

# SG33CX-US New

String Inverter For North America



## High Yield

- 4 MPPTs with max. efficiency 98.9%
- Compatible with bifacial module
- Built-in PID recovery function



## Smart O&M

- Touch free commissioning and remote firmware upgrade
- Online IV curve scan and diagnosis
- Fuse free design with smart string current monitoring



## Low Cost

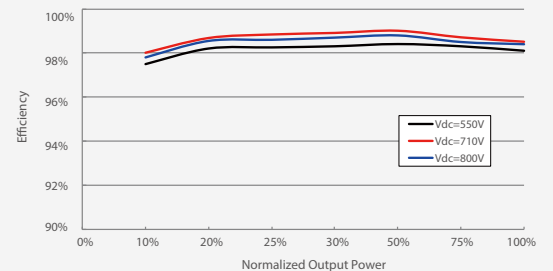
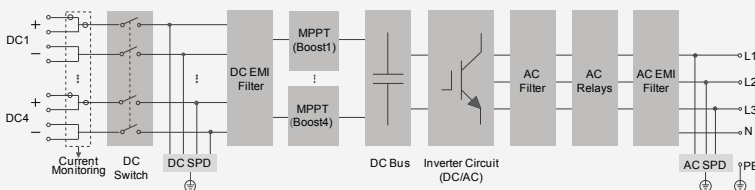
- DC/AC ratio more than 1.5
- Compatible with Al and Cu AC cables
- Flexible installation from vertical to horizontal



## Proven Safety

- NEMA 4X and C5 protection
- Type II SPD for both DC and AC
- Compliant with UL safety and grid code

## Circuit Diagram



**Input (DC)****SG33CX-US**

|  |               |
|--|---------------|
| Max. PV input voltage                          | 1000 V        |
| Min. PV input voltage / Start-up input voltage | 200 V / 200 V |
| Nominal PV input voltage                       | 710 V         |
| MPP voltage range                              | 200 – 1000 V  |
| MPP voltage range for nominal power            | 500 – 850 V   |
| No. of independent MPP inputs                  | 4             |
| Max. number of PV strings per MPPT             | 2 / 2 / 2 / 2 |
| Max. PV input current                          | 26 A * 4      |
| Max. current for input connector               | 15 A          |
| Max. DC short-circuit current                  | 40 A * 4      |

**Output (AC)**

|   |   |
|---|---|
| AC output power   | 33 kVA @ 45 °C (113 °F) / 30 kVA @ 50 °C (122 °F) |
| Max. AC output current                                  | 39.7 A  |
| Nominal AC voltage                                      | 3 / N/PE, 277 / 480 V                             |
| AC voltage range  | 422 – 528 V                                       |
| Nominal grid frequency / Grid frequency range           | 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 – 0.8 lagging                 |
| Feed-in phases / Connection phases                      | 3 / 3   |

**Efficiency**

|                                  |               |
|----------------------------------|---------------|
| Max. efficiency / CEC efficiency | 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               |
| PV string current monitoring         | Yes                     |
| Anti-PID function                    | Yes                     |
| Arc fault circuit interrupter (AFCI) | Yes                     |
| Overvoltage protection               | DC Type II / AC Type II |

**General Data**

|  |  |
|--|--|
| Dimensions (W*H*D)                                 | 780*930*310 mm (30.7**36.6**12.2")   |
| Weight   | 62 kg (136.7 lbs)  |
| Isolation method                                   | Transformerless  |
| Degree of protection                               | NEMA 4X  |
| Night power consumption                            | < 2 W  |
| Operating ambient temperature range                | -30 to 60 °C (> 50 °C derating)  |
| Allowable relative humidity range (non-condensing) | 0 – 100%   |
| Cooling method                                     | Smart forced air cooling   |
| Max. operating altitude                            | 4000 m (> 3000 m derating)   |
| Display  | LED, Bluetooth + APP   |
| Communication                                      | RS485 / optional: WiFi, Ethernet   |
| Third-Party communication protocol                 | SunSpec Modbus   |
| DC connection type                                 | Screw clamp terminal (10AWG,Cu or Al )   |
| AC connection type                                 | OT(2/0AWG,Cu or Al )   |
| Compliance   | UL1741, UL 1741 SA, CA Rule 21, IEEE 1547, IEEE 1547.1, CSA C22.2, No.107.1-01, UL 1699B and FCC Part 15 |
| Grid support                                       | LVRT, HVRT, active & reactive power control and power ramp rate control                                  |

