

# SG4400UD-MV-20

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 °C



## SMART O&M

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



## SAVED INVESTMENT

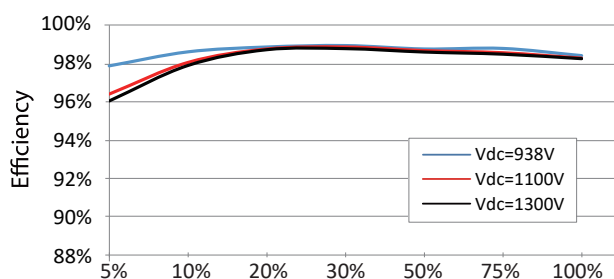
- Low transportation and installation cost due to 20-foot container design
- DC 1500V system, low system cost
- Integrated MV transformer, switchgear, and LV auxiliary power supply
- Q at night function optional



## 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

## EFFICIENCY CURVE



Normalized Output Power

| Type Designation                                        | SG4400UD-MV-20                                                                             |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------|
| <b>Input (DC)</b>                                       |                                                                                            |
| Max. PV input voltage                                   | 1500 V                                                                                     |
| Min. PV input voltage / Startup input voltage           | 938 V / 950 V                                                                              |
| MPP voltage range                                       | 938 – 1500 V                                                                               |
| No. of independent MPP inputs                           | 4                                                                                          |
| No. of DC inputs                                        | 20 (optional: 24/28 inputs negative grounding)                                             |
| Max. PV input current                                   | 4 * 1435 A                                                                                 |
| Max. DC short-circuit current                           | 4 * 5000 A                                                                                 |
| PV array configuration                                  | Negative grounding or floating                                                             |
| <b>Output (AC)</b>                                      |                                                                                            |
| 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                                        | 10 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                                                                                   |
| <b>Efficiency</b>                                       |                                                                                            |
| Inverter max. efficiency / Inverter European efficiency | 99.0 % / 98.7 %                                                                            |
| <b>Transformer</b>                                      |                                                                                            |
| Transformer rated power                                 | 4400 kVA                                                                                   |
| Transformer max. power                                  | 5280 kVA                                                                                   |
| LV / MV voltage                                         | 0.66 kV / 0.66 kV / (10 – 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                                        |
| <b>Protection &amp; Function</b>                        |                                                                                            |
| 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                                                                                   |
| <b>General Data</b>                                     |                                                                                            |
| Dimensions (W*H*D)*                                     | 6058*2896*2438 mm                                                                          |
| Weight*                                                 | ≤ 17.5 T                                                                                   |
| Degree of protection                                    | Inverter: 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 |

\*: The actual product received shall prevail.