

125/250 kW Commercial Energy Storage for North America



CPS Commercial Energy Storage System

CPS is excited to introduce a turnkey commercial energy storage system (ESS) solution to the North American market.

The new CPS ESS solution integrates 125/250 kW two-hour energy storage building blocks that can be easily expanded to meet any C&I project size. Modular design minimizes the impact of faults and their associated O&M costs. Rack-level management reduces mismatch losses between parallel battery cabinets, and also enables battery mixing and phased replacement. The CPS bi-directional power conversion system (PCS) acts as the mediator between the generation source, the grid, and the battery rack using advanced energy management system (EMS) software.

C&I Applications

- PV energy shifting and TOU optimization
- Peak shaving with demand-charge management
- Active and reactive power control for grid support service
- Zero-export control

Key Features

- Fully integrated turnkey energy storage solution
- LFP batteries with high thermal stability and high energy density
- Fully integrated fire protection system
- Smart liquid cooling systems for extended battery cycle life
- Modular design with flexible scalability
- Advanced EMS with project cash flow analysis
- Active control and management
- Full power capacity up to 45°C
- Compact cabinets with flexible layout options
- UL 9540 certified

System Model Name	CPS ES-125 kW / 279.55 kWh	CPS ES-250 kW / 559.1 kWh
PCS Cabinet Model Name	CPS ES-125 kW	CPS ES-250 kW
Battery Cabinet Model Name		O652280-E
Configurations	(1) CPS ES-125 kW + (1) O652280-E	(1) CPS ES-250 kW + (2) O652280-E
Battery Specifications		
Battery capacity	279.55 kWh	559.1 kWh
Rated voltage		998.4 V
Max charge/discharge rate		0.5 C
Rack configuration		1P312S
Operating voltage range		873-1123.2 V
Overcurrent protection		Yes
Cooling system		Liquid cooling
Battery chemistry		LFP
Electrical Specifications		
Rated AC output power	125 kW	250 kW
Maximum AC output power	125 kVA	250 kVA
Nominal grid voltage		480 Vac
Grid voltage range		422-528 Vac
Nominal grid frequency		60 Hz
Grid frequency range		57-63 Hz
Continuous AC power - charge	125 kVA	250 kVA
Continuous AC power - discharge	125 kVA	250 kVA
Maximum continuous AC current	150 A	300 A
Grid connection type		3 phase/PE/N (neutral optional)
Total harmonic distortion (THD)		<3% (IEEE 519 compliant)
Power factor		>0.99 (-1 to 1)
Maximum efficiency (PCS)		98.1%
CEC efficiency (PCS)		97.5%
AC connection		3 phase, 3 wire
Environment & Certifications		
Enclosure		PCS cabinet: NEMA 3R Battery cabinet: NEMA 3R
PCS	UL 1741-SA/SB Ed. 3, CSA-22.2 NO.107.1-16, IEEE 1547a-2014, IEEE 1547-2018, FCC PART15	
Battery	UL 1973, UL 9540A	
System	UL 9540	
Equipment Specifications		
Dimensions (W x H x D)	PCS cabinet: 29.4 x 89.7 x 50.0 in (747 x 2277.5 x 1269 mm) Battery cabinet: 51.2 x 89.8 x 51.2 in (1300 x 2280 x 1300 mm)	
Weight	PCS cabinet: 1984.2 - 2204.6 lbs (0.9 - 1 T) Battery cabinet: 6613.9 lbs (3 T)	
Lifting provisions	Forklift slots and lifting rings	
Fire suppression	Aerosol	
Operating temperature range	-13°F to 131°F / -25°C to 55°C	
Storage temperature range	-22°F to 140°F / -30°C to 60°C	
Operating altitude	≤6561.7 ft (2000 m)	
Operating humidity	0-95%, non-condensing	
Operation Parameters		
Demand charge management	Yes	
Self-consumption	Yes	
Load shifting	Yes	
Key System Components		
Bi-directional energy storage inverter	Yes	
High-voltage Lithium-ion battery	Yes	
DC disconnect (load rated)	Yes	
AC disconnect (load rated)	Yes	
Climate control system	Yes	
Integrated EMS	Yes	
Warranty		
Standard	5 years	
Extended terms	10 years	