

LiFePO₄ Smart Battery

12,8V 300Ah

CONNECTSERIES

Bluetooth™



VOLTIUM
ENERGY

VE-SPBTC-12300

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



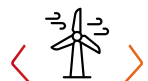
MEDICAL



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!



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VE-SPBTC-12300

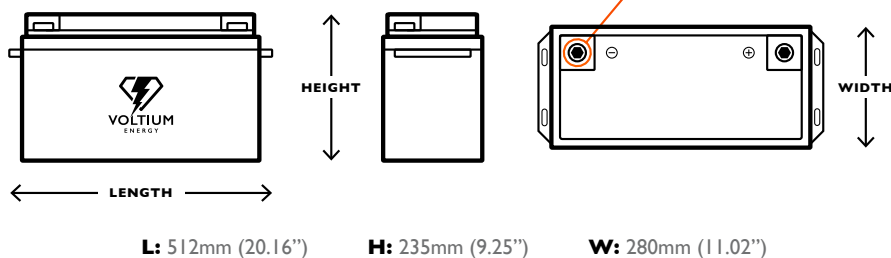
BATTERY SPECIFICATIONS

GENERAL SPECIFICATIONS	
Nominal Voltage	12,8V (4S)
Rated Capacity (CC 0.2C to 10V)	300Ah
Nominal Energy	3840Wh
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 mixes (with COMBOX)
Communication	Bluetooth®, RS485, CANBUS (coming soon)

MECHANICAL CHARACTERISTICS	
Dimension	Length 521±2mm
	Width 280±2mm
	Height 235±2mm
Weight	Approx. 40.0Kg
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

DIMENSIONS



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	200A 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	200A at 25±5°C
Recommended discharge current	0.2C
Pulse discharge current	400A 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

BMS TECHNICAL SPECIFICATIONS

OVER CHARGE	
Over-charge protection for each cell (delay time)	3.75V ±0.05V (3s)
Over-charge release for each cell (delay time)	3.6V ±0.05V (3s)
Over-charge release method	When voltage is under release voltage

OVER DISCHARGE	
Over-discharge protection for each cell (delay time)	2.5V ±0.05V (3s)
Over-discharge release for each cell (delay time)	2.8V ±0.05V (3s)
Over-discharge release method	Charging recover

OVER CURRENT CHARGE	
Charge over-current protection (delay time)	1st protection / 210A ±5A (10s) 2nd protection / N/A
Over-current release method (delay time)	Discharge or auto release (60s)

OVER CURRENT DISCHARGE	
Discharge over-current protection (delay time)	1st protection / 210A ±5A (30s) 2nd protection / 400A ±20A (3s)
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 method (delay time)	Remove load for the short circuit protection to release (0s)

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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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