

# SG125HV

String Inverter for 1500 Vdc System



### High Yield

- Patented five-level topology, max. efficiency 98.9 %, CEC efficiency 98.5 %
- Full power operation without derating at 122 °F



### Easy O&M

- Virtual central solution, easy for O&M
- NEMA 4X protection



### Saved Investment

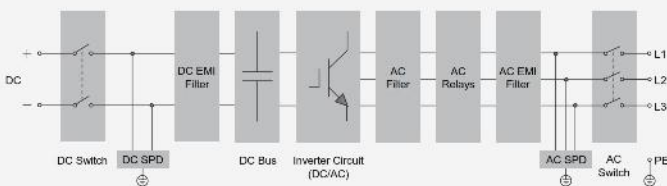
- DC 1500 V, AC 600 V, low system initial investment
- 1 to 5 MW power block design for lower AC transformer and labor cost
- Max. DC/AC ratio up to 1.5



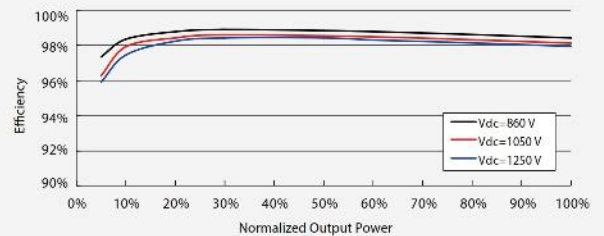
### Grid Support

- Complies with standards: UL1741, UL 1741 SA, CA Rule 21, IEEE 1547, IEEE 1547.1, CSA C22.2, No.107.1-01
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control

### Circuit Diagram



### Efficiency Curve



**Input (DC)**

	SG125HV
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	860 V / 920 V
Nominal input voltage	1050 V
MPP voltage range	860 – 1450 V
MPP voltage range for nominal power	860 – 1250 V
No. of independent MPP inputs	1
No. of DC inputs	1
Max. DC short-circuit current	240 A

**Output (AC)**

AC output power	125000 VA @ 50 °C (122 °F)
Max. AC output current	120 A
Nominal AC voltage	3 / PE, 600 V
AC voltage range	480 – 690 V
Nominal grid frequency / Grid frequency range	60 Hz / 55 – 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % I <sub>n</sub>
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3

**Efficiency**

Max. efficiency / CEC efficiency	98.9 % / 98.5 %
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**Protection**

DC reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
DC switch / AC switch	Yes / Yes
Overvoltage protection	DC Type II / AC Type II
Anti-PID function	Optional

**General Data**

Dimensions (W*H*D)	670*902*296 mm <b>(26.4"*35.5"*11.7")</b>
Weight	72 kg <b>(158.7 lbs)</b>
Isolation method	Transformerless
Degree of protection	NEMA 4X
Night power consumption	< 4 W
Operating ambient temperature range	-25 to 60 °C (> 50 °C derating) <b>(-13 to 140 °F (&gt; 122 °F derating))</b>
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating) <b>(13123 ft (&gt; 9843 ft derating))</b>
Display / Communication	LED, Bluetooth+APP / RS485
Third-Party communication protocol	SunSpec Modbus
DC connection type	OT or DT terminal (Max. 350 Kcmil )
AC connection type	OT or DT terminal (Max. 350 Kcmil )
Compliance	UL1741, UL 1741 SA, CA Rule 21, IEEE 1547, IEEE 1547.1, CSA C22.2 No.107.1-01 and FCC Part 15
Grid support	L/HVRT, L/HFRT, active & reactive power control and power ramp rate control, Volt-var, Frequency-watt
Type designation	SG125HV-10