

2/2.4MW String PCS Station



CPS PSW2M-US / PSW2.4M-US

CPS is excited to introduce a turnkey PCS Station for utility energy storage systems. The new PCS Station presents two standardized configurations: 2MW and 2.4MW, achieved by incorporating 10 and 12 units of CPS's 200kW string PCS inverters (CPS ECB200KTL/US-800), respectively. The 2MW configuration is compatible with CPS's 3.4MWh air-cooling BESS (CPS ES-3404KWH-US), and the 2.4MW configuration is compatible with CPS's new 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, empowering 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
- Fully integrated solution with PCS, low voltage BOS, auxiliary power supply, medium voltage transformer into a 20ft container.
- Configurable sizes: 2MW or 2.4MW
- Rack-level control and management for ESS, improved availability and efficiency.
- Modular design, reducing O&M costs, easy to expand
- Outdoor design, NEMA 3R rated for application in different environments
- Various smart grid features included

Model Name	CPS PSW2M-US	CPS PSW2.4M-US
DC Input		
Max. DC Input Voltage	1500V	
Min. DC Voltage	875V	
DC Voltage Range for Nominal Power	950-1500V	
Number of CPS ECB200KTL/US-800 PCS Units:	10	12
Number of DC Inputs	10	12
AC Output		
Rated Power	2000kVA / 2000kW	2400kVA / 2400kW
Rated Grid Frequency	60Hz	
Medium Voltage Rating	34.5kV	
Vector Group	Dy1 , Dy11	
Cooling Class	KNAN	
Insulating Fluid	Biodegradable Oil, FR3 Type or Equivalent	
Environment		
Protection Degree	NEMA 3R	
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%	
Operating Altitude	6562ft/2000m	
Display and Communication		
Communication	RS485 / Ethernet / CAN	
Modbus Data Mapping	CPS	
Mechanical		
Dimensions (WxHxD)	6058×2591×2438mm	
Weight	14000kg	15000kg
Safety		
Certifications and Standards	UL1741, CSA-22.2 NO.107.1-16, IEEE1547-2018, FCC Part 15	
Selectable grid standard	IEEE 1547-2018, IEEE 1547.1-2010	
Smart-grid features	Volt-Ride Thru, Freq-Ride Thru, Ramp-Rate, PF, Volt-VAR, Freq-Watt, Volt-Watt	
Protective Functions		
Black start	Yes	
Reverse polarity protection	Yes	
Overvoltage protection	Yes	
Grid monitoring	Yes	
Ground fault monitoring	Yes	
Active / reactive power response time	< 100ms	