

SG4400UD-MV-20

Turnkey Station for 1500 Vdc System MV Transformer Integrated

Preliminary



LOW LCOE

- Effective cooling, full power operation at 50 °C
- Integrated transformer, switchgear and LV auxiliary power supply
- Q at night function (optional), saving investment



SMART O&M

- Modular equipment, 1.1 – 8.8 MW block flexible design
- Modular system, flexible PV DC/AC ratio and ESS capacity
- Modular component, plug and play, no need professional



SAFETY & RELIABLE

- DC arc fault protection, 200 ms cut off fault
- AC LV copper bar connection, no risk of insulation failure
- Inverter and MV factory test, more reliable



GRID SUPPORT

- $SCR \geq 1.02$, stable operation in extremely weak grid
- Reactive power response time < 20 ms
- Compliant with grid code



Type designation	SG4400UD-MV-20
Input (DC)	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	950 V / 980 V
MPP voltage range	950 – 1300 V
No. of independent MPP inputs	4
No. of DC inputs	20 (optional: 24/28 inputs negative grounding)
Max. PV input current	4 * 1400 A
Max. DC short-circuit current	4 * 5000 A
PV array configuration	Negative grounding or floating
Output (AC)	
AC output power	4400 kVA @ 50 °C, 5280 kVA @ 20 °C
Max. inverter output current	4 * 1155 A
Max. AC output current	152 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)
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 European efficiency	98.7 %
Transformer	
Transformer rated power	4400 kVA
Transformer max. power	5280 kVA
LV / MV voltage	0.66 kV / (20 – 35) kV
Impedance	8 % (0 – ±10 %) @ 4400 kVA
Transformer 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 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	≤ 17.5 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 °C (> 50 °C derating)
Allowable relative humidity range	0 – 100 %
Cooling method	Temperature controlled forced air cooling
Max. operating altitude	1000 m (standard) / > 1000 m (optional)
Display	LED Indicators, WLAN+WebHMI
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 (optional), L/HVRT, active & reactive power control and power ramp rate control