

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

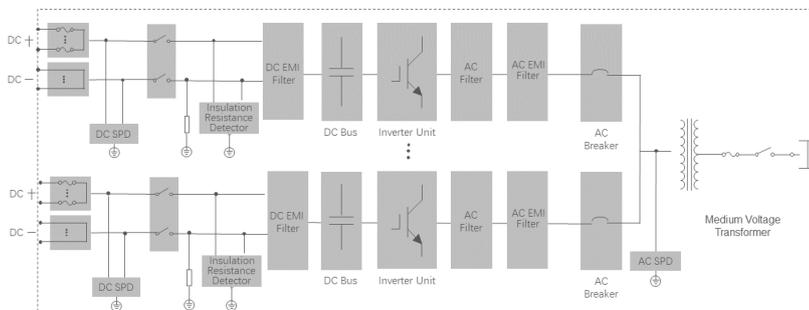
SAVED INVESTMENT

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

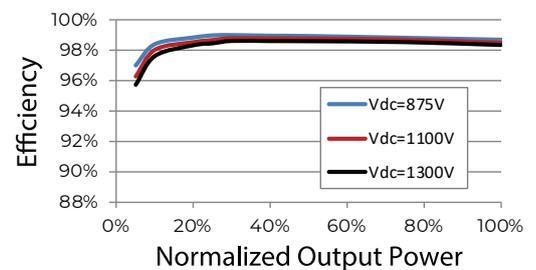
GRID SUPPORT

- 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
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 – 630 A
MPP voltage range	915 V – 1500 V
Full power MPP voltage range @ 40 °C ¹⁾	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))
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
Efficiency	
Max. inverter unit efficiency	98.9 %
CEC inverter unit efficiency	98.5 %
Max. efficiency (including transformer)	98.2 %
CEC efficiency (including transformer)	97.5 %
Protection	
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
General data	
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 ²⁾	-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, 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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