

SH125CX

Multi-MPPT Commercial & Industrial Hybrid Inverter



SUPERIOR YIELD

- Up to 200 % PV oversizing
- 20 A per string with 182 / 210 mm high-power modules
- PID Zero[®] anti-PID technology



ROBUST PERFORMANCE

- 150 % off-grid overload (10 s)
- Up to 200 A charge / discharge current
- Built-in ≤ 10 ms UPS level on / off-grid switching



FLEXIBLE APPLICATION

- Smart trading ready for intelligent TOU, dynamic pricing, and VPP participation
- DC coupled solution for new installation and retrofit upgrades
- 100 % three-phase unbalance output



ACTIVE SAFETY

- AFCI 3.0+ , intelligent DC arc interrupter, with a detection range of 600m
- Intelligent string-level protection switch & PV-to-Ground fault protection
- IP66, C5, and self-cleaning air ducts function



Type designation	SH125CX
Input (DC)	
Max. PV input power	250 kWp
Max. PV input voltage ¹⁾	1100 V
Min. PV input voltage / Startup input voltage	180 V / 200 V
Rated PV input voltage	600 V
MPPT voltage range ²⁾	180 V - 1000 V
No. of independent MPP inputs	10
No. of PV strings per MPPT	2
Max. PV input current	40 A * 10
Max. DC short-circuit current	50 A * 10
Max. current for DC connector	30 A
Battery input data	
Battery type	Lithium-ion battery
Battery Voltage Range ³⁾	129 V - 880 V
Communication	CAN
Max. charge / discharge current ⁴⁾	200 A / 200 A
Max. charge / discharge power	125 kW / 125 kW
Input and output (AC)	
Max. AC power from grid ⁵⁾	160 kVA @ 230 V
Rated AC output power	125 kW
Max. AC output apparent power	125 kVA
Max. AC output current	189.9 A
Rated AC output current	180.4 A
Rated AC voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V
AC voltage range	270 V - 480 V
Rated grid frequency	50 Hz / 60 Hz
Grid frequency range	45 Hz - 55 Hz / 55 Hz - 65 Hz
Harmonic (THD)	< 3 % (at 400 V AC voltage and rated power)
Power factor at rated power / Adjustable power factor	> 0.99 / 0.8 leading - 0.8 lagging
Feed-in phases / AC connection	3 / 3 - N - PE
Backup data	
Rated voltage	3 / N / PE, 220 V / 380 V, 230 V / 400 V
Rated frequency	50 Hz / 60 Hz
THDv (@ Linear load)	< 2 % (at rated power)
Backup switch time	≤ 10 ms
Rated output power	125 kW
Peak load power	1.5 times of rated power, 10 s
Efficiency	
Max. efficiency / European efficiency	98.6 % / 98.3 %
Protection & function	
Grid monitoring	Yes
DC reverse polarity protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
DC switch	Yes
Ground fault monitoring	Yes
PV string current monitoring	Yes
Arc fault circuit interrupter (AFCI)	Yes
Surge protection	DC Type I+II / AC Type II
PID zero	Yes
Battery input reverse polarity protection	Yes
General data	
Topology	Transformerless
Degree of protection	IP66
Dimensions (W * H * D)	1095 mm * 795 mm * 360 mm
Weight	≤ 128 kg
Mounting method	Wall-mounting bracket
Operating ambient temperature range	-30 °C to 60 °C
Allowable relative humidity range (non-condensing)	0 - 100 %
Corrosion	C5
Cooling method	Smart forced air cooling
Max. operating altitude	3000 m
Noise (Typical)	≤ 65 dB (A)
Grid compliance	IEC 62109-1/-2, IEC 62477-1, IEC 62920, EN 55011, IEC 63027, VDE-AR-N 4105, VDE-AR-N 4110, NRS 097-2-1, UNE 207002, UNE 207001, NTS 2.1, CEI 0-16, CEI 0-21, EN 50549, EN 50530, IEC 61683, IEC 62116, IEC 61727, IEC 60068, IEC 61000-6-3, IEC 63027
Interface	
Display	LED, Bluetooth + APP
Communication with battery	CAN
Communication with Logger	RS485
Communication between Logger and iSolarCloud	4G (optional) / WLAN / Ethernet
DI / DO	DI * 2 / DO * 3
DC connection type	MC4 (Max. 6 mm ²)
AC connection type ⁶⁾	OT / DT terminal (Max. 300 mm ²)

¹⁾ Input voltage exceeding the MPPT operating voltage range triggers inverter protection

²⁾ Please refer to the user manual for the full load MPPT voltage range

³⁾ Minimum battery voltage for black-start : 270 V

⁴⁾ Depending on the connected battery

⁵⁾ Max. AC power from grid would be 125 kVA for SH125CX if inverter works without backup loads

⁶⁾ Please refer to the user manual for detail information

ST050-250CF

PowerKeeper Modular C&I Energy Storage System



Flexible & Scalable

- 12.5 kWh pack-based design supports flexible configuration up to 250 kWh per system
- Optional long-duration battery junction boxes enable flexible expansion up to 1000 kWh & 8h
- 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

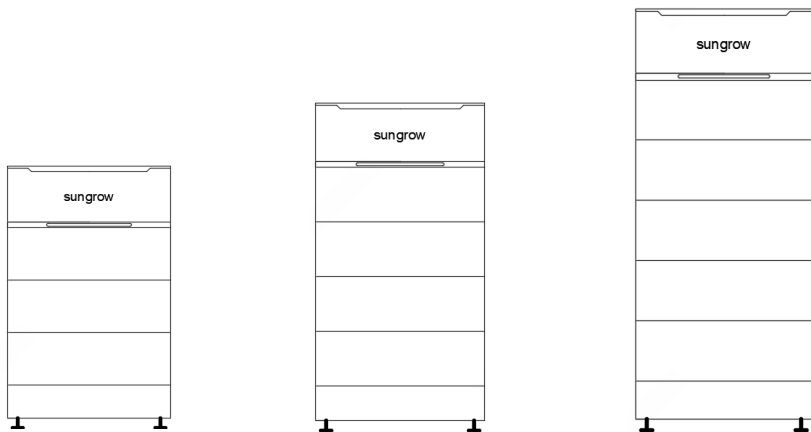
- Pack-level thermal runaway protection, smoke detection and explosion relief valve
- IP66 & C5 protection, enhanced flood resistance, withstanding 50 cm submersion for 24 hours
- Seamless off-grid transfer $\leq 10\text{ms}$ ensures load continuity



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 pack		STC12.5	
Cell type	LFP 3.2 V		
Nominal capacity	12.48 kWh		
Depth of discharge (DOD)	0 % - 100 %		
Nominal voltage range	32.4 V ~ 43.8 V		
Nominal charge / discharge current	162.5 A		
Weight (per pack)	≤ 90 kg		
Dimensions (W * H * D)	800 mm * 270 mm * 405 mm		
System Specifications			
Auxiliary power supply	Internal power supply		
Installation method	Floor-standing		
Noise level	≤ 60 dB (A) @ 1 m, 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, C5		
Temperature control method	Forced air cooling		
Compliance & Safety			
Standard compliance	IEC / EN 62619, IEC / EN 63056, UN 38.3; IEC / EN62477-1, IEC / EN 62040, IEC / EN 61000-6-1 / 6-3; VDE 2510-50; IEC / EN 62933-5-2, UL 9540A		
Fire suppression system	Aerosol, smoke sensor and explosion relief valve		
EMC class	Class B		
Base configuration options			
			
Number of packs	x 3 (*1)	x 4	x 5
Stack capacity	37.4 kWh	49.9 kWh	62.4 kWh
Stack weight	340 kg	430 kg	520 kg
Stack demension (W * H * D)	800 mm * 1297 mm * 405 mm	800 mm * 1567 mm * 405 mm	800 mm * 1837 mm * 405 mm
Typical system configurations			
ST050CF 49.9 kWh		*1	
ST062CF 62.4 kWh			*1
ST075CF 74.9 kWh	*2		
ST100CF 99.8 kWh		*2	
ST150CF 149.8 kWh		*3	
ST200CF 199.7 kWh		*4	
ST250CF 249.6 kWh			*4
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. A single 3-pack stack cannot operate independently, the minimum system capacity is 49.9 kWh

2. "Pre-built stack (50kWh)" consists of four pre-built battery packs for integrated delivery and installation, see user manual for details

3. The usable capacity equals the nominal capacity, under 25°C and 0.25C constant current charge/discharge conditions

