ST455kWh-110kW-4h-AU

PowerStack Liquid Cooled C&I Energy Storage System

NEW

LOWER COST

- Fully integrated system design with pre-installation and pre-commissioning, to reduce commissioning work on site
- Innovative AI bionic thermal balance, 33 % reduction in all-day system heat loss
- Balanced heat dissipation by liquid cooling, the cell temperature difference ≤ 2.5 ℃

SAFE AND RELIABLE

- AI monitoring of cell health with early warning, to manage thermal runaway
- PACK, RACK, PCS three-level overcurrent protection
- Three-level fire safety design and accurate early warning of thermal runaway, to prevent fire event

EFFICIENT AND FLEXIBLE

- High-efficiency PCS with max.efficiency 98.5 %
- Seamless side by side parallel connection

SMART AND ROBUST

- iSolarCloud App or Web cloud monitoring, to provide real-time alarm and troubleshooting solution
- Near-distal intelligent wireless operation and one-key remote upgrade, to reduce labour O&M cost

SUNGROW
Clean power for all

Product name	ST455kWh-110kW-4h-AU
DC side	
Cell type	LFP 3.2 V / 280 Ah
System battery configuration	256S2P
Nominal capacity	458 kWh
Nominal voltage range	691.2 V ~ 934.4 V
AC side (on-grid)	
Nominal power	110 kW
Nominal voltage	400 V
Voltage range	340 V ~ 440 V
Nominal frequency	50 Hz
Frequency range	45 Hz ~ 55 Hz
Max.THD of current	< 3 % (Nominal power)
DC component	< 0.5 % (Nominal power)
Power factor range	1.0 leading ~ 1.0 lagging
AC side (off-grid) *	
Nominal voltage	400 V
Nominal frequency	50 Hz
Max.THD of voltage	< 3 % (Linear load)
Unbalance load capacity	100 %
System parameter	
Dimension (W * H * D)	2152 mm * 2470 mm * 1610 mm
Weight	5300 kg
Degree of protection	IP55
Auxiliary power supply	Internal power supply (Default) External power supply (Optional)
Anti-corrosion degree	C5
Operation humidity range	0 % ~ 100 %
Operation temperature range	-30 ℃ ~ 50 ℃ (> 45 ℃ derating)
Max. operating altitude	3000 m
Temperature control method	Intelligent liquid cooling
Noise	≤ 70 dB @ 1 m
Fire suppression system	Default : Flammable gas detector, Smoke detector, Heat detector, Alarm sounder, Aerosol Optional : Ventilation system, Sprinkler
Communication interface	Ethernet
Communication protocol	Modbus TCP
Standard	IEC 62619, IEC 63056, IEC 62040, IEC 62477, IEC 61000, UN 38.3, AS/NZS 4777.2, AS/NZS 3000
Max.Parallel quantity (off-grid)	10
Transformer cabinet parameter *	
Transformer capacity	250 kVA
Primary side voltage / Secondary side voltage	400 V / 400 V (Dyn11)
Nominal frequency	50 Hz
Dimensions (W*H*D)	1200 mm * 2000 mm * 1200 mm
Weight	1500 kg
Degree of protection	IP55
Anti-corrosion degree	C5
Operation humidity range	0 % ~ 100 %
Operation temperature range	-30 ℃ ~ 50 ℃ (> 45 ℃ derating)
Max. operating altitude	3000 m
Temperature control method	Air cooling
Energy management system	
EMS	EMS300CP
Functions	FCAS, Peak shaving, Emergency backup, Peak-valley arbitrage, Demand control, Zero-export, Integrated control of PV, ESS and diesel generator, etc.

* A transformer cabinet is needed additionally when the system is in off-grid mode.