SG2500/3000HV-MV-30

Turnkey Station for 1500 Vdc System MV Transformer Integrated

HIGH YIELD

- Advanced three-level technology, max. inverter efficiency 99%
- Effective cooling, full power operation at 50 ℃

SMART O&M

- Integrated zone monitoring and MV parameters monitoring function for online analysis and trouble shooting
- Modular design, easy for maintenance
- Convenient external touch screen

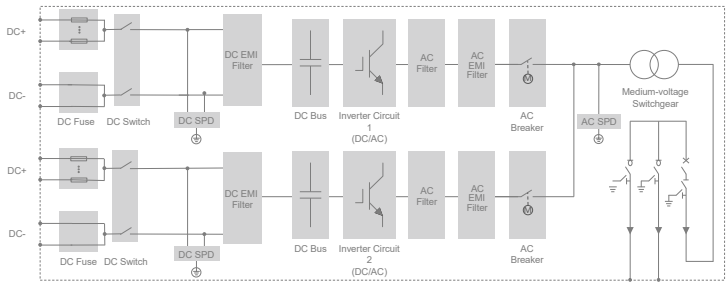
SAVED INVESTMENT

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

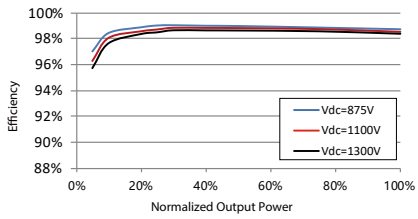
GRID SUPPORT

- Compliance with standards: IEC 62271-202, IEC 62271-200, IEC 60076
- Low / High voltage ride through (L / HVRT)
- Active & reactive power control and power ramp rate control

CIRCUIT DIAGRAM



EFFICIENCY CURVE (SG3000HV-30)



Type designation	SG3000HV-MV-30	SG2500HV-MV-30
Input (DC)		
Max. PV input voltage	1500 V	
Min. PV input voltage / Startup input voltage	875 V / 915 V	800 V / 840 V
MPP voltage range	875 – 1300 V	800 – 1300 V
No. of independent MPP inputs	2	
No. of DC inputs	18 / 20 / 22 / 24	16 / 18 / 20 / 22
Max. PV input current	3500 A	
Max. DC short-circuit current	10000 A	
PV array configuration	Negative grounding or floating	
Output (AC)		
AC output power	3000 kVA @ 50 ℃, 3300 kVA @ 45 ℃	2500 kVA @ 50 ℃, 2750 kVA @ 45 ℃
Max. inverter output current	2887 A	
AC voltage range	20 kV – 35 kV	
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz	
Harmonic (THD)	< 3 % (at nominal power)	
DC current injection	< 0.5 % In	
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging	
Feed-in phases / AC connection	3 / 3-PE	
Efficiency		
Inverter max. efficiency	99.0 %	
Inverter Euro. efficiency	98.7 %	
Transformer		
Transformer rated power	3000 kVA	2500 kVA
Transformer max. power	3000 kVA	2500 kVA
LV / MV volatage	0.6 kV / 20 kV – 35 kV	0.55 kV / 20 kV – 35 kV
Trnsformer vector	Dy11	
Transformer cooling type	ONAN (Oil-natural, air-natural)	
Oil type	Mineral oil (PCB free) or degradable oil on request	
Protection & Function		
DC input protection	Load break switch + fuse	
Inverter output protection	Circuit breaker	
AC MV output protection	Circuit breaker	
Surge protection	DC Type I + II / AC Type II	
Grid monitoring / Ground fault monitoring	Yes / Yes	
Insulation monitoring	Yes	
Overheat protection	Yes	
Q at night function	Optional	
General Data		
Dimensions (W*H*D)	6058 * 2896 * 2438 mm	
Weight	15 T	
Degree of protection	Inverter: IP55 (optional: IP65) / Others: IP54	
Auxiliary power supply	5 kVA (optional: max. 40 kVA)	
Operating ambient temperature range	-35 to 60 ℃ (> 50 ℃ derating)	
Allowable relative humidity range	0 – 100 %	
Cooling method	Temperature controlled forced air cooling	
Max. operating altitude	1000 m (standard) / > 1000 m (optional)	
Display	Touch screen	
Communication	Standard: RS485, Ethernet; Optional: optical fiber	
Compliance	CE, IEC 62109, IEC 61727, IEC 62116, IEC 62271-202, IEC 62271-200, IEC 60076	
Grid support	Q at night fuction (optional), L/HVRT, active & reactive power control and power ramp rate control	