LiFePO4 Smart Battery

12,8V 100Ah

CONNECTSERIES

Bluetooth

VOLTIUM ENERGY

VE-SPBTC-12100

VOLTIUMENERGY.COM

BATTERY FEATURES

- Long lasting superpower, LiFePO4 has up to 10 times more cycles than comparable lead acid batteries
- With the VE-SPBTC series it is possible to connect 4 batteries in series and/or 4 batteries in parallel (4S4P). When you connect the batteries both in series and parallel, it is necessary to use the Voltium Energy® Connect series COMBOX *
- The VE-SPBTC series is designed to withstand extreme conditions with temperatures down to -35°C. When necessary, the smart BMS will automatically activate the built-in heating module when a charger is connected to the battery *
- The intelligent Battery Management System (BMS) monitors and balances the cells, protects the battery against overcharging, deep discharge and has a temperature protection
- With our smart Bluetooth® app you can easily view and monitor all relevant data of your VE-SPBTC battery
- Low self-discharge and the ability to charge quickly and efficiently
- The VE-SPBTC series has a terminal communication interface which supports RS485 and CANBUS (coming soon).

** Please read the manual carefully to see exactly how the COMBOX and heating module works*

APPLICATIONS

- SPORT & RECREATION
- MOBILITY
- TRANSPORT
- DATA CENTER
- MEDICAL
- SOLAR
- UTILITY
- WIND

CERTIFICATES

- CE certificate
- UL 1642 cell certificate
- IEC 62133 cell certificate
- UN 38.3 certified
- ISO9001:2015 - Quality management systems

Bluetooth

DOWNLOAD THE APP OF VOLTIUM ENERGY

With our Bluetooth® app, you can view and monitor the current status of your LiFePO4 battery!

Download on the App Store

ANDROID APP ON Google play

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BATTERY SPECIFICATIONS

GENERAL SPECIFICATIONS

Nominal Voltage	12,8V (4S)
Rated Capacity (CC 0.2C to 10V)	100Ah
Nominal Energy	1280Wh
Internal Resistance	≤20mΩ
Terminal type	T11
Cycle Life (@DOD 100% at 1C and ±25°C)	3000
Cycle Life (@DOD 100% at 0.2C and ±25°C)	6000
Connection options	4 in series OR 4 in parallel (without COMBOX) 4 in series and 4 in parallel combination (with COMBOX)
Communication	Bluetooth®, RS485, CANBUS (coming soon)

MECHANICAL CHARACTERISTICS

Dimension	Length 318±2mm
	Width 165±2mm
	Height 215±2mm
Weight	Approx. 10.0Kg
Housing material	ABS

STORAGE SPECIFICATIONS

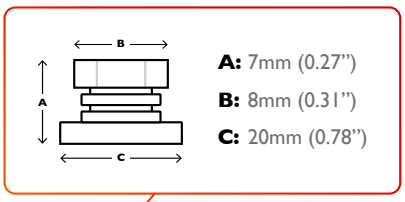
Storage Temperature	0-25°C
Self-discharge rate	≤3% per month
Recommended storage SOC	50-70% SOC
Storage condition	See manual

CHARGE SPECIFICATIONS

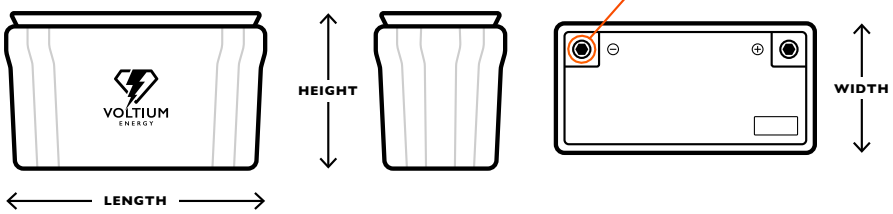
Battery operation temperature range @charging	0~45°C
Normal charge voltage	14.6 ±0.1V
Recommended float charge voltage (for Standby use)	13.8 ±0.1V
Max charge current	100A 30min at 25±5°C
Recommended charge current	0.2C
Charge Cut-off Voltage	15.6V

DISCHARGE SPECIFICATIONS

Discharging temperature range	-20~60°C
Output Voltage Range	10.0~14.6V
Max discharge current	100A at ±25°C / 150A 3 min at ±25°C
Recommended discharge current	0.2C
Pulse discharge current	350A withstand 3s
Discharge Cut-off voltage	10.0V
Discharge temperature characteristics	-20°C / 70% capacity
	0°C / 90% capacity
	25°C / 100% capacity
	60°C / 102% capacity



DIMENSIONS



L: 318mm (12.52") **H:** 215mm (8.46") **W:** 165mm (6.50")

BMS TECHNICAL SPECIFICATIONS

OVER CHARGE

Over-charge protection for each cell (delay time)	3.75V ±0.05V (2s)
Over-charge release for each cell (delay time)	3.6V ±0.05V (2s)
Over-charge release method	When voltage is under release voltage

OVER DISCHARGE

Over-discharge protection for each cell (delay time)	2.5V ±0.05V (2s)
Over-discharge release for each cell (delay time)	2.8V ±0.05V (2s)
Over-discharge release method	Charging recover

OVER CURRENT CHARGE

Charge over-current protection (delay time)	1st protection / 110A ±5A (10s) 2nd protection / 150A ±5A (3s)
Over-current release method (delay time)	Discharge or auto release (60s)

OVER CURRENT DISCHARGE

Discharge over-current protection (delay time)	1st protection / 150A ±5A (3min) 3rd protection / 300A ±10A (3-4s)
Over-current release method (delay time)	Charge or auto release (60s)

BATTERY TEMPERATURE CHARGING

Temperature protection	Over / 60°C ±5°C (2s) Low / 0°C ±2°C (2s)
Release temperature	Over / 45°C ±2°C (2s) Low / 2°C ±2°C (2s)
Release method (delay time)	When temperature is on release

BATTERY TEMPERATURE DISCHARGING

Over-temperature protection Battery	Over / 65°C ±5°C (2s) Low / -20°C ±2°C (2s)
Release temperature Battery	Over / 55°C ±5°C (2s) Low / -18°C ±2°C (2s)
Over-temperature protection Circuit	Over / 85°C ±5°C (2s)
Release temperature Circuit	Over / 70°C ±5°C (2s)
Release method (delay time)	When temperature is on release

SHORT CIRCUIT PROTECTION

Function condition	External short circuit
Short circuit delay time	250-500 ms
Release mehod (delay time)	Remove load for the short circuit protection to release (30s)

To ensure safe and efficient operation always refer to the latest edition of our Technical Datasheet, as published on our website.

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