

Centralized Converter Boost System

2.5 / 5 MW |



What is the Centralized Converter Boost System? The PCS-MV-C is a skid-mounted 20 ft prefab converter station that integrates centralized 1,500 V DC converters (2 or 4 DC inputs, up to 1,400 A × 4) with a 2,500 / 2,750 kVA or 5,000 / 5,500 kVA oil-immersed transformer stepping 690 V up to 20 kV (10–35 kV optional). The IP54 MV station and IP65 PCS cabinets run from –20 °C to +40 °C at up to 4,000 m with intelligent forced-air cooling.

2.5 / 5 MW

Rated Power

1,500 V

Max DC Voltage

10–35 kV

MV Output Range

IP54 / IP65

Protection Class

KEY FEATURES

- ✓ Grid-Forming Ready
PQ and VSG operating modes with LVRT / HVRT and strong grid adaptability for modern power plants.
- ✓ All-in-One MV Station
PCS, oil-immersed transformer and MV switchgear pre-integrated in a 20 ft prefab container.
- ✓ Extreme-Environment Ready
–20 °C to +40 °C operation (derating above), 4,000 m altitude, IP54 MV station and IP65 PCS cabinets.
- ✓ Flexible Medium Voltage
MV output configurable from 10 kV to 35 kV to match local grid codes.

TECHNICAL SPECIFICATION

Parameter	2.5MW PCS-MV-C	5MW PCS-MV-C
DC Input		
Max DC Voltage	1,500 V	
DC Voltage Range	1,000 ~ 1,500 V	
No. of DC Inputs	2	4
Max DC Current	1,400 A × 2	1,400 A × 4
AC Output — PCS		
Rated Power	2,500 kVA @ 30 °C	5,000 kVA @ 30 °C
Max Power	2,750 kVA @ 40 °C	5,500 kVA @ 40 °C
Rated AC Voltage	690 V, 3W	
Max AC Current	2,092 A @ 30 °C 2,301 A @ 40 °C	4,184 A @ 30 °C 4,602 A @ 40 °C
Rated AC Frequency	50 Hz	
AC Frequency Range	45 ~ 55 Hz	
THDi	< 3% @ Pn	
AC Power Factor	–1 (Leading) ~ 1 (Lagging)	
MV Transformer		
Type	Oil-immersed (mineral oil)	
Rated Power	2,500 / 2,750 kVA @ 30/40 °C	5,000 / 5,500 kVA @ 30/40 °C

Parameter	2.5MW PCS-MV-C	5MW PCS-MV-C
Voltage Ratio	0.69 kV / 20 kV (10 ~ 35 kV optional)	
Vector Group	Dyn11	
Cooling	ONAN / KNAN	
General Data		
Protection Class	IP54 (MV station) / IP65 (PCS)	
Working Temperature	-20 °C ~ +40 °C (derating above)	
Humidity	0 ~ 100%	
Max Altitude	4,000 m (derating above 2,000 m)	
PCS Cooling	Intelligent forced air cooling	
Communication	RS485 / Ethernet / CAN	
Prefab Container	20 ft	
Weight	~15 t	~23 t
Standards		
Design & Grid	IEC 62477-1 / IEC 62920 / IEC 61727 / IEC 62116 / IEC 62271 series / IEC 60076 / EN 50549-2-1 / VDE 4110-4120	

Models 2.5MW / 5MW PCS-MV-C — MV output 10–35 kV configurable; full datasheet available on request.
Specifications are subject to change without notice.