

ST050-250CF

PowerKeeper Modular C&I Energy Storage System



Flexible & Scalable

- 50kWh stack-based module, expandable up to 5 stacks (250 kWh total)
- Optional long-duration battery junction boxes enable flexible expansion up to 1000 kWh & 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 ⁽¹⁾	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				
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, 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 ⁽²⁾	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	49.9 kWh	99.8 kWh	149.8 kWh	199.7 kWh	249.6 kWh
Usable battery capacity ⁽¹⁾	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				
Battery Junction Box		SJC160-02			
Configurations (for single inverter)	Single box supports 2 strings in parallel up to 2 * 250 kWh, two boxes support 3 strings in parallel up to 3 * 250 kWh, three boxes support 4 strings in parallel up to 4 * 250 kWh				
Max. DC voltage	1000 Vdc				
Rated DC current	162.5 A per input, 200 A output				
Safety & protection	Fuse protection + DC isolation switch				
Degree of protection	IP66, C5				
Dimensions (W*H*D)	350 mm * 411 mm * 185 mm				
Weight & installation	≤ 12 kg, Wall-mounted				

1. Usable capacity measured at 25°C under 0.25C constant current charge/discharge conditions

2. Refer to battery warranty letter for conditional application

