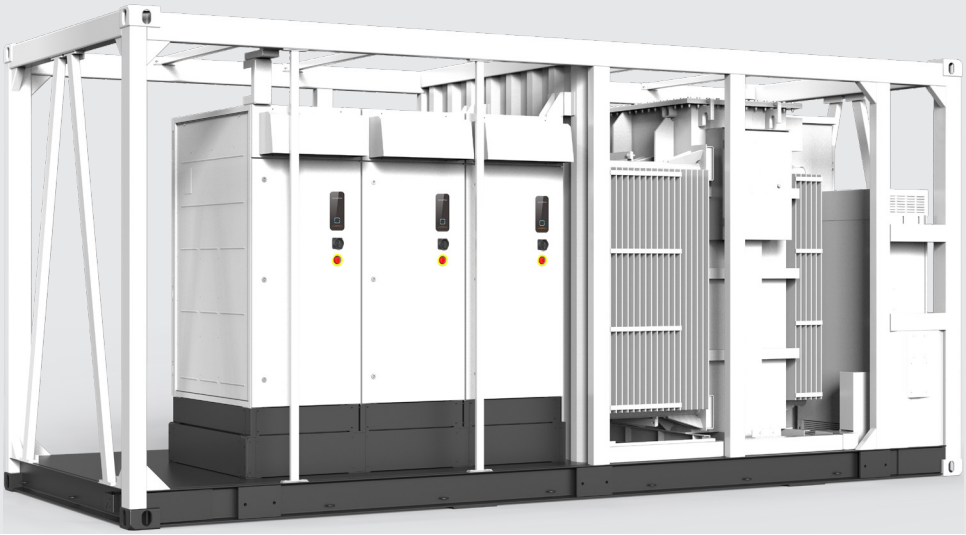
SG3150UD-MV-US

MV Grid-connected PV Inverter for 1500Vdc System



HIGH YIELD

- Advanced three-level technology
- Full power operation at 40 ℃ (104 ℉)
- 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

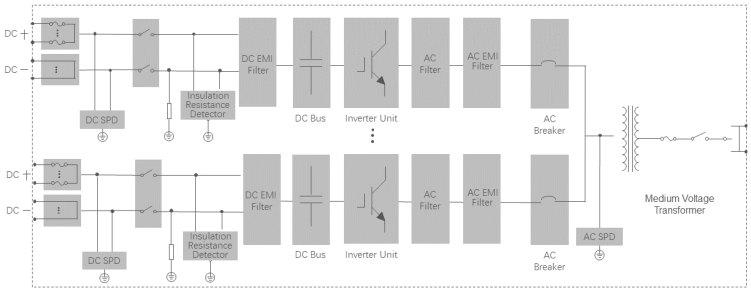
SAVED INVESTMENT

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

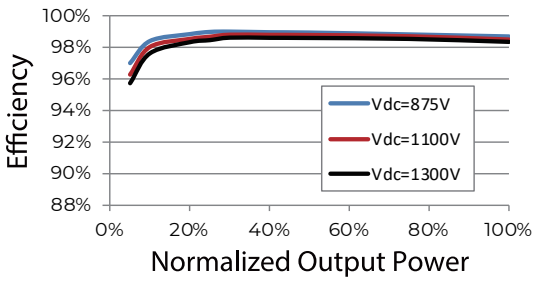
GRID SUPPORT

- 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 ℃ [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 ℃ (104 ℉)
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 / Ajustable 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 ℃ – 60 ℃ / optional: -40℃ – 60℃ -31 ℉ – 140 ℉ / optional: -40 ℉ – 140℉
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	UL 1741, UL 62109-1, CSA C22.2 No.107.1-16, IEEE 1547-2018, IEEE 1547.1-2020, UL 1741 SA/SB, California Rule21, HECO SRD V2.0, NEC 2023, PRC-024

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.