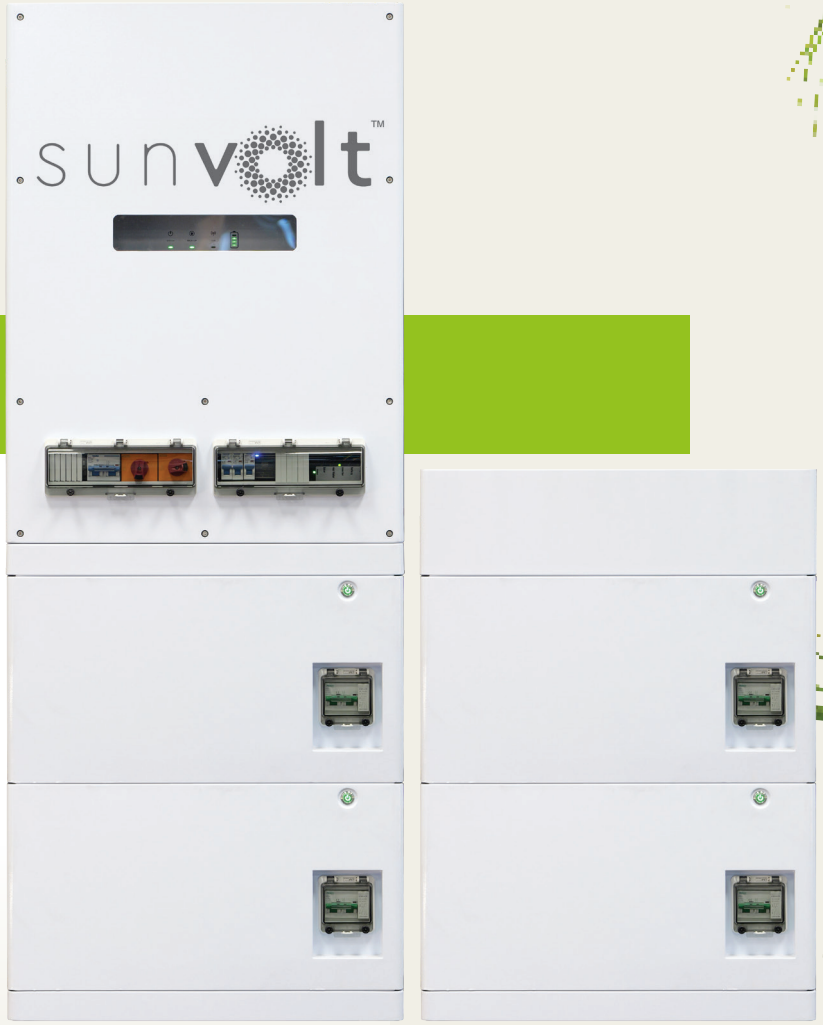
sunvolt

ENERGY STORAGE SOLUTION

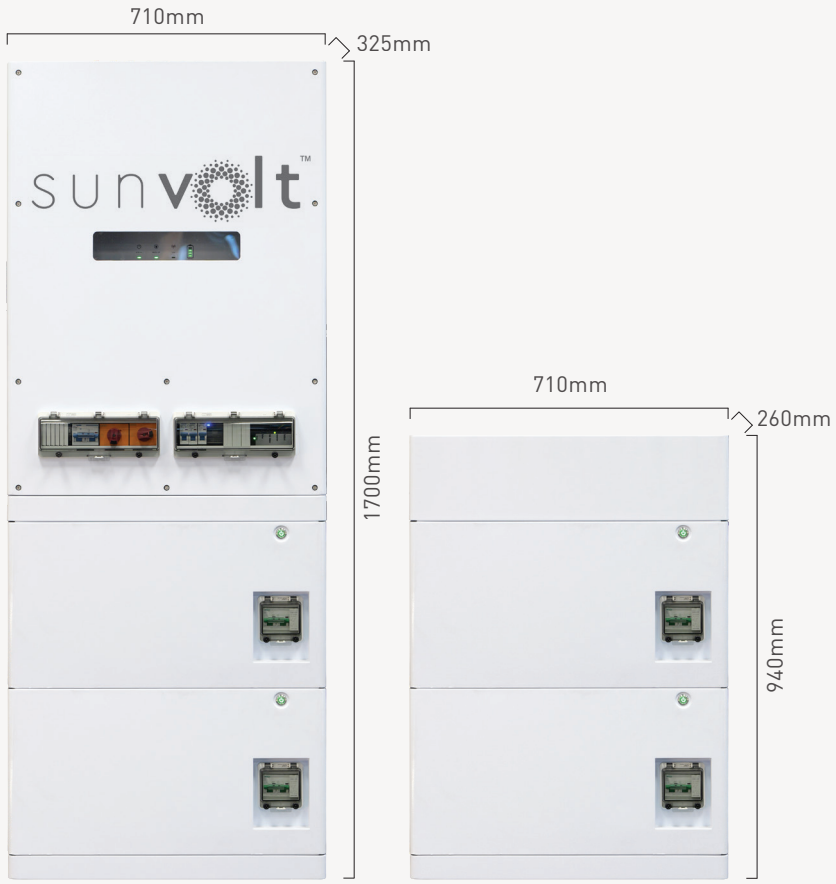
Energy Solutions by Panasonic

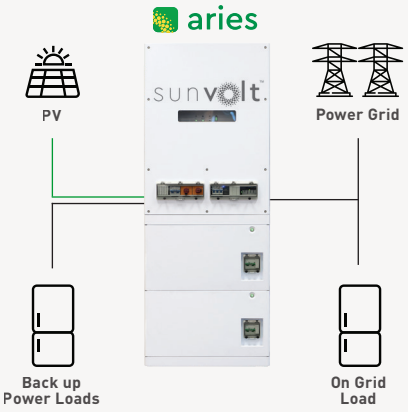


SUNVOLT ENERGY STORAGE SYSTEM

- Outdoor Installation
- Backup Power
- Integrated Isolators
- Pre-wired
- Mobile App

HOW IT WORKS





TECHNICAL SPECIFICATIONS

SUNVOLT LV ESS Parameters	SV-LV ESS G3 5.4-1（5.37kWh）	SV-LV ESS G3 10.8-1 （10.74kWh）	SV-LV ESS G3 16.2-1 （16.11kWh）	SV-LV ESS G3 21.6-1（21.48kWh）
PV String Input Data				
Max. Input Power (W)*1	7500			
Max. Input Voltage (V)	600			
MPPT Operating Voltage Range(V)	60~550			
MPPT Voltage Range at Nominal Power (V)	200~500			
Start-up Voltage (V)	58			
Nominal Input Voltage (V)	360			
Max. Input Current per MPPT (A)	16			
Max. Short Circuit Current per MPPT (A)	23			
Max. Backfeed Current to The Array (A)	0			
Number of MPP Trackers	2			
Number of Strings per MPPT	1			
Battery Input Data				
Battery Parameters	1×Battery System	2×Battery System	3×Battery System	4×Battery System
Rated Energy (kWh)	5.37	10.74	16.11	21.48
Usable Energy (kWh)*2	4.83	9.66	14.49	19.32
Cell Type	LFP（LiFePO4）			
Cell Configuration	16S1P	16S2P	16S3P	16S4P
Rated Voltage (V)	51.2			
Operating Voltage Range (V)	47.5~57.6			
Nominal Dis-/Charge Current (A)	50A	50A	50A	50A
Max. Dis-/Charge Current (A)*3	50A（100A@15min）	100A	100A	100A
Max. Discharge Power(kW) *3	5.3	5.3	5.3	5.3
Communication	CAN&RS485			
Battery Weight (kg)	53（1 pack）	106（2 packs）	159（3 packs）	212（4 packs）
Battery Dimensions (W×H×D) (mm)	650×390×260	650×390×260 ×2(Non-stack size)	650×390×260 ×3(Non-stack size)	650×390×260×4(Non-stack size)
Operating Temperature( )	Charge: 0~+50; Discharge: -10~+50			
Storage temperature ( )	-20~+40 (≤One Month) ; 0~+35 (≤One Year)			
Relative Humidity	0~95%			
Max. Operating Altitude (m)	2000			
Protection Degree	IP55（Outdoor / Indoor，Battery stack）			
Standard and Certification	Safety，EMC，UN38.3			

AC Output Data (On-grid)				
Nominal Apparent Power Output to Utility Grid (VA)	5,000			
Max. Apparent Power Output to Utility Grid (VA)	5,000			
Nominal Apparent Power from Utility Grid (VA)	5000			
Nominal Output Voltage (V)	220/230/240			
Output Voltage Range (V)	170~280			
Nominal AC Grid Frequency (Hz)	50/60			
AC Grid Frequency Range (Hz)	45~55 / 55~65			
Max. AC Current Output to Utility Grid (A)	22.7			
Max. AC Current From Utility Grid (A)	43.5			
Nominal AC Current From Utility Grid (A)	21.7			
Max. Output Fault Current (Peak and Duration) (A)	96A@3μs			
Inrush Current (Peak and Duration) (A)	96A@3μs			
Nominal Output Current (A)	21.7			
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)			
Max. Total Harmonic Distortion	<3%			
Maximum Output Overcurrent Protection (A)	80			
Type of Voltage (a.c. or d.c.)	a.c.			
AC Output Data (Back-up)				
Back-up Nominal Apparent Power (VA)	5000			
Nominal Output Current (A)	21.7			
Max. Output Current (A)	22.7			
Max. Output Fault Current (Peak and Duration) (A)	96A@3μs			
Inrush Current (Peak and Duration) (A)	96A@3μs			
Maximum Output Overcurrent Protection (A)	80			
Nominal Output Voltage (V)	220/230/240			
Nominal Output Frequency (Hz)	50/60			
Output THDv (@Linear Load)	<3%			
Efficiency				
Max. Efficiency	97.60%			
European Efficiency	96.70%			
CEC Efficiency	96.90%			
Max. Battery to AC Efficiency	95.50%			
MPPT Efficiency	99.90%			
Protection				
PV String Current Monitoring	Integrated			
PV Insulation Resistance Detection	Integrated			
Residual Current Monitoring	Integrated			
PV Reverse Polarity Protection	Integrated			
Anti-islanding Protection	Integrated			
AC Overcurrent Protection	Integrated			
AC Short Circuit Protection	Integrated			
AC Overvoltage Protection	Integrated			
DC Switch	Integrated			
DC Surge Protection	Type II			
AC Surge Protection	Type III			
AFCI	Optional			
Remote Shutdown	Integrated			
General Data				
Operating Temperature Range ( )*[4]	-25~50			
Relative Humidity	0~95%			
Max. Operating Altitude(m)	2000			
Cooling Method	Natural Convection			
User Interface	LED,WLAN+APP			
Communication with BMS	CAN			
Communication with Meter	RS485			
Communication with Portal	WiFi / WiFi+LAN / 4G			
Weight (kg)	115.5	168.5	Left: 168.5 Right:68	Left:168.5 Right: 121
Dimension (W×H×D mm)	710×1360×325	710×1700×325	Left: 710×1700×325 Right: 710×600×260	Left: 710×1700×325 Right: 710×940×260
Topology	Non-isolated			
Ingress Protection Rating	Decorated Enclosure: IP43, Electrical Enclosure:IP65,Battery Enclosure:IP55			

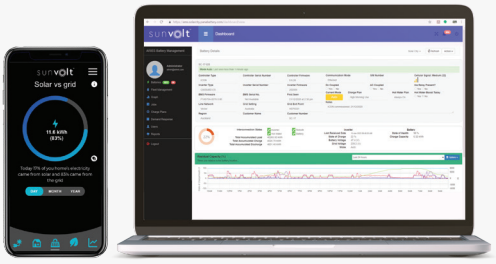
Environmental Category	4K4H
Pollution Degree	III
Overvoltage Category	DC II / AC III
Protective Class	I
Storage Temperature (℃)	Battery： -20~+40(≤One Month) ; 0~+35(≤One Year) Inverter： -40~+85
The Decisive Voltage Class(DVC)	Battery: A PV: C AC: C Com: A
Installation Location	Wall Mounted & Grounded
Type of Electrical Supply System	single phase
Active Anti-islanding Method*5	AFDPF + AQDPF *5
Country of Manufacture	China

*1 The max power is the actual power of PV.
2 Usable Energy (kWh) : Test conditions, 90% DOD, 0.5C charge & discharge at +25±2 °C for battery system at beginning life. System Usable Energy may vary with different Inverter.
3 Max. Continuous Discharge Current/Power* ： Max. Continuous Charge/Discharge and power derating will occur related to Temperature and SOC.
4 Operating Temperature Range (℃): When the temperature is lower than 0 ° C, the battery will stop charging. When the temperature is lower than -10 ° C, the battery will stop discharging. The PV and AC are running properly.
*5 AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

MONITORING

Sunvolt ARIES is a web based application designed for customers to control and monitor Energy Storage Systems. They can view system information over the course of a day, week, month or year, without interfering with how the system is being operated.

- Early Intelligent Device Failure Detection for Zero Downtime
- Data Analytics for Performance Improvement and Diagnosis
- Easy Management with Real Time Alerts and Reports



WARRANTY

10 Year Warranty. Terms & Conditions apply.

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