SUNGROW
Clean power for all

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

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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 ℃ to 60 ℃
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 mm²)
AC connection type [6]	OT / DT terminal (Max. 300 mm²)

[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

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