

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)

Grid Support

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

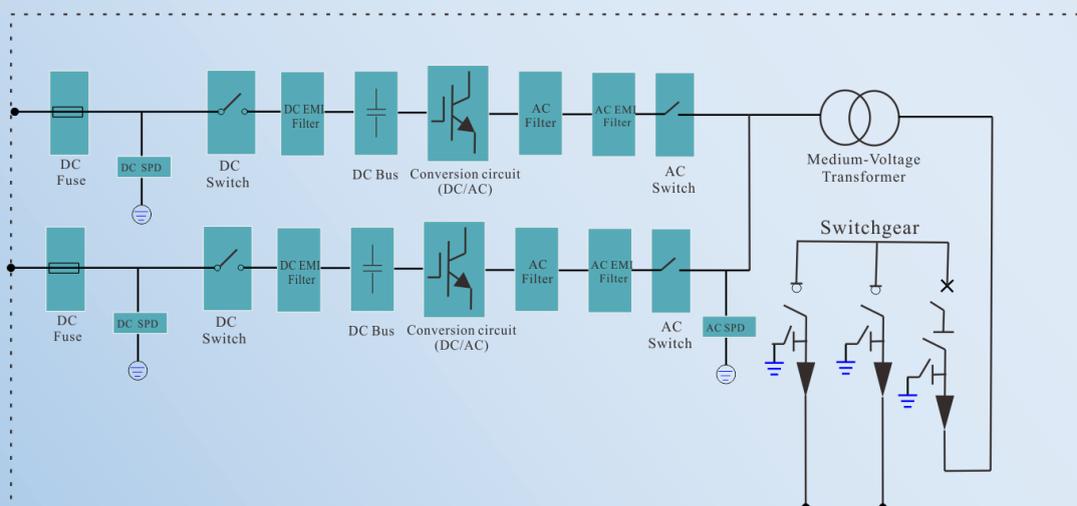
Great Performance

- 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

Easy O&M

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

Circuit Diagram.



Type Designation	NEPCSH-5000-MV IEC
PCS DC-side	
Max. DC Voltage	1500V
Min. DC Voltage	1181V
DC Voltage Range	1181~1500V
Max. DC Current	2328A*2
No. of DC Inputs	2
AC-side (Grid)	
AC Output Power	5000kVA@40°C/5500kVA@30°C
Converter Port Max. AC Output Current	1804A*2@40°C/1984.6A*2@30 °C
Overload capability (at 30°C)	110% (long-term) ,120% (60 seconds)
Converter Port Nominal AC Voltage	800V
Converter Port AC Voltage Range	720 ~ 840V
Nominal Grid Frequency/Grid Frequency Range	50Hz/45~55Hz,60Hz/55~65Hz
Harmonic (THD)	< 3%(at nominal power)
DC voltage component	< 0.5 % Un (linear balance load)
Power Factor at Nominal Power / Adjustable Power Factor	>0.99/0.99 leading~0.99 lagging
Adjustable Reactive Power	-100%~100%
Feed-in Phases/AC Connection	3/3
AC-side (Off-Grid)	
Converter Port Nominal AC Voltage	800V
Converter Port AC Voltage Range	720 ~ 840V
AC Voltage Distortion	<3% (linear load)
DC Voltage Component	<0.5%Un (linear balance load)
Unbalance Load Capacity	100% ThdU<1% (under linear load)
Nominal Frequency/Frequency Range	50Hz/45~55Hz,60Hz/55~65Hz
Efficiency	
Converter Max. Efficiency	Max. efficiency 98.8 %/CEC Efficiency 98.5%
Transformer	
Nominal Power	5000 kVA
Max. Power	5500 kVA
LV/MV Voltage	0.8kV/11~35kV
Transformer vector	Dy11
Transformer cooling type	ONAN
Oil type	Oil
Protection	
DC Input Protection	Load break switch + fuse
Converter Output Protection	Circuit breaker
AC Output Protection	Circuit breaker
Over Voltage Category	II(DC)/ III (AC Main)
Grid Monitoring/Ground Fault Monitoring	Yes/Yes
Insulation Monitoring	Yes
Overheat Protection	Yes

General Parameters	
Dimensions (W*H*D)	6058*2896*2438mm
Weight	19000 kg
Degree of Protection	IP54 (Converter: IP21)
Operating Ambient Temperature Range	-35 to 60°C (> 40°C derating)
Allowable Relative Humidity Range	0~95 % (non-condensing)
Cooling Method	Temperature controlled forced air cooling
Max. Operating Altitude	4000m (>2000m derating)
Display	Touch screen
Communication	Modbus RTU, Modbus TCP/IP, CAN, IEC 104, IEC61850
Compliance	IEC62477-1; IEC61000-6-4; IEC-61000-6-2; NTSYCS:2020
Grid Support	L/HVRT, FRT, active & reactive power control and power ramprate control, Volt-var, Volt-watt, Frequency-watt

*Subject to actual delivery.