

SES2H-2500-MV-EX

Prefabricated Inverter Substation



Features



Flexible Configuration

- Integrated inverter and booster, highly compact
- Improves space efficiency, easier installation
- Big Modular, configurable power



High Efficiency & Stability

- 1500V wide-range DC voltage
- DC side 2/1 branch
- 5MWh, 0.5C and 0.25C application



Intelligent Collaboration

- Automated peak shaving operation
- VSG / PQ / VF mode capabilities
- Islanding, black start capable



Safety & Compatibility

- With LVRT and HVRT
- 4-quadrant active and reactive power control
- Fast power response (<20ms)

MVS Product Specification

| | |
|-----------------------------------|---|
| Model | SES2H-2500-MV-EX |
| AC AND DC PARAMETER | |
| Rated Power | 2500kVA |
| AC Voltage | 10kV-33kV (Consult with Sinexcel for other voltage level) |
| AC Frequency | 50Hz |
| DC Voltage Range | 1040~1500V |
| Number of DC BUS | 1/2 (Based on PCS branches) |
| Maximum Current per Branch | 2404A/1202A |
| THDi/THDu | <3% |
| LC AND AUXILIARY EQUIPMENT | |
| Aux. Transformer | 150kVA, 690V\400V, 50Hz, 3P4W (Consult with Sinexcel for Customized) |
| UPS | Up to 2kVA (1h Standard) (Consult with Sinexcel for more capacity) |
| Meter | Meters for Aux. Power Consumption and PCS |
| Communication Method | RS485, CAN, TCP/IP (via switch) |
| Cooling Method | Temperature controlled forced air cooling |
| TRANSFORMER | |
| Capacity | 2650kVA @45°C Based on PCS rated power |
| Transformer Type | Oil-immersed transformer |
| Transformer Protection | Protection relay for pressure, temperature (two levels) and gas. |
| Winding vector group | Dy11 (Consult with Sinexcel for customized) |
| MV AC Voltage Level | 12/24/36kV (Consult with Sinexcel for other voltage level) |
| LV AC Voltage | 690V (Consult with Sinexcel for other voltage level) |
| AC Frequency | 50Hz |
| Efficiency | Tier 2 (From EU548) |
| Transformer Impedance | 7%~8% |
| Cooling Type | ONAN (Based on project requirement) |
| Insulation Level | Class A |

MVS Product Specification

| CONNECTION AND PROTECTION | |
|---|--|
| Switchgear Configuration | DeV\CV\CCV (Consult with Sinexcel for customized) |
| Switchgear Protection | Medium-voltage vacuum circuit breaker(V) |
| Internal Arc Classification Medium-voltage Control Room (according to IEC 62271-202) | 20kA 3s |
| LV-MV Connections | Copper bar or cable |
| LV Protection | Motorized CB in PCS |
| MV Protection | Microcomputer protection |
| DC Protection | Circuit Breaker and Fuses |
| GENERAL PARAMETER | |
| Size (W*H*D) | 6058*2896*2438 mm |
| Weight | ≤20t |
| Enclosure | IP55 for Overall (IP68 for Transformer; IP65 for PCS) |
| Corrosion Prevention | C5 (Only applicable to external mechanical part) |
| PCS cooling Method | Air Cooling |
| Operating Temp. | -40 °C to 60 °C (De-rating over 45 °C) |
| Storage Temp. | -50 °C to 70 °C |
| Operating Humidity | 0~95% (No condensing) |
| Storage Humidity | 0~100%(No condensing) |
| Max Elevation | Standard 1000 m (Consult with Sinexcel for other elevation) |
| Inverter Max. Efficiency | 98.4% |
| Voltage Regulation Accuracy | ≤±1% |
| Current Regulation Accuracy | ≤±1% |
| CERTIFICATION | |
| Compliance | IEC62477/IEC61000/G99/VDE4110/ EN50549-2/IEC60076/IEC62271 (Consult with Sinexcel for more certification information) |