Li Time

12.8V 320Ah

ComFlex Edition

Smart BLUETOOTH 5.0 x Automatic Self-Heating

PRODUCT (200A BMS) MANUAL

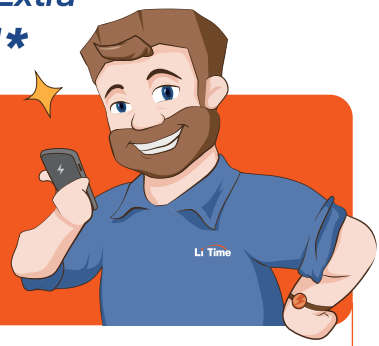
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*Batteries＞20Ah Only.

PRODUCT OVERVIEW

12.8V 320AH COMFLEX SMART SELF-HEATING

Operating Voltage: 12.8V

Charging Voltage: 14.4V±0.2V

Recommended Charge Current: 64A (0.2C)

Required Minimum Charge Current (for Heating Function): 15A

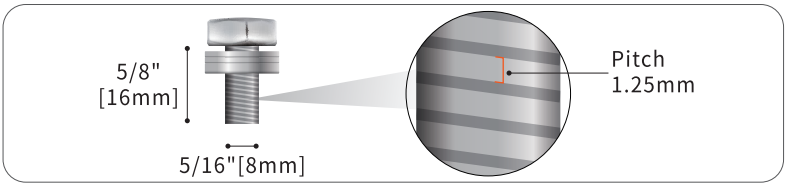
Max. Continuous Discharge Current: 200A

Max. Continuous Output Power: 2560W

ADDITIONAL COMPONENTS

M8- 5/8" [16MM] TERMINAL BOLTS

The terminal bolts are used to secure multiple cable lugs to a single battery terminal. The bolts can be replaced with M8 bolts of other lengths based on actual needs.



BATTERY PARALLEL COMMUNICATION CABLE

EXTERNAL COMMUNICATION CABLE (WITH RJ45 COUPLER)

For connecting batteries to Victron GX series devices

RV-C COMMUNICATION CABLE

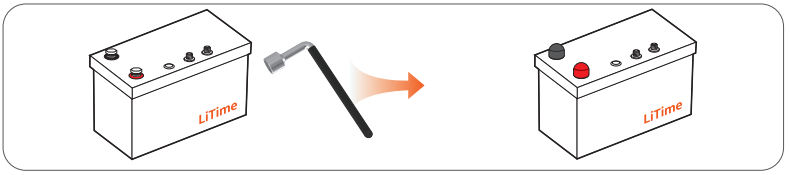
For connecting batteries to RV-C compatible devices

NMEA 2000 COMMUNICATION CABLE

For connecting batteries to NMEA 2000 compatible devices

SOCKET WRENCH & INSULATING CAPS

Cover the battery with the insulating caps after tightening the bolts. If the cap melts, stop using the battery and reach out to service@litime.com for further analysis.



BATTERY PRE-USE GUIDE

PREPARATION & PROTECTION

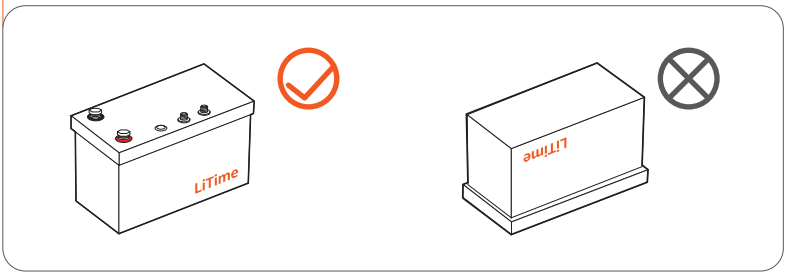
With proper care, the LiTime battery will provide years of trouble-free power. Read this part carefully for more detailed & useful information.

- PLEASE: Carefully read this **product manual** before use.
- After unpacking, wear **insulating gloves** for battery installation and wiring.
- Due to shipping-related regulations, this battery carries about **30%~50% capacity** when shipped.
- **Fully charge** the battery before starting to use it.

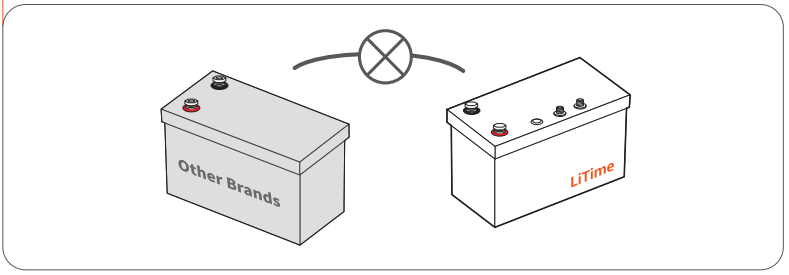
OPERATING PRECAUTIONS

Precautions for battery installation, connection, and storage.

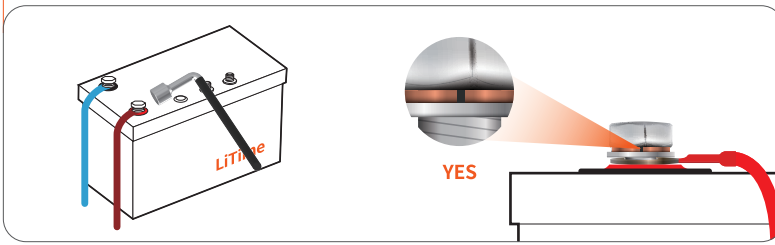
- **Install the battery upright with the post bolts facing up**, do not mount it upside down. If it's necessary to mount it on its side, reach out to service@litime.com to confirm the correct direction.



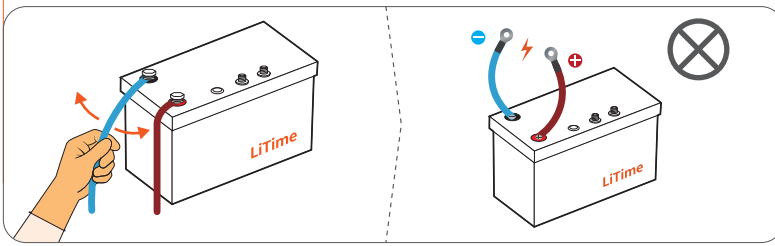
- **Do not connect batteries from different brands or with different specifications** in series or parallel.



- **Tighten the terminal bolts with socket wrench** provided until they can not be turned and **the spring washer is completely flattened**. Having loose battery terminals will cause the terminals to build up heat resulting in damage to the battery.

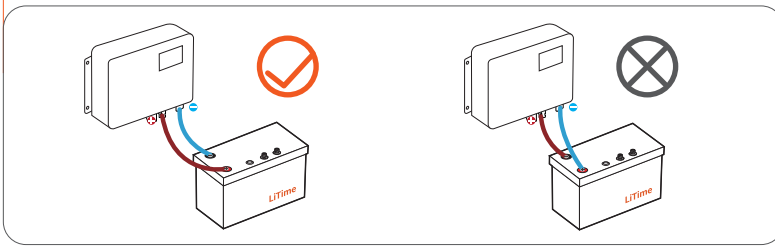


- **Give the wire harness a firm shake** to make sure it's tightly secured.



- **Avoid direct contact between positive and negative terminals** of the battery, and **avoid contact between metal / conductive objects from both terminals**, as those could cause a short circuit and damage.

- Ensure that the battery is properly wired to the device, **do not reverse the positive and negative connections**.



- Before connecting the load, make sure the **power supported by the battery** can meet the **power demand of the load**.

- For long-term storage, it is advised to store the battery between **10°C to 35°C / 50°F to 95°F at a 50% charge level** and ensure a **recharge every three months**.

24/7 MONITORING VIA LITIME APP

This product, integrated with Bluetooth 5.0, enables accurate and effortless real-time tracking and management of the battery status.

Step 1

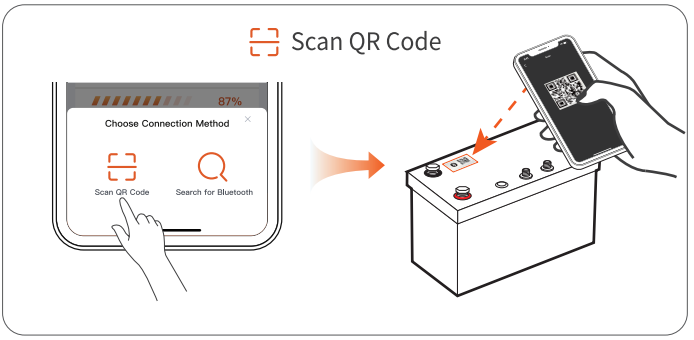
Download the LiTime APP and register your account.

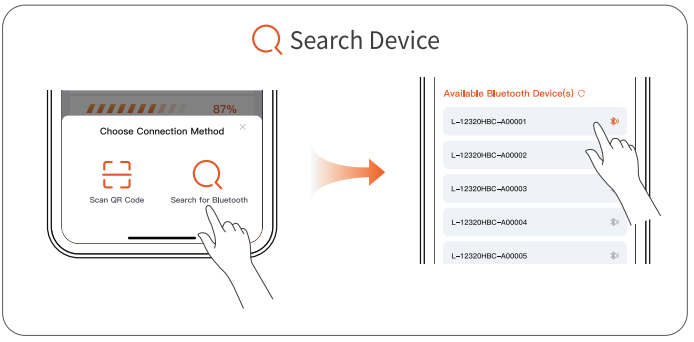
Download on the App Store

GET IT ON Google Play

Step 2

Pair the battery with the LiTime APP and effortlessly keep track of the battery's real-time status.





FCC STATEMENT (FCC ID:2BDSV12320)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RF Exposure Information

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator and your body.

ISED STATEMENT (IC: 32466-12V320)

English: This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada' s licence-exempt RSS(s). Operation is subject to the following two conditions:

(1) This device may not cause interference.

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

The digital apparatus complies with Canadian CAN ICES-3 (B)/NMB-3(B).

French: Cet appareil contient des émetteurs/récepteurs exempts de licence qui sont conformes aux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada.

L'exploitation est soumise aux deux conditions suivantes :

(1) Cet appareil ne doit pas provoquer d'interférences.

(2) Cet appareil doit accepter toute interférence, y compris les interférences susceptibles de provoquer un fonctionnement indésirable de l'appareil.

l'appareil numérique du ciem conforme canadien peut - 3 (b) / nmb - 3 (b).

This device meets the exemption from the routine evaluation limits in section 2.5 of RSS 102 and compliance with RSS 102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

cet appareil est conforme à l'exemption des limites d'évaluation courante dans la section 2.5 du cnr - 102 et conformité avec rss 102 de l'exposition aux rf, les utilisateurs peuvent obtenir des données canadiennes sur l'exposition aux champs rf et la conformité.

This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment.

Cet équipement est conforme aux limites d'exposition aux rayonnements du Canada établies pour un environnement non contrôlé.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement doit être installé et utilisé à une distance minimale de 20 cm entre le radiateur et votre corps.

IMPORTANT
SAFETY INSTRUCTION

Keep the battery away from fire, heat sources, sparks, and hazardous chemicals. Never soak the battery in water.

Maintain Adequate Ventilation and Heat Dissipation

Place the battery in a well-ventilated area with sufficient heat dissipation to prevent overheating and damage.

Size the Battery Cables and Connectors Appropriately

Use high-stranded copper connectors and heavy gauge cables to handle possible battery loads. Make sure to keep identical cable lengths.
Avoid accidents caused by unsuitable connectors or cables that make the connection a heat source during battery operation.

DO NOT puncture, drop, crush, burn, penetrate, shake, or strike the battery.

The battery should be securely fastened during handling to prevent impact or dropping.
It should be safely secured to a solid plane and the cables safely tied to a suitable location to avoid arcing and sparking due to friction.
DO NOT press it by placing heavy stuff on top of it for long periods, which may damage it due to an internal short circuit.

DO NOT open, dismantle, or modify the battery.

DO NOT touch the exposed electrolyte or powder if the battery casing is damaged.

Uncovered electrolyte or powder that has contacted the skin or eyes MUST be flushed out with plenty of clean water immediately. Seek medical attention afterward.

Avoid Short Circuit

Please use circuit breakers, fuses, or disconnects that have been properly sized by certified electricians, licensed installers, or regional code authorities to protect all the electrical equipment in your system. The battery has a built-in battery management system (BMS) that protects the battery cells from over-charge, over-discharge, and over-current, however this alone will not protect your system from severe electrical conditions.

Trained and certified technicians are required for safe and reliable installation. This product manual can only serve as a guideline as it cannot cover all possible scenarios.

Verify Correct Polarity

Please verify the polarity before connecting the wiring. Reverse polarity can and will destroy the battery and other electrical equipment. Use a multimeter to determine proper polarity.

Avoid Exposed Metal Terminals or Connectors

The terminals of this battery are always live. Avoid exposed metal terminals or connectors; DO NOT place tools on the terminals or touch them with bare hands; DO NOT short circuit or use outside of specified electrical ratings.

DO NOT dispose of the battery as household waste. Please use recycling channels in accordance with local, state, and federal regulations.

DO NOT use it as a starting battery.

WARNING

- Batteries are potentially dangerous and proper precautions must be taken during operation and maintenance.
- Improper use of the battery can lead to battery failure or other potential damage.
- Improper configuration, installation, or use of related equipment in the battery system may damage the battery and other related equipment.
- Please wear proper personal protective equipment when working on the battery.
- Battery installation and maintenance must be performed by trained and certified technicians.
- Failure to follow the warnings above can result in potential damage.

If you have any questions or need any help, please feel free to contact us (and leave your contact phone number) at service@litime.com, we will offer phone or email support in 12hrs.

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IDENTIFICATION OF PARTS



No.	Item	Function
1	Negative Terminal	/
2	Positive Terminal	/
3	ON/OFF Switch	Power on/off the battery
4	CAN-P | RS485 Port	○ To communicate in parallel with the identical battery by provided battery parallel communication cable ○ To communicate with the specified LiTime LCD screen① ○ To communicate with RV-C compatible devices by provided RV-C communication cable
5	CAN-P | CAN-I Port	○ To communicate in parallel with the identical battery by provided battery parallel communication cable ○ To communicate with the external Victron GX series device by provided external communication cable ○ To communicate with NMEA 2000 compatible devices by provided NMEA 2000 communication cable

① It is necessary to use the specified LiTime screen and cable, other screens and cables are not supported. If the product is damaged by connecting other cables or screens, it will not be covered by the warranty.

ON/OFF SWITCH

For a Single Battery

Function	Operation
Power On	Short Press (1s~2s)
Power Off①	Press and Hold (3s~5s)

① The battery/battery system will also be powered off when there is no external power supply (no charger connected to the battery) and the voltage is below 10V.

For Battery Banks in Parallel (All cables connected correctly)

In a powered-off parallel battery system, a short press on one of the batteries or connecting a suitable charging device to it turns on the power to the entire battery system.

In a powered-on parallel battery system, a press and hold on the button of one of the batteries turns off the power to the whole battery system.

LED INDICATOR

LED Status	Battery Status
Always on Green	Normal (Stand by, charging or discharging)
Flashes Green	Battery SOC<20% (Recommend charging the battery, stop flashing when SOC>25%)
Alternately Flashes Red and Green	In Protection Status (Over temperature, low temperature, short-circuit,low-voltage over-current)
Always on Red	Cell Failure
Flashes Red	BMS Failure

Note: BMS or cell failure of the battery, please contact us at service@litime.com for further assistance.

BATTERY PARAMETERS

Cell Type	$LiFePO_4$
Nominal Voltage	12.8V
Rated Capacity	320Ah
Energy	4096Wh
Internal Resistance	⩽40mΩ
Cycle Life	⩾4000 times
Battery Management System (BMS) Board	200A
Charge Method	CC/CV
Charge Voltage	14.4V±0.2V
Recommended Charge Current	64A (0.2C)
Required Minimum Charge Current for Heating Function①	15A
Max. Continuous Charge Current	200A
Max. Continuous Discharge Current	200A
Surge Discharge Current	1000A@1 second
Max. Continuous Output Power	2560W

Dimension	L14.49*W7.44*H10.04 inch L368*W189*H255 mm
	L14.49*W7.44*H10.63 inch L368*W189*H270 mm (With Post Bolts)
Housing Material	ABS
Recommended Terminal Torque	106.2 to 123.9 inch·lbs / 12 to 14 N·m
Protection Class	IP65
Temperature Range	Charge: -20°C to 50°C / -4°F to 122°F
	Discharge: -20°C to 60°C / -4°F to 140°F
	Storage: -10°C to 50°C / 14°F to 122°F
Heating Temperature	Charge: -20°C to 5°C / -4°F to 41°F
Approx. Heating Time @15A	60-80mins (From -10°C / 14°F)
	90-110mins (From -20°C / -4°F)
Low Temperature Charging Protection(LTCP) Function②	Yes
Resume Charging Temperature Under LTCP	5°C/41°F (Battery Temperature)
Bluetooth Encryption Protection Function③	Yes

① The charge current should be at least 15A to activate the automatic self-heating function.

② This product supports Low Temperature Charging Protection (LTCP), where the BMS stops battery charging when the battery temperature falls below 0°C/32°F and resumes charging when the temperature rises above 5°C/41°F.

③ This battery supports Bluetooth encryption to prevent unauthorized access and ensure device security. This feature is disabled by default and can be activated via the "Device Control" page in the App by setting a 6-digit password. Once enabled, the password is required for every Bluetooth connection to monitor or manage the battery settings.

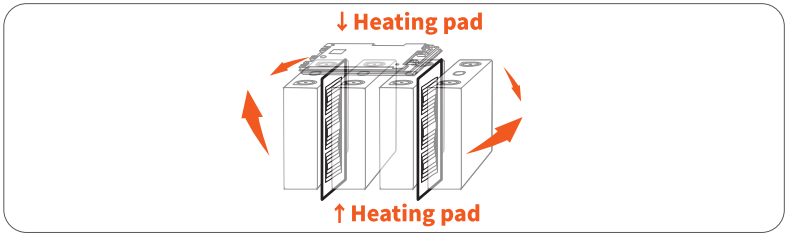
AUTOMATIC
SELF-HEATING FUNCTION

The automatic self-heating function will be activated by the BMS when the battery is connected to a charger @ -20°C to 5°C/ -4°F to 41°F. The heating will be stopped when the battery temperature has reached the set value, which normally takes approx. 60-80 mins from -10°C / 14°F and approx. 90-110 mins from -20°C/-4°F.

The battery will be normally charged after the heating has been stopped.

HOW DOES IT LOOK LIKE?

The heating pads are installed inside the battery, providing sufficient heating and more comprehensive protection for your battery.



HOW DOES IT WORK?

Step 1

Connection

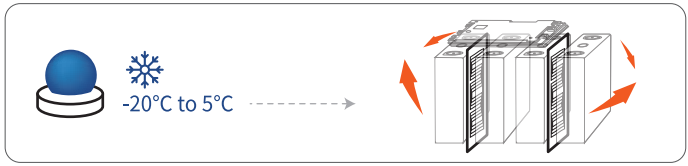
Connect the battery to the charger.

(DC charging voltage: 14.2V~14.6V, DC charging current ⩾15A)

Step 2

Heating or Charging

(based on the initial battery temperature)



Situation ①

When the initial battery temperature is between -20°C to 5°C / -4°F to 41°F, the battery starts heating. When the battery temperature is ⩾ 10°C / 50°F, the heating will be stopped and the battery will be charged.

Situation ②

When the initial battery temperature is ⩾ 5°C / 41°F, the battery will be normally charged and the heating function will not be activated.

REGULAR & ENERGY-EFFICIENT HEATING MODES

This product supports two heating modes, which can be adjusted through LiTime APP. The specific modes are as following table.

HEATING MODE	POWER SUPPLY	CHARGER CURRENT	BATTERY SOC①	HEATING SOURCE/STATUS
Regular (Default)	Charger	⩾15A	/	Charger
		＜15A		Not able to start heating②
Energy-efficient	Charger+Battery	⩾15A	/	Charger
		＜15A	＞20%	Use charger first, battery as supplement
			⩽20%	Not able to start heating
	Battery	/	＞20%	Battery (Not able to start heating when the battery temperature is below -20°C / -4°F)
			⩽20%	Not able to start heating

① The 20% Battery State of Charge (SOC) is an estimation, the actual values may exhibit a variance of ±5%.

② To turn on the heating function, make sure charger/battery meet the below requirements. Regular Heating Mode: Charger current⩾15A. Energy-efficient Heating Mode: Battery SOC＞20% or charger current ⩾15A.

Energy-efficient Heating Mode

In addition to the power supplied by the charger, this mode supports using the battery's own power to heat the heating pads to maintain the battery temperature (when there is no/not enough external charging power supply and the battery SOC＞20%), thereby improving the heating energy efficiency.

○ Recommended Application

Since it consumes additional battery power, it is only recommended for use in the following situations:

① In outdoors with a temperature below -5°C / 23°F, there is a need to save heating time and charge the battery quickly during daylight hours. Or ② The battery needs to power loads when the outdoor temperature drops below -20°C / -4°F at night. Please preselect this mode and keep the heating status when the battery temperature is above -20°C / -4°F.

Note: It is recommended to switch to the Regular Heating Mode or power off the battery during storing, to avoid abnormal battery capacity caused by the battery repeatedly consuming its own power to heat up.

○ Recommended Charger Current

Depending on the different temperatures, it is recommended to choose different charging currents for fast charging, which can be referred to as follows:

TEMPERATURE	APPROX. CAPACITY CONSUMPTION AT NIGHT①	RECOMMENDED CHARGER CURRENT	RECOMMENDED PV POWER	APPROX. CHARGING TIME② (REPLENISH CAPACITY CONSUMED AT NIGHT)
-18°C / -0.4°F	32Ah	16A to 32A	410W to 820W	2 hours to 1 hour
-15°C / 5°F	29Ah	14.5A to 29A	380W to 750W	2 hours to 1 hour
-10°C / 14°F	21Ah	21A to 42A	540W to 1080W	1 hour to 0.5 hour
-5°C / 23°F	16Ah	16A to 32A	410W to 820W	1 hour to 0.5 hour

① These data represent the approximate capacity consumed during night (about 9 hours) using only the battery power to maintain battery at 5°C to 10°C / 41°F to 50°F. Before setting Energy-efficient Heating Mode at night, it is recommended to ensure that the battery capacity is at least 64Ah greater than the expected consumption.

② The recommended charging current can replenish the battery capacity consumed by the Energy-efficient Heating Mode at the corresponding time listed. For example, at -18°C / -0.4°F, a charge current of 16A will charge about 32Ah capacity in around 2 hours to replenish the capacity consumed by battery's self-heating process at night.

DISCHARGE RESERVED SOC FUNCTION

WHAT IS DISCHARGE RESERVED SOC?

The Discharge Reserved SOC (State of Charge) function enables users to set a minimum discharge cutoff SOC threshold, with an adjustable range from 0% to 80%. During operation, the system automatically stops discharging once the battery SOC drops to this preset limit.

This feature is designed to maximize battery cycle life by preventing deep discharge.

HOW TO CONFIGURE DISCHARGE RESERVED SOC?

- Download the LiTime APP and connect the battery.
- Tap the control icon in the bottom-right corner of the APP.
- Follow the instructions to preset the Discharge Reserved SOC.

OVER-THE-AIR (OTA) UPDATE

WHAT IS AN OVER-THE-AIR(OTA) UPDATE?

An Over-the-Air (OTA) update enables remote firmware upgrades for battery systems. With OTA updates, users can enjoy enhanced functionality, improved performance, and richer data insights whenever LiTime releases new battery features.

HOW TO UPGRADE FIRMWARE VIA OTA?

- When a firmware upgrade notification appears in the LiTime APP, confirm the update.
- Ensure a stable connection and start the upgrade process.
- Once the update is complete, your battery system will be successfully upgraded.

CHARGING METHODS

SOLAR PANEL(S) & CONTROLLER

Solar Panel

☆ Recommended Power: ⩾1300W

- The battery can be fully charged in one day (with effective sunshine 4.5hrs/day) by 1300W solar panels.
- It may take more than one day to fully charge the battery by ⩾1300W solar panels since the duration and intensity of light would be a great factor for their charging efficiency.

Controller

☆ Recommended Charging Current:

64A (0.2C)	The battery will be fully charged in around 5hrs.
160A (0.5C)	The battery will be fully charged in around 2hrs.

☆ Recommended Charging Mode: **12V (14.6V) LI ($LiFePO_4$)**

Controller Settings

Refer to the below parameters if you need to manually set up your controller. As different types of batteries have different charging modes, it is recommended to set only the following parameters for $LiFePO_4$ batteries. The settings for other types of batteries do not apply to $LiFePO_4$ batteries except for the following settings.

CHARGING	Charge /Bulk /Boost Voltage	14.4±0.2V
	Absorption Voltage	14.4±0.2V
	Over Voltage Disconnect	15V
	Over Voltage Reconnect	14.2V
	Tail Current	6.4A (0.02C)
DIS-CHARGING	Under Voltage Warning	11.6V
	Under Voltage Warning Recover	12.4V
	Low Voltage Disconnect	10.8V
	Low Voltage Reconnect	12V

BATTERY CHARGER

Use 14.6V lithium iron phosphate ($LiFePO_4$) battery charger to maximize the capacity.

☆ Recommended Charging Voltage: Between 14.2V to 14.6V

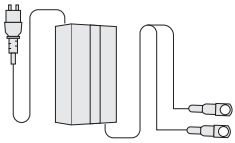
☆ Recommended Charging Current:

64A (0.2C)	The battery will be fully charged in around 5hrs.
160A (0.5C)	The battery will be fully charged in around 2hrs.

Tips

① It's recommended to disconnect the charger from the battery after fully charging.

② It is not recommended to use alligator clips to connect the charger or load to the battery as the contact area is too small and can cause the terminals to melt and damage the battery.



ALTERNATOR / GENERATOR

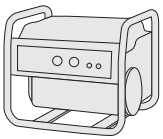
LiTime battery can be charged by an alternator or generator.

If the alternator/generator supports DC output, a DC-to-DC charger needs to be added between the battery and the generator; if the alternator/generator supports AC output, please refer to the recommendations in "Battery Charger" above to add a suitable battery charger between the battery and the generator.

☆ Recommended Charging Voltage: Between 14.2V to 14.6V

☆ Recommended Charging Current:

64A (0.2C)	The battery will be fully charged in around 5hrs.
160A (0.5C)	The battery will be fully charged in around 2hrs.



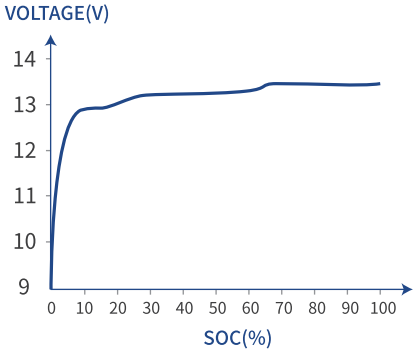
HOW TO ESTIMATE THE BATTERY CAPACITY

STATE OF CHARGE (SOC)

The battery capacity could be roughly estimated by its resting voltage (not charging/discharging voltage).①

Since the voltage of each battery is slightly different, and the voltage measurement is affected by the measuring instrument, ambient temperature, etc., the following parameters are for reference only. The actual SOC of the battery is based on the discharge capacity under load.

Resting Voltage: The voltage is measured after the battery has been disconnected from the charger and loads with zero current, and left alone for 30 minutes.



SOC (%)	VOLTAGE (V)
0	10 to 12
25	13 to 13.15
50	13.15 to 13.2
75	13.3 to 13.33
100	⩾13.33②

① Based on the characteristics of $LiFePO_4$ batteries, the voltage measured by all $LiFePO_4$ batteries during charging/discharging is not the real voltage of the battery. Therefore, after charging/discharging and disconnecting the battery from the power source, the voltage of the battery will gradually drop/increase to its real voltage.

② After this battery is protected from overcharge, the voltage measured by an external instrument is lower than the actual voltage. To calculate SOC (%), add 0.5V~0.7V to the measured voltage.

RECOMMENDED CABLE SIZING

Battery cables should be properly sized to handle the expected load. Refer to the table below for amperage ratings for different sizes of copper cables.

PVC COPPER CABLE SIZE (AWG/mm^2)	AMPACITY (A)
14 (2.08)	20
12 (3.31)	25
10 (5.25)	35
8 (8.36)	50
6 (13.3)	65
4 (21.1)	85
2 (33.6)	115
1 (42.4)	130
1/0 (53.5)	150
2/0 (67.4)	175
4/0 (107)	230

The above values are from NEC Table 310.15(B)16 for copper cables rated at 167°F (75°C) operating at an ambient temperature not exceeding 86°F (30°C). Cables longer than 6 feet (1829 mm) or ambient temperature higher than 86°F (30°C) may require heavier gauges to avoid excessive voltage drops with undersized ones.

SERIES / PARALLEL CONNECTION

THE PREMISE OF CONNECTION

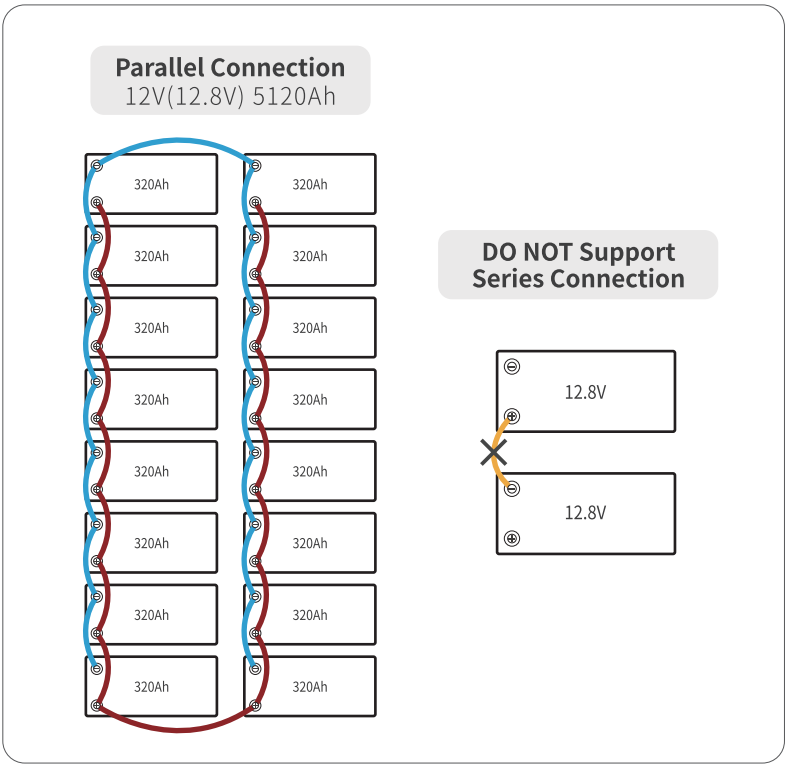
To connect in series or/and parallel, batteries should meet the below conditions:

a. identical batteries with the same battery capacity (Ah) and BMS (A);
b. from the same brand (as lithium battery from different brands has their special BMS);
c. purchased in near time (within one month).

LIMITATION FOR SERIES/PARALLEL CONNECTION

Situation 1: When the battery is in communication.

Support connecting up to 16 identical batteries in parallel for up to:
12V(12.8V) 5120Ah battery system.

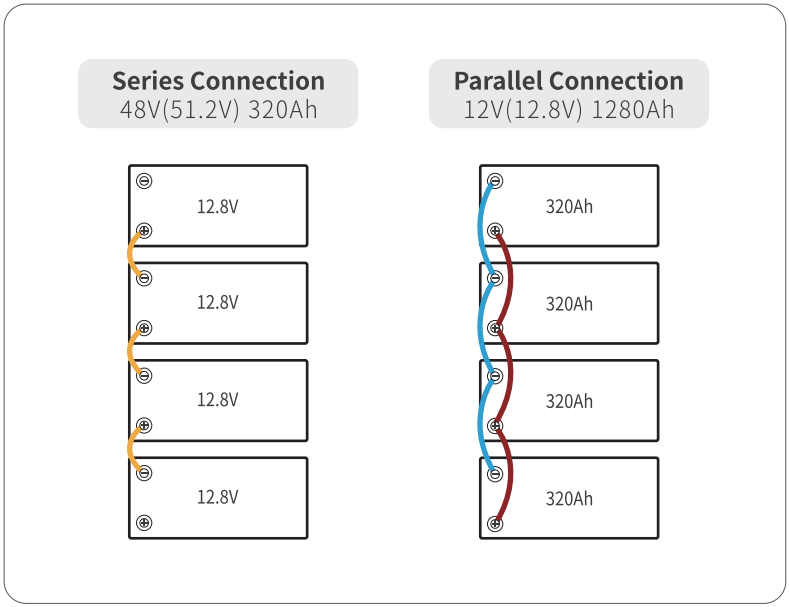


Situation 2: When the battery is NOT in communication.

Support connecting up to 16 identical batteries for up to:

4 in series as 48V(51.2V) 320Ah battery system or

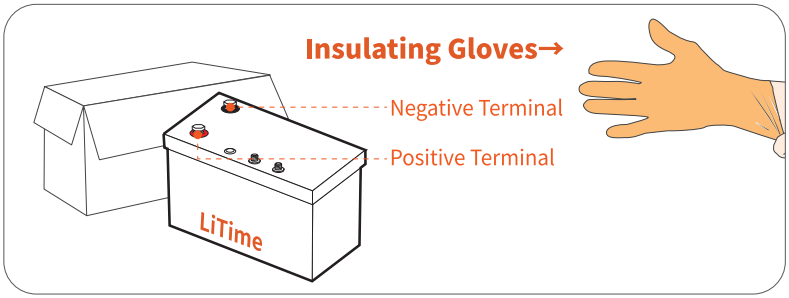
4 in parallel as 12V(12.8V) 1280Ah battery system.



HOW TO CONNECT BATTERIES

Step 1 Wear Insulating Gloves

Wear insulating gloves for protection before connecting. Please pay attention to operation safety in the process of connection.



Step 2 Voltage Balancing Before Connection

Below two steps are necessary to reduce the voltage difference between batteries and let the battery system perform the best of it in series or/ and in parallel.

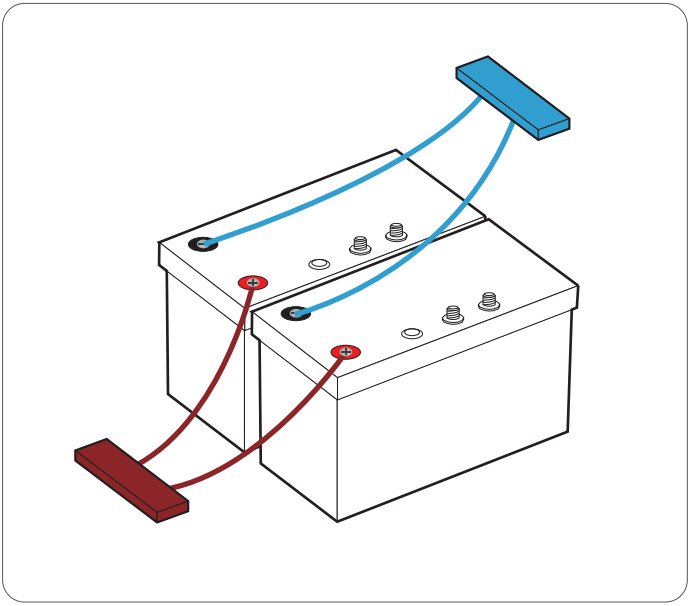
Step 1

Fully charge the batteries separately, then turn off the batteries.
(voltage at rest: ⩾13.33V)

Step 2

Connect all the positive and negative output cables of the batteries to bus bars① separately.

Connect Batteries in Parallel ⊕ to ⊕ ⊖ to ⊖



Step 3

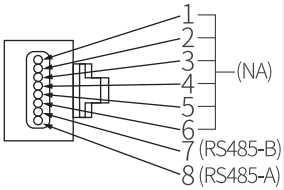
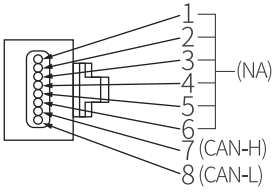
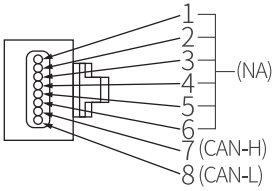
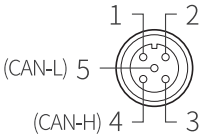
Leave them together for 12-24hrs until the battery voltages have been balanced.

①Bus Bar: It can help ensure the input & output currents of each battery are balanced.

Step 3 Complete the Communication and System Connection

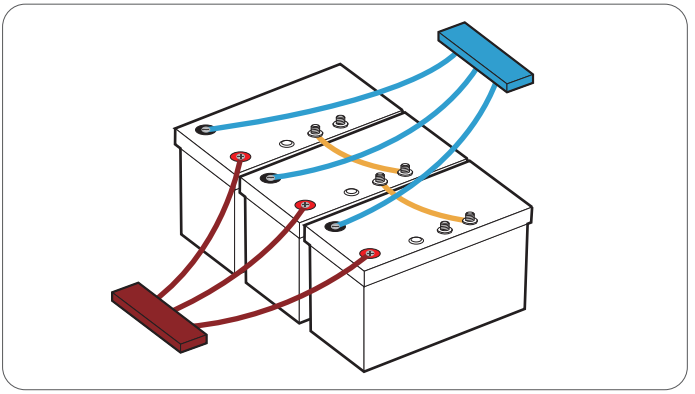
Step 1

Connect the cables according to the communication protocol supported by the device. Refer to the table below. If the required connection port is CAN-P | RS485, connect to the first battery in the battery system. If the required connection port is CAN-P | CAN-I, connect to the last battery in the battery system.

COMMUNICATION PROTOCOL	CONNECTION PORT	REQUIRED CABLE	PINOUT
LiTime	CAN-P | RS485	/	
Victron	CAN-P | CAN-I	External Communication Cable	
RV-C	CAN-P | RS485	RV-C Communication Cable	
NMEA2000	CAN-P | CAN-I	NMEA2000 Communication Cable	

Step **2**

(Optional) Connect the first battery's CAN-P | CAN-I port to the second battery's CAN-P | RS485 port using the provided battery parallel communication cable. then the second battery's CAN-P | CAN-I port to the third battery's CAN-P | RS485 port, and so on in sequence.

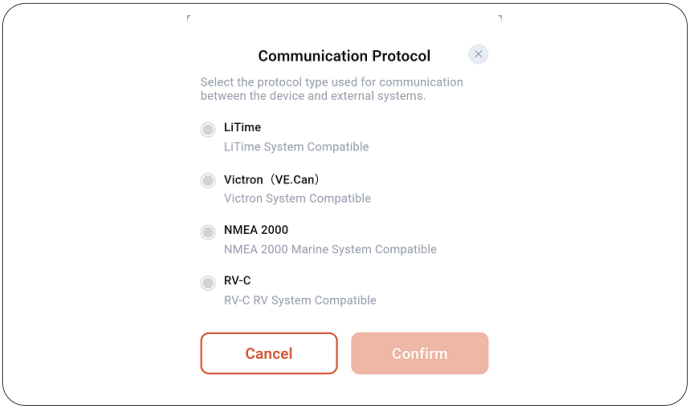


Step **3**

Connect the ⊕ and ⊖ of the load to the bus bars. The cable gauge used in this step should be able to support the total input & output current of the entire battery system.

Step **4**

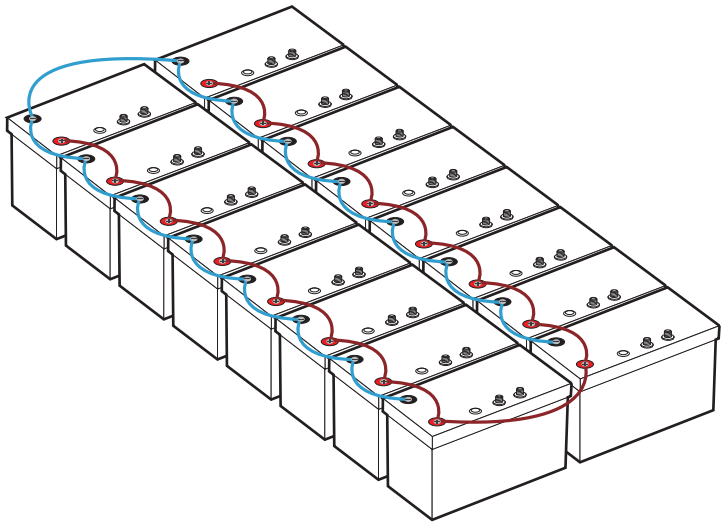
Power on one battery and connect to the LiTime App. Tap the bottom-right control icon " " to enter the Device Control. Turn ON Parallel Mode, then select the required Communication Protocol.



Note: In a parallel battery system, the battery connected to the monitoring screen will complete the communication between the batteries within 5 seconds of switching on the battery. After that, the monitoring screen can not only control the whole battery system but also view the information of the individual batteries and the whole battery system.

If the port connection is incorrect or missing connections, the information can not be read correctly.

12V(12.8V) 5120Ah Battery System



65.536kWh Usable Energy

Max. 3200A Continuous Discharging Current

Max. 40.96kW Load Power

WHAT TO DO WHEN THE
BATTERY CAN'T DISCHARGE?

When the battery

shutdown or discharge switch is off on the LiTime APP or voltage < 9V

Check the indicator status of the ON/OFF switch and refer to the solutions below.

Indicator Status	Solutions
On	① Press and hold then short press to restart the battery ② Turn on discharge switch via LiTime APP
Off	Short press the switch to turn on the battery

If it fails, try one of below methods to activate the battery.

Method ①

Activate and charge the battery with a 14.6V lithium battery charger. If it fails, disconnect the load, reinsert the AC input of the charger to activate and charge the battery.

Note: The lead-acid charger cannot activate the $LiFePO_4$ battery.

Method ②

Connect a 12V $LiFePO_4$ controller/inverter charger/solar inverter charger to charge the battery for 3~10 seconds.

After successful activation (voltage>10V) and fully charged by the normal charging method, the battery can be used normally.

Li Time

LIFE & DISCOVERY

Miss the code,
Miss a Lot.

