



NEPCSH-5000-MV Power Conversion System

Applications

- Renewable power plant integration (ramp rate control, energy shifting)
- Grid ancillary control (frequency regulation, peak shaving)
- Distributed network and micro-grid (peak shaving, autonomous operation)

Great Performance

- Advanced three-level technology, max. efficiency reaches 98.8%
- High DC voltage up to 1500V
- Battery charge & dis-charge management and black start function integrated

Grid Support

- Compliant with EN IEC 62477-1, IEC 61000-6- 2/4, EN 50549-1/2
- L/HVRT, L/HFRT, specified power factor control and reactive power support

Easy O&M

- Integrated monitoring function and fast trouble shooting
- Integrated auxiliary power supply panels for external devices
- Low transportation and installation cost

NEPCSH-5000-MV

PCS DC-Side	
DC Voltage Range	1181 ~ 1500 V
Max. DC Current	2328 A*2
No. of DC Inputs	2
AC-Side (Grid)	
AC Output Power	5000 kVA @ 45 °C / 5500 kVA @ 30 °C
Converter Port Max. AC Output Current	1804 A*2 @ 45 °C / 1984.6 A * 2 @ 30 °C
Overload Capability (at 30°C)	110% (Long-Term) ,120% (60 Seconds)
Converter Port Nominal AC Voltage	800 V
Converter Port AC Voltage Range	720 ~ 840 V
Nominal Grid Frequency/ Grid Frequency Range	50 Hz / 45 ~ 55 Hz, 60 Hz / 55 ~ 65 Hz
Feed-in Phases / AC Connection	3 / 3
AC-Side (Off-Grid)	
Converter Port Nominal AC Voltage	800 V
Converter Port AC Voltage Range	720 ~ 840 V
Nominal Frequency / Frequency Range	50 Hz / 45 ~ 55 Hz, 60 Hz / 55 ~ 65 Hz
Efficiency	
Converter Max. Efficiency	Max. Efficiency 98.8 % / CEC Efficiency 98.5%
Transformer	
Nominal Power	5000 kVA
Max. Power	5500 kVA
LV/MV Voltage	0.8 kV / 11 ~ 35 kV
Transformer Vector	Dy11
Transformer Cooling Type	ONAN
Oil type	Oil
General Parameters	
Dimensions (W*H*D)	6058*2896*2438 mm
Weight	19000 kg
Degree of Protection	IP54 (Converter: IP21)
Operating Ambient Temperature Range	-35 to 60°C (> 45°C Derating)
Allowable Relative Humidity Range	0~95 % (Non-Condensing)
Cooling Method	Temperature Controlled Forced Air Cooling
Max. Operating Altitude	4000 m (> 2000 m Derating)
Display	Touch Screen
Communication	Modbus RTU, Modbus TCP/IP, CAN, IEC 104, IEC 61850
Compliance	IEC 62477-1; IEC 61000-6-4; IEC-61000-6-2; NTSYCS:2020
Grid Support	L/HVRT, FRT, Active & Reactive Power Control and Power Ramp-rate Control, Volt-var, Volt-watt, Frequency-watt