

## SG4400UD-MV-20

## MV Grid-connected PV Inverter for 1500 Vdc System

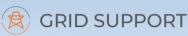




- Advanced three-level technology
- Effective cooling, full power operation at 51°C



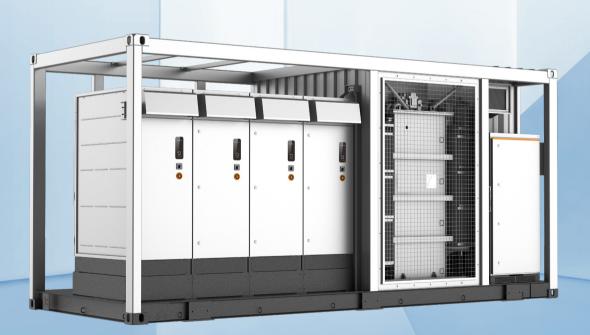
- Integrated zone monitoring and MV parameters monitoring function for online analysis and trouble shooting
- Modular design, easy for maintenance



- Compliance with standards: IEC 61727, IEC 62116,IEC 62271-202, IEC 62271-200, IEC 60076
- Low/High voltage ride through (L/HVRT)
- Active & reactive power control and power ramp rate control



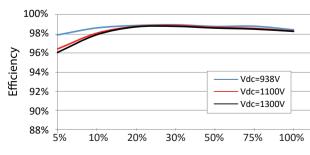
- Low transportation and installation cost due to 20-foot container design
- DC 1500V system, low system cost
- Q at night function optional



Type designation	SG4400UD-MV-20
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	938 V / 950 V
MPP voltage range	938 V – 1500 V
No. of independent MPP inputs	4
No. of DC inputs	20 ( optional: 28 )
Max. PV input current	4 * 1435 A
Max. DC short-circuit current	4 * 3528 A
PV array configuration	Negative grounding or floating
Output (AC)	Tregutive grounding of houting
AC output power	4400 kVA @ 51 ℃, 5280 kVA @ 23 ℃
Max. AC output current 1)	305 A
Rated voltage range	10 kV – 35 kV
Nominal grid frequency / Grid frequency range	50 Hz / 45 Hz – 55 Hz, 60 Hz / 55 Hz – 65 Hz
THD	
Power factor at nominal power / Adjustable power factor	< 1.5 % (at nominal power)
Feed-in phases / AC connection	>0.99 / 0.8 leading – 0.8 lagging
Efficiency	3/3
Max. inverter unit efficiency	20.00%
,	99.0 %
Inverter unit European efficiency	98.7 %
Max. efficiency(including transformer)	98.4 %
European efficiency(including transformer)	97.9 %
Protection & Function	
DC input protection	DC load switch + fuse
AC protection	AC circuit breaker
Surge protection	DC Type 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	20 T
Impedance	8 % ( 0 ~ ±10 % ) @ 4400 kVA
Transformer vector	Dyll
Oil type	Mineral oil ( PCB free )
Degree of protection	Inverter: IP65 / Others: IP54
Auxiliary power supply	15 kVA ( optional: max. 30 kVA )
Operating ambient temperature range <sup>2)</sup>	-35 °C to 60 °C ( > 51 °Cderating )
Allowable relative humidity range	0 % – 100 %
Cooling method	Temperature controlled forced air cooling+ ONAN
Max. operating altitude	1000 m (standard) / > 1000 m (optional)
Display	LED Indicators, Ethernet+WebHMI
Communication	Standard: RS485, Ethernet
Compliance	CE, IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, IEC62271-202

<sup>1)</sup> Calculated based on the minimum nominal AC voltage.

## **EFFICIENCY CURVE**



Normalized Output Power

<sup>2)</sup> The ambient temperature is determined as the average temperature obtained from at least four evenly distributed 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.