

2.0 / 2.4 MW Battery Storage Inverter Skid



CPS PSW2M-US / PSW2.4M-US

CPS is excited to introduce a turnkey battery storage inverter skid for utility-scale energy storage systems. The battery storage skid is available in two standardized configurations: 2 MW and 2.4 MW, achieved by incorporating 10 and 12 units of CPS's 200 kW string PCS inverters (CPS ECB200KTL/US-800), respectively. The battery storage inverter skid is compatible with CPS's 5 MWh liquid-cooling BESS (CPS ES-5016KWH-US). This solution is characterized by its exceptional integration, encompassing PCS, low voltage BOS and switchgear, auxiliary power supply, communication gateways, and a medium voltage transformer, all tailored for utility ESS applications. The design embodies a modular PCS structure, enabling string-level control and monitoring of battery systems. This innovative approach ensures heightened adaptability, efficiency, and operational continuity for utility applications.

Key Features

- Wide DC voltage range suitable for various batteries
- Full four-quadrant operation
- New and old battery racks can be integrated
- Configurable sizes: 2 MW or 2.4 MW
- Fully integrated with PCS, BOS, auxiliary power supply, medium voltage transformer into a 20 ft container frame
- Rack-level control and management for ESS, improved availability and efficiency
- Modular design, reducing O&M costs, easy to expand
- Various smart grid features included
- Outdoor design, NEMA 3R rated for application in different environments

Product Name	CPS PSW2M-US	CPS PSW2.4M-US
DC Input		
Max. DC input voltage	1500 V	
Min. DC voltage	875 V	
DC voltage range for nominal power	950-1500 V	
Number of CPS ECB200KTL/US-800 PCS units	10	12
Number of DC inputs	10	12
AC Output		
Rated power	2000 kVA / 2000 kW	2400 kVA / 2400 kW
Rated grid frequency	60 Hz	
Medium voltage rating	12.47-34.5 kV	
Vector group	Dy1, Dy11, Yd1, Yd11, Yny	
Cooling class	KNAN	
Insulating fluid	Biodegradable, FR3 type or equivalent	
Environment		
Protection degree	NEMA 4X for ECB200KTL/US-800 PCS NEMA 3R for the MV transformer	
Cooling	Forced air cooling	
Operating temperature range	-22°F to 140°F / -30°C to 60°C)	
Storage temperature range	-40°F to 158°F / -40°C to 70°C)	
Operating humidity	0-100%	
Display and Communication		
Communication	RS485 / Ethernet / CAN	
Mechanical		
Dimensions (W × H × D)	19.88 × 8.50 × 8.00 ft (6058 × 2591 × 2438 mm)	
Weight	30864.72 lb / 14000 kg	33069.34 lb / 15000 kg
Safety		
Certifications and standards	UL1741, CSA-22.2 NO.107.1-16, IEEE 1547-2018, FCC Part 15	
Selectable grid standard	IEEE 1547-2018	
Smart-grid features	Volt-Ride Thru, Freq-Ride Thru, Ramp-Rate, PF, Volt-VAR, Freq-Watt, Volt-Watt	
Protective Functions		
Black start	Yes	
Overvoltage protection	Yes	
Ground fault monitoring	Yes	