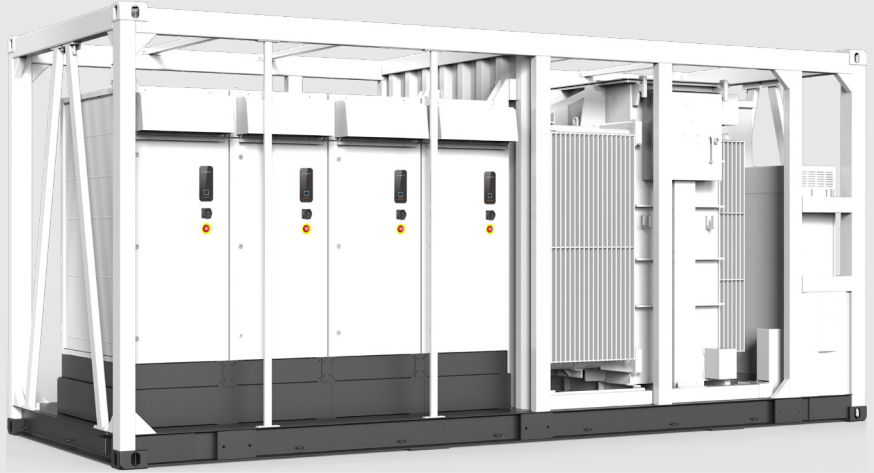


# SG4400UD-MV-US

MV Grid-connected PV Inverter for 1500Vdc System



## HIGH YIELD

- Advanced three-level technology
- 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

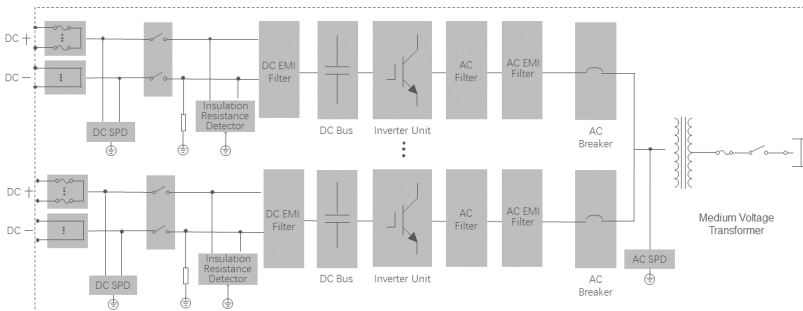
## SAVED INVESTMENT

- Low transportation and installation cost due to 20-foot container size design
- DC 1500V system, low system cost
- Q at night

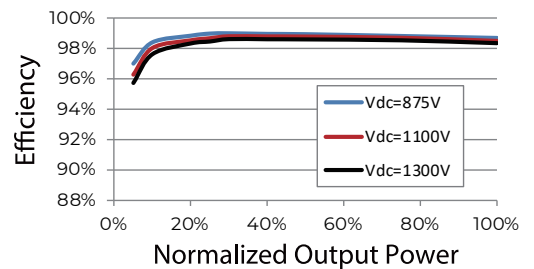
## GRID SUPPORT

- 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 – 630 A
MPP voltage range	915 V – 1500 V
Full power MPP voltage range @ 40 °C <sup>1)</sup>	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 ) )
Max. AC output current	73 A
Nominal grid frequency / Grid frequency range	60 Hz / 57 Hz – 63 Hz
THD	< 3 % ( at nominal power )
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Nominal AC voltage	34.5 kV
<b>Efficiency</b>	
Max. inverter unit efficiency	98.9 %
CEC inverter unit efficiency	98.5 %
Max. efficiency ( including transformer )	98.2 %
CEC efficiency ( including transformer )	97.5 %
<b>Protection</b>	
DC protection	DC load switch + fuse
AC protection	MV 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
Transformer vector	Dy1 ( Optional: Dy11, Yny0, YNd1)
Degree of protection	NEMA 4X ( Electronic enclosure ) / NEMA 3R ( Others )
Auxiliary power supply	5 kVA, 120 Vac ; Optional : 35 kVA 480 Vac + 5 kVA 120 Vac
Operating ambient temperature range <sup>2)</sup>	-35 °C – 60 °C / optional: -40 °C – 60 °C -31 °F – 140 °F / optional: -40 °F – 140 °F
Allowable relative humidity range	0 % - 100 %
Cooling method	Forced air cooling + KNAN ( Optional: ONAN )
Max. Operating altitude	1000 m ( Standard ) / > 1000 m ( Customized ) ( 3280.8 ft ( Standard ) / > 3280.8 ft ( Customized ) )
Display	LED Indicators , Ethernet + WebHMI
Night reactive power function	Yes
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, PRC-028, PRC-029

<sup>1)</sup> Full power MPP range is temperature dependent, check the characteristic curve of the inverter for more information.

<sup>2)</sup> The ambient temperature is determined as the average temperature obtained from at least four evenly distributed temperature monitoring points located at a distance of 1 meter from the equipment, at a height halfway up the machine. The temperature sensors must be shielded from airflow, thermal radiation, and rapid temperature fluctuations to prevent display inaccuracies.