



Partastar User Manual

9.42KWH LIFEPO4 BATTERY

Product Description

The PartaStar 9.42kWh stacked energy storage system is a high-performance solution for residential and small commercial applications.

It adopts premium automotive-grade LiFePO₄ cells, offering high safety, long cycle life, and modular scalability.

Up to 6 modules can be stacked and 15 sets paralleled, achieving up to 56.52kWh capacity for hybrid and off-grid energy systems.

Key Features

- **High Capacity & Scalable**

Up to 6 stacked modules and 15 parallel groups for flexible expansion to 56.52kWh.

- **Smart Battery Management System (BMS)**

Integrated BMS ensures real-time monitoring and multiple protection mechanisms.

- **PV & Hybrid Compatibility**

Compatible with 5600W / 6000W / 8000W / 11000W inverter systems.

- **Modular Design**

Quick-connect terminals and standardized stackable modules for easy setup.

- **Reliable & Safe**

Automotive-grade LiFePO₄ cells with over 4000 cycles at 80% DOD.

- **Smart Monitoring**

Supports CAN / RS485 communication and integration with mainstream EMS platforms.

Specifications

Item	Specification	Unit
Energy	9.42	kWh
Nominal Voltage	51.2	V
Nominal Capacity	184	Ah
Operating Voltage Range	40–58.4	V
Charge Voltage	58.4	V
Discharge Cut-off Voltage	40	V
Standard Charge Current	50	A
Max Charge Current	100	A
Max Discharge Current	115	A
Peak Discharge Current	120	A @ 30s
Cell Type	LiFePO ₄	
Configuration	16	S1P
Cycle Life	4000+	cycles
Charge Temperature	0–60	°C
Discharge Temperature	-20–60	°C
Storage Temperature	10–45	°C
IP Rating	IP65	
Communication	RS485 / CAN	
Dimensions	Approx. 540×380×320	mm (per module)
Weight	Approx. 45	kg (per module)

Inverter Specifications

Item	5600W	6000W	8000W	11000W
Rated Voltage	220/110VAC	220/110VAC	220/110VAC	220/110VAC
PV Input Range	DC100–500V	DC65–150V	DC90–450V	DC90–450V
Output Frequency	50/60Hz ±0.1%	Same	Same	Same
Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Max Output Power	5600W	6000W	8000W	11000W
Peak Power	11000VA	10000VA	16000VA	22000VA
Max Efficiency	>94%	>88%	>94%	>94%
MPPT Max Input Power	5400W MAX	3000W×2	5500W×2	5500W×2
AC Charge Power	3600W MAX	3000W MAX	7200W MAX	7200W MAX

Installation & Wiring

Environment Requirements

Indoor installation with ventilation and no direct sunlight.

Flat, stable surface to prevent vibration or tilting.

Installation Steps

Fix the base frame

Stack the battery modules

Connect power and communication cables

Verify polarity and voltage consistency

Power on and test the system

Wiring Notes

Do not reverse polarity.

Voltage difference between parallel units must be $<0.2V$.

Use circuit breakers or fuses for protection.

Keep CAN / RS485 ports accessible for monitoring.

Safety Instructions

Do not short-circuit battery terminals.

Keep away from fire, high temperatures, or moisture.

Installation and maintenance must be done by qualified personnel.

Do not immerse in water or expose to rain.

Use only compatible chargers and inverters provided by PartaStar.

Maintenance & Storage

Check terminals monthly for looseness or heating.

Check and balance cell voltages every 6 months.

For long-term storage, keep 50–60% charge and reactivate every 3 months.

Store in a cool, dry place between 10–45°C.

FAQ

Q: Can multiple systems be connected in parallel?

A: Yes, up to 6 modules per stack and 15 parallel groups (max 56.52kWh).

Q: Is it compatible with major inverter brands?

A: Yes, including Growatt, Deye, and Goodwe.

Q: Is the system safe?

A: Uses automotive-grade $LiFePO_4$ cells with multiple safety protections.