

SG510HX

Preliminary



LOW LCOE

- 1000Vac, The power transmission of the cable has been increased by 25%
- Q at night function, save investment
- MPLC communication



GRID-FORMING

- Millisecond-level inertia and reactive power response, active support for frequency and voltage
- Voltage source MPPT tracking ensures reliable power generation even in extremely weak power grids



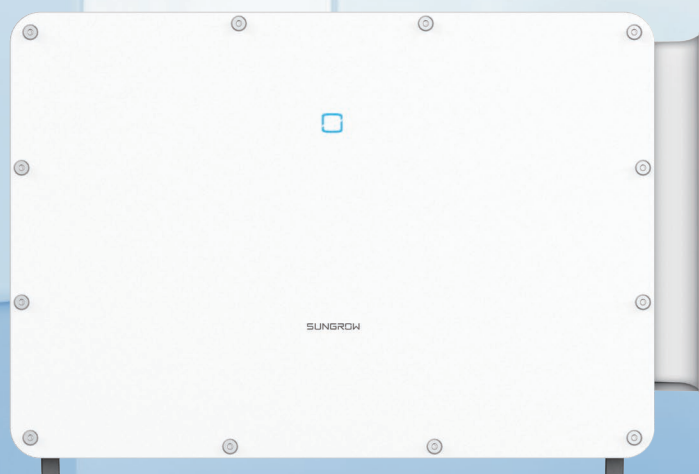
SAFE AND RELIABLE

- Mechanical switch + electronic switch, redundant protection
- DC/AC terminal over-temperature protection
- 24h real-time AC and DC insulation monitoring



SMART O&M

- MPPT level ISO detection, reducing troubleshooting time
- Smart IV Curve diagnosis, active O&M
- Intelligent Detection and Self-Cleaning of Air Ventilation System Health Degree

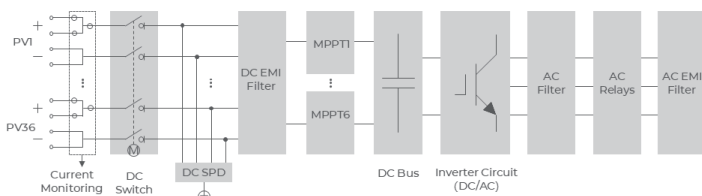


Type designation	SG510HX
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	500 V / 550 V
Nominal PV input voltage	1200 V
MPP voltage range	500 V – 1500 V
No. of Independent MPP inputs	6
Max. number of input connector per MPPT	6
Max. PV input current	6 * 105 A
Max. DC short-circuit current per MPPT	6 * 155 A
Output (AC)	
AC output power	511.5 kVA @ 30 °C / 465 kVA @ 40 °C / 420 kVA @ 50 °C / 413kVA @ 51°C
Max. AC output current	295.3 A
Nominal AC voltage	3 / PE, 1000 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 Hz – 55 Hz, 60 Hz / 55 Hz – 65 Hz
THD *	< 1 % (Rated Condition)
Ajustable power factor	0.8 leading – 0.8 lagging
Efficiency	
Max. efficiency / European efficiency	99.04 % / 98.8 %
Protection	
DC intelligent circuit breaker	Yes
DC reverse connection protection	Yes
DC insulation resistance detection	Yes
AC Overcurrent protection	Yes
Leakage current protection	Yes
Surge protection	DC Type II / AC Type II
DC/AC terminal over-temperature protection	Yes
Communication	
Display	LED Indicators , + APP
MPLC	Yes
RS485	Yes
USB	Yes
General data	
Dimensions (W * H * D)	1190 mm * 797 mm * 406 mm
Weight	≤ 130 kg
Isolation method	Transformerless
Degree of protection	IP66
Operating ambient temperature range **	- 30 °C to 60 °C
Allowable relative humidity range	0 % – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m
DC connection type	MC4
AC connection type	Support OT/DT terminal (Three core cable:Max. 400 mm ² /Single core cable:Max. 500 mm ²)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, EN 50549-2, UNE 217002, NTS, UTE C15-712-1:2013 , Rpps 3.1

* Rated Condition:PV input voltage 1200V, AC voltage 1000V, AC output power 465kW

** The ambient temperature is determined as the average temperature obtained from at least four evenly distributed temperature monitoring points located at a distance of 1 meter from the equipment, at a height halfway up the machine. The temperature sensors must be shielded from airflow, thermal radiation, and rapid temperature fluctuations to prevent display inaccuracies

CIRCUIT DIAGRAM



EFFICIENCY CURVE

