

# SDB10 Series

High voltage DC lithium-ion battery system for telecommunication



shoto

## Application Scenarios

- Telecom core room
- Internet Data Center (IDC)
- DC remote power supply

## Production features

◆ Using high voltage DC lithium-ion battery system for telecommunication power supply directly, Can be alternative UPS in the communication core room, Internet data center (IDC), DC remote power supply and other communications, Multi machine parallel become easy, Non harmonic interference, No influence of 0.6 to 0.8 of the power factor, no phase and frequency and other issues, the real implementation of the backup power of the "0" switch;

◆ High voltage DC lithium-ion battery system for telecommunication saves the inverter, power efficiency increased from 70% to more than 95%, greatly reducing the operating costs;

◆ The charging current limiting technology and the discharge current sharing technology of High voltage direct current lithium-ion phosphate battery system, can directly use the N+1 redundancy design, Low investment cost, cost-effective, to avoid the UPS synchronous weaver complex technical problems;

◆ Centralized monitoring module using CAN bus and the SNMP simple network management protocol, Achieve computer management and telemetry, remote control, remote control, remote adjustment and other functions, Through the RS485, to accept HMI (man-machine interface) query system all the information, as shown in Figure 3. Can be remote communication with the dynamic loop system;

◆ 4.0C discharge performance of high voltage direct current DC lithium-ion battery system, Can use the smaller capacity of the lithium-ion phosphate battery system to meet the use of large current discharge occasions, reduce the one-time investment cost of power equipment;

◆ Working temperature range - 20°C ~ + 60°C, by air instead of air conditioning, annual electricity saving more than 30%, greatly reduce the cost of equipment investment and daily electricity consumption;

◆ More than 3000 cycles for individual cells;

◆ Higher volumetric specific energy and gravimetric specific energy, during installing, there is no special demand for space and bearing, greatly reducing the cost of renting the area;

◆ LFP cell adopts leakproof structure, it can be put anywhere with no harmful gas release, non-pollution, green product.



Fig. 1 336V/200Ah high voltage DC lithium-ion battery system for telecommunication



Fig. 2 high voltage DC lithium-ion battery system for telecommunication in China Harbin Mobile IDC application scenarios

High voltage DC DC lithium-ion battery system for telecommunication is high-tech product which developed, by SHOTO, as shown in Fig. 1. The product has the characteristics of integration, miniaturization, lightweight, intelligent, energy saving and environmental protection, it adopts centralized monitoring, maintenance convenience, no man on duty, standard cabinet installation, it is widely used in core communication room, Internet Data Center (IDC), DC remote power supply, UPS replacement and other communication areas as a backup power supply, as shown in Fig. 2. The product is highly favored by the Telecom industry.

*Passion for Storage  
and Green Energy*

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## Specification and technical parameters

Specification	Rated voltage (V)	Rated capacity (Ah)	Dimension (mm)	Weight (kg)
SDB10-336200	336	200	(600×2) ×1000×2200	1450
SDB10-240200	240	200	(600×2) ×1000×2000	1380

Note 1: 336V/50Ah~200Ah and 240V/50Ah~200Ah series of products can be provided ;  
Note 2: It can be designed according to customer's special requirements.

Table 1 specifications of high voltage DC lithium-ion battery system for telecommunication

Specification	Charging voltage (DCV)			Charging current (A)		
	Minimum value	Typical value	Maximum value	Minimum value	Typical value	Maximum value
SDB10-336200		390.00	396.00		0.2C	0.4C
SDB10-240200		278.60	282.80		0.2C	0.4C

Table 2 Charging parameters of High voltage DC lithium-ion phosphate battery system for telecommunication

Specification model	Discharge voltage (DCV)			Discharge current (A)		
	Minimum value	Typical value	Maximum value	Minimum value	Typical value	Maximum value
SDB10-336200	246.40		396.00		3.0C	4.0C
SDB10-240200	176.00		282.80		3.0C	4.0C

Table 3 Discharge parameters of high voltage direct current lithium-ion battery system

## Different rate discharge curves

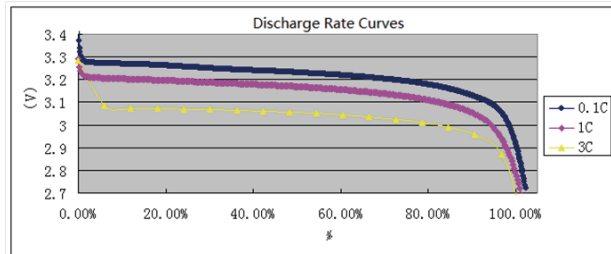


Fig. 4 Discharge to 2.7V capacity curves at different rates (25°C)

## Temperature characteristic curves

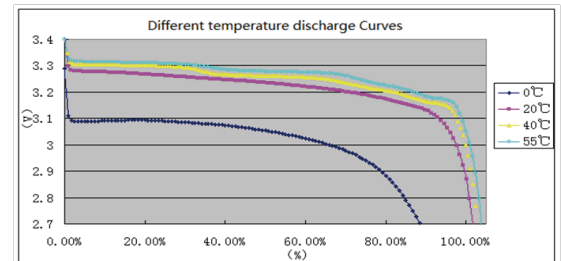


Fig. 5 Temperature-voltage curves of 1.0C discharge to 2.7V

## Cycle Curve

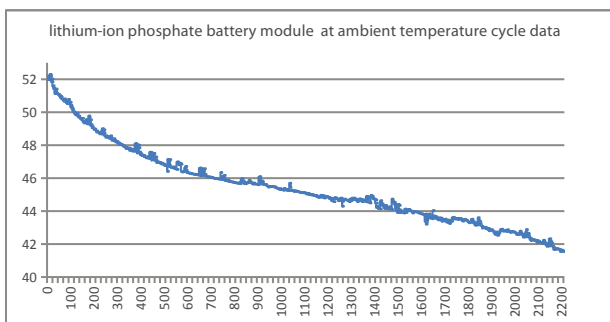


Fig. 6 Battery module 100% DOD cycle curve (25°C)

## TCO Curve

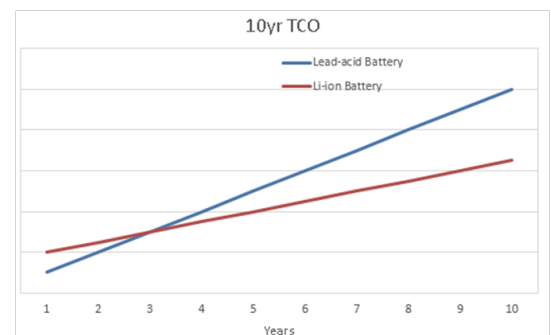


Fig. 7 TCO curve of different battery