

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 10/12/15 kW / 10 - 40 kWh

Intelligent Residential Energy Storage System

- DC & AC-Coupled
- Generator Input
- Split & Three Phase
- RSD & AFCI
- Smart App & Web Management
- Floor & Wall Mounted

US-standard



24 kW
Max. PV Input

4/2
MPPTs / Input

20 kVA
Max. AC Input

Stacked Design
for Easy Installation

10~40 kWh
Flexible Expansion

Up to **6**
in Parallel

Quiet
As Low As 29 dB

NEMA 4X



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System Specification

Model	SUN10000S-U/A	SUN12000S-U/A	SUN15000S-U/A
Rated AC Output Power (W)	10000	12000	15000
Nominal Energy (kWh)		5 to 40	
Noise (dB)		≤29	
Operating Temperature Range	-20~55°C (-4 ~ 131°F), >45°C(113°F) derating		
Dimensions (WxDxH, mm)	33.3 x 7.9 x (32.1+10.7*N) inch / [845 x 200 x (815+270*N) mm], N=2 to 8		
Ingress Rating	Inverter: NEMA 4X Battery: IP65		
Mounting Options	Indoor/Outdoor, Floor standing or Wall mounted (optional)		
Compliance & Certificates			
UL9540, UL9540A, UL1973, IEEE 1547, IEEE 1547.1, UL1741, UL1741 CRD, UL1741SB, UL1699B, UL1998, UL991, CSA C22.2, FCC Part 15B, ICES-003, UN38.3, CEC Listing			

Inverter Specification

Model	SUN10000S-U	SUN12000S-U	SUN15000S-U
Input - DC (PV)			
Max. Power (Wp)	14400	20000	24000
Max. DC Voltage (V)		550	
MPPT Voltage Range (V)		120~550	
MPPT Voltage Range (V, full load)	235~550	200~550	225~550
Start Voltage (V)		150	
Max. Input Current per MPPT (Imp, A)	15.5	27	27
Max. Short Circuit Current per MPPT (Isc, A)	20	40	40
Number of MPPT		4	
Number of PV String per MPPT	1	2	2

Input - DC (Battery)			
Compatible Battery	RBmax5.1H Series		
Voltage Range (V)	75-480		
Max. Charge / Discharge Power (W)	10000 / 10000	12000 / 12000	15000 / 15000
Max. Charge / Discharge Current (A)	75 / 75		

Input - AC (GEN)			
Max. AC Power (W)	19000		
Max. AC Current (A)	79.2		
Rated Voltage (V) / Frequency (Hz)	240, (L1/L2) / 60Hz		

AC (On grid)			
Rated Output Power @240V (W)	10000	12000	15000
Max. Output Apparent Power @240V (VA)	10000	12000	15000
Rated Output Current (A)	41.6	50	62.5
Rated Input Power @240V(W)	20000		
Rated Input Apparent Power @240V(VA)	20000		
Max. Input Current (A)	83.3		
Rated Grid Voltage (V)	120/240, (L1/L2/N)		
Rated Grid Frequency (Hz)	60		
THDI	<3%		
Power Factor	0.8 leading to 0.8 lagging		

Efficiency			
Max.Efficiency (PV to Grid)	98.0%		

AC (Back Up)			
Rated Output Power (W)	10000	12000	15000
Rated Output Current (A)	79.2		
Rated Output Voltage	120/240V, L1/L2/N		
Rated Frequency (Hz)	60		
Back-up Switch Time	<10ms		
THDV	<3%		
Overload Capacity	105%<Load≤115%, 10min. 115%<Load≤125%, 1min. 125%<Load, 0.3 Sec.		

Protections	
PV Switch / PV Rapid Shutdown / Arc Fault Circuit Interrupter (AFCI) / GFCI/Anti-islanding Protection /DC Reverse-polarity Protection / AC Over / Under Voltage Protection / AC Over Current Protection / AC Short Circuit ProtectionInsulation Resistor Detection	
DC/AC Surge Protection Device	TYPE 4

Environmental	
Operating Temperature	-30 ~ 60°C(-22 ~ 140°F), derating above 45°C(113°F)
Operating Humidity	0~95% RH
Storage Conditions	-30~60°C(-22 ~ 140°F), 0~95% non-condensing
Enclosure Type	NEMA Type 4X
Max Elevation	3000m (>2000m derating) / 9842ft (>6561ft derating)
Noise (dB)	≤29

General Data	
Mounting Option	Wall Mount, indoor or outdoor
Coupling	DC-Coupling & AC-Coupling
Topology	Transformerless
Cooling	Natural Convection
Display	LCD + APP (WiFi)
Communication Interface	RS485 / CAN / WiFi
Dimensions (WxDxH)	33.5 x 7.9 x 21.7 inch (850 x 200 x 550mm)
Weight	55kg (121.3 lbs)

Battery Module Specification

Model	2*RBmax5.1H	3*RBmax5.1H	4*RBmax5.1H	5*RBmax5.1H	6*RBmax5.1H	7*RBmax5.1H	8*RBmax5.1H
Electric Data							
Nominal Energy (kWh)	10.24	15.36	20.48	25.6	30.72	35.84	40.96
Usable Energy (kWh)	9.58	14.37	19.16	23.95	28.74	33.53	38.32
Nominal Voltage (V)	102.4	153.6	204.8	256	307.2	358.4	409.6
Operating Voltage Range (V)	89.6~113.6	134.4~170.4	179.2~227.2	224~284	268.8~340.8	313.6~397.6	358.4~454.4
Max. charge/discharge Current (A)	50 / 75						

General Data							
Battery Chemistry	LFP (LiFePO ₄)						
Weight (Kg)	233.7 lb (106 kg)	337.4 lb (153 kg)	441 lb (200 kg)	553.4 lb (251 kg)	657 lb (298 kg)	760.6 lb (345 kg)	864.3 lb (392 kg)
	Single tower			Double tower			
Dimensions (W×D×H) (mm)	33.3×7.9×31.7 in 845×200×805 mm	33.3×7.9×42.4 in 845×200×1075 mm	33.3×7.9×53 in 845×200×1345 mm	33.3×7.9×42.4, 33.3×7.9×27 in 845×200×1075, 845×200×685 mm	33.3×7.9×42.4, 33.3×7.9×37.6 in 845×200×1075, 845×200×955 mm	33.3×7.9×53, 33.3×7.9×37.6 in 845×200×1345, 845×200×955 mm	33.3×7.9×53, 33.3×7.9×53 in 845×1200×1345, 845×1200×1345 mm
Operating Temperature	Charge: 0 to 55°C (32 to 131°F), -20 to 55°C (-4 to 131°F)						
Storage temperature	≤1 month: -20 to 45°C (-4 to 113°F), >1 month: 0 to 35°C (32 to 95°F)						
Relative Humidity	5~95%						
Max. Altitude	4000m (>2000m derating) / 13123ft (>6561ft derating)						
Protection Degree	IP 65 (NEMA Type 4X)						
Installation Location	Indoor/Outdoor, Floor standing, Wall mounted						
Communication	CAN, RS485						