

SG1250HV/SG1500HV

For 1500 Vdc System



High Yield

- Efficient three-level topology, max. efficiency up to 99 %
- Full power operation without derating at 55 °C



Easy O&M

- Integrated zone current monitoring function for fast trouble shooting
- Modular design easy for maintenance



Saved Investment

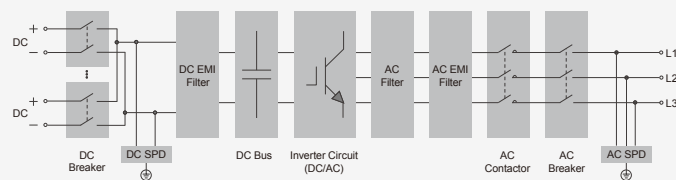
- DC 1500 V system, low system initial investment
- Max. DC/AC ratio up to 1.4



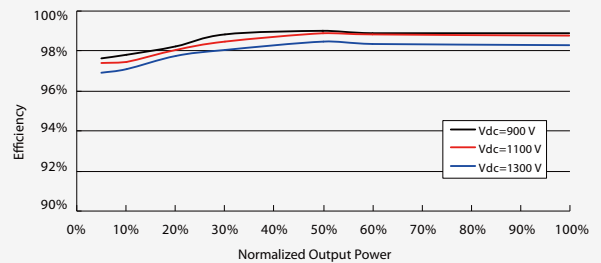
Grid Support

- Compliance with standards: CE, IEC 62109, IEC 61727, IEC 62116
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control

Circuit Diagram



Efficiency Curve



Input (DC)

| | SG1250HV | SG1500HV |
|---|---------------|---------------|
| Max. PV input voltage | 1500V | |
| Min. PV input voltage / Startup input voltage | 800 V / 840 V | 900 V / 940 V |
| MPP voltage range for nominal power | 800 – 1300 V | 900 – 1300 V |
| No. of independent MPP inputs | 1 | |
| No. of DC inputs | 8 – 12 | |
| Max. PV input current | 1754 A | |
| Max. DC short-circuit current | 2105 A | |

Output (AC)

| | | |
|---|--|---------------------|
| Nominal AC power | 1250 kW (at 55 °C) | 1500 kW (at 55 °C) |
| Max. AC output power at PF=1 | 1375 kW (at 50 °C) | 1500 kW (at 55 °C) |
| Max. AC apparent power | 1375 kVA (at 50 °C) | 1500 kVA (at 55 °C) |
| Max. AC output current | 1443 A | |
| Nominal AC voltage | 550 V | 600 V |
| AC voltage range | 440 – 632 V | 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 | 99.0 % / 98.7 % |
|------------------------------------|-----------------|

Protection

| | |
|---|-------------------------|
| DC reverse connection protection | Yes |
| DC input protection | Circuit breaker |
| AC output protection | Circuit breaker |
| Overvoltage protection | DC Type II / AC Type II |
| Grid monitoring / Ground fault monitoring | Yes / Yes |
| Insulation monitoring | Yes |
| Overheat protection | Yes |
| Anti-PID function | Optional |

General Data

| | |
|--|---|
| Dimensions (W*H*D) | 1805*1915*835 mm |
| Weight | 1650 kg |
| Isolation method | Transformerless |
| Degree of protection | IP21 |
| Night power consumption | < 20 W |
| Operating ambient temperature range | -30 to 65 °C (> 55 °C derating) |
| Allowable relative humidity range (non-condensing) | 0 – 95 % |
| Cooling method | Temperature controlled forced air cooling |
| Max. operating altitude | 4500 m (> 3500 m derating) 4000 m (> 2000 m derating) |
| Display | Touch screen |
| Communication | RS485 / Modbus, Ethernet |
| Compliance | CEA, IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, CE |
| Grid support | LVRT, HVRT, active & reactive power control and power ramp rate control |
| Type designation | SG1250HV-10 SG1500HV-10 |

