



12V 4Ah Motorcycle Starting Battery

Li-ion Battery Specification
EB-1204A/EB-1204C



1. Basic Parameters

Item	Parameter		Remark
	BNC-1204A	BNC-1204C	
Nominal Capacity	4AH	4AH	After standard charge, the capacity is calculated by discharging at 0.2C
Rated Voltage	13.2V	13.2V	Voltage in the standard discharge process
Charging Limit Voltage	15.4V	15.4V	0.2C discharge after full charge
Cut off Voltage	11V	11V	
Charge Method	CC-CV	CC-CV	
Charge Current	6A (recommend 1~3C)		CC
Discharge Current	180A	180A	CC
Max. Discharge Current	350A	400A	< 3S
Resistance	≤ 12 mΩ	≤ 12 mΩ	
Weight	800 ± 15g	950g	
Dimensions(L.W.H.)	134×74×102(132 including spacer)	138×66×101 mm	
Operating Temperature	-20 ~75°C	-20 ~75°C	
Storage Temperature	-20~75 °(1 month)	-20 ~ 45°(3 month) -20 ~ 25°(6 month)	RH 25%~85%

This product specification has been prepared to specify the rechargeable LiFePO4 battery to be supplied to the customer by Shenzhen Enershare Technology Company Limited

2. Technical Specifications

Standard Test Conditions		
(1) Environmental Conditions	(2) Standard Charging	(3) Standard Discharge
Temperature:15-35°C Relative Humidity:25%-85%RH Atmospheric Pressure:86kPa-106kPa	Under the condition of $(20 \pm 5)^{\circ}\text{C}$ ambient temperature, charge the battery with $1I_3$ constant current to the limiting voltage (15.4V) and then charge at constant voltage until the charging current is less than 0.02A.	Discharge the battery to the terminal voltage (8.8V) at the constant current of I_3 at the ambient temperature of $20 \pm 5^{\circ}\text{C}$. The I_3 discharge current is obtained from the integral of the area covered by the voltage capacity curve. $I_3 = C_3 / 3$ (A), C_3 -3h rated capacity.

Electrical Characteristics		
(1) Rated Capacity	(2) Rated Reserve Capacity	(3) Low Temperature Discharge Performance
After standard charging, place the battery for 1 h. At $20 \pm 5^{\circ}\text{C}$, the power provided by 1C discharge until the voltage down to 11V is the rated capacity. Criteria: ≥ 60 min	After standard charging, place the battery for 1 h. At $20 \pm 5^{\circ}\text{C}$, the duration from 4.4A constant current discharge to 8.8V protection voltage is the rated reserve capacity. Criteria: ≥ 60 min	After standard charging, place at $-20 \pm 2^{\circ}\text{C}$ low temperature box for 20 hours, discharge at 1C current to protection voltage 11V, and measure the discharge time. Criteria:Discharge time not less than 56 min
(4) High Temperature Discharge Performance	(5) Discharge Performance at 30C rate at 20°C	(6) Charge Performance at 8C rate at 20°C
After standard charging, put the battery in a high temperature box of $55 \pm 2^{\circ}\text{C}$ for 5 hours, discharge at 1C current to 11V protection voltage, and measure the discharge time. Criteria:Discharge time not less than 65 min	AAfter the battery is fully charged, discharge at 30C (132A) for 10s at $20 \pm 5^{\circ}\text{C}$. Criteria:Outer surface temperature of cell $\leq 65^{\circ}\text{C}$	At $20 \pm 5^{\circ}\text{C}$, discharge with $1I_3$ (A) current until the discharge protection voltage is 11V. Let it stand for 10 minutes, then charge for 10 seconds at 8C (35.2A). Criteria:Outer surface temperature of cell $\leq 50^{\circ}\text{C}$
(7) Charge Retention	(8) Cycle Life	
After standard charging, the battery was left open for 28 days at the ambient temperature of $20 \pm 5^{\circ}\text{C}$, and then discharged to the protection voltage of 11V at 1C constant current, and the discharge time was measured. Criteria:Discharge time not less than 62 min	After fully charged, the battery is discharged at $6I_3$ (A) current at $20 \pm 2^{\circ}\text{C}$ until the discharge capacity reaches 100% of the rated capacity, and then charged to 14.6V at $3I_3$ (A) current. Then charge at a constant voltage of 14.6V until the current drops to $0.1I_3$ (A). Repeat the above steps for 24 times. Check the capacity and terminate the test if the capacity of the battery is less than 80% of the rated capacity. Criteria:The number of cycles shall not be less than 2000.	

3. Battery Storage

The battery should be stored in a clean, dry and ventilated room with an ambient temperature of 5°C to 35°C and a relative humidity of not more than 75%. Contact with corrosive substances should be avoided, and fire and heat sources should be kept away. And the battery should be in a state of charge of about 70% to 80%. To prevent over-discharge of the battery, the battery should be charged every six months during storage..