



SUNOVA Residential ESS

All In One Energy Storage System



CATL LFP Battery, stable and safe
Module, pack, system, triple protection
IP65, outdoor installation, away from living room



Modular design, single person can carry and install it. Plug and play, 30 min quick installation
Space saving; 0.15 sq. m foot print



Global cloud platform & Mobile APP anytime and any where
Open API, support power internet applications



Battery Model

Physical

Battery type	LFP (LiFePO4)
System Weight	54KG
Dimension (W x D x H)	540*490*240
IP Protection	IP65
Warranty	5 Year Product Warranty, 10 Year Performance Warranty

Electrical

Energy Capacity	5.12kwh
Usable Capacity	4.6kwh
Depth of Discharge (DoD)	90%
Nominal Voltage	51.2V
DC Circuit Breaker	125A
Operating Voltage Range	44.8-56.5V
Internal Resistance	<20mΩ
Cycle Life	10000cycle

Sunova-PACK5.1

Operation

Max. Charge/Discharge Current	50A/80A
Rated DC power	4096W
Max. Charge/Discharge Power	2825W/4096W
Operating Temperature Range	0 to 50°C charging -10 to 50°C discharging
Humidity	0~95% (No condensation)

BMS

Modules Connection	Max. 4
Capacity	100-400Ah
Power Consumption	<2W
Communication	CAN & RS485
Monitoring Parameters	System voltage, current, cell voltage, cell temperature, PCBA temperature measurement

Certificate

Safety(Cell)	Pack: IEC/EN 62619;UN38.3 Cell: IEC/EN 62619;UN38.3;UL1973
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*Maximum 4 battery pack in parallel.

Hybrid Inverter Model**SUNOVA-S 3680D****SUNOVA-S 5000D****PV String Input**

Max. DC Voltage	580V	580V
Nominal Voltage	400V	400V
MPPT Voltage Range	80V-560V	80V-560V
Start Voltage	130V	130V
Number of MPPT Tracker	2	2
Strings Per MPPT Tracker	1	1
Max. Input Current Per MPPT	15A	15A
Max. Short-circuit Current Per MPPT	18A	18A

AC Output (Grid)

Nominal AC Output Power	3680W	5000W
Max. AC Apparent Power	7360VA (from grid)	7360VA (from grid)
Max. AC Output Power	3680W	5000W ¹
Nominal AC Voltage	230Vac	230Vac
AC Grid Frequency Range	50 / 60Hz±5Hz	50 / 60Hz±5Hz
Max. Output Current	16A	22A ²
Max. Input Current	32A	32A
Power Factor (cosΦ)	0.8leading-0.8lagging	0.8leading-0.8lagging
THDi	<3%	<3%

Battery Input

Battery Type	LFP (LiFePO4)	LFP (LiFePO4)
Nominal Battery Voltage	48V	48V
Charging Voltage Range	40-60V	40-60V
Max. Charging Current	50A	100A
Max. Discharging Current	80A	100A
Battery Capacity	100-400Ah	100-400Ah
Charging Strategy for Li-ion Battery	Depend on the BMS	Depend on the BMS

AC Output (Backup)

Max. Output Apparent Power	4000VA	5000VA
Peak Output Apparent Power	6900VA 10sec	6900VA 10sec
Max. Output Current	16A	20A
Nominal Output Voltage	230V	230V
Nominal Output Frequency	50/60Hz	50/60Hz
Output THDv (@Linear Load)	<3% (Linear Load)	<3% (Linear Load)

Efficiency

Max. PV Efficiency	97.6%	97.6%
Euro. PV Efficiency	97.0%	97.0%

Protection

DC Switch	Bipolar DC Switch (125A/Pole)	Bipolar DC Switch (125A/Pole)
Anti-islanding Protection	Yes	Yes
Output Over Current	Yes	Yes
DC Reverse Polarity Protection	Yes	Yes
String Fault Detection	Yes	Yes
AC/DC Surge Protection	DC Type II;AC Type III	DC Type II;AC Type III
Insulation Detection	Yes	Yes
AC Short Circuit Protection	Yes	Yes

General Specifications

Dimensions W x H x D	540*590*240mm
Weight	32kg
Operating Temperature Range	-25°C~+60°C
Noise (dB)	<25
Cooling Type	Natural Convection
Max. Operation Altitude	2000m
Operation Humidity	0~95% (No Condensation)
IP Class	IP65
Topology	Battery Isolation
Communication	RS485/CAN2.0/WIFI/4G
Display	LCD/APP

Certification & Standard IEC/EN 62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC 60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21;G98;G99;C10/C11

¹1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa. ²2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.



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