

ST050-250CF

PowerKeeper Modular C&I Energy Storage System



Flexible & Scalable

- 50kWh stack-based module, up to 5 stacks expandable to 250kWh
- Optional long-duration combiner box supports 2-4 clusters, expandable to 1000kWh & 9h
- Standardized design simplifies warehousing and distribution



Fast Deployment

- Pre-built design with simplified wiring reduces installation time
- Suitable for both new and retrofit projects, with rapid site deployment
- Supports mixed new & aged modules with active balancing



Safety & Reliable

- Pack-level thermal runaway protection, smoke detection and explosion relief valve
- IP66 & C5 protection, enhanced flood resistance, withstanding 50 cm submersion for 24 hours
- Seamless off-grid transfer $\leq 10\text{ms}$ ensures load continuity



Smart O&M

- User-friendly monitoring via logger with cloud-based energy optimization
- OTA upgrades and predictive diagnostics reduce maintenance costs
- Smooth integration with legacy EMS and existing meter



Product Name		ST050-250CF			
Battery Stack		ST050CF			
Cell type	LFP 3.2 V				
Nominal capacity	49.9 kWh				
Usable battery capacity	49.9 kWh				
Depth of discharge (DOD)	0 % - 100 %				
Nominal voltage range	129.6 V - 175.2 V				
Nominal DC Voltage	153.6 V				
Nominal charge / discharge current	162.5 A (0.5P)				
Max charge / discharge current	192 A				
Weight (per stack)	≤430 kg				
Dimensions (W * H * D)	860 mm * 1500 mm * 410 mm				
System Specifications					
Auxiliary power supply	Internal power supply				
Installation method	Floor-standing				
Noise level	≤ 60 dB (A) @ 1m, 25 °C				
Operation temperature range	Charge: 0 °C - 55 °C / -20 °C - 55 °C (optional) Discharge: -20 °C - 55 °C				
Storage temperature range	-30 °C - 55 °C				
Operation humidity range	0% ~ 100% RH, non-condensing				
Max. operation altitude	3000 m				
Degree of protection	IP66				
Anti-corrosion degree	C5				
Temperature control method	Forced air cooling				
Warranty ⁽¹⁾	10 Years				
Compliance & Safety					
Standard compliance	IEC62619, IEC63056, UN38.3; IEC62477-1, IEC62040, IEC61000-6-1/6-3; IEC62933-5-2, UL9540A				
Fire suppression system	Aerosol, smoke sensor and explosion relief valve				
EMC class	Class B				
Standard system configurations					
Type designation	ST050CF	ST100CF	ST150CF	ST200CF	ST250CF
Nominal battery capacity ⁽²⁾	49.9 kWh	99.8 kWh	149.8 kWh	199.7 kWh	249.6 kWh
Usable battery capacity	49.9 kWh	99.8 kWh	149.8 kWh	199.7 kWh	249.6 kWh
Rated DC Power	25.0 kW	49.9 kW	74.9 kW	99.8 kW	124.8 kW
Nominal voltage range	129.6 V - 175.2 V	259.2 V - 350.4 V	388.8 V - 525.6 V	518.4 V - 700.8 V	648 V - 876 V
Nominal Voltage	153.6 V	307.2 V	460.8 V	614.4 V	768 V
Nominal charge / discharge current	162.5 A	162.5 A	162.5 A	162.5 A	162.5 A
Max charge / discharge current	192 A	192 A	192 A	192 A	192 A
Country of manufacture	China				

1. Refer to battery warranty letter for conditional application

2. The optional long-duration combiner box supports 2-4 clusters in parallel, expandable up to 1000kWh & 9h

