

## Appendix 5-2

# **Sungrow Inverter Specification Sheet**

# SG3425/3600UD-MV

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



### HIGH YIELD

- Advanced three-level technology, max. efficiency 98.9%
- Full power operation at 45 °C (113 °F)
- Effective cooling, wide operation temperature
- Max. DC/AC ratio up to 2.0

### SAVED INVESTMENT

- Low transportation and installation cost due to 20-foot container size design
- DC 1500V system, low system cost
- Integrated MV transformer and LV auxiliary power supply
- Q at night optional

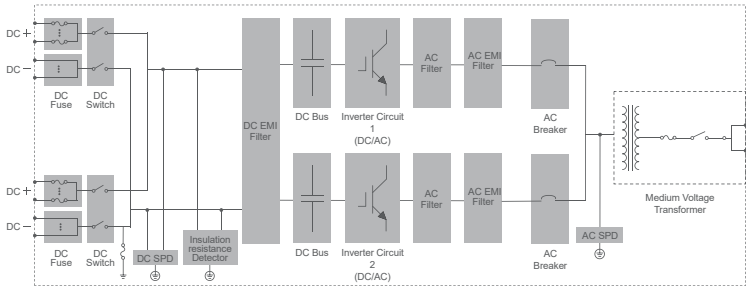
### EASY O&M

- Integrated current, voltage and MV parameters monitoring function for online analysis and trouble shooting
- Modular design, easy for maintenance

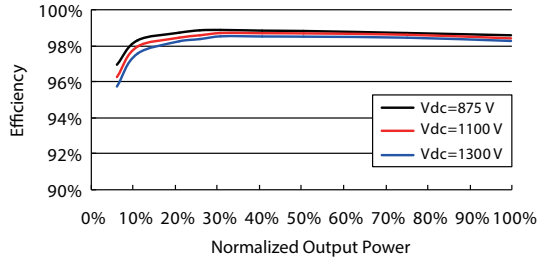
### GRID SUPPORT

- Compliance with standards:UL 1741,UL 1741 SA, IEEE 1547, Rule 21 and NEC code
- Low / High voltage ride through (L/HVRT), L/HFRT, soft start / stop
- Active & reactive power control and power ramp rate control

### CIRCUIT DIAGRAM



### EFFICIENCY CURVE (SG3425UD)



| Type designation                              | SG3425UD-MV  | SG3600UD-MV   |
|---|--|---|
| <b>Input (DC)</b>                             |  |   |
| Max. PV input voltage                         | 1500V  |   |
| Min. PV input voltage / Startup input voltage | 875 V / 915 V  | 915 V / 955 V   |
| Available DC fuse sizes                       | 250A, 315A, 400A, 450A, 500A   |   |
| MPP voltage range for nominal power           | 875 – 1300 V   | 915 – 1300 V  |
| No. of independent MPP inputs                 | 1  |   |
| No. of DC inputs                              | 20 (optional: 22 / 24 / 26 / 28)   |   |
| Max. DC short-circuit current                 | 10000 A  |   |
| PV array configuration                        | Negative grounding or floating   |   |
| <b>Output (AC)</b>                            |  |   |
| AC output power                               | 3425 kVA @ 45 °C (113 °F),<br>3083 kVA @ 50 °C (122 °F)  | 3600 kVA @ 45 °C (113 °F),<br>3240 kVA @ 50 °C (122 °F) |
| Nominal grid frequency / Grid frequency range | 50 Hz / 45 – 55 Hz, 60 Hz / 50 – 65 Hz   |   |
| THD   | < 3 % (at nominal power)   |   |
| DC current injection                          | < 0.5 % I <sub>n</sub>   |   |
| <b>Efficiency</b>                             |  |   |
| Inverter Max. efficiency                      | 98.9 %   |   |
| Inverter CEC efficiency                       | 98.5 %   |   |
| <b>Transformer</b>                            |  |   |
| Transformer rated power                       | 3425 kVA   | 3600 kVA  |
| Transformer max. power                        | 3425 kVA   | 3600 kVA  |
| LV / MV voltage                               | 0.6 kV / (12 – 35) kV  | 0.63 kV / (12 – 35) kV                                  |
| Transformer vector                            | Dy1 or Dy11  |   |
| Transformer cooling type                      | ONAN (Optional: KNAN)  |   |
| <b>Protection</b>                             |  |   |
| 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                         | Yes  |   |
| Overheat protection                           | Yes  |   |
| <b>General Data</b>                           |  |   |
| Dimensions (W * H * D)                        | 6058 * 2896 * 2438 mm 238.5" * 114.0" * 96.0"  |   |
| Weight  | 18000 kg 39683.2 lbs   |   |
| Degree of protection                          | NEMA 4X (Electronic for Inverter) / NEMA 3R (Others)   |   |
| Auxiliary power supply                        | 5kVA, 120Vac/240Vac; Optional: 30kVA, 480Vac/277Vac  |   |
| Operating ambient temperature range           | -35 to 60 °C (> 45 °C derating) / optional: -40 to 60 °C (> 45 °C derating)<br>-22 to 140 °F (> 113 °F derating) / optional: -40 to 140 °F (> 113 °F derating) |   |
| Allowable relative humidity range             | 0 - 100 %  |   |
| Cooling method                                | Temperature controlled forced air cooling  |   |
| Max. operating altitude                       | 1000 m (Standard) / > 1000 m (Customized)<br>(3280.8 ft (standard) / > 3280.8 ft (Customized))   |   |
| DC-Coupled storage interface                  | Optional   |   |
| Charging power from the grid                  | Optional   |   |
| Communication                                 | Standard: RS485, Ethernet; Optional: optical fiber   |   |
| Compliance                                    | UL 1741, IEEE 1547, UL1741 SA, NEC 2017, CSA C22.2 No.107.1-01   |   |
| Grid support                                  | Q at night function (optional), L/HVRT, L/HFRT, Active & reactive power control and power ramp rate control, Volt-var, Frequency-watt                          |   |