**SG3150/2500U-MV**

New Turnkey Station for North America 1500 Vdc System - MV Transformer Integrated

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**High Yield**
- Advanced three-level technology, max. inverter efficiency 98.8%, inverter CEC efficiency 98.5%
- Max. DC/AC ratio more than 1.5

**Easy O&M**
- Integrated current, voltage and MV parameters monitoring function for online analysis and fast trouble shooting
- Modular design, easy for maintenance
- Convenient external LCD

**Saved Investment**
- Low transportation and installation cost due to 20-foot container design
- 1500V DC system, low system cost
- Integrated MV transformer and LV auxiliary power supply

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**Circuit Diagram**

**Efficiency Curve (SG3150U)**

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**Grid Support**
- Complex w/ UL 743, UL 1741, IEEE 1547, Rule 21 and NEC 2014/2017
- Grid support including L/HVRT, L/HFRT, active & reactive power control and power ramp rate control

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**Type Designation**

<table>
<thead>
<tr>
<th>Type Designation</th>
<th>SG3150U-MV</th>
<th>SG2500U-MV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input (DC)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Max. PV input voltage</td>
<td>1500V</td>
<td></td>
</tr>
<tr>
<td>Min. PV input voltage / Startup input voltage</td>
<td>915V / 955V</td>
<td>800V / 840V</td>
</tr>
<tr>
<td>Max PV grading range for nominal power</td>
<td>940 – 1500V</td>
<td>800 – 1500V</td>
</tr>
<tr>
<td>No. of independent MPP inputs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of DC inputs</td>
<td>18 – 24</td>
<td>18 – 21</td>
</tr>
<tr>
<td>Max. PV input current</td>
<td>3820 A</td>
<td>3508 A</td>
</tr>
<tr>
<td>Max. DC short-circuit current</td>
<td>4850 A</td>
<td></td>
</tr>
<tr>
<td>PV array configuration</td>
<td>Negative grounding</td>
<td></td>
</tr>
</tbody>
</table>

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**Output (AC)**

<table>
<thead>
<tr>
<th>AC output power</th>
<th>3150 kVA</th>
<th>2750 kVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. inverter output current</td>
<td>2886 A</td>
<td>100%</td>
</tr>
<tr>
<td>AC voltage range</td>
<td>34.5 kV</td>
<td>100%</td>
</tr>
<tr>
<td>Nominal grid frequency / Grid frequency range</td>
<td>60 Hz / 55 – 65 Hz</td>
<td>100%</td>
</tr>
<tr>
<td>THD</td>
<td>&lt; 3% (at nominal power)</td>
<td>100%</td>
</tr>
<tr>
<td>DC current injection</td>
<td>≤ 0.5% in</td>
<td>100%</td>
</tr>
<tr>
<td>Power factor at nominal power / Adjustable power factor</td>
<td>&gt; 0.99 / 0.8 leading – 0.8 lagging</td>
<td>100%</td>
</tr>
<tr>
<td>Feed-in phases / Connection phases</td>
<td>3 / 3</td>
<td>100%</td>
</tr>
</tbody>
</table>

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**Efficiency**
- Inverter Max. efficiency: 98.8%
- Inverter Euro. efficiency: 98.5%

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**Transformer**
- Transformer rated power: 3150 kVA
- Transformer max. power: 2750 kVA
- LV / MV voltage: 0.63 kV / 34.5 kV
- Transformer vector: Dy1
- Transformer cooling type: Dielectric oil (PCB free) or degradable oil on request
- Transformer type designation: SG3150U-MV/ SG2500U-MV

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**Protection and Function**
- DC input protection: Load break switch + fuse
- Inverter output protection: Circuit breaker
- AC MV output protection: Load break switch + fuse
- Overvoltage protection: DC Type II / AC Type II
- Grid monitoring / Ground fault monitoring: Yes / Yes
- Insulation monitoring: Optional
- Overheat protection: Yes

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**General Data**
- Dimensions (W*H*D): 6058 * 2896 * 2438 mm (238.5" * 114.0" * 96.0")
- Weight: 18 T (39,683.2 lbs)
- Degree of protection: NEMA 3R
- Auxillary power supply: 100 Vac, 5 kVA / Optional: 480 Vac, 30 kVA
- Operating ambient temperature range: -30 to 60 °C (+ 5°C derating) / -22 to 140 °F (+ 13 °F derating)
- Allowable relative humidity range (non-condensing): 0 – 95 %
- Cooling method: Dry run derating
- Max. operating altitude: 1000 m (standard) / > 1000 m (optional)
- Standard: RS485, Ethernet; Optional: optical fiber
- Compliance: UL, IEC, IEEE 1547, UL1741 SA, NEC 2014/2017, CSA C22.2 No.1071-01
- Grid support: Q at night function (optional), L/HVRT, L/HFRT, active & reactive power control and power ramp rate control, Volt-var, Frequency-watt

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