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Off-Grid Energy Storage System



Experience the Freedom of Energy Independence



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ROYPOW

For One-stop New Energy Solutions

- R&D, manufacturing and sales of motive power systems and energy storage systems as one-stop solutions
- Fully automatic production lines, a full range of test equipment and an advanced MES
- Covering Low-Speed Vehicles' Batteries, Industrial Batteries, as well as Residential ESS, Commercial & Industrial ESS, and Mobile ESS
- Self-development of power electronics technologies, including PCS, BMS, and EMS



750+ Employees
190+ R&D People
105,000 m² Headquarters Floor Area
2,500 m² Testing Center
171 Patents

Quality Control Certificates:

- ✓ Environmental Management System: ISO 14001:2015
- ✓ Occupational Health and Safety Management System: ISO 45001:2018
- ✓ Quality Management System: ISO 9001:2015, IATF16949:2016
- ✓ Information Security Management System: ISO/IEC 27001:2022
- ✓ Social Accountability Management System: SA8000:2014
- ✓ Hazardous Substance Process Management: IECQ QC 080000



Product Certifications:

UL 1973, UL 9540A, UL 9540, UL 2580, UL 2271, UL 1741			FCC, IEC/EN 61000-6, BS EN IEC 61000-6
IEEE 1547			IEC 60730, ISO 13849-1
IEC 62619			UN 38.3
EN 62477, EN 62040, (EU) 2023/1542, EN 62109-1, EN 62109-2			RoHS Directive 2011/65/EU & (EU) 2015/863

R&D and Manufacturing Highlights

As a result of these investments, ROYPOW is capable of "end-to-end" integrated delivery, making our products out-perform the industry norms.

- Fully Automatic Production Lines
- BMS, PCS, EMS All Designed in House
- All-round Testing
- Advanced MES System

Global Sales and Service Network

- Timely Delivery
- Hassle-free After-sales Service
- Fast Response Technical Support

ROYPOW has comprehensively unfolded its overseas market layout to ensure the localization of R&D, manufacturing, marketing and service, becoming one of your most reliable and valuable partners.



Upgrading to New Technology, with Our Turnkey Solutions.

With years of dedication to new energy solutions, we are proud to offer customers professional solutions for:

- Low-speed Vehicle Batteries
- Battery Systems for Off-highway Applications
- Residential Energy Storage Systems
- Mobile Energy Storage Systems
- Industrial Batteries
- Battery Systems for Emerging Applications
- Commercial & Industrial Energy Storage Systems
- Chargers





LIFEPO₄ BATTERY

5.1 ~ 40.8 kWh

Reliable Power for Off-Grid Living

Up to **5** kW / Module
Maximum Continuous
Discharge Power

Up to **8** Units
Flexible Capacity Expansion

> **6,000** Times
Cycle Life

5 Years
Warranty



Safe

✓ Advanced Cobalt-free LiFePO₄
Battery Technology

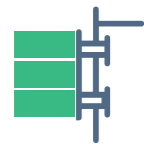
✓ Intelligent BMS with
Multiple Protections



Reliable

✓ Long Design Life

✓ Zero Maintenance and
No Frequent Swapping



Convenient

✓ Modular and Stacked
Design for Easy Installation

✓ Ground-mounted or
Wall-mounted Installation

System Specification

Model

RBmax5.1-F

Electric Data

Nominal Energy (kWh)	5.12
Usable Energy (kWh)	4.79
Cell Type	LFP (LiFePO ₄)
Nominal Voltage (V)	51.2
Operating Voltage Range (V)	44.8 ~ 56.8
Max. Continuous Charge Current (A)	50
Max. Continuous Discharge Current (A)	100

General Data

Weight (KG)	48
Dimensions (W × D × H) (mm)	500 * 167 * 485
Operating Temperature (°C)	0 ~ 55°C (Charge), -20 ~ 55°C (Discharge)
Storage Temperature (°C) Delivery SOC State (20~40%)	>1 Month: 0 ~ 35°C; ≤1 Month: -20 ~ 45°C
Relative Humidity	≤ 95%
Max. Altitude (m)	4000 (>2000 m Derating)
Protection Degree	IP 20
Installation Location	Ground-Mounted; Wall-Mounted
Communication	CAN, RS485

Certification

EMC	CE
Transportation	UN38.3

Warranty

Warranty (Years)	5 Years
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CE UN38.3



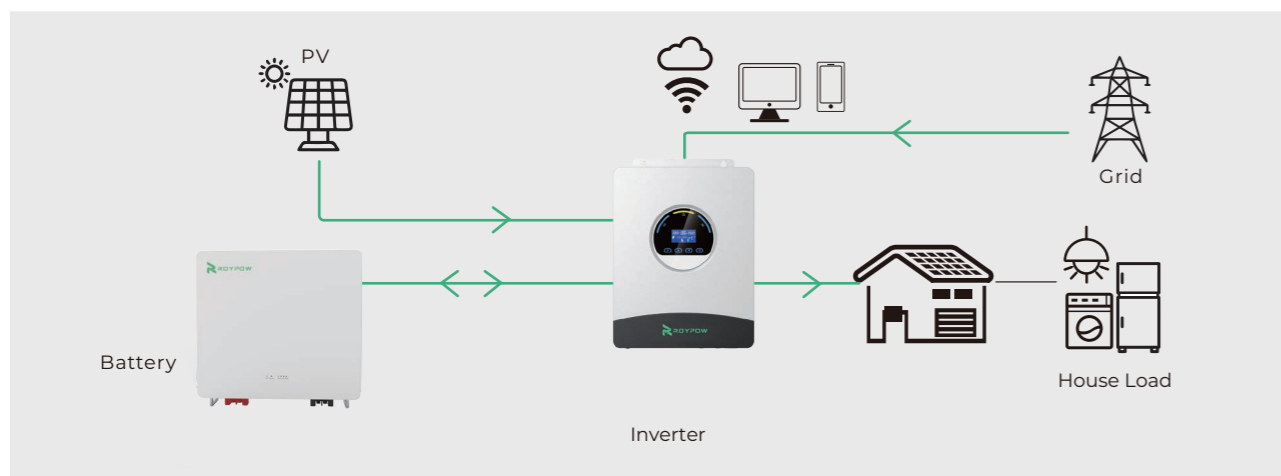
OFF-GRID INVERTER

6 ~ 72 kW

Compact and Light, Designed for Efficient Energy Production

- 98%**
Peak Efficiency
- Up to **12** Units
Parallel Working
- 10**ms UPS
Seamless Switch
- IP54**
Ingress Rating
- 3** Years
Warranty

- ✓ Pure Sine Wave Output
- ✓ Wide MPPT Operating Range
- ✓ Built-in BMS Communication
- ✓ Multiple Safe Protections



System Specification

Model	R6000S-E		
PV (DC Input)			
Recommended Max. PV Input Power (W)	6000		
Max. Input Voltage (VOC) (V)	500		
MPPT Operating Voltage Range (V)	85 V - 450 V (@75V Start up)		
Number of MPPT	1		
Max. Number of Input Strings per MPPT	1		
Max. Input Current per MPPT (A)	27		
Max. Short-circuit Current per MPPT (A)	35		
Grid (AC Input)			
Max. Output Power (W)	11500		
Max. Output Current (A)	50		
Rated Grid Voltage (Vac)	220 / 230 / 240		
Rated Grid Frequency (Hz)	50 / 60		
Acceptable Range	170 - 280 Vac (For UPS); 90 - 280 Vac (For Home Appliances)		
Battery (Bi-direction)			
Battery Type	LiFePO ₄ / Lead-acid		
Battery Voltage Range (Vdc)	40-60		
Rated Battery Voltage (Vdc)	48		
Max. Charge / Discharge Current (A)	120 / 130		
BMS Communication Mode	RS485		
Backup Output (AC Output)			
Rated Output Power	6000W / 6000VA		
Rated Output Current (A)	27.3		
Rated Output Voltage / Frequency	220 / 230 / 240Vac 50 / 60Hz		
Parallel Capacity	Max. 12 Units		
Surge Power	12000VA 5s		
THDv (@ Linear Load)	< 3%		
Switch Time	10ms Typical (For UPS), 20ms Typical (For Home Appliances)		
Efficiency			
Peak Efficiency	98%		
Max. MPPT Efficiency	99.90%		
Protection			
Inner Protection	Output Short-circuit Protection, Output Overvoltage Protection		
Surge Protection	PV: Type III, AC: Type III		
IP Rating	IP54		
General Specifications			
Operating Temperature Range	-10°C ~ 55°C		
Relative Humidity Range	5% ~ 95%		
Max. Operating Altitude	>2000 m Derating		
Standby Self-consumption (W)	<10		
Installation Type	Wall-mounted		
Cooling Mode	Fan Cooling		
Communication	RS232/RS485/Dry Contact/Wi-Fi		
Display	LCD		
Mechanical Specifications			
Inverter Dimension (L x W x H) (mm)	444.7 x 346.6 x 120	Shipping Dimension (mm)	560 x 465 x 240
Net Weight (kg)	12.4	Gross Weight (kg)	14.6
Warranty Period	3 Years		