

# SG125HV Preliminary

String Inverter for 1500 Vdc System



### High Yield

- Patent five-level topology, max. efficiency 98.9 %, European efficiency 98.7 %, 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

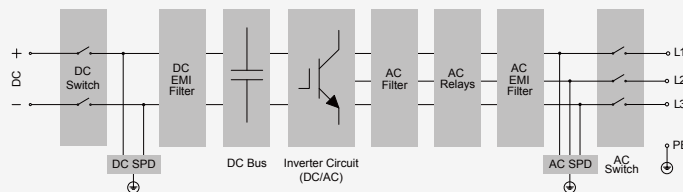
- DC 1500 V, AC 600 V, low system initial investment
- 2 to 5 MW power block design for lower AC transformer and labor cost
- Max. DC/AC ratio up to 1.5



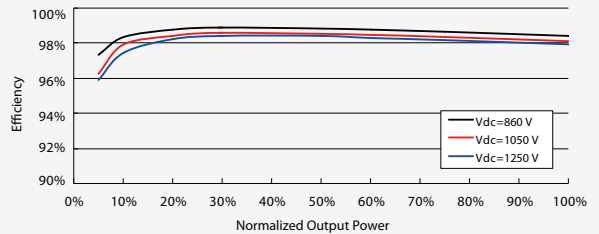
### Grid Support

- Compliance with standards: CE, 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



### 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
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 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 % In
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 / Euro. efficiency / CEC efficiency	98.9 % / 98.7 % / 98.5 %
---	--------------------------

**Protection**

DC reverse connection protection	Yes
AC short-circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
DC switch / AC switch	Yes / Yes
DC fuse	No
PV string current monitoring	No
Overvoltage protection	DC Type II / AC Type II

**General Data**

Dimensions (W*H*D)	670*890*296 mm <b>26.4**35.1**11.7"</b>
Weight	72 kg <b>158.7 lb</b>
Isolation method	Transformerless
Degree of protection	IP65
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
DC connection type	OT or DT terminal (Max. 185 mm <sup>2</sup> )
AC connection type	OT or DT terminal (Max. 185 mm <sup>2</sup> )
Compliance	CE, UL 1741, UL 1741 SA, IEEE 1547, IEEE 1547.1, CSA C22.2 107.1-01-2001 A Limits and California Rule 21
Grid support	LVRT, HVRT, active & reactive power control and power ramp rate control
Type designation	SG125HV-10

