

Battery System 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
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
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
Cell Type	Lithium iron phosphate (LFP)							
Nominal Voltage (V)	51.2							
Operating Voltage Range (V)	44.8 ~ 56.8							

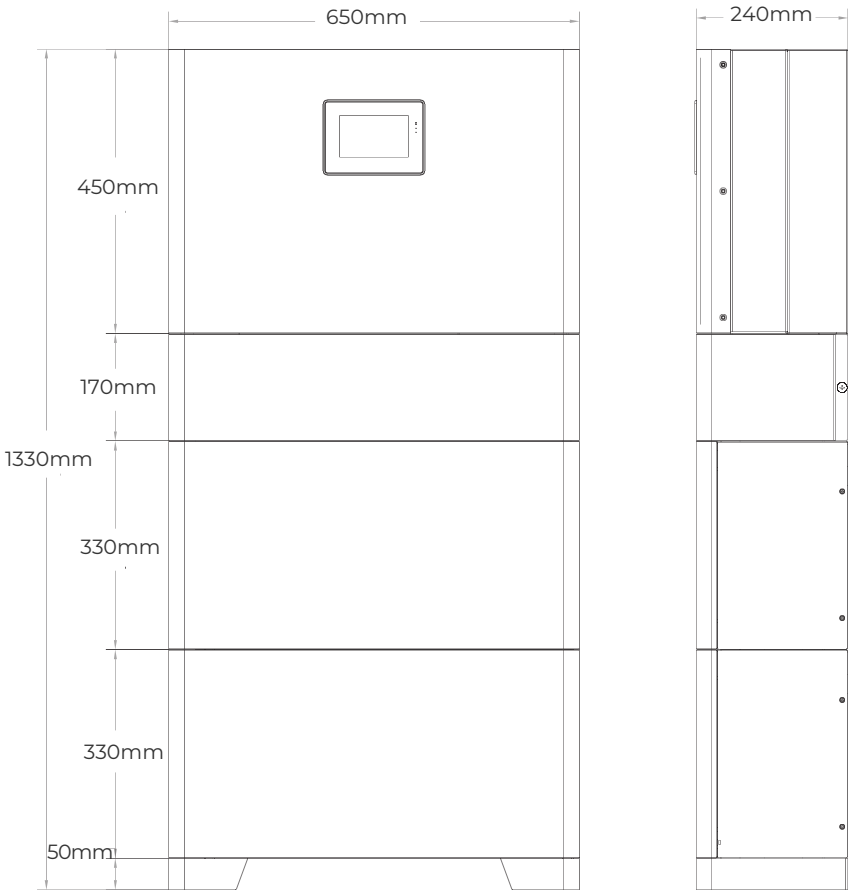
General Data

Weight (kg)	47.5 kg	92.1 kg	136.7 kg	181.3 kg	228.8 kg	273.4 kg	318 kg	362.6 kg
Dimensions (W×D×H, mm)	Single Tower				Double tower			
	650x240x460	650x240x790	650x240x1120	650x240x1450	650x240x790+ 650x240x1120	650x240x1120+ 650x240x1120	650x240x1120+ 650x240x1450	650x240x1450+ 650x240x1450
Operating Temperature (°C) ^[1]	Charge: 0 ~ 55°C, Discharge: -20 ~ 55°C							
Storage Temperature (°C)	≤1 month: -20 ~ 45°C, >1 month: 0 ~ 35°C							
Installation Location	Indoor/Outdoor, Floor Standing or Wall Mounted							
Communication	CAN, RS485							
Relative Humidity	0 ~ 95%							
Max. Altitude (m)	4000 m (>2,000 m derating)							
Ingress Rating	IP 65							
Certification	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.

[2] All pictures shown are for reference only and data are based on ROYPOW standard test procedures. Actual performance may vary according to local conditions. Only authorized personnel are allowed to operate or make adjustments to the batteries. We reserve the right to make revisions as well as product alterations and improvements at any time without prior notice.

Product Diagram



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🌐 www.roypow.com



3.6 ~ 5kW / 5 ~ 40kWh

PowerHome

Intelligent Residential Energy Storage System

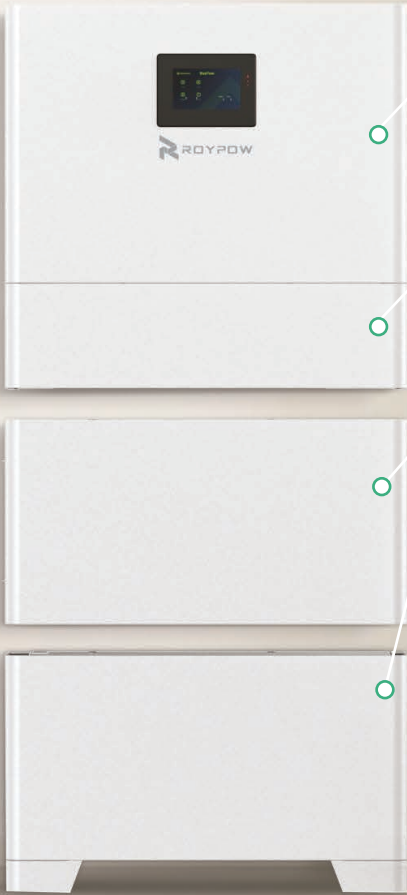
2
MPPTs

35
dB
Max. Noise

10
Years
Warranty

7
kVA
Max. AC Input

7
kW
Max. PV Input



Euro-standard



IP65 Protection



Integrated
Multiple Protections



Natural Cooling



Smart Load
Function



Modular &
Integrated Design



Smart App &
Web Management

PowerHome System

Model	SUN3600S-E/I	SUN4600S-E/I	SUN5000S-E/I
PV terminal parameters			
Max. Input Power (W)	4600	6000	7000
Max. Input Voltage (Vdc)		580	
MPPT Voltage Range (Vdc)		120~550	
MPPT Voltage Range (Full Load)	180~550V	200~550V	200~550V
Start Voltage (Vdc)		150	
Max. Input Current (Adc)		13.5 / 13.5	
Max. Short Current (Adc)		16 / 16	
No. of MPPT		2	
No. of String per MPPT		1	

Battery input/output parameters

Battery Type	Lithium-ion		
Maximum Voltage (Vdc)	60		
Norminal Voltage (Vdc)	48		
Operation Voltage Range (Vdc)	40-60		
Max. Charge / Discharge Power (W)	3600 / 3600	4600 / 4600	5000/5000
Max. Charge / Discharge Current (Adc)	75/75	95.8 / 95.8	100/100
Battery Charge Method	Self-Adaption to BMS		

Grid terminal input parameters

Max. Continuous Input Active Power(W)	7000	7000	7000
Max. Input Apparent Power (VA)	7000	7000	7000
Max. Input Current (Aac)	30		
Max. Continuous Input Current from Grid to Battery (Aac)	16	20.9	22
Max. Continuous Input Power from Grid to Battery (W)	3600	4600	5000

Grid terminal output parameters

Rated Grid Voltage (Vac)	230 Vac / L+N+PE		
Rated Grid Frequency (Hz)	50		
Rated Apparent Power (VA)	3600	4600	5000
Rated Output Power (W)	3600	4600	5000
Rated Output Current (Aac)	15.7	20	21.7
Max. Output Apparent Power (VA)	3600	4600	5000
Max. Output Active Power [W]	3600	4600	5000
Max. Output Current (Aac)	15.7	20	21.7
Adjustable Power Factor	0.8 leading to 0.8 lagging		
THDI (Rated Power)	<3%		

Backup terminal parameters

Rated Output Power (W)	3600	4600	5000
Rated Apparent Power (VA)	3600	4600	5000
Rated Output Current (Aac)	15.7	20	21.7
Rated Output Voltage (Vac)	230		
Rated Frequency (Hz)	50		

Model	SUN3600S-E/I	SUN4600S-E/I	SUN5000S-E/I
Backup terminal parameters			
Maximum Continuous Output Current (Aac)	15.7	20	21.7
Maximum Output Active Power (W)	3600	4600	5000
Maximum Output Apparent Power (VA)	3600	4600	5000

Backup terminal parameters

THDV (@Linear Load)	< 3%		
Back-up Switch Time	< 20ms (Typical 10ms)		
Overload Capacity	105%< Load≤125%, 10min. 125%< Load≤150%, 1min. 150%<Load Rate, 10S		

Efficiency

Max. Efficiency (BAT to AC)	93.8%
Max. Efficiency (PV to BAT)	94.5%
Max. Efficiency (PV to AC)	97.0%
Euro. Efficiency	96.2%
Max. MPPT Efficiency	99.9%

Protection

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

General Data

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

Standard Compliance

Safety / EMC	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 61000-6-1, IEC/EN 61000-6-3
Grid Connection Standard	NRS 097, EN 50549, G98, G99, AS 4777.2

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