

Topband 12V 300Ah Lithium Iron Phosphate Battery , over 2000 cycles

- long life & deep cycle(over 2000cycles @ 100%DOD)
- with built-in PCM/BMS protection
- super quick charge/discharge performance
- safe pressure valve design (no explosion, no fire)
- high energy density
- low self-discharge(<3% per month,<15% per year)
- easily replace lead acid battery

1. General Information

This specification defines the performance of rechargeable LiFePO₄ battery pack **TB12300F- S103A** manufactured by Shenzhen Topband Battery Co., Ltd, describes the type, performance, technical characteristics, warning and caution of the battery pack.

2. Specification

NO	Items		Characteristics
2.1	Normal capacity		300Ah
2.2	Nominal energy		3.84KWh
2.3	Nominal voltage		12V (LFP-4S)
2.4	Internal resistance		≤30mΩ @1kHz AC
2.5	Normal charge voltage		14.6±0.5V
2.6	Float charge voltage(for Standby use)		13.8±0.2V
2.7	Allowed MAX charge current		150A
2.8	Recommended charge current		≤150A
2.9	Allowed MAX discharge current		200A
2.10	End of discharge voltage		10.0V
2.11	Dimension		520±3 mm
			268±2 mm
			222±2 mm
2.12	Weight (No accessories)		38.0±1.0Kg
2.13	Operation temperature	Charge	0~45℃
		Discharge	-20~60℃
2.14	Self-discharge rate	Residual capacity	≤3%/Month; ≤15%/ year
		Recover capacity	≤1.5%/Month; ≤8%/ year
2.15	Storage environment	≤1month	-20~+60℃, 5~75%RH
		≤3month	-10~+45℃, 5~75%RH
		Recommend environment	15~35℃, 5~75%RH

3. Electrical Characteristics & Test Condition

Testing Conditions: Ambient Temperature: 25±5°C; Humidity:45%~75%.

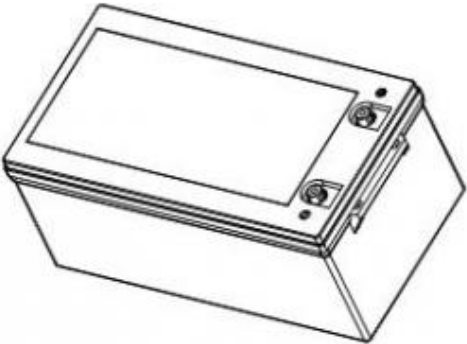
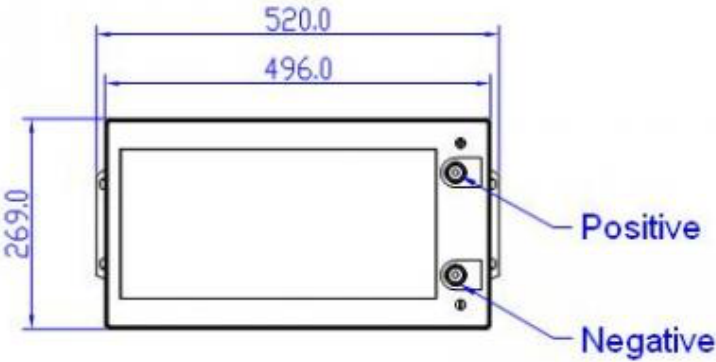
NO	Items	Criterion	Condition
3.1	Normal Capacity	300Ah	After Normal charge, discharge @0.33C current to the end of discharge voltage.
3.2	Internal Impedance	≤30mΩ	@50% SOC @1kHz AC internal resistance test instrument.
3.3	Short circuit protection	Auto cutoff load when short circuit	Connect the positive and negative of this battery pack through a lead with 0.1Ω resistance.
3.4	Cycle life @DOD100%	≥2000 cycles	After Normal charge, discharge @0.33C current to the end of discharge voltage. Repeat above process until discharge capacity reduce to 80% of initial value.
3.5	Discharge temperature characteristic@0.33C	-20°C(6h)	≥70%
		0°C(6h)	≥80%
		25°C(4h)	≥100%
		55°C(4h)	≥95%
3.6	Capacity retention rate	remain capacity ≥96%	After normal charge, store the battery @25±5°C for 28days, then discharge capacity @0.33C, the retention capacity accord with criterion.

4. Circuit Protection

The batteries are supplied with a LiFePO4 Battery Management System (BMS) that can monitor and optimized each single prismatic cell during charge & discharge, to protect the battery pack overcharge, over discharge, short circuit. Overall, the BMS helps to ensure safe and accurate running.

No	Item	Content	Criterion
4.1	Over charge	Over-charge protection for each cell	3.75±0.03V
		Over-charge release for each cell	3.60±0.04V
		Over-charge release method	Under the release voltage
4.2	Over discharge	Over-discharge protection each cell	2.50±0.03V
		Over-discharge release for each cell	2.8±0.04V
		Over-discharge release method	Charging
4.3	Over current	Discharge over current protection	255A±5A, delay time 30s±5s
		Discharge over current release	Recovering after 30s
		Short circuit protection	Available
4.4	Temperature	Charge over temperature protection	Protect@55±5°C; Release@45±5°C;
		Charge under temperature protection	Protect@0±5°C; Release@10±5°C
		Discharge over temperature protection	Protect@65±5°C; Release@55±5°C;

5. Dimensional Drawing



Unit: mm

