



PCS-9567MV-5000-V2.5

Integrated Medium Voltage Skid



Designed for Grid Reliability and Resilience

- Full four-quadrant operation with bidirectional power conversion system
- State of the art three-level technology with high conversion efficiency.
- Full power operation at 1500V and wide DC voltage operation range.
- Suitable for most local standards and severe environmental conditions.
- Endured extensive quality, safety and reliability.

Investment with Higher Returns

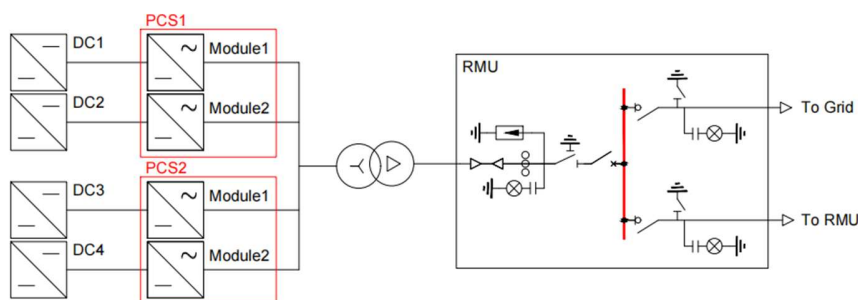
- Compressed construction lead-times through factory integrated solution.
- Reduced off-loading, on-site labor expense and transportation cost.
- Enhanced system reliability owing to reliable and qualified designs.

Easy to Install and Service

- Fully monitored solution for online analysis and fast troubleshooting.
- Convenient modular design provides easy access to all components for maintenance purposes.
- Standard size container for ease of shipment and installation worldwide.
- Pre-assembled solution, configured & tested to reduce on-site labor and project duration.

Product Applications

- Typical applications - energy shifting, frequency regulation, peak shaving
- Grid forming control, reactive power control, L/HVRT, L/HFRT, soft start/stop, and specified power factor control.
- Compliant with international standard, CE, VDE, ISO, EN etc.
- Multiple communication interfaces such as CAN, RS485 and Ethernet



MV SKID GENERAL	
Transformer	
Rated Power (kVA)	5000 [•] / 4000 [○]
Transformer Model	Oil type ^[1]
Transformer Vector	Dy11
Protection Level	IP54
Cooling Method	ONAN [•] / KNAN [○]
Temperature Rise	60K (Top Oil) 65K (Winding) @40°C
Oil Retention Tank	None [•] / Galvanized steel [○] ^[2]
Winding Material	Aluminum [•] / Copper [○]
Transformer Oil	25# /45# mineral oil [•] / Natural ester insulation oil [○]
Transformer Efficiency	IEC standard [•] / IEC Tier-2 [○]
MV Operating Voltage Range (kV)	6.6~33±5%
Nominal Frequency (Hz)	50 / 60
Altitude (m)	<1000 [•] / >1000 [○]
Switchgear	
Switchgear Type	Ring Main Unit, CCV ^[3]
Rated voltage (kV)	12/24/36
Insulating medium	SF6 [•] / SF6 Free (≤24kV) [○]
Rated frequency (Hz)	50/60
Enclosure protection degree	IP3X
Gas tank protection degree	IP67
Gas leakage rate per year	≤0.1%
Rated Operating Current (A)	630
Switchgear Short Circuit Rating (kA/s)	20kA/3s [•] / 25kA/3s [○]
Switchgear IAC (kA/s)	A FL 20kA 1S
PCS * 2	
DC Input Voltage Range (V)	1050~1500
Max. DC input Current (A)	1310*2
DC Voltage Ripple	< 2%
DC Current Ripple	< 3%
LV Nominal Operating Voltage (V)	690
LV Operating Voltage Range (V)	621~759
PCS Efficiency	98.7% ^[4]
Max. AC Output Current (A)	1151*2
Total Harmonic Distortion Rate	< 3%
Reactive Power Compensation	Four quadrant operation
Nominal Output Power (kVA)	1250*2
Max. AC Power (kVA)	1375*2
Power Factor Range	>0.99

Technical Parameters | NR MEDIUM VOLTAGE SKID - PCS-9567MV-5000-V2.5 DATASHEET

Nominal Frequency (Hz)	50 / 60 Hz
Operating Frequency (Hz)	45~55 / 55~65 Hz
Connection Phases	Three-phase-three-wire
Protection	
DC Input Protection	Disconnecter + Fuse inside of inverter
AC Output Protection	Motorized Circuit breaker inside of Inverter
DC Overvoltage Protection	Surge arrester, type II [●] / I+II [○]
AC Overvoltage Protection	Surge arrester, type II [●] / I+II [○]
Ground Fault Protection	DC IMD [●] / DC IMD+ AC IMD [○]
Transformer Protection	Protection relay for pressure, temperature, gassing
Fire Extinguishing System	Smoke detector sensor (dry contact)
Communication Interface	
Communication Method	CAN / RS485 / RJ45 / Optical fiber
Supported Protocol	CAN / Modbus / IEC60870-103 / IEC61850
Ethernet Switch Qty	One for standard ¹⁵
UPS	1kVA for 15min [●] / 1h [○] / 2h [○]
Skid General	
Dimensions (W*H*D)(mm)	6058*2896*2438 (20ft)
Weight (kg)	24300
Protection Level	IP54
Anti-corrosion Grade	C3 [●] / C4 [○] / C5 [○] ¹⁶
Operating Temperature (°C)	-35~60, >45 derating
Storage Temperature (°C)	-40~70
Maximum Altitude (above sea level) (m)	5000, ≥3000 derating ¹⁷
Environment Humidity	0~ 100%, No condensation
Type of Ventilation	Nature air cooling [●] / Forced air cooling [○]
Auxiliary Power Consumption (kVA)	11.4 (peak)
Auxiliary Transformer (kVA)	Without

Notes:

● Standard ○ Optional

- 1). If dry transformer is required, please contact with NR for more information
- 2). Standard for no supply of oil retention tank. If required to be integrated with PCS skid, please contact with NR
- 3). If other type of switchgear is required, please contact with NR for more information
- 4). Typical discharge value for each PCS running at DC 1200V under IEC62933-2-1 environment condition
- 5). If more ethernet switch is required, please contact with NR for more information
- 6). If project is located in high salinity coastal areas, please contact with NR for more information
- 7). When altitude is between 3000~4000m, the system LV AV voltage shall be less than 600V; When altitude is between 4000~4500m, the system LV AC voltage shall be less than 550V; When altitude is between 4500~6000m, please contact with NR for more information.