

# SG125HV

String Inverter for 1500 Vdc System



### High Yield

- Patent five-level topology, max. efficiency 98.9 %, CEC efficiency 98.5 %
- Full power operation without derating at 50 °C



### Easy O&M

- Virtual central concept, easy for O&M work
- Compact design and light weight for easy installation



### Saved Investment

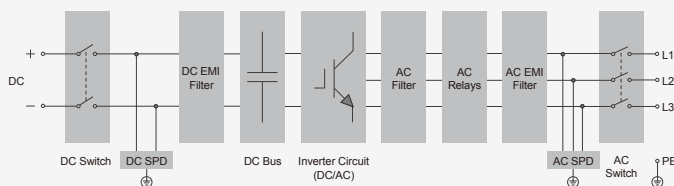
- DC 1500 V, AC 600 V, low system initial investment
- 1 to 5 MW power block design for lower AC transformer and labor cost
- Max. DC/AC ratio up to 1.5



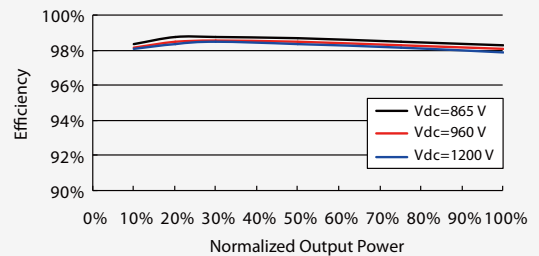
### Grid Support

- Compliance with standards: UL 1741, UL 1741 SA, IEEE 1547, IEEE 1547.1 and California Rule 21
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control

### Circuit Diagram



### CEC Efficiency Curve



**Input (DC)**
**SG125HV**

Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	860 V / 920 V
MPP voltage range	860 – 1450 V
MPP voltage range for nominal power	860 – 1250 V
No. of independent MPP inputs	1
Max. number of PV strings per MPPT	1
Max. PV input current	148 A
Max. DC short-circuit current	240 A

**Output (AC)**

Nominal AC power (at 50 °C)	125000 W
Max. AC output power at PF=1 (at 50 °C)	125000 W
Max. AC apparent power (at 50 °C)	125000 VA
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	50 Hz / 45 – 55 Hz, 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 to 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

**General Data**

Dimensions (W*H*D)	26.4**35.0**11.7" 670*890*296 mm
Weight	158.7 lb 72 kg
Isolation method	Transformerless
Degree of protection	NEMA 4X
Night power consumption	< 4 W
Operating ambient temperature range	-13 to 140 °F (> 122 °F derating) -25 to 60 °C (> 50 °C derating)
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	13123 ft (> 9843 ft derating) 4000 m (> 3000 m derating)
Display / Communication	LED / RS485, Bluetooth + APP
DC connection type	OT or DT terminal (Max. 350 Kcmil)
AC connection type	OT or DT terminal (Max. 350 Kcmil)
Compliance	UL 1741, UL 1741 SA, IEEE 1547, IEEE 1547.1, CSA C22.2 No.107.1-01 and California Rule 21
Grid support	LVRT, HVRT, active & reactive power control and power ramp rate control