

SG3425UD-MV/ SG3600UD-MV

MV Grid-connected PV Inverter for North America 1500 Vdc System



HIGH YIELD

- Advanced three-level technology, max. efficiency 98.9%
- Inverter full power operation up to 45 °C(113 °F)
- Effective cooling, wide operation temperature
- Max. DC/AC ratio up to 2.0



EASY O&M

- Integrated current, voltage and MV parameters monitoring function for online analysis and trouble shooting
- Modular design, easy for maintenance



SAVED INVESTMENT

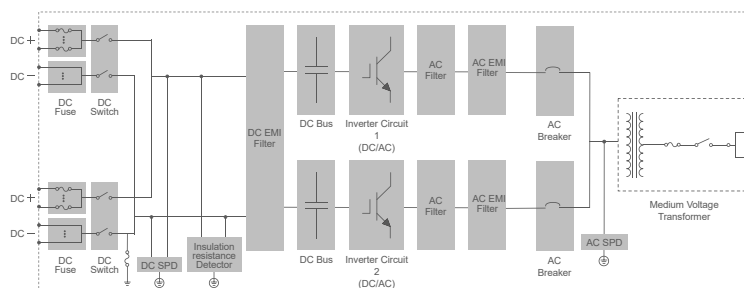
- Low transportation and installation cost due to 20-foot container size design
- DC 1500V system, low system cost
- Integrated MV transformer and LV auxiliary power supply
- Q at night optional



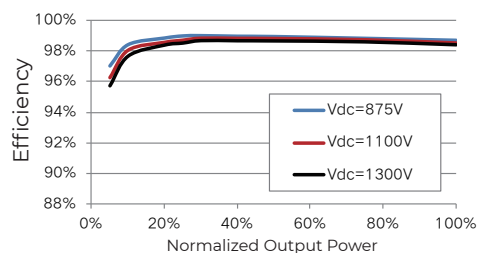
GRID SUPPORT

- Compliance with standards:UL 1741,UL 1741 SA, 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 (SG3425UD)



Type designation	SG3425UD-MV	SG3600UD-MV
Input (DC)		
Max. PV input voltage	1500 V	
Min. PV input voltage / Start-up input voltage	875 V / 915 V	915 V / 955 V
Available DC fuse sizes	250 A - 630 A	
MPP Voltage Range	875 V - 1500 V	915 V - 1500 V
Full power MPP voltage range @ 45 °C	875 V - 1300 V *	915 V - 1300 V *
No. of DC inputs	24 (optional: 28)	
Max. DC short-circuit current	10000 A	
PV array configuration	Negative grounding or floating	
Output (AC)		
AC output power	3425 kVA @ 45 °C(113 °F) , 3083 kVA @ 50 °C(122 °F) **	3600 kVA @ 45°C(113 °F) , 3240 kVA @ 50°C(122 °F) **
Max. AC output current	165 A	173 A
AC voltage	12 kV - 34.5 kV	
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	
Efficiency		
Inverter max. efficiency	98.9 %	
Inverter CEC efficiency	98.5 %	
Transformer		
Transformer rated power	3425 kVA	3600 kVA
Transformer max. power	3425 kVA	3600 kVA
LV / MV voltage	0.6 kV / (12 – 35) kV	0.63 kV / (12 – 35) kV
Transformer vector	Dy1 (Optional: Dy11, Yny0)	
Transformer cooling type	KNAN (Optional: ONAN)	
Protection		
DC input protection	DC Load switch + fuse	
Inverter output protection	AC Circuit breaker	
AC MV output protection	MV Load switch + fuse	
Overvoltage 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	18000 kg 39683.2 lbs	
Degree of protection	NEMA 4X (Electronic for Inverter) /NEMA 3R (Others)	
Auxiliary power supply	5 kVA, 120 Vac; Optional: 30 KVA 480 Vac + 5 KVA 120 Vac	
Operating ambient temperature range***	-35 °C to 60 °C (> 45 °C derating) / optional: -40 °C to 60 °C (> 45 °C derating) -31 °F to 140 °F (> 113 °F derating) / optional: -40 °F to 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))	
DC-Coupled storage interface	Optional	
Night reactive power function	Optional	
Charging power from the grid	Optional	
Communication	Standard: RS485, Ethernet	
Compliance	UL 1741, IEEE 1547, UL 1741 SA, NEC 2017, CSA C22.2 No.107.1-01	
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

***The ambient temperature is determined as the average temperature obtained from at least four evenly distributed temperature monitoring points located at a distance of at least 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.