SolisStorage

FlexCore-OD

48-253kWh Outdoor Stackable Energy Storage System (ESS)

Simple Installation, **Flexible** Expansion
Scalable Energy Storage Solutions

- Uses A+ grade cells, ≥8,000+ cycle life ①
- Six-level safety configuration (smoke detector + aerosol module + pressure relief valve + distributed temperature sampling + ceramic insulation pad between battery cells + automotive-grade CR foam insulation layer around)
- Modular design, single module 12kWh, maximum single cluster 253kWh, supports up to 6 clusters in parallel, 1518kWh
- The high-voltage control box is designed with dual DC output ports, allowing multiple clusters to be connected in parallel without the need for a combiner box
- Vertical stacking structure, plug and play (A single Pack weighs only 100 kg)
- Intelligent BMS with real-time cell monitoring and fault state recovery
- Top brand fans, 10 years of maintenance-free operations, and the maximum noise of the fan is ≤55dB
- Independent maintenance window for Pack, no need to disassemble the entire machine for operation and maintenance of key components
- IP66+C5-M+Battery heating function
- Integrated four-in-one power electronics (PV+PCS+STS+EMS)
- Smart port enables multiple energy source inputs, including grid-tied inverters, diesel generators, and AC wind inverters.
- Supports 200% PV oversizing, maximizing solar energy utilization
- Supports a max. 21A string input current, perfectly matching high-power PV modules
- Supports seamless on-grid and off-grid switching with transfer times <10ms
- Supports 160% overload for 200ms in off-grid mode
- Unified monitoring platform with OTA capability
- 7 inch LCD display+Bluetooth commissioning, quick commissioning, automatic battery recognition
- Third-party VPP/EMS manufacturers on-boarded or being on-boarded, >100
- Solis AI cloud smart management

FlexCore-OD 253kWh ESS

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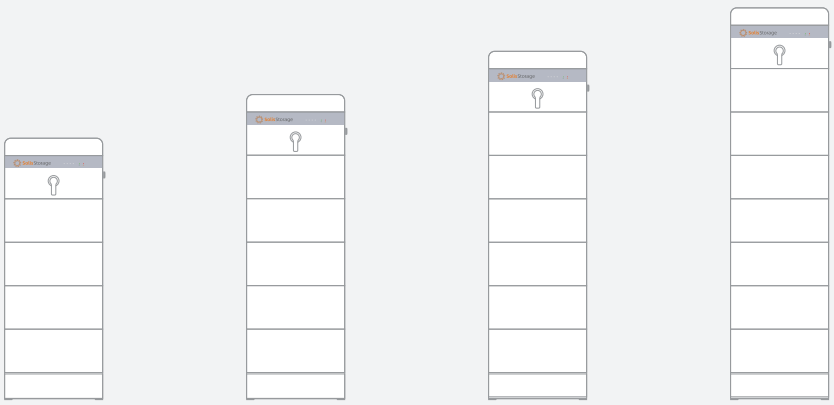
Hybrid Inverter	S6-EH3P29.9K-H-AU(21A)	S6-EH3P30K-H-AU(21A)	S6-EH3P40K-H-AU(21A)	S6-EH3P50K-H-AU(21A)	S6-EH3P60K-H-AU(21A)	S6-EH3P80K10-NV-YD-H-AU	S6-EH3P100K10-NV-YD-H-AU	S6-EH3P125K10-NV-YD-H-AU
Input DC (PV side)								
Recommended max. PV array size	59.8 kW	60 kW	80 kW	100 kW	100 kW	160 kW	200 kW	250 kW
Max. usable PV input power	59.8 kW	60 kW	80 kW	100 kW	100 kW	160 kW	200 kW	250 kW
Max. input voltage	1000 V							
Rated voltage	600 V							
Start-up voltage	180 V							
MPPT voltage range	150 - 850 V					150 - 950 V		
Max. input current	3 × 42 A		4 × 42 A			10 × 42 A		
Max. current per DC input	42 A							
Max. short circuit current	3 × 45 A		4 × 45 A			10 × 45 A		
MPPT number / Max. input strings number	3 / 6		4 / 8			10 / 20		
Max. inverter backfeed current to the array	0 A							
Battery								
Battery type	Li-ion							
Battery voltage range	150 - 800 V					300 - 950 V		
Max. charge / discharge current	80 A × 2 / 80 A × 2				84 A × 2 / 84 A × 2	100 A × 2 / 100 A × 2		
Number of battery port / Number of BMS port	2							
Max. charge / discharge current of each port	80 A				84 A	100 A		
Communication	CAN / RS485							
Output AC (Grid side)								
Rated output power	29.9 kW	30 kW	40 kW	50 kW	60 kW	80 kW	100 kW	125 kW
Max. apparent output power	29.9 kVA	30 kVA	40 kVA	50 kVA	60 kVA	80 kVA	100 kVA	125 kVA
Rated grid voltage	3/N/PE, 230 V / 400 V					3/N/PE, 220 V / 380 V, 230 V / 400 V		
Rated grid frequency	50 Hz							
Rated grid output current	43.2 A	43.3 A	57.7 A	72.2 A	86.6 A	115.5 A	144.3 A	180.4 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)							
THDi	< 3%							
Inrush current	228 A @10 us					500 A @ 10 us		
Max. output fault current	150 A					320 A		
Max. output overcurrent protection	43.2 A	43.3 A	57.7 A	72.2 A	86.6 A	115.5 A	144.3 A	180.4 A
Input AC (Grid side)								
Max. input power	59.8 kW	60 kW	60 kW	100 kW	105 kW	160 kW	173.2 kW	173.2 kW
Input voltage range	320 - 460 V					320 - 460 V		
Max. input current	86.4 A	86.6 A	115.4 A	144.4 A	152 A	250 A		
Output AC (Back-up)								
Rated output power	29.9 kW	30 kW	40 kW	50 kW	60 kW	80 kW	100 kW	125 kW
Max. apparent output power	29.9-60K: 1.6 times of rated power, 2 s; 1.5 times of rated power, 10 s 80-100K: 1.6 times of rated power, 10 s; 2 times of rated power, 200 ms 125K: 1.4 times of rated power, 10 s; 1.6 times of rated power, 200 ms							
Back-up switch time	< 10 ms							
Rated output voltage	3/N/PE, 230 V / 400 V					3/N/PE, 220 V / 380 V, 230 V / 400 V		
Rated frequency	50 Hz							
Rated output current	43.2 A	43.3 A	57.7 A	72.2 A	86.6 A	115.5 A	144.3 A	180.4 A
Max. AC passthrough current	43.2 A	43.3 A	57.7 A	72.2 A	86.6 A	115.5 A	144.3 A	180.4 A
THDv (@linear load)	< 2%					< 3%		
Inrush current	228 A @10 us					500 A @ 10 us		
Max. output fault current	150 A					320 A		
Max. output overcurrent protection	43.2 A	43.3 A	57.7 A	72.2 A	86.6 A	115.5 A	144.3 A	180.4 A
Input AC (Generator side)								
Max. input power	29.9 kW	30 kW	40 kW	50 kW	60 kW	80 kW	100 kW	125 kW
Rated input current	43.2 A	43.3 A	57.7 A	72.2 A	86.6 A	115.5 A	144.3 A	180.4 A
Rated input voltage	3/N/PE, 230 V / 400 V					3/N/PE, 220 V / 380 V, 230 V / 400 V		
Rated input frequency	50 Hz							
Efficiency								
Max. efficiency	97.7%					97.6%		
EU efficiency	97.3%					97.2%		
BAT charged by PV/AC max. efficiency	98.5% / 97.8%					98.2% /97.0%		
Battery discharged efficiency	97.5%					97.0%		
General Data								
Max. power per phase (grid & back-up)	33% rated power							
Dimensions (W × H × D)	530 × 880 × 290 mm					1174 × 814 × 400 mm		
Weight	76 kg					170 kg		
Inverter topology	Transformerless							
Self-consumption	< 35 W					< 45 W		
Operating temperature range	-25 ~ +60°C							
Relative humidity	0 - 100%							
Ingress protection	IP66							
Cooling concept	Intelligent redundant fan-cooling							
Max. operation altitude	4000 m					3000 m		
Grid connection standard	AS/NZS 4777.2:2020+A1+A2					AS/NZS 4777.2:2020		
Safety / EMC standard	IEC 62109-1/-2, IEC 61000-6-2/-4							

Battery	FlexCore-OD-(48-253)kWh			
Battery Pack				
Battery pack model	FlexCore-OD-BAT12kWh			
Battery type	$LiFePO_4$			
Cell capacity	314 Ah			
Cycle life ①	≥ 8000			
Depth of discharge	Max. 100% DOD			
Configuration	1P12S			
Rated voltage	38.4 V			
Recommended charge & discharge current	157 A			
Nominal energy	12.06 kWh			
Fire suppression mode	Temperature sensor, Smoke detector, Pack level aerosol, Explosion released valve, Heat insulation pad between cells, Foam insulation layer around the Pack			
Dimensions (W × H × D)	648 × 287 × 415 mm			
Weight	100 kg			
Control Box				
Control box model	FlexCore-OD-CB250A			
Max. current	250 A			
Dimensions (W × H × D)	648 × 287 × 415 mm			
Weight	48 kg			
Communication	CAN / LAN / 4G / WIFI			
Cluster				
Cluster model	FlexCore-OD-(48-253)kWh			
Number of packs in series	4~21			
Nominal energy per cluster	48~253 kWh			
Scalability	Up to 6 units in parallel			
Recommended charge & discharge current	157 A			
Recommended charge & discharge power rate	0.5P			
Operating ambient temperature range	Discharge: -20~55°C, Charge: -20~55°C (Smart heating function)			
Storage temperature range	-10~45°C			
Relative humidity range	0~100 %			
Communication	CAN / LAN / 4G / WIFI			
Max. operating altitude	4000 m			
Ingress protection	IP66			
Cooling	Smart fan-cooling			
Anti-corrosion class	C5			
Installation method	Outdoor stackable			
Noise level	< 65 dB			
Certificates	IEC/EN 62619, IEC 63056, IEC/EN 62477, EN 61000, IEC62040, UN38.3			
				
Number of packs per stand	4	5	6	7
Nominal energy	48.24 kWh	60.3 kWh	72.36 kWh	84.42 kWh
Dimensions (W × H × D)	648 × 1730 × 415 mm	648 × 2017 × 415 mm	648 × 2304 × 415 mm	648 × 2591 × 415 mm
Weight	468 kg	568 kg	668 kg	768 kg

① This is provided by the battery cell manufacturer. Defined with standard test condition: the battery is within 70%SOH, charge and discharge at a constant current (0.2C) and an ambient temperature at 25°C±2°C.