SUNGROW
Clean power for all

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 ≤ 10ms ensures load continuity

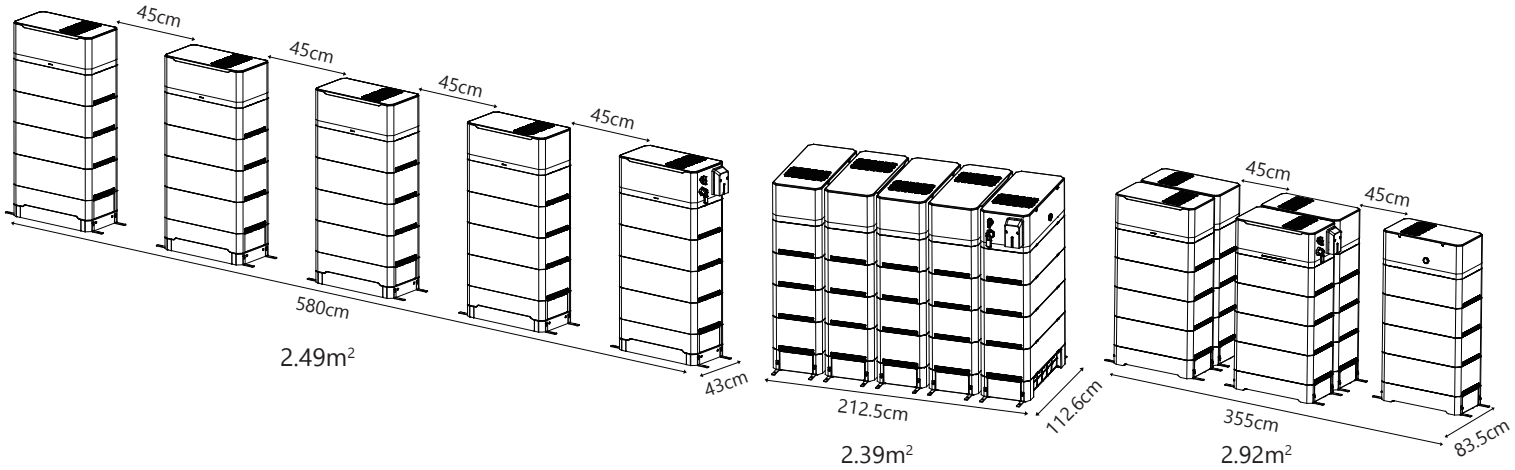
Smart O&M

- 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)	800 mm * 1350 mm * 405 mm				
System Specifications					
Auxiliary power supply	Internal power supply				
Installation method	Floor-standing				
Noise level	≤ 60 dB(A) @ 1m, 25℃				
Operation temperature range	Charge: 0 ℃ - 55 ℃, discharge: -20 ℃ - 55 ℃				
Storage temperature range	-30 ℃ - 55 ℃				
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*250kWh, two boxes support 3 strings in parallel up to 3*250kWh, three boxes support 4 strings in parallel up to 4*250kWh				
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)	410 mm * 310 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



© 2026 Sungrow Power Supply Co., Ltd. All rights reserved. Subject to change without notice. Version 7 APAC