

SG2500U-MV

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



High Yield

- Advanced three-level technology, max. inverter efficiency 98.8%
- Effective cooling, 1.1 overload capacity, no derating up to 50 °C
- 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

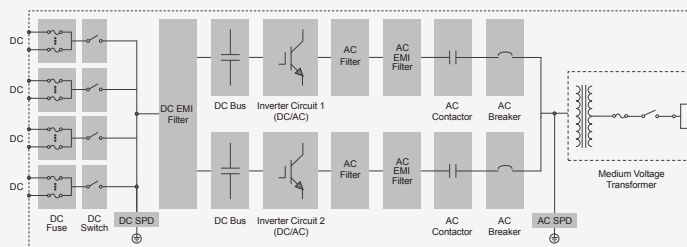
- Low transportation and installation cost due to 20-foot container design
- DC 1500 V system, low system cost
- Integrated MV transformer and LV auxiliary power supply



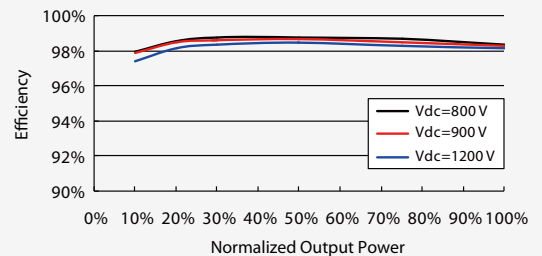
Grid Support

- Comply with UL1741, UL1741 SA, IEEE 1547, Rule 21 and NEC code
- Grid support including L/HVRT, L/HFRT, soft start/stop, specified power factor control and reactive power support

Circuit Diagram



Inverter CEC Efficiency Curve



Input (DC)
SG2500U-MV

Max. PV input voltage	1500V
Min. PV input voltage / Startup input voltage	800 V / 840 V
MPP voltage range for nominal power	800 – 1300 V
No. of independent MPP inputs	1
No. of DC inputs	18 – 28
Max. PV input current	3508 A
Max. DC short-circuit current	4210 A
PV array configuration	Negative grounding

Output (AC)

Nominal AC power (at 50 °C)	2500 kW
Max. AC output power at PF=1 (at 45 °C)	2750 kW
Max. AC apparent power (at 45 °C)	2750 kVA
Max. inverter output current	2886 A
AC voltage range	10 – 35 kV
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 % In
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3

Efficiency

Inverter max. efficiency / Inverter CEC efficiency	98.8 % / 98.5 %
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Transformer

Transformer rated power	2500 kVA
Transformer max. power	2750 kVA
LV / MV voltage	0.55 kV / 10 – 35 kV
Transformer vector	Dy11
Transformer cooling type	ONAN (Oil Natural Air Natural)
Oil type	Mineral oil (PCB free) or degradable oil on request

Protection

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	Optional
Overheat protection	Yes

General Data

Dimensions (W*H*D)	6058*2896*2438 mm 238.5"*114.0"*96.0"
Weight	15.7 T 34612.6 lb
Degree of protection	NEMA 3R
Auxiliary power supply	220/110Vac, 5 kVA / Optional: 480 Vac, 30 kVA
Operating ambient temperature range	-30 to 60 °C (> 50 °C derating) -22 to 140 °F (> 122 °F derating)
Allowable relative humidity range (non-condensing)	0 – 95 %
Cooling method	Temperature controlled forced air cooling
Max. operating altitude	2000 m (standard) / > 2000 m – 4000 m (optional) 6561 ft (standard) / > 6561 ft – 13123 ft (optional)
Display	Touch screen
Communication	Standard: RS485, Ethernet; Optional: optical fiber
Compliance	UL 1741, IEEE 1547, UL1741 SA, NEC Standard
Grid support	Night SVG function (optional), L/HVRT, L/HFRT, active & reactive power control and power ramp rate control

