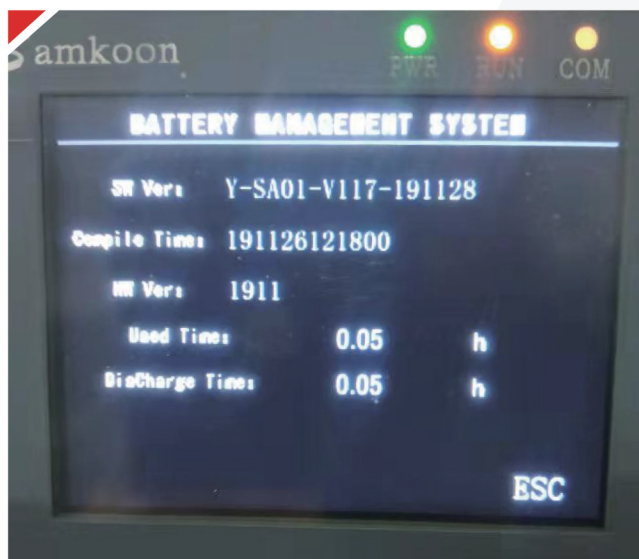
2 Single cell information page

Click the main menu, and then click "CELL INF" to enter the interface (cannot be modified). This page can view the real-time voltage and temperature of all single cells in modules 1 and 2 (each module includes a maximum of 12 strings of cell voltage collection points and 2 temperature collection points).



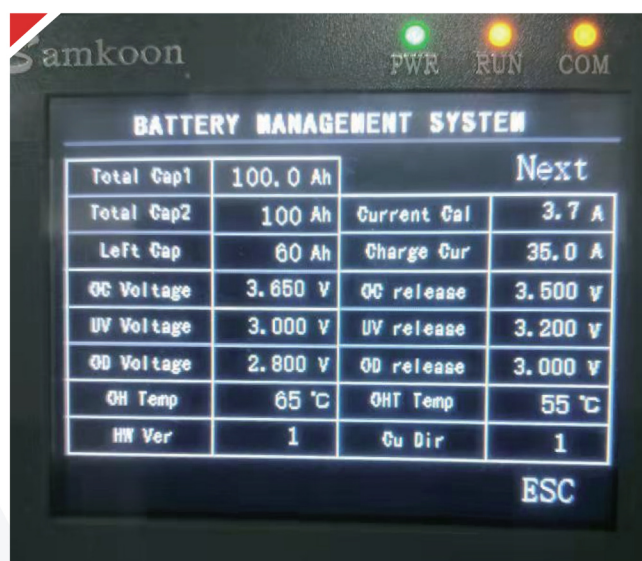
3 Version page

Click "Main Menu", and then click "VERION" to enter the version information interface (cannot be modified). Display program version information and discharge time statistics.



4 Setting page

Click "Main Menu", then click "SETWP" to enter the screen saver password interface, input the password to enter the parameter setting interface. This page can modify the internal parameter settings. That is, the actual capacity value, the charging and discharging protection trigger voltage, the alarm trigger voltage, the detection current correction value, the maximum charging current, the alarm temperature, the number of serial ports of the module, etc.



Note: The data of this page is adjustable, which is set by the manufacturer before leaving the warehouse. If it is necessary to match and adjust individual parameters during on-site use, please contact the professional technicians of the manufacturer for confirmation.

The touch screen is made of glass and is fragile. And the shell is not completely sealed, it needs to be waterproof, dustproof and drop-proof, and keep it properly.

If the battery pack is abnormal and needs to be checked, you can disconnect the original (J6) communication terminal connector, and connect this screen to visually evaluate the general abnormality of the battery pack (pressure difference, temperature, current, etc.).

THE FOLLOWING GENERAL ABNORMAL FAULT METHOD:

DESCRIPTION	REASON	SOLUTION
Large SOC deviation	<ol style="list-style-type: none"> 1. The offset of the current sensor is large and the measurement is inaccurate 2. Incomplete charge and discharge, the capacity value is not corrected 	<ol style="list-style-type: none"> 1. Adjust the current correction value to make it return to 0 2. Fully charged or discharged, the capacity is automatically corrected
Abnormal alarm	<ol style="list-style-type: none"> 1. Abnormal temperature alarm 2. Single unit undervoltage alarm 3. Single over-discharge alarm 	<ol style="list-style-type: none"> 1. Detect the actual ambient temperature, if it is consistent with it, it should be stopped immediately, and it can be used after cooling down. 2. The alarm is lower than the setting, and it needs to be charged in time
Not charging	<ol style="list-style-type: none"> 1. The charger signal is interrupted 2. The charger fault light flashes 3. The charger is not powered on 	<ol style="list-style-type: none"> 1. Reconnect the charger and battery terminal connector 2. Check whether the 12V power supply of the charger is output normally. If not, replace the charger. 3. Directly replace the charger
Vehicle Power Outage, 12v Output	Small output current, 12 hours power failure protection	Reset the switch once

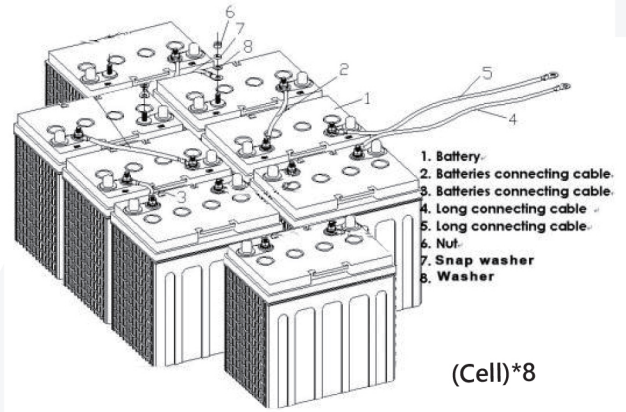
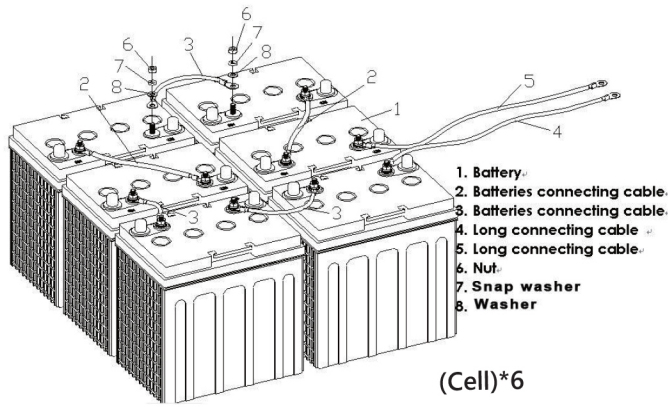
ALARM LIGHT FAULT INDICATION

CLASSIFICATION	CONTROL LOGIC	ALARM LIGHT INDICATION (BUZZER)	RESET INDICATION
General alarming	Power on for 5s and stop for 5s	Red -- Red -- Red --	Handle exceptions properly
Undervoltage alarming	Power on for 5s and stop for 5s	Red -- Red -- Red --	Charging, higher than undervoltage, release voltage value
Over-discharge alarming	Always powered on	Red	Charging, higher than over-discharge, release voltage value

OPERATION PRECAUTIONS AND PROHIBITIONS

- Be sure to read the user manual and precautions before using the battery system.
- Improper handling of lithium-ion batteries can cause leakage, heat generation, smoke, explosion or fire.
- This may result in poor performance or failure. In order to ensure the service life of lithium batteries, operators should pay attention to the following points:
 - The manual should be placed where it can be seen, the operator should be trained, or work under the guidance of professionals, and read the manual in detail.
 - The lithium-ion battery should be charged immediately after each discharge. If it is not used for a long time, the battery pack should be disconnected from the emergency power off or the button switch, and the power should be kept between 30%-80% to avoid battery power loss.
 - It is not recommended to exceed 80% of the total battery capacity for each discharge. At this time, the voltage of the single battery should not be lower than 2.8V. If it is lower than 2.8V, it is over-discharge. Frequent over-discharge will reduce the life of the battery.
 - Foreign objects and tools should not be placed on the lithium battery to avoid short circuit of the battery.
 - It is forbidden to expose or put the battery in an environment above 55°C for a long time, and it is forbidden to try to heat or put the battery into fire.
 - The charging temperature range is: 0-40°C. High current charging in a low temperature environment below 0°C will cause damage to the battery; in a low temperature environment below 0°C, please charge the vehicle immediately after use.
 - The discharge temperature range is: -20-50°C, the discharge capacity at low temperature (-20-0°C) may be lower than that at normal temperature; the battery can be used at 40-50°C ambient temperature, but The ambient temperature of the battery is too high, especially if the battery is in a high temperature environment for a long time, it will accelerate the aging of the internal materials of the battery and shorten the service life of the battery. Therefore, it is not recommended to use it at this temperature for a long time.
 - It is forbidden to disassemble, squeeze, puncture, shelve or bake the battery and battery box at high temperature, and avoid the battery from being subjected to excessive vibration, external force impact, and falling from a high place.
 - It is forbidden to charge the battery without installing a reasonable charging protection device (lithium-ion battery protection circuit board, battery management system, etc.) or using non-battery manufacturer-approved charging equipment (charger, DC power supply, etc.). Non-manufacturer-designated technicians are prohibited from disassembling and assembling the battery without permission.
 - Do not operate electric vehicles with lithium batteries in an environment where the temperature exceeds 55°C or is lower than -20°C.
 - Do not wash the battery box directly to prevent water from entering the battery box to ensure the safety of the battery pack.
 - Please store the battery module at room temperature (-20°C ~55°C, 15°C ~30°C is better; recommended temperature is lower than 20°C).
 - Use a special charger for charging, reverse charging is prohibited, and the charging current must be controlled to the value specified in the battery specification.

Lead Acid Battery (Cell)



BSLBATT Lithium Battery



MODEL	VOLTAGE (V)	CAPACITY (AH)
B-LFP48-100A	51.2	104
B-LFP48-100B	51.2	104
B-LFP48-100C	51.2	104

TECHNICAL SUPPORT:

If you have technical questions about your BSLBATT battery, please contact the original place of purchase or BSLBATT Battery directly:

-  info@sonnypower.com
-  sonnypower.com
-  832-909-0128 / 832-909-0129



ISO 9001:2015

UN38.3

UL

CE

BSLBATT Battery provides our customers with the highest quality and safest lithium products, in compliance with all regulatory standards.

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