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RoyPow®
Get powered. Get inspired

LI-ION technology

Residential ALL IN ONE Energy Storage System

Intelligent technology coexisting with nature powers your home

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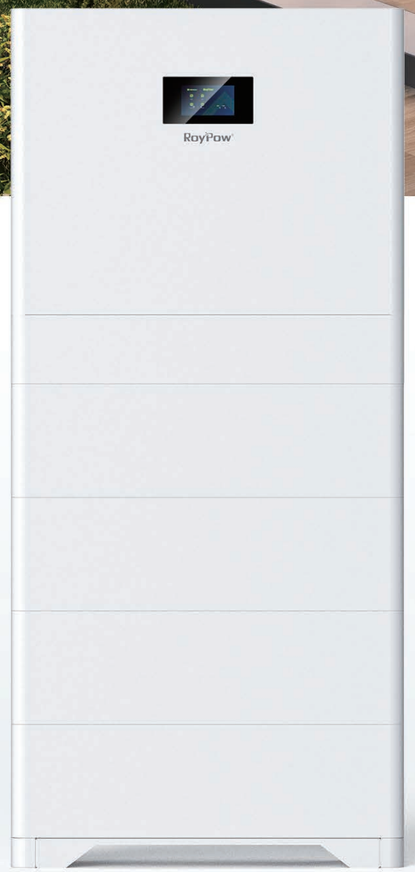
Contents

RoyPow
your trusted partner

RoyPow SUN Series



ALL IN ONE

Meet RoyPow SUN Series - Compact, intelligent, and safe.

RoyPow SUN Series combines the most advanced battery management system with super power supply capacity to provide ***sustainable & green energy*** for your working and family usages all day.

RoyPow SUN Series is a fully-integrated $LiFePO_4$ battery system for residential usages. The rechargeable lithium-ion battery with long design life improves solar self-consumption.

Bi-directional energy storage system supports backup mode.

The electrical interface provides a simple connection to any houses or buildings. Simple installation and user-friendly APP monitoring facilitate your usage of clean energy.

RoyPow®
Get powered. Get inspired

Why RoyPow SUN Series?

RoyPow®
Get powered. Get inspired

Safety

LiFePO4 batteries ensure premium electrical characteristics without any safety issues.

Enhanced safety with aerosol fire protection.

Integrated Arc Fault Circuit Interrupters (AFCI) & Rapid Shut Down (RSD).

IP65

IP65 Rating, safe and reliable while using.

Core value

Application	Energy transformation	Energy conservation
	Smart home	Capitalization
Platform	Prediction	Scheduling
	AI algorithm	Big data
Communication control	WI-FI power carrier	Cloud communication
Hardware	Power generation / Transformation / Distribution	

Intelligent energy

RoyPow cloud platform

With full-on visual experience, user-friendly data display and all-round monitoring functions, RoyPow makes smart energy management easier for everyone.

- Lifelong free access to monitoring via Web and APP
- New function and latest version upgrades available remotely
- Set parameters control and build VPP
- IoT compatible

Battery management system (BMS)

RoyPow research institute

30+ BMS R&D veteran researchers with **16**+ years ESS BMS experiences

High SOC accuracy

Our SOC algorithm accuracy reaches **5%**

Comprehensive protection

3-level software protection, redundant hardware level protection

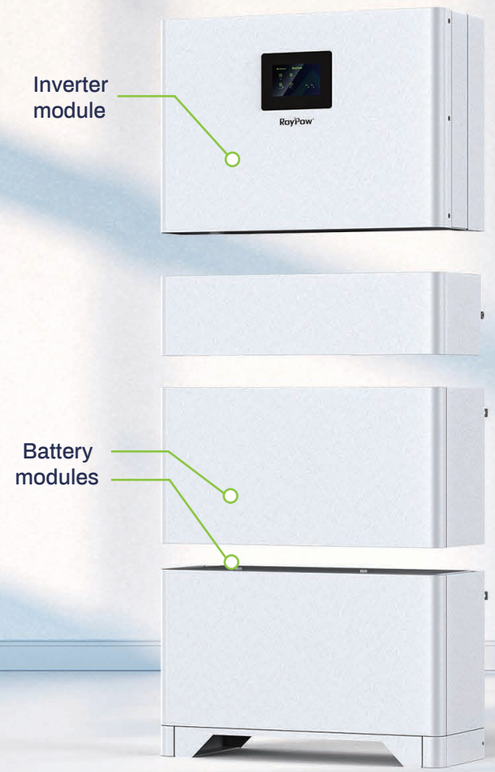
Euro-standard

3 - 5 kW / 5 - 40 kWh

US-standard

10 - 15 kW / 10 - 40 kWh

RoyPow SUN Series 3 - 5 kW / 5 - 40 kWh



Euro-standard

Intelligent residential energy storage system

97.6% Max. efficiency

2 MPPTs

35 dB Max. noise

7 kVA Max. AC input

7 kW Max. PV input

6 Max. systems in parallel

Up to **30 kW** parallel working

5/10 Years optional warranty

IP65
IP65 protection

Natural cooling

- Modular & integrated design for easy installation
- Friendly compatible with new install or existing PV system
- Integrated multiple protections
- Smart management with App & Web, remote off upgrade

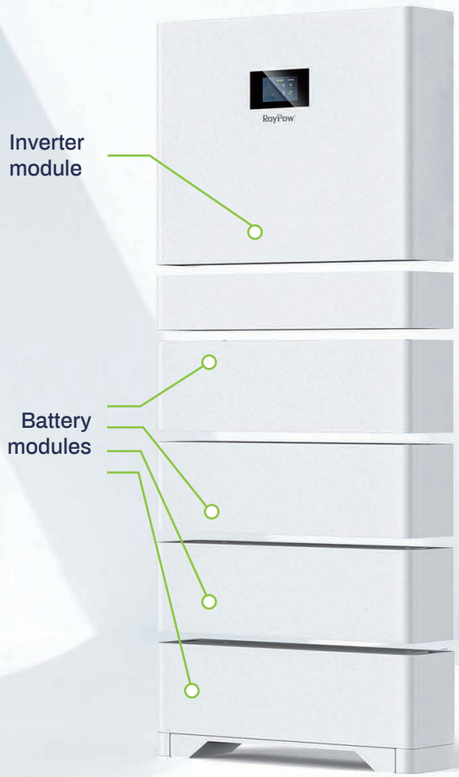
Model	SUN3600S-E/A		SUN5000S-E/A	
System specification				
Nominal output power	3,600 W		5,000 W	
Energy capacity	5.1 kWh ~ 40.8 kWh		Battery type	Lithium iron phosphate (LFP)
Ingress protection rating	IP65		Warranty	5 / 10 years (optional)

Inverter model	SUN3600S-E/I			SUN5000S-E/I		
PV input						
Max. input power	4,600 W			7,000 W		
Max. input voltage	580 V	MPPT voltage range	120 V ~ 550 V	Start operation voltage	150 V	
Max. input current	2 * 13.5 A			2 * 13.5 A		
Max. short current	2 * 18 A			2 * 18 A		
No. of MPPT	2	No. of string per MPPT	1			
Battery input						
Nominal voltage	51.2 V	Operation voltage range	40 V - 60 V	Battery charge method	Self-adaption to BMS	
AC (grid)						
Max. apparent power	3,600 VA			5,000 VA		
Max. input power	5,000 VA			7,000 VA		
Grid type	Single phase, L / N / PE	Nominal frequence	50 Hz / 60 Hz	Grid voltage range	170 V - 270 V	
Nominal voltage	230 V	Frequence range	45 - 55 Hz / 55 - 65 Hz	THDI (rated power)	< 3%	
Max. output current	16 A			23 A		
Max. input current	23 A			30 A		
PF	-0.8 ~ 0.8	Switch time (typical)		10 ms		
AC (back up)						
Max. active power	3,600 W			5,000 W		
Max. output current	15.6 A			22 A		
Nominal frequence	50 Hz / 60 Hz	Nominal voltage		230 V		
THDV（100% R load）	< 2%	Output parellel		6 Pcs		
Over load	105% ＜ Load ⩽ 125%, 10 min	125% ＜ Load ⩽ 150%, 1 min		Load ＞150%, 10 S		
Efficiency						
Max. efficiency（BAT to AC）	94%	Max. efficiency（PV to AC）		97.6%		
Euro efficiency	97%					
General data						
Dimension (W x D x H)	25.6 x 9.4 x 24.4 inch (650 × 240 × 620 mm)			Operating temperature range	-13°F ~ 140°F (-25°C~ 60°C) (45°C derating)	
Electronics protection degree	IP65			Noise	< 35 dB	
HMI	APP / LCD			COM	RS485 / CAN / WiFi / 4G (optional)	
Net weight	66.1 lbs (30 kg)	Relative humidity	0% ~ 95%	Max. altitude	3,000 m (>2,000 m derating)	
Topology type	Transformer (Bat to AC)	Night self consumption	< 1 W	Cooling	Natural	
Certification						
Safety	EN 62109-1 / 2	EMC	EN 61000-6-2/3	Grid code	VDE 4105, NRS 097, EN 50549, CEI 0-21	

Battery model	RBmax5.1L		
Electric data			
Usable energy	N * 4.7 kWh	Nominal energy[1]	N * 5.1 kWh (1~ 8 Pcs parallel)	Operating voltage range	44.8 V ~ 56.8 V
General data			
Dimensions (W × D × H)	25.6 x 9.4 x 18.7 inch (650 × 240 × 475 mm)		
Operating temperature	32°F ~ 122°F (0°C ~ 50°C) (charge), 4°F~ 122°F (-20°C ~ 50°C) (discharge)		
Relative humidity	0 ~ 95%	Storage temperature	-4 ~122°F (-20 ~ 50°C)	Max. altitude	3,000 m (>2,000 m derating)
Ingress protection rating	IP65	Installation	Ground-mounted, wall-mounted	
Certification			
IEC62619	CE	UN38.3	

[1] Under specific test condition

RoyPow SUN Series 10 - 15 kW / 10 - 40 kWh



US-standard

Intelligent residential energy storage system

98.5% Max. efficiency

4 MPPTs

35 dB Max. noise

20 kVA Max. AC input

27 A Max. current (per MPPT)

6 Max. systems in parallel

Up to **90 kW** parallel working

5/10 Years optional warranty

- Split phase output
- Natural cooling
- Type 4X protection
- Smart load function

- Modular & integrated design for easy installation
- Friendly compatible with new install or existing PV system
- Integrated RSD (Rapid Shut Down) & AFCI (Arc Fault Circuit Interrupters)
- Smart management with App & Web, remote off upgrade

Model	SUN10000S-U/A		SUN15000S-U/A	
System specification				
Nominal output power	10,000 W		15,000 W	
Energy capacity	5.1 kWh ~ 40.8 kWh		Battery type	Lithium iron phosphate (LFP)
Ingress protection rating	IP65		Warranty	5 / 10 years (optional)
Inverter model	**SUN10000S-U/I**		**SUN15000S-U/I**	
PV input				
Max. input power	4 * 3,600 W		4 * 7,200 W	
Max. input voltage	600 V	MPPT voltage range	120 V ~ 550 V	Start operation voltage	150 V
Max. input current	15.5 A + 15.5 A + 15.5 A + 15.5 A		27 A + 27 A + 27 A + 27 A	
Max. short current	20 A + 20 A + 20 A + 20 A		40 A + 40 A + 40 A + 40 A	
No. of MPPT	4		No. of string per MPPT	2
Battery input				
Nominal voltage	153.6 V		204.8 V	
Operation voltage range	75 V - 480 V		Battery charge method	Self-adaption to BMS
AC (grid)				
Max. apparent power	10,000 VA		15,000 VA	
Max. input power	15,000 VA		20,000 VA	
Grid type	Split phase, L1 / L2 / N / PE	Nominal frequence	60 Hz	Grid voltage range	102 V ~ 132 V / 204 V ~ 264 V
Nominal voltage	120 V / 240 V	Frequence range	55 Hz - 65 Hz	THDI (rated power)	< 3%
Max. output current	41.6 A		62.5 A	
Max. input Current	62.5 A		83.3 A	
PF	-0.8 ~ 0.8		Switch time (typical)	10 ms
AC (back up)				
Max. active power	10,000 W		15,000 W	
Max. output current	41.6 A		62.5 A	
Nominal frequence	60 Hz		Nominal voltage	120 V / 240 V
THDV（100% R load）	< 2%		Output parellel	6 Pcs
Over load	105% ＜ Load ⩽ 125%, 10 min		125% ＜ Load ⩽ 150%, 1 min		Load ＞150%, 10 S
Efficiency				
Max. efficiency（BAT to AC）	96%		Max. efficiency（PV to AC）	98.5%
CEC efficiency	97%			
General data				
Dimension (W × D × H)	33.3 × 9.4 × 21.7 inch (845 × 240 × 550 mm)		Operating temperature range	-13°F ~ 140°F (-25°C ~ 60°C) (45°C derating)
Electronics ingress protection rating	IP65 / Type 4X		Noise	< 35 dB
HMI	APP / LCD		COM	RS485 / CAN / WiFi / 4G (Optional)
Net weight	110.2 lbs (50 kg)	Relative humidity	0% ~ 95%	Max. altitude	3,000 m (> 2,000 m derating)
Topology type	Transformerless	Night self consumption	< 1 W	Cooling	Natural
Certification				
Safety	UL 1741SA，UL 1699B，CSA 22.2	EMC	FCC Part 15 Class	Grid code	IEEE 1547，IEEE 2030.5

Battery model	RBmax5.1H				
Electric data					
Usable energy	N * 4.7 kWh	Nominal energy [1]	N * 5.1 kWh (2 Pcs String)	Operating voltage range	102.4 V ~ 409.6 V
General data					
Dimensions (W × D × H)	33.3 x 9.4 x 31.7 inch (845 × 240 × 805 mm) (2 Pcs string)				
Operating temperature	32°F ~ 122°F (0°C ~ 50°C) (charge), -4°F ~122°F (-20°C~ 50°C) (discharge)				
Relative humidity	0 ~ 95%	Storage temperature	-4°F ~122°F (-20°C ~ 50°C)	Max. altitude	3,000 m (>2,000 m derating)
Protection degree	IP65			Installation	Ground-mounted, wall-mounted
Certification					
UL1642, UL1973		FCC		UN38.3	

[1] Under specific test condition

RoyPow SUN Series

Smart energy storage for homeowners,
simple to use & easy to install.

Advanced LiFePO4 battery module

5 kW / module
Max. continuous discharge power

5.1 kWh ~ **40.8** kWh
Flexible capacity

5/10 Years
optional warranty

- Easy installation with modular and stacked design
- Excellent safety of cobalt free LiFePO4 battery
- Safety standards like CE, UN38.3, EN 62619, UL1973
- Built-in BMS with intelligent monitoring & multiple protections

Model	RBmax5.1L	2 * RBmax5.1L	3 * RBmax5.1L	4 * RBmax5.1L
Electric data				
Nominal energy	5.1 kWh	10.2 kWh	15.3 kWh	20.4 kWh
Usable energy[1]	4.7 kWh	9.5 kWh	14.2 kWh	19 kWh
Cell type	Lithium iron phosphate (LFP)			
Nominal voltage	51.2 V			
Operating voltage range	44.8 V ~ 56.8 V			
Max. continuous charge current	50 A	100 A	100 A	100 A
Max. continuous discharge current	100 A	100 A[2]	100 A[2]	100 A[2]
General data				
Weight	110.2 lbs / 50 kg	211.6 lbs / 96 kg	313.0 lbs / 142 kg	414.4 lbs / 188 kg
Dimensions (W × D × H)	25.6 × 9.4 × 18.7 inch (650 × 240 × 475 mm)	25.6 × 9.4 × 31.6 inch (650 × 240 × 805 mm)	25.6 × 9.4 × 44.6 inch (650 × 240 × 1,135 mm)	25.6 × 9.4 × 57.6 inch (650 × 240 × 1,465 mm)
Operating temperature	32°F ~ 122°F (0°C ~ 50°C) (charge), -4°F ~ 122°F (-20 °C ~ 50 °C) (discharge)			
Storage temperature	-4°F ~ 122°F (-20 °C ~ 50 °C)			
Relative humidity	0 ~ 95%			
Max. altitude	3,000 m (> 2,000 m derating)			
Ingress protection rating	IP65			
Installation	Ground-mounted, wall-mounted		Communication	CAN, RS485
Certification				
IEC62619 (EU), UL 1973 (US)	CE		UN38.3	
Warranty	5 / 10 years (optional)			

[1] Under specific test condition
[2] Optional high-performance version, supporting the maximum continuous current of 200 A application conditions.
Heating function (optional) is available for cold regions.
Information may be subject to change without notice during product improving. For the latest product specs, please refer to RoyPow website: www.roypowtech.com.

Powerful monitoring & data platform

APP&WEB MANAGEMENT

Everything at a glance and under control; the intuitive App / Web allows you to have full visibility into your self-powered home while providing real-time information on solar generation, battery power flow, and household consumption.

- Real-time monitoring & comprehensive visualization
- Multi-terminal compatibility & sharing
- Dynamic power flow & generation report
- Backup function & data encryption
- Working mode switch & profit calculation
- Integrated after-sales service

Portable power station

RoyPow
Get powered. Get inspired

R2000PRO 1280 Wh

Lightweight & easy to carry

Maintenance free

Fast charge

Safe & simple to use

Multiple inputs & outputs

Plug and play for multiple devices

Fridge (36W)
R2000PRO 20+ hours
Optional expansion pack 80+ hours

LCD TV (75W)
R2000PRO 10+ hours
Optional expansion pack 35+ hours

Laptop (56W)
R2000PRO 15+ hours
Optional expansion pack 50+hours

CPAP (40W)
R2000PRO 15+ hours
Optional expansion pack 50+hours

Phone (5W)
R2000PRO 90+ hours
Optional expansion pack 280+ hours

LED lamp (4W)
R2000PRO 210+ hours
Optional expansion pack 700+ hours

R2000PRO
Technical specifications

AC	R2000PRO-U	R2000PRO-E
Nominal power	2,000 VA	
Input voltage range	90 - 145 Vac	175 - 265 Vac
Input frequency range	55 - 65 Hz	45 - 65 Hz
Inverter voltage	110 Vac / 120 Vac	230 Vac
Impact power	4,000 VA	
Efficiency	> 88% Max. 90%	
Switch time	10 ms Standard	
Output wave forms	Puew sine wave	
Battery		
Nominal voltage	25.6 Vdc	
Operating range	23 - 28.8 Vdc	
Battery type	Lithium Iron Phosphate (LFP)	
Main capacity	1,280 Wh	
Additional capacity	2,560 Wh（100 Ah）	
PV charge		
Max. charge power	1,000 W	
PV input range	30 - 60 Vdc	
Max. charge current	30 A	
Efficiency	Max. 95%	
AC charge		
Max. charge power	750 W	
Charge voltage range	90 - 264 Vac	
Charge frequency range	47 - 63 Hz	
Charge current	25 A	
Efficiency	Max. 93%	
DC output		
DC output voltage	13.8 Vdc	
Rated DC output current	25 A	
Cigarette lighter	10 A (Normal), 10 A < I < 15 A (1 mins switch off), > 15 A (Immediate switch off)	
USB * 2	5 V * 2.4 A * 2	
PD * 2	5 V / 9 V / 12 V / 15 V / 20 V 3 A * 2	
Dimensions (W * D * H)	14.6 * 17.1 * 12.8 inch (370 * 435 * 326 mm)	
Weight	50.7 lbs / 23 kg (main device) ; 51.8 lbs / 23.5 kg (back-up device)	

All pictures shown are for reference only and data are based on RoyPow standard test procedures. Actual performance may vary according to local conditions.

RoyPow, your trusted partner for one-stop energy solutions

RoyPow is founded in Huizhou City, Guangdong Province, China, with manufacturing center in China and subsidiaries in the USA, Europe, Japan, the UK, Australia, South Africa, etc., to settle global sales and service network. We have been dedicated to new energy solutions for years, and we have developed a portfolio of intellectual property and an integrated design and manufacturing capability that spans all aspects of the business from electronics and software design to module and battery assembly and testing. We are vertically integrated, and this gives us the ability to provide a wide range of application specific solutions to our customers.

R&D and manufacturing highlights

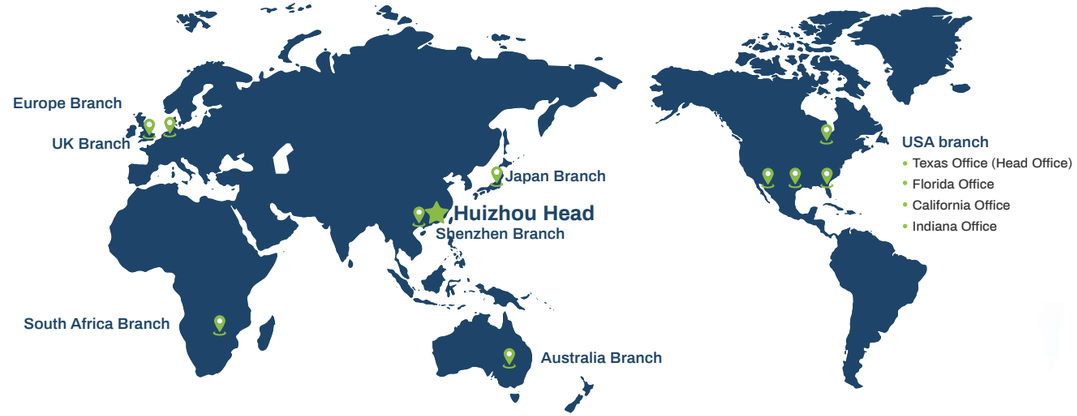
By virtue of all this, RoyPow is capable of “end-to-end” integrated delivery, and makes our products out-performing industry norms.

- Persistent technology innovation.
- All-round testing.
- Integrated design.
- Advanced MES system.
- Fully automatic production line.
- IATF16949 system.
- QC system.

Global sales and service network system

- Timely delivery.
- Hassle-free after-sales service.
- Fast response technical support.

RoyPow has comprehensively unfolded its overseas market layout to realize the localization of R&D, manufacturing, marketing and service, then become your most reliable partner.



Upgrading to new technology, with our turnkey solutions.

Years of dedication on new energy solutions, we are proud to offer customers professional solutions for:

- **Low speed vehicle batteries** including golf carts and sightseeing cars;
- **Industrial batteries** including forklifts, aerial work platforms and floor cleaning machines;
- **Residential energy storage systems & portable power units** including home storage and portable energy storage products, as well as off-grid energy storage (for forest cabin, island villa without electricity, etc.);
- **Vehicle-mounted batteries & HVAC systems** including RV and truck energy storage and air conditioning system, as well as off-grid solar system for RV;
- **Marine & boat power systems** including trolling motors, fish finders, other off-grid energy storage systems for marine, and marine power system;
- **Chargers** for forklifts, aerial work platforms, floor cleaning machines, golf carts and various marine batteries.