

# 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

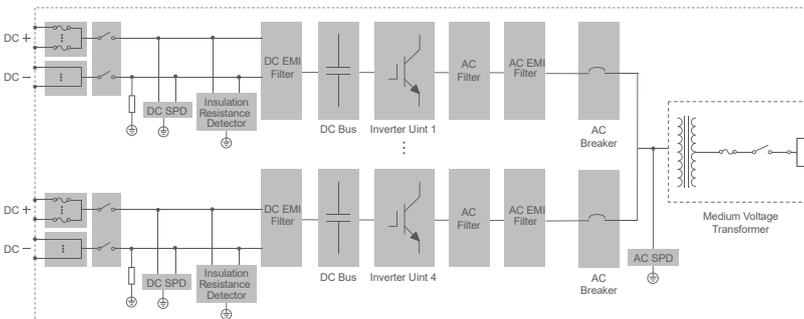
- Low transportation and installation cost due to 20-foot container size design
- DC 1500V system, low system cost
- Integrated MV transformer and LV auxiliary power supply
- Q at night optional



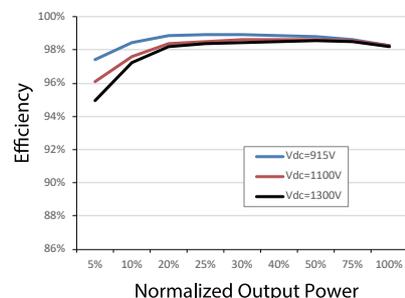
## GRID SUPPORT

- 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
<b>Input (DC)</b>	
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
<b>Output (AC)</b>	
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
<b>Efficiency</b>	
Inverter Max. efficiency	98.9 %
Inverter CEC efficiency	98.5 %
<b>Transformer</b>	
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 )
<b>Protection</b>	
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
<b>General Data</b>	
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.