

# SG3150UD-MV-US

Turnkey Station for 1500 Vdc System MV Transformer Integrated



## HIGH YIELD

- Advanced three-level technology, max. inverter efficiency 99%
- Full power operation at 40 °C (104 °F)
- Effective cooling, wide operation temperature

## EASY O&M

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

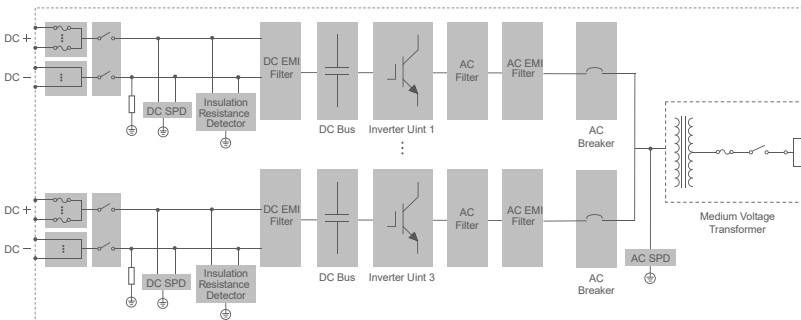
## SAVED INVESTMENT

- 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

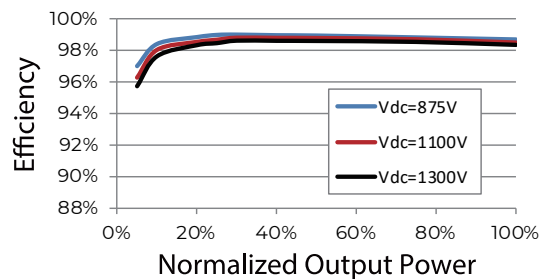
## GRID SUPPORT

- Compliance with standards: UL 1741, UL 1741 SA / SB, 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



| Type Designation  | SG3150UD-MV-US   |
|---|--|
| <b>Input (DC)</b>   |  |
| Max. PV input voltage   | 1500 V   |
| Min. PV input voltage / Start-up input voltage  | 875 V / 915 V  |
| Available DC fuse sizes   | 250 A, 315 A, 400 A, 450 A, 500 A, 630 A   |
| MPP voltage range   | 875 V – 1500 V   |
| Full power MPP voltage range @ 40 °C  | 875 V - 1300 V *   |
| No. of independent MPP inputs   | 3  |
| No. of DC inputs  | 21 inputs negative grounding( optional: 18 inputs floating )   |
| Max. PV input current   | 3 * 1226 A   |
| Max. DC short-circuit current   | 3 * 3528 A   |
| PV array configuration  | Negative grounding or floating   |
| <b>Output (AC)</b>  |  |
| AC output power   | 3150 kVA @ 40 °C ( 104 °F )  |
| Nominal grid frequency / Grid frequency range   | 60 Hz / 57 Hz – 63 Hz  |
| Harmonic (THD)  | < 3 % ( at nominal power )   |
| Power factor at nominal power / Adjustable power factor   | > 0.99 / 0.8 leading - 0.8 lagging   |
| <b>Efficiency</b>   |  |
| Inverter Max. efficiency  | 98.9 %   |
| Inverter CEC efficiency   | 98.5 %   |
| <b>Transformer</b>  |  |
| Transformer rated power   | 3150 kVA   |
| Transformer max. power  | 3150 kVA   |
| LV / MV voltage   | 0.6 kV / ( 12 – 35 ) kV  |
| Transformer vector  | Dy1 ( Optional: Dy11, Yny0 )   |
| Transformer cooling type  | KNAN ( Optional: ONAN )  |
| <b>Protection</b>   |  |
| DC input protection   | Load switch + fuse   |
| Inverter output protection  | Circuit breaker  |
| AC MV output protection   | Load 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 mm * 2896 mm * 2438 mm    238.5" * 114.0" * 96.0"   |
| Weight  | ≤ 31967 lbs  |
| Degree of protection  | NEMA 4X ( Electronic for Inverter ) / NEMA 3R ( Others )   |
| Auxiliary power supply  | 5 kVA, 120 Vac; Optional: 35 KVA 480 Vac + 5 KVA 120 Vac   |
| Operating ambient temperature range<br>(It refers to the ambient temperature of 1m around the inverter) | -35 °C - 60 °C (> 40 °C derating) / optional: -40 - 60 °C (> 40 °C derating)<br>-31 °F - 140 °F (> 104 °F derating) / optional: -40 °F - 140 °F (> 104 °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 ) )   |
| Display   | LED Indicators, WLAN+WebHMI  |
| Night reactive power function   | Optional   |
| Dc-coupled storage interface  | Optional   |
| Charging power from the grid  | Optional   |
| Communication   | Standard: RS485, Ethernet  |
| Compliance  | UL1741, UL62109-1, CSA C22.2 No.107.1-16, IEC61851-1, IEC61851-2, IEC61851-3, IEC61851-4, IEC61851-5, IEC61851-6, IEC61851-7, IEC61851-8, IEC61851-9, IEC61851-10, IEC61851-11, IEC61851-12, IEC61851-13, IEC61851-14, IEC61851-15, IEC61851-16, IEC61851-17, IEC61851-18, IEC61851-19, IEC61851-20, IEC61851-21, IEC61851-22, IEC61851-23, IEC61851-24, IEC61851-25, IEC61851-26, IEC61851-27, IEC61851-28, IEC61851-29, IEC61851-30, IEC61851-31, IEC61851-32, IEC61851-33, IEC61851-34, IEC61851-35, IEC61851-36, IEC61851-37, IEC61851-38, IEC61851-39, IEC61851-40, IEC61851-41, IEC61851-42, IEC61851-43, IEC61851-44, IEC61851-45, IEC61851-46, IEC61851-47, IEC61851-48, IEC61851-49, IEC61851-50, IEC61851-51, IEC61851-52, IEC61851-53, IEC61851-54, IEC61851-55, IEC61851-56, IEC61851-57, IEC61851-58, IEC61851-59, IEC61851-60, IEC61851-61, IEC61851-62, IEC61851-63, IEC61851-64, IEC61851-65, IEC61851-66, IEC61851-67, IEC61851-68, IEC61851-69, IEC61851-70, IEC61851-71, IEC61851-72, IEC61851-73, 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