

SES4H-5160/6900-MV-EX

Prefabricated Inverter Substation



Features

Flexible Configuration

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

High Efficiency & Stability

- 1500V wide-range DC voltage
- Multi-branch DC design prevents battery looping currents

Extensive Use

- With active/reactive four-quadrant adjustment function
- VSG / PQ / VF mode capabilities
- Deployment on demand. Peak shaving and local automatic operation

Safety & Compatibility

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

MVS Product Specification

Model	SES4H-5160/6900-MV-EX	
AC AND DC PARAMTER		
Rated AC Power	N*215kW@45°C, N*129kW@50°C, shut down@60°C (N for number of modules, 20 ~32)	
Maximum Power	110% * Rated Power, 2min (≤45°C)	
AC Voltage	10kV-33kV (Consult with Sinexcel for other voltage level)	
AC Frequency	50Hz	
DC Voltage Range	1000~1500V (1070~1500V for full load discharging)	
Number of DC BUS	4/32	
Max. DC Current per Branch	1612A/201A	
THDi/THDu	<3%	
LC AND AUXILIARY EQUIPMENT		
Aux. Transformer	50kVA, 690V\400V, 50Hz, 3P4W	
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	5200kVA @45°C Based on PCS rated power	6900kVA@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	Dy11y11 (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	De\CV\CCV\VMV(Customized) (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)	40ft: 12192*2896*2438 mm 45ft:13716*2896*2438mm
PCS Number	Optional: 2/3/4
Weight	≤30t
Enclosure	IP54 for Overall
Corrosion Prevention	C5 (Only applicable to external mechanical part)
Operating Temp.	-25 °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	98.5%
Voltage Regulation Accuracy	≤±1%
Current Regulation Accuracy	≤±1%
CERTIFICATION	
Compliance	IEC62477/IEC61000/G99/VDE4110/VDE4120/EN50549-2 (Consult with Sinexcel for more certification information)