

# LiFePO4 Battery

## POW-30AH-12.8V

POWMr

### Perfect Upgrade Replacement:

The ideal upgrade replacement for lead-acid battery packs with high energy density.

### A-Grade Cells:

Safe and efficient.

### Long Cycle Life:

0.2C discharge, at 25°C and 80% DOD, cycle life exceeds 3000 cycles.

### High Capacity and Endurance:

Supports up to 384W continuous load power, capable of powering multiple loads simultaneously.

### Comprehensive Protection:

Built-in safe, reliable, and highly compatible BMS, ensuring energy storage safety.

### More Energy Storage:

Store more energy within the same volume.

### Efficient Charging:

Maximum charging current of 30A, achieving full charge in as little as one hour.

### Flexible Configuration:

Configurable up to 4 in series and 4 in parallel, achieving a total capacity of up to 120Ah, a total voltage of up to 51.2V, and a total energy of up to 6144Wh.



Overvoltage



Undervoltage



Overcurrent



Short Circuit



## Product Overview

The POW lithium battery series delivers exceptional performance, capacity, and reliability. Utilizing the latest high-power battery technology, the POW lithium batteries are designed for applications in environmentally sensitive areas that require enhanced commercial cycle life capabilities. These batteries are widely used across industrial, residential, commercial, and private sectors, meeting a diverse range of needs. With a maintenance-free structure and advanced design features, the POW lithium series is the ideal choice for various markets, including solar and renewable energy storage, electric vehicles, golf carts, industrial equipment, floor machines, forklifts, aerial work platforms, and robotics; marine, RV, and idle-free solutions; mobile and medical equipment; as well as telecommunications, broadband, and cable TV UPS systems. The POW lithium battery series, with its superior technology and reliability, ensures optimal performance in all applications.

## BATTERY SPECIFICATION

|                                  |               |
|----------------------------------|---------------|
| Battery Type-Chemistry           | LiFePO4       |
| Nominal Voltage                  | 12.8V         |
| Nominal Capacity                 | 30Ah          |
| Energy Density                   | 384Wh         |
| Dimensions (LxWxH)               | 165x120x182mm |
| Weight                           | 4kg           |
| Terminal Type                    | M6            |
| Terminal Torque                  | 8.5Nm         |
| Case Material                    | ABS           |
| BMS Built-in                     | Yes           |
| Self-Discharging Per Month       | <3%           |
| Max in Parallel                  | 4             |
| Max in Series                    | 4             |
| Charging Voltage Range           | 10.8~14.4V    |
| Recommend Charge Voltage         | 14V           |
| Max Charge Voltage               | 14.4V         |
| Max Continuous Current           | 30A           |
| Recommend Discharge Voltage      | 11.2V         |
| Max Discharge Voltage            | 10.8V         |
| Max Continuous Discharge Current | 30A           |
| Cycle Life (0.2C, 25°C@80% DOD)  | 3000 Cycle    |
| Discharge Temperature            | -10~60°C      |
| Charge Temperature               | 0~60°C        |
| Storage Temperature              | -30~50°C      |

## BMS CHARACTERISTICS

|                                   |                |                      |
|-----------------------------------|----------------|----------------------|
| Primary Discharging Protection    | Current: 100A  | Delay Time: 100ms    |
| Second Discharging Protection     | Current: 120A  | Delay Time: 50ms     |
| Over Charge Voltage Protection    | Current: 14.4V | Delay Time: 1~2s     |
| Over Discharge Voltage Protection | Current: 8.4V  | Delay Time: 0.1~0.5s |



## Constant Current Discharge Data (Amperes@25°C) ( Cut off voltage 10.8V)

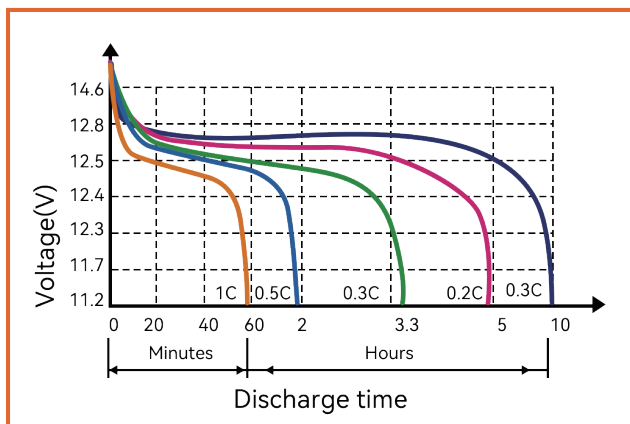
|                     |     |     |     |      |    |     |      |
|---------------------|-----|-----|-----|------|----|-----|------|
| Discharging Time    | 1h  | 2h  | 3h  | 4h   | 5h | 10h | 20h  |
| Discharging Current | 30A | 15A | 10A | 7.5A | 6A | 3A  | 1.5A |

## Constant Current Discharge Data (Watts@25°C) ( Cut off voltage 10.8V)

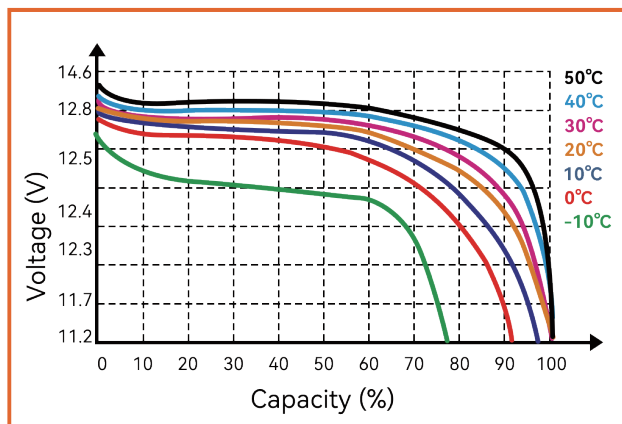
|                   |      |      |      |     |       |       |       |
|-------------------|------|------|------|-----|-------|-------|-------|
| Discharging Time  | 1h   | 2h   | 3h   | 4h  | 5h    | 10h   | 20h   |
| Discharging Power | 384W | 192W | 128W | 96W | 76.8W | 38.4W | 19.2W |

## PERFORMANCE CURVE

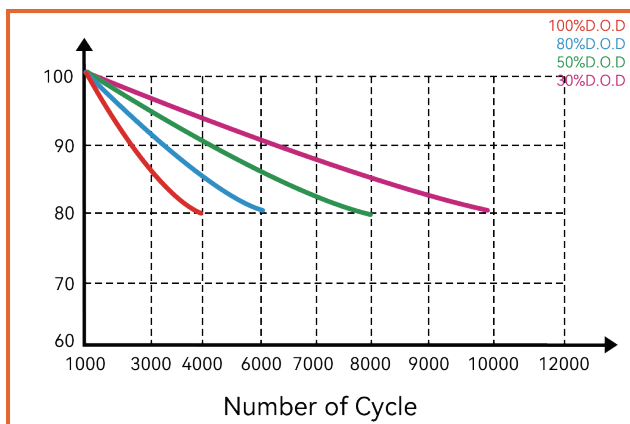
Discharge characteristics (25°C)



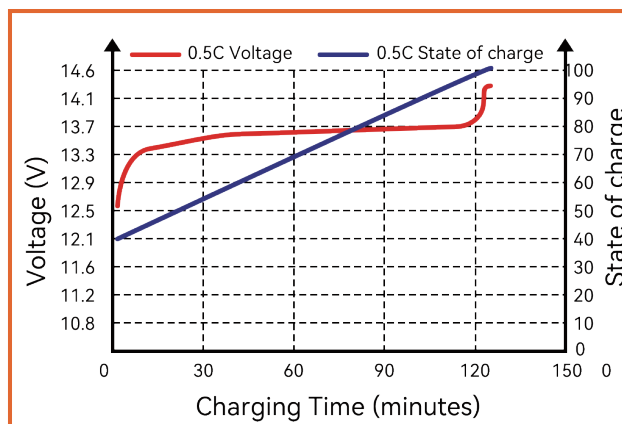
Different Temperature Discharge Curve (0.5C)



Different DOD Discharge cycle life Curve 0.2C 25°C



State of Charge Curve (0.5C, 25°C)



## Dimension



## Precautions

**Note 1:** Please always refer to the latest version of the technical manual published on our website to ensure safe and efficient operation.

**Note 2:** For parallel connections, fully discharge the batteries before connecting them in parallel, and then recharge them. For series connections, ensure the remaining capacity of each battery is the same.

**Note 3:** Parallel connections are intended only to extend backup time, not to increase output power.

**Note 4:** The company assumes no responsibility for any accidents caused by not following this user manual.

**POWMR**

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