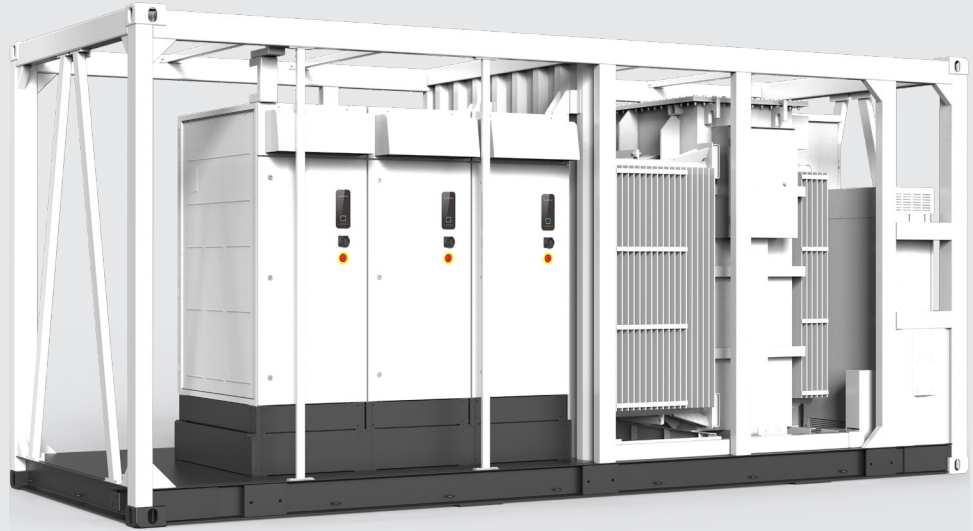


SG3150UD-MV-US

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

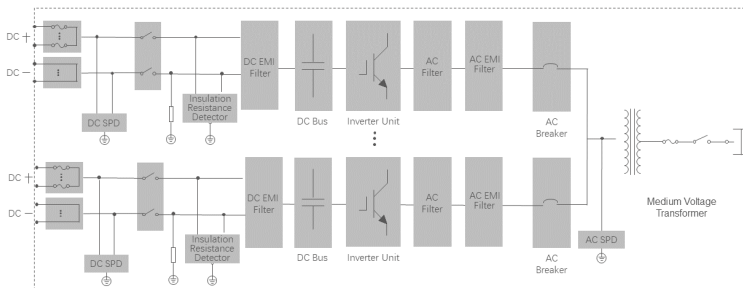
SAVED INVESTMENT

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

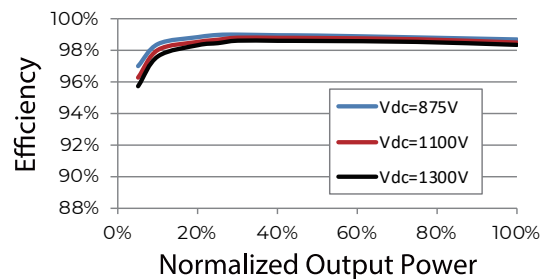
GRID SUPPORT

- 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	SG3150UD-MV-US
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Start-up input voltage	875 V / 915 V
Available DC fuse sizes	250 A - 630 A
MPP voltage range	875 V – 1500 V
Full power MPP voltage range @ 40 °C ¹⁾	875 V - 1300 V
No. of independent MPP inputs	3
No. of DC inputs	21 inputs negative grounding (optional: 18 inputs floating)
Max. PV input current	3 * 1226 A
Max. DC short-circuit current	3 * 3528 A
PV array configuration	Negative grounding or floating
Output (AC)	
AC output power	3150 kVA @ 40 °C (104 °F)
Max. AC output current ²⁾	151 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	12 kV – 35 kV ³⁾
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	≤ 31967 lbs
Transformer vector	Dy1(Optional: Dy11, Yny0, YNd1)
Degree of protection	NEMA 4X(Electronic enclosure) / NEMA 3R(Others)
Auxiliary power supply	5kVA, 120Vac; Optional: 35KVA 480Vac+5KVA 120Vac
Operating ambient temperature range ⁴⁾	-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, IEC61547-2018, IEC61547.1-2020, UL1741 SA/SB, California Rule21, HECO SRD V2.0, NEC 2020, PRC-024, PRC-028, PRC-029

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

²⁾ Calculated based on the minimum nominal AC voltage.

³⁾ For detailed AC voltage ratings, refer to the product configuration table provided by SUNGROW.

⁴⁾ The ambient temperature is determined as the average temperature obtained from at least four 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.