IFR1220 LifePo4 battery

Specification

MODEL:IFR1220CHN(FLT)

Prepared By/Date	Checked By/Date	Approved By/Date
Johnson/24.9.2019	Ms Yu/24.9.2019	Ms Chen/24.9.2019

Customer Approval	**Signature/Date**
	Company Name:
	Company Stamp

Amendment Records				
Edition	Description	Prepared by	Approved by	Date
A	First Edition	Johnson	Ms Yu	2019-9-24
B				
C				
D				
E				

1. Scope

This specification is applied to the LiFePO4 Battery Pack that manufactured by Shenzhen Head Battery Co., Ltd.

2. Specification

No.	Item	General Parameter	Remark
1	Rated Capacity	20Ah(256wh)	Standard discharge(0.2C) after standard charge(0.2C)
2	Cell	Cylinder LFP cell	
3	Nominal Voltage	12.8V	
4	Life Expectation	Residual capacity is more than 60% of the rated capacity	1）Charge: CC@0.2C to 14.6V, then CV till current to 0.01C 2）Rest: 30min. 3）Discharge: 0.2C to 10V Temperature:20±5℃ Carry out 2000 cycles
5	Discharge cut-off voltage	2.5V/cell	
6	Charging cut-off voltage	3.65V/cell	
7	Assembly method	4S4P 16cells Lifepo4	
8	Case model	ABS plastic case	
9	Standard charge	0.2C constant current (CC) charge to 14.6V,then constant voltage (CV) 14.6V charge till charge current decline to ≤0.01C	Charge time : Approx 6.0h

10	Standard discharge	Constant current 4A Cut-off voltage 10V	
11	Standard Charge Current	4A@20℃	
12	Maximum Continuous Discharge Current	10A@20℃ (Will be adjust according to customer motor & controller)	
13	Peak Discharge Current	20A@20℃ (Will be adjust according to customer motor & controller)	
14	Operation Temperature Range	Charge: 0~45℃	60±25%R.H.
		Discharge: -20~60℃	
15	Storage Temperature Range	Less than 6 months: -10~30℃	60±25%R.H. at the shipment state
		Less than 3 months:-20~50℃	
16	Terminal Type	Screw	
17	Dimension	181*77*175mm(L*W*H)	
18	Ex-factory open circuit voltage	⩾14.0V	(voltage will drop due to the long time storage)
19	Short-circuit, over charge, over discharge, over current protection,	Yes, with protection	
20	Temperature monitoring	Yes, with temperature monitoring	

3. Performance And Test Conditions

3.1 Standard Test Conditions

Test should be conducted with new batteries within one week after shipment from our factory and the batteries shall not be cycled more than five times before the test. Unless otherwise specified, test and measurement shall be done under temperature of 20±5℃ and relative humidity of 45~85%. If it is judged that the test results are not affected by such conditions, the tests may be conducted at temperature 15~30℃ and humidity 25~85%RH.

3.2 Measuring Instrument or Apparatus

3.2.1 Dimension Measuring Instrument

The dimension measurement shall be implemented by instruments with equal or more precision scale of 0.01mm.

3.2.2 Voltmeter

Standard class specified in the national standard or more sensitive class having inner impedance more than 10kΩ/V

3.2.3 Ammeter

Standard class specified in the national standard or more sensitive class. Total external resistance including ammeter and wire is less than 0.01Ω.

3.2.4 Impedance Meter

Impedance shall be measured by a sinusoidal alternating current method (1kHz LCR meter).

3.3 Standard Charge/Discharge

3.3.1 Standard Charge : 4A

Charging at 4A constant current until the battery reaches 14.6V. The battery shall then be charged at constant voltage of 14.6V while tapering the charge current. Charging shall be terminated when the current has tapered to 0.2A. Charge time is approx 6.0 hours, The battery shall demonstrate no permanent degradation when charged between 0 ºC and 50 ºC.

3.3.2 Standard Discharge : 4A

Battery shall be discharged at a constant current of 4A to 10V @ 20 ± 5℃

3.3.3 If no otherwise specified, the rest time between charging and discharging is 30min.

3.4 Appearance

There shall be no such defect as crack, rust, leakage, which may adversely affect commercial value of battery.

4. Handling of battery

4.1 Prohibition short circuit

Never short circuit battery. It generates very high current which causes heating of the battery and may cause electrolyte leakage, gassing or explosion that is very dangerous.

The terminals may be easily short-circuited by putting them on conductive surface.

Such outer short circuit may lead to heat generation and damage of the battery.

4.2.Mechanical shock

Falling, hitting, bending, etc. may cause degradation of battery characteristics.

5. Period of Warranty

The period of warranty is 12 months from the date of shipment. Head Battery guarantees to give a replacement in case of battery with defects proven due to manufacturing process instead of the customer abuse and misuse.

6. Storing the Batteries

The batteries should be stored at room temperature, charged to about 30% to 50% of capacity. We recommend that battery to be charged once each three months to prevent over-discharge. Charge battery at once when it is fully discharged.

7. Photo

The picture is for reference only.

bottom backside of the housing written SCR

8. Any other item which is not covered in this specification shall be agreed by both parties.