

Vertical Residential All-in-One ESS (LV)

Features & Advantages

- **All-in-One Design**

- AIO modular system that includes inverter, charger controller, UPS-level switching system and battery modules

- **Easy Installation & Capacity Expansion**

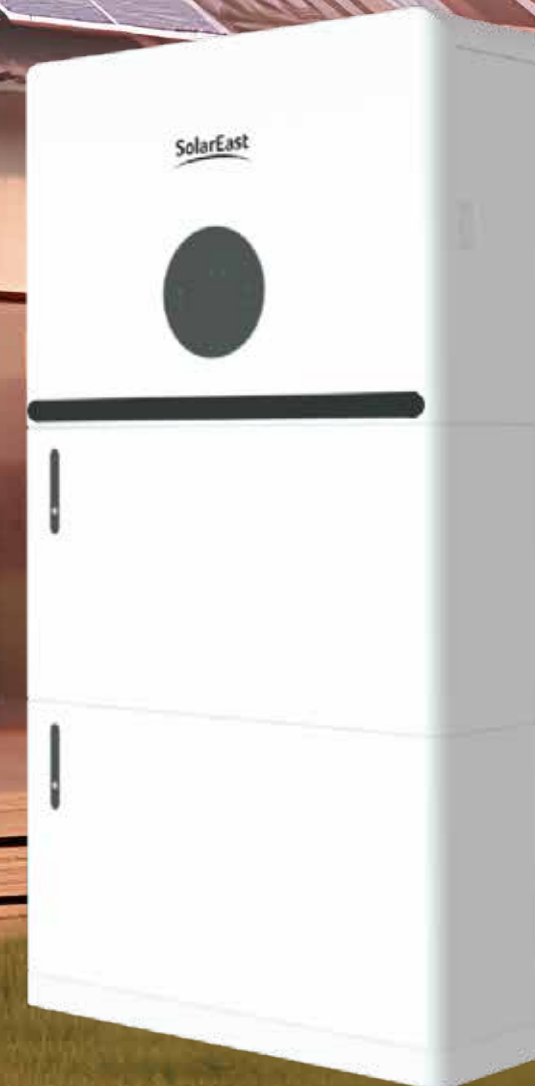
- Plug & Play modular design
- Save 50% installation time
- Save 50% installation space
- Scalable up to 30.72kWh

- **High Safety**

- IP65 outdoor design
- 3-level (cell-pack-system) protection
- AFCI standard
- Overload capacity 150% for 10mins

- **Easy Management**

- Dynamic SOC calibration
- RSD Ready & VPP Ready
- Support remote monitoring through mobile phone APP & global Cloud platform available



Technical Specifications

	Ares 3KAL	Ares 3.6KAL	Ares 4KAL	Ares 4.6KAL	Ares 5KAL	Ares 5.5KAL	Ares 6KAL
PV Input							
Max. Input Power	4.5 kW	5.4 kW	6.0 kW	6.9 kW	7.5 kW	8.3 kW	9.0 kW
Max. PV Voltage				550 V			
MPPT Range				80-500 V			
Full MPPT Range	90 - 500 V	110 - 500 V	120 - 500 V	130 - 500 V	150 - 500 V	160 - 500 V	170 - 500 V
Normal Voltage				360 V			
Startup Voltage				100 V			
Max. Input Current				18.5 x 2 A			
Max. Short Current				26 x 2 A			
No. of MPP Tracker / No. of PV String				2/2			
Battery Port							
Max. Charge/Discharge Power	3.0 kW	3.6 kW	4.0 kW	4.6 kW	5.0 kW	5.5 kW	6.0 kW
Max. Charge/Discharge Current	80 A			120 A			
Battery Normal Voltage				51.2 V			
Battery Voltage Range				40 - 60 V			
Battery Type	Li-ion / Lead-acid etc.						
AC Grid							
Max Continuous Current	14.0 A	17.0 A	19.0 A	22.0 A	23.0A	26.0 A	28.0 A
Max Continuous Power	3.0 kVA	3.6 kVA	4.0 kVA	4.6 kVA	5.0 kVA	5.5 kVA	6.0 kVA
Nominal Grid Current	13.7 / 13.1 A	16.4 / 15.7 A	18.2 / 17.4 A	21.0 / 20.0 A	22.8 / 21.8 A	25.0 / 24.0 A	27.3 / 26.1 A
Nominal Grid Voltage	198 to 242 @ 220 / 207 to 253 @ 230 V						
Nominal Grid Frequency	50 / 60 Hz						
Power Factor	0.999 (Adjustable from 0.8 overexcited to 0.8 underexcited)						
Current THD	< 3 %						
AC Load Output(Back-up)							
Max Continuous Current	14.0 A	17.0 A	19.0 A	22.0 A	23.0 A	26.0 A	28.0 A
Max Continuous Power	3.0 kVA	3.6 kVA	4.0kVA	4.6 kVA	5.0 kVA	5.5 kVA	6.0 kVA
Max Peak Current (10min)	20.5 / 19.6A	24.6 / 23.5A	27.3 / 26.1A	31.4 / 30A	34.1 / 32.7A	37.8 / 36.1A	41.0 / 39.2A
Max Peak Power (10min)	4.5 kVA	5.4 kVA	6.0 kVA	6.9 kVA	7.5 kVA	8.3 kVA	9.0 kVA
Nominal AC Voltage L-N	220 / 230 V						
Nominal AC Frequency	50 / 60 Hz						
Switching Time	< 10 ms						
Voltage THD	< 3 c						
Efficiency							
CEC Efficiency	97.0 %			98.1 %			
Max. Efficiency	97.6 %			98.1 %			
PV to Bat. Efficiency	98.1 %			98.1 %			
Bat. between AC Efficiency	96.8 %			96.8 %			
Protection							
PV Reverse Polarity Protection				Yes			
Over Current/Voltage Protection				Yes			
Anti-Islanding Protection				Yes			
AC Short Circuit Protection				Yes			
Residual Current Detection				Yes			
Ground Fault Monitoring				Yes			
Insulation Resister Detection				Yes			
PV Arc Detection				Yes			
Enclosure Protect Level				IP65 / NEMA4X			

	Ares 3KAL	Ares 3.6KAL	Ares 4KAL	Ares 4.6KAL	Ares 5KAL	Ares 5.5KAL	Ares 6KAL
General Data							
Dimensions (W*H*D)				600 x 430 x 210 mm			
Weight				25 kg			
Topology				Transformerless			
Cooling				Intelligent Fan			
Relatively Humidity				0-100 %			
Operating Temperature Range				-25 to 60 °C			
Operating Altitude				≤ 2000 ^o m			
Noise Emission				< 25 dB			
Standby Consumption				< 10 W			
Mounting				Wall Bracket			
Communication with RSD				SUNSPEC			
Display & Communication Interfaces				LCD, LED, RS485, CAN, Wi-Fi, GPRS, 4G			
Certification & Approvals	NRS097, G98/G99, EN50549-1, C10/C11, AS4777.2, VDE-AR-N4105, VDE0126, IEC62109-1, IEC62109-2						
EMC	EN61000-6-2, EN61000-6-3						

	Battery Cell Technology						PowerCool-LFP-VLV					
Number of Pack	1pcs		2pcs		3pcs		4pcs		5pcs		6pcs	
Total Energy*	5.12 kWh		10.24 kWh		15.36 kWh		20.48 kWh		25.6 kWh		30.72 kWh	
Usable Energy*	4.86 kWh		9.72 kWh		14.59 kWh		19.45 kWh		24.32 kWh		29.18 kWh	
Voltage Range							44.8 ~ 57.6 Vd.c					
Nominal Voltage							51.2 V					
Max. Charge Voltage							57.6 V					
Max. Continuous Charging Current	50 A		100 A		150 A		160 A		160 A		160 A	
Max. Continuous Discharge Current	50 A		100 A		150 A		160 A		160 A		160 A	
DOD							95 %					
Communication							CAN					
Dimension(L*W*H)	(600±2) * (215±2) * (360±3) mm		(600±2) * (215±2) * (680±5) mm		(600±2) * (215±2) * (1000±7) mm		(600±2) * (215±2) * (1320±9) mm		(600±2) * (215±2) * (1640±9) mm		(600±2) * (215±2) * (1960±9) mm	
Net Weight	(50±2) kg		(97±4) kg		(144±6) kg		(191±6) kg		(238±6) kg		(285±6) kg	
Operating Condition							Indoor or outdoor					
Operating Temperature	Charging						0~55 °C					
	Discharging						0~55 °C					
Humidity							15% ~ 85% (No Condensation)					
Cooling Type							Natural					
IP Rating							IP66					
Installation Method							Stacked installation					
Warranty							10 years (5 free warranty + 5 paid warranty)					
Configuration							IEC62619,IEC63056,IEC61000-6-1,IEC61000-6-3,IEC62477-1,IEC60730,IEC62040,UN38.3,MSDS					

Testing conditions based on temperature 25°C at the beginning of life.

*Total Energy/Usable Energy measured under specific conditions from PowerCool-LFP 0.2C CC-CV