

# ROYPOW, For One-stop New Energy Solutions

ROYPOW TECHNOLOGY is dedicated to the R&D, manufacturing and sales of motive power systems and energy storage systems as one-stop solutions.

With more than 20 years of combined experience in manufacturing renewable energy and battery systems, ROYPOW provides Lithium-ion Batteries covering most daily living and working fields: for Low-Speed Vehicles such as golf carts, personnel carriers; Industrial Batteries for use in Material Handling Equipment such as forklifts, aerial work platforms and floor cleaning machines as well as renewable Energy Storage Systems for residential, commercial, industrial, vehicle-mounted and marine applications.

ROYPOW has established a worldwide network to serve customers with a manufacturing center in China and subsidiaries in the USA, the UK, Germany, the Netherlands, South Africa, Australia, Japan and Korea to date. ROYPOW owns and operates fully automatic production lines, a full range of test equipment and an advanced MES that collectively address all aspects of its manufacturing process, from electronics, software design to module assembly, battery assembly as well as initial and final testing. ROYPOW focuses on the self-development of power electronics technologies, including PCS, BMS, and EMS as the core competence.

As a renewable energy innovator, ROYPOW is committed to the mission of achieving energy sustainability while creating a better life for human beings.

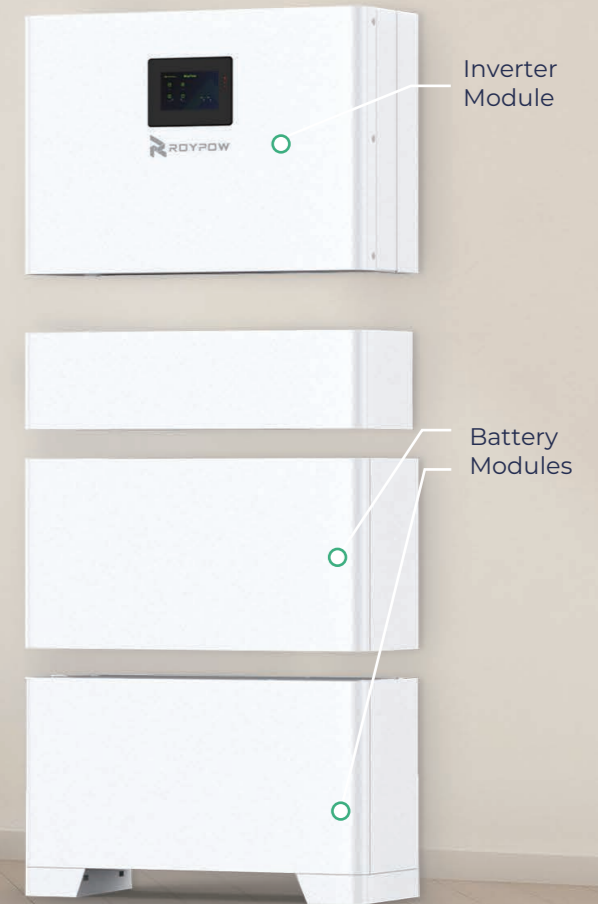


ROYPOW RES 3 - 5 kW / 5 - 40 kWh

## Intelligent Residential Energy Storage System

2 MPPTs      35 dB Max. Noise      7 kVA Max. AC Input  
7 kW Max. PV Input      10 Years Warranty

Euro-standard



IP65 IP65 Protection

Smart Load Function

Li-ion CE

Integrated Multiple Protections

Modular & Integrated Design

Natural Cooling

Smart App & Web Management

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# System Specification

Model	SUN3600S-E/A	SUN4600S-E/A	SUN5000S-E/A
Rated AC Output Power (W)	3600	4600	5000
Nominal Energy (kWh)		5 to 40	
Noise (dB)		<35	
Operating Temperature Range		-20~55°C (>45°C derating)	
Dimensions (WxDxH, mm)		650 x 240 x 750+330*N (N=1 to 8)	
Ingress Rating		IP65	
Mounting Options		Indoor/Outdoor, Floor standing or Wall mounted (optional)	

## Hybrid Inverter Specification

Model	SUN3600S-E/I	SUN4600S-E/I	SUN5000S-E/I
<b>Input - DC (PV)</b>			
Max. Input Power (W)	4600	6000	7000
Max. Input Voltage (V)		580	
MPPT Voltage Range (V)		120~550	
MPPT Voltage Range (full load)	180~550	200~550	200~550
Start Voltage (V)		150	
Max. Input Current (A)		13.5 / 13.5	
Max. Short Current (A)		16 / 16	
No. of MPPT		2	
No. of String per MPPT		1	

<b>Input - DC (Battery)</b>			
Battery Type		Lithium-ion	
Nominal Voltage (V)		51.2	
Operation Voltage Range (V)		40-60	
Max. Charge / Discharge Power (W)	3600 / 3600	4600 / 4600	5000 / 5000
Max. Charge / Discharge Current (A)	75 / 75	95.8 / 95.8	100 / 100
Battery Charge Method		Self-adaption to BMS	

<b>AC (On grid)</b>			
Rated Input Apparent Power (VA)		7000	
Rated Output Power (W)	3600	4600	5000
Max. Output Apparent Power (VA)	3600	4600	5000
Rated Grid Voltage		230 Vac / L+N+PE	
Rated Grid Frequency (Hz)		50 / 60	
Max. Input Current (A)		30	
Max. Output Current (A)	16	20.9	22
THDI(Rated power)		<3%	
Adjustable Power Factor		0.8 leading to 0.8 lagging	

<b>AC (Back Up)</b>			
Rated Output Power (W)	3600	4600	5000
Rated Output Current (A)	15.6	20	22
Rated Output Voltage (V)		230	
Rated Frequency (Hz)		50 / 60	
THDV (@linear load)		< 3%	
Overload Capacity	105%<Load≤125%, 10min. 125%<Load≤150%, 1min. 150%<Load rate,10S		
Back-up Switch time		< 20ms	

<b>Efficiency</b>	
Max.Efficiency (BAT to AC)	93.8%
Max.Efficiency (PV to BAT)	95.2%
Max.Efficiency (PV to AC)	97.0%
Euro.Efficiency	96.2%
Max.MPPT Efficiency	99.9%

<b>Protection</b>	
DC Switch / GFCI / Anti-islanding Protection / DC Reverse-polarity Protection / Output Over/Under Voltage Protection / Output Over Current Protection / AC Short Circuit Protection / Insulation Resistor Detection	
DC/AC Surge Protection	Type III

<b>General Data</b>	
PV Connection	MC4/H4
DC Switch	Integated
Dimensions (WxDxH, mm)	650 x 240 x 620
Net Weight (kg)	35
Operating Temperature Range	-25~60°C (>45°C derating)
Relative Humidity	0~95%
Max. Altitude(m)	3000
Electronics Protection Degree	IP65
Topology type	Transformer(Bat to AC)
Night Self Consumption (W)	<10
Cooling	Natural
Noise (dB)	<35
Display	Wifi+APP / LCD
Communication	RS485 / CAN / WiFi

<b>Standard Compliance</b>	
Safety / EMC	EN IEC 62109-1, EN IEC 62109-2, EN IEC 61000-6-1, EN IEC 61000-6-3
Grid Connection Standard	VDE-AR-N 4105, NRS 097, EN 50549, G98, G99, AS 4777.2

## Battery Module Specification

Model	RBmax5.1L	2*RBmax5.1L	3*RBmax5.1L	4*RBmax5.1L	5*RBmax5.1L	6*RBmax5.1L	7*RBmax5.1L	8*RBmax5.1L
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<b>Electric Data</b>								
Nominal energy(kWh)	5.12	10.24	15.36	20.48	25.6	30.72	35.84	40.96
Usable energy(kWh)	4.79	9.58	14.37	19.16	23.95	28.74	33.53	38.32
Cell type	Lithium iron phosphate (LFP)							
Nominal voltage (V)	51.2							
Operating voltage range (V)	44.8 ~ 56.8							
Max. continuous charge current (A)	50	100	100	100	100	100	100	100
Max. continuous discharge current (A)	100	100	100	100	100	100	100	100

<b>General Data</b>								
Weight (lbs / kg)	47.5	92.1	136.7	181.3	228.8	273.4	318	362.6
Dimensions (W × D × H) (mm)	650 × 240 × 460	650 × 240 × 790	650 × 240 × 1,120	650 × 240 × 1,450	Double tower			
					650 × 240 × 790 + 650 × 240 × 1120	650 × 240 × 1120 + 650 × 240 × 1120	650 × 240 × 1120 + 650 × 240 × 1450	650 × 240 × 1450 + 650 × 240 × 1450
Operating temperature <sup>[1]</sup>	Charge: 32 ~ 131°F (0 ~ 55°C), Discharge: 4 ~ 131°F (-20 ~ 55°C)							
Storage temperature	≤1 month: -20 to 45°C (-4 to 113°F), >1 month: 0 to 35°C (32 to 95°F)							
Relative humidity	0 ~ 95%							
Max. altitude (m)	4,000 (> 2,000 derating )							
Ingress rating	IP65							
Mounting options	Indoor/Outdoor, Floor standing or Wall mounted				Communication			
					CAN, RS485			

<b>Certification</b>	
IEC 62619, UL 1973, EN 61000-6-1, EN 61000-6-3, FCC Part 15, UN38.3	

[1] When the ambient temperature is too low or too high, the performance of battery may be limited.