LiFePO4 Battery Pack

Specification

Model No: HD12.8-3.0(12.8V3.0Ah)

Designed	Checked	Approved
Tian Gao	Yehao Han	Anson Zhao

1. Preface

This specification describes the type and size, performance, technical characteristics, warning and caution of the HD12.8-3.0(12.8V3.0Ah) LiFePO4 rechargeable battery pack. The specification only applies to HD12.8-3.0(12.8V3.0Ah) LiFePO4 rechargeable battery pack supplied by Haidi Energy Technology Co.,Ltd.

2. Product and Model

2.1 Product: HD12.8-3.0(12.8V3.0Ah)LiFePO4BatteryPack

2.2 System Configuration:

Standard pack:HD26650-3.2V-3000mAH-3.2V-4S1P

| Charge/Discharge | Positive | UL1007 20AWG 100+10mm |
| | Negative | Connector:Molex-430250200 |

3. Battery Pack Specifications

Items	Standard	Comments
Nominal voltage	12.8V	4S
Typical capacity	3.0Ah	At 0.2C discharge rate
Max continuous discharge current	5A	
Discharge cut-off voltage	About 10V	
Charge input voltage	14.6±0.05V	Charge mode: CC/CV，Use a constant current, constant voltage(CC/CV)
Charge current	≤5A	
Inner resistance	≤140mΩ	Betweenpositiveandnegativepolar
Operation temperature range	Charge/Discharge	0℃～+45℃/-20℃～+60℃
	Discharge	When the environment temperature is higherthan45℃，pleasepayattention to ventilation and heat rejection.
Storage temperature range	0℃～40℃ （Capacity80%）	Recommendedlong-termstorage temperatureis15~25℃
Humidity		5%≤RH≤85%
Cabinet Material		PVC Shrink Package
Total Weight		0.40±0.02Kg
Size （L*W*H）		≤125*74*32mm
Protection function	Over charge protection, Over discharge protection, Over current protection, Short circuit protection, Temperature protection.	

4. Standard Test Conditions

All test in this specification should be in standard atmospheric conditions: temperature:

25± 5℃, relative humidity: 65±20%.

5. Characteristics

5.1 Standard charge

Charge the battery with the Battery special test cabinet, supply 14.6 voltage, constant-current 0.2C(A) current until current down to 0.02C（A）.

5.2 Standard discharge

Discharge the battery at 0.2C（A） to 10V or battery cut off voltage.

5.3 Electrical Performance

TestItems	TestMethods	TestStandards
Capacityretention rate	After standard charge under 5.1 specified conditions, store the cells for 28days,thendischargeat0.2C（A）to cut-offvoltage.	Capacityretentionrate≥80%
Cycle Life	1) Standard charge at 0.2C（A）, 2) Rest 0.5~1 h 3) Discharge at 0.2C to cut off voltage 4) Capacity retention rate≥80%	>2000cycles @ 100% DOD; >3000cycles @ 90% DOD; >4000cycles @ 80% DOD;

![HAIDI logo]

6. Characteristics Curve
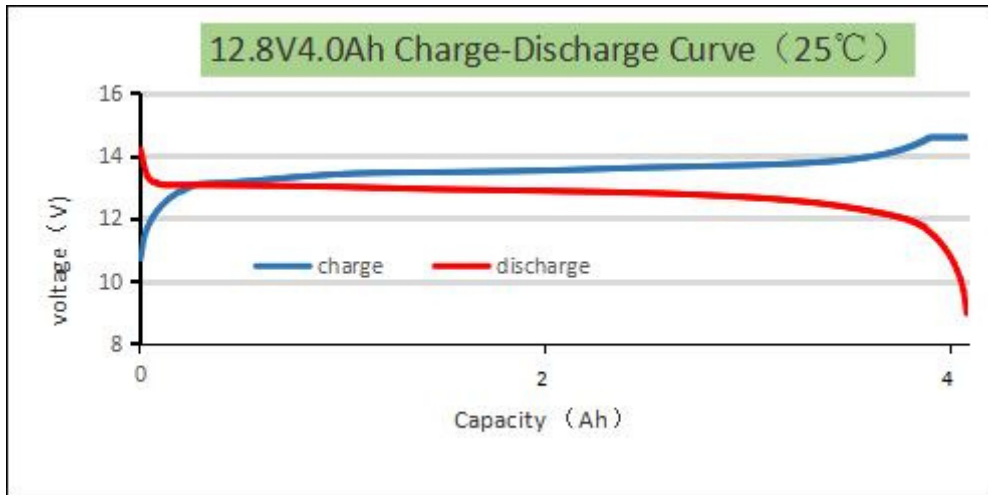
7. Cautions

7.1 Charging current should not be more than maximum charge current specified in the Product Specification，Charging current bigger than recommended current may damage the battery;

7.2 Discharging current should be no more than maximum discharge current specified in the Product Specification；Dischargingcurrentbiggerthanrecommendeddischargecurrentmaydamagethebattery;

7.3 It should be noted that the cell would be possible to be at a over-discharged state by its self-discharge characteristics in case the cell is not used for long time. In order to prevent over-discharging, the cell shall be charged periodically to maintain between 13.2V and 13.6V （Recommended 3 months one cycle）.Over-discharging may causes loss of cell performance, characteristics, or battery functions;

7.4 Please charge the battery within 12 hours after use;

7.5 Battery storage environment follow the above conditions and in standard atmosphere, should be without strong magnet, no power, no static;

7.6 Do not reverse the polarity of the battery pack for any reason;

7.7 Do not short circuit the battery pack;

7.8 Do not reverse polarity charging;

7.9 Battery packs can be combined in series or in parallel according to the specification;

7.10 Do not immerse the battery pack in water or sea water, or get it wet;

7.11 Do not disassemble battery;

7.12 Do not expose the battery to extreme heat or flame;

7.13 Please use a compatible charger for charging;