

SG125HV

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 solution, easy for O&M
- Compact design and light weight for easy installation



Saved Investment

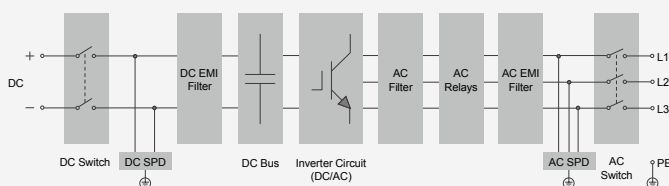
- DC 1500 V, AC 600 V, low system initial investment
- 1 to 5 MW power block design for lower MV transformer and labor cost
- Max. DC/AC ratio up to 1.5



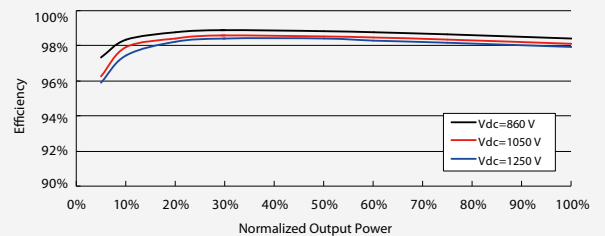
Grid Support

- Compliance with both IEC and UL safety, EMC and grid support regulations
- 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. PV input current | 148 A |
| Max. DC short-circuit current | 240 A |

Output (AC)

| | |
|---|--|
| AC output power | 125000 VA @ 50 °C |
| 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 _n |
| 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 |
| Overvoltage protection | DC Type II / AC Type II |

General Data

| | |
|--|--|
| Dimensions (W*H*D) | 670*902*296 mm 26.4"*35.5"*11.7" |
| Weight | 76 kg 167.6 lb |
| Isolation method | Transformerless |
| Degree of protection | NEMA 4X |
| Night power consumption | < 4 W |
| Operating ambient temperature range | -25 to 60 °C (> 50 °C derating) -13 to 140 °F (> 122 °F derating) |
| Allowable relative humidity range (non-condensing) | 0 – 100 % |
| Cooling method | Smart forced air cooling |
| Max. operating altitude | 4000 m (> 3000 m derating) 13123 ft (> 9843 ft derating) |
| Display / Communication | LED, Bluetooth+APP / RS485 |
| DC connection type | OT or DT terminal (Max. 350 Kcmil) |
| AC connection type | OT or DT terminal (Max. 350 Kcmil) |
| Compliance | CE, IEC 62109-1/-2, IEC 61000-6-2/-4, IEC 61727, IEC 62116, IEC 61000-3-11/-12, UL 1741, UL 1741 SA, IEEE 1547, IEEE 1547.1, CSA C22.2 107.1-01 and California Rule 21 |
| Grid support | LVRT, HVRT, active & reactive power control and power ramp rate control |
| Type designation | SG125HV-10 |

