

SG4400UD-MV-20

MV Grid-connected PV Inverter for 1500 Vdc System



HIGH YIELD

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



GRID SUPPORT

- 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



SMART O&M

- Integrated zone monitoring 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 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)		
AC output power		4400 kVA @ 51 °C, 5280 kVA @ 23 °C
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		< 1.5 % (at nominal power)
Power factor at nominal power / Adjustable power factor		>0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / AC connection		3 / 3
Efficiency		
Max. inverter unit efficiency		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		Dy11
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 ²⁾		-35 °C to 60 °C (> 51 °C derating)
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

1) Calculated based on the minimum nominal AC voltage.

2) 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.

EFFICIENCY CURVE

