

SG4400UD-MV-US

Turnkey Station for 1500 Vdc System MV Transformer Integrated



HIGH YIELD

- Advanced three-level technology, max. inverter efficiency 98.9 %
- 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

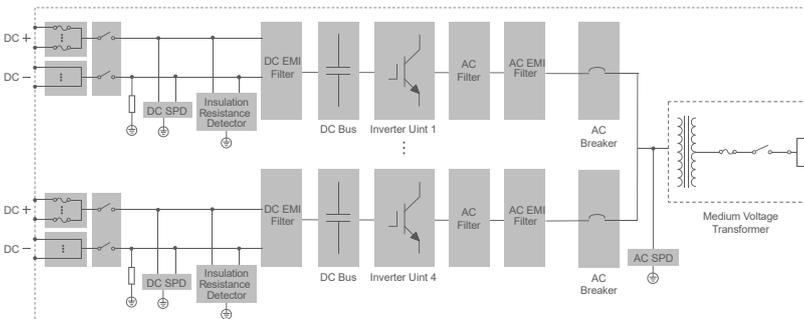
- Low transportation and installation cost due to 20-foot container size design
- DC 1500V system, low system cost
- Integrated MV transformer and LV auxiliary power supply
- Q at night optional



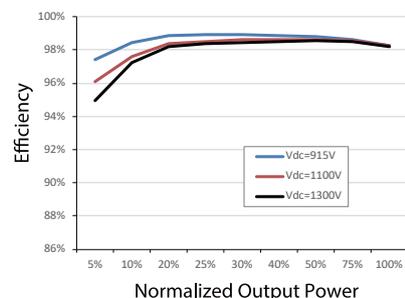
GRID SUPPORT

- 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	SG4400UD-MV-US
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Start-up input voltage	915 V / 955 V
Available DC fuse sizes	250 A, 315 A, 400A, 450 A, 500 A, 630 A
MPP voltage range	915 V – 1500 V
Full power MPP voltage range@40°C	915 V - 1337 V*
No. of independent MPP inputs	4
No. of DC inputs	28 inputs negative grounding (optional: 24 inputs floating)
Max. PV input current	4 * 1226 A
Max. DC short-circuit current	4 * 3528 A
PV array configuration	Negative grounding or floating
Output (AC)	
AC output power	4400 kVA @ 40 °C (104 °F) ** (Optional: 4400 kVA @ 45 °C (113 °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
Efficiency	
Inverter Max. efficiency	98.9 %
Inverter CEC efficiency	98.5 %
Transformer	
Transformer rated power	4400 kVA
Transformer Max. power	4400 kVA
LV / MV voltage	0.645 kV / 34.5 kV
Transformer vector	Dy 1 (Optional: Dy 11, Yny 0)
Transformer cooling type	KNAN (Optional: ONAN)
Protection	
DC input protection	Load switch + fuse
Inverter output protection	Circuit breaker
AC MV output protection	Load switch + fuse
Surge protection	DC Type II / AC Type II
Grid monitoring / Ground fault monitoring	Yes / Yes
Insulation monitoring	Yes
Overheat protection	Yes
General Data	
Dimensions (W * H * D)	6058 mm * 2896 mm * 2438 mm 238.5" * 114.0" * 96.0"
Weight	≤ 36376 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 (It refers to the inverter only and the ambient temperature is 1m around the inverter.)	-35 °C - 60 °C (> 45 °C derating) / optional: -40 °C - 60 °C (> 45 °C derating) -31 °F - 140 °F (> 113 °F derating) / optional: -40 °F - 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) (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, IEEE1547-2018, IEEE1547.1-2020, UL1741 SA/SB, California Rule21, HECO SRD V2.0, NEC 2020,PRC-024
Grid support	Q at night function (optional), L/HVRT, L/HFRT, Active & reactive power control and power ramp rate control, Volt-var, Frequency-watt

*Full power MPP range is temperature dependent, check the characteristic curve of the inverter for more information.

**For sustained operation above 40°C, an optional 60 °C temperature rise transformer is recommended.