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SG 500LV



Grid-friendly

- Full grid support, including LVRT, ZVRT, FRT, and power curtailment
- Overload capability, maintaining real power output while satisfying power factor requirement
- Adjustable active power (0 -100%)
- Auto adjust reactive power according to the grid voltage
- Auto adjust active power according to the grid frequency
- Reactive power control with power factor adjustment from 0.8 overexcited to 0.8 underexcited
- Nighttime reactive power compensation capability
- Intelligent control, compliance with multiple regional utility standards



Efficient

- Max. efficiency at 98.5%
- Efficient MPPT control design for higher yield
- Efficient control algorithm, low consumption on switch device
- Temperature controlled air-cooling, energy saving



Adaptable

- -25°C ~ +55°C continuously operating at rated power
- NEMA 3R(IP54) for easy outdoor installation
- Continuously and stably working in high altitude environment
- Auxiliary heater (opt.)



Qualified

- CSA, UL1741, IEEE1547, C22.2 107.1-01 certified, compliance with BDEW

Input (DC)

Max. PV input power	566kW
Max. PV input voltage	600V
Start voltage	340V
Min. operation voltage	320V
Max. PV input current	1600A
MPP voltage range	320~600V
No. of DC inputs	1,6-12
PV array configuration	Negative ground (standard), floating or positive ground (optional)

Protection

Input side disconnection device	DC load switch
Output side disconnection device	Breaker
DC overvoltage protection	Yes
AC overvoltage protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Optional
Over temperature protection	Yes
Insulation monitoring	Optional

Output (AC)

Nominal AC output power	500kW
Max. AC output apparent power	550kVA
Max. AC output current	1443 A
THD	< 3% (nominal power)
Nominal AC voltage	200Vac
AC voltage range	176~220Vac
Nominal grid frequency	60Hz
Grid frequency range	59.3~60.5Hz
Power factor	>0.99@default value at nominal power, adj. 0.8 overexcited)~0.8 underexcited
Isolated transformer	No
DC current injection	<0.5 % I _n

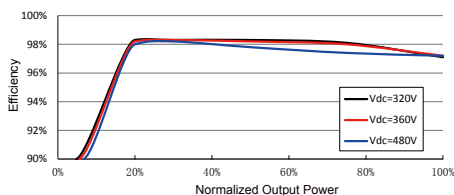
Efficiency

Max. efficiency	98.50%
European efficiency	98.00%
CEC efficiency	98.00%

General Data

Dimensions (W*H*D)	2598*2164*1000mm 102*85*39 inch
Weight	2400kg 5291 lbs
Operating ambient temperature range	-25~+60°C (> 55°C derating) -13~+140°F (> 131°F derating)
Noise emission	<70dB
Night power consumption	<100W
External auxiliary supply voltage	480/600V(3/N/PE)
Cooling method	Temperature controlled air-cooling
Ingress protection rating	NEMA 3R (IP54)
Allowable relative humidity range	0~95%, no condensing
Max. operating altitude	6000m (> 3000m derating)
Fresh air consumption	4425 m³/h
Display	LCD
Communication	RS485/Modbus, Ethernet (opt.)

Efficiency Curve



Circuit Diagram

