Pack Type: APLFP2550

Specifications

Lithium-LiFePo4 Rechargeable Battery Pack

Li-FePO4

Lithium-Battery Pack with protection electronics (BMS single cells monitoring), protects the battery against overcharge, deep discharge and short circuit, Implemented cell balancing.

Terminal Type: M8

Applications

Marine
Automotive
Military
Industrial
Medical
and others

Pack Specifications	
Nominal Voltage	25.6 V
Capacity (Nominal)	50 Ah ±6%.
Energy	1280 Wh
Weight	10150 grams ±50g.
Size, Max. (L x W x H) mm	327 x 171 x 215 ±1

Operating Specifications	
Operating Voltage	20.0 V to 28.8 V
Charge Voltage	(**Max**. 28.80 V)
Discharge End Volt.	20.0V
Operating Temperature: Discharge Charge	 -20°C to 60°C 0°C to 55°C
Max. Discharge Current	50A @ (-20°C-60°C) 150 A ±5A (Peak)
Max. Charge Current	10A @ (0°C-55°C) 50A @ (10°C-40°C)

Storage Specifications	
Storage Temperature Rh: (0% ~ 75%) SoC: *State-of-Charge* ≥ 70%	1 year : -20~25°C(1*) 3 months : -20~45°C(1*) 1 month : -20~60°C(1*)

Note (1): If the cell is kept as ex-factory status (≥ 30% of charge), the capacity recovery rate is more than 80%.

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Standard charging method

0.5C CC （constant current） charge to Max. 28.80V, then CV (constant voltage Max. 28.80V) charge till charge current decline to ≤ 0.02C

Overcharge/Overdischarge/Overcurrent Safety Circuits:

The controller IC measures the voltage for each cell (or for each parallel battery block) and shuts off a control switch to either prevent overcharging (if the voltage exceeds the specified voltage range) or to prevent over discharging (if the voltage falls below the specified voltage range). Moreover, the voltage of the control switch is measured on both ends and in order to prevent overcurrent, control switches are shut off if the voltage exceeds specifications.

• The Functions of the Safety Circuits (typical functions)

The voltages listed below are typical values and are not guaranteed. The charge voltage varies according to model number.

1. The Overcharge Safety Function

The charge stops when the voltage per cell rises above 3.65 ± 0.05 V.
The charge restarts when the voltage per cell falls below 3.55 ± 0.05 V.

2. The Overdischarge Safety Function

The discharge stops when the voltage per cell falls below 2.35 ± 0.05 V.
The discharge restarts when the voltage per cell rises above 2.55 ± 0.05V.

3. The Overcurrent Safety Function

The discharge is stopped when the output terminals are shorted. The discharge restarts when the short is removed.

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NOTE:
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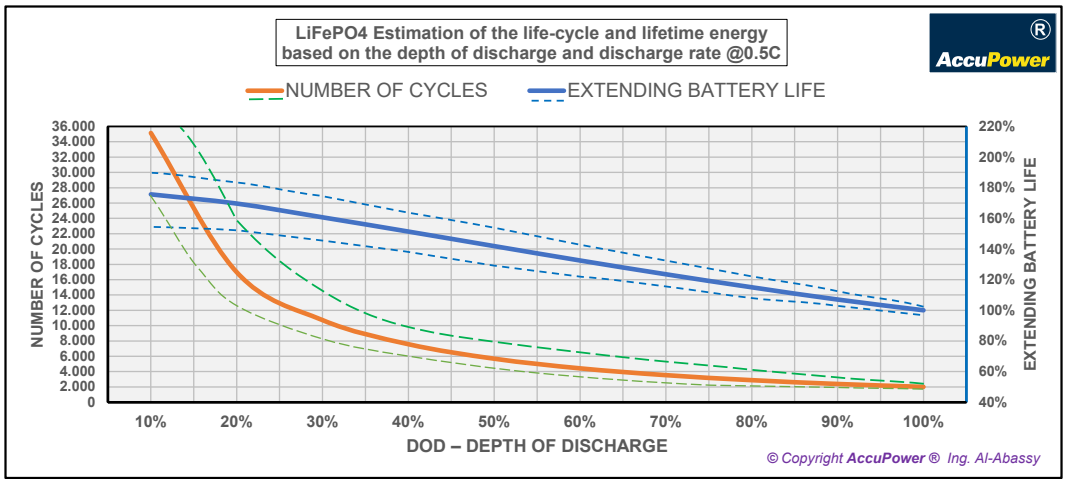
Cycle Characteristic:

100% DOD > 2000 cycles
80% DOD > 3000 cycles
50% DOD > 5000 cycles
30% DOD > 8000 cycles
the residual capacity ≥ 80% of the nominal of the nominal capacity at the 0.2C rate and standard Operating conditions.



(This applies to use under optimal conditions!)

In general, the aging of the batteries is accelerated with a higher C-rate, Temperature and an increasing the DOD as well as SOC-value. Our research has shown that the SOC value has a major influence on aging, with higher C values in the lower SOC values even causing less aging than the lower C values in the higher SOC values.
(It should also be noted that the lifespan of the LiFePo4 Rechargeable is very long. Doing thousands of cycles means many years of continuous operation. Added to this is the natural aging of the material, which also affects its service life)

Transportation

Transport according to the current regulations: ADR / RID / ADN / IATA / IMDG
Class: 9 / UN-Number: UN3480
Shipping name: Lithium ion batteries
Environmental hazards / Marine pollutant: No

Care and safety recommendations:

Never open, short circuit or put in fire. Do not install backwards. Avoid short circuit with metal objects.

ATTENTION:

Please pay attention to following recommendations:

1. Always avoid Deep discharge of the battery
2. Charge the battery before longer Storage.
3. Use only the battery charger specified for this battery type.
4. Do not leave battery in charger over 24 hours.
5. Keep it in a cool and dry place.
6. Avoid exposure to high temperatures.
7. Do not disassemble or modify the battery, may cause the battery to generate heat, explode or ignite.
8. Dispose properly used batteries. Dispose it according to the applicable recycling regulations. Contact your city recycling coordinator. Thank you.

ATTENTION! Recharge batteries immediately after receipt:

Due to the new IATA Dangerous Goods Regulations since April 2016, the state of charge condition for air transport must not exceed 30% of the nominal capacity!
If you receive a battery pack with airfreight with 30% charge and it will be sent by air again after storage, the state of charge 30% must be checked every 2 months and recharged according to 30%.

NOTE:

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