

# 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 for commercial energy storage applications.

## 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 compatibility
- 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
PCS inverter model name	(1) ECB125KTL-M/US-480	(2) ECB125KTL-M/US-480
Battery cabinet model name	O652280-E	
Configurations	(1) CPS ES-125 kW + (1) O652280-E	(1) CPS ES-250 kW + (2) O652280-E
<b>Battery Specifications</b>		
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	
<b>Electrical Specifications</b>		
Rated AC output power	125 kW	250 kW
Max. 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
Max. continuous AC current	150 A	300 A
Grid connection type	3 phase / PE	
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	
<b>Environment &amp; Certifications</b>		
Enclosure	PCS cabinet: NEMA 3R (IP54) Battery cabinet: IP66	
PCS inverter	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, UL 1642, UN 38.3	
System	UL 9540	
<b>Equipment Specifications</b>		
Dimensions (W × H × D)	PCS cabinet: 29.8 × 89.8 × 52.4 in (757 × 2280 × 1330 mm) 279.55 kWh battery cabinet: 51.2 × 92.1 × 51.2 in (1300 × 2340 × 1300 mm)	
Weight	125/250 kW PCS cabinet: 1455 lb (0.73 T) 279.55 kWh battery cabinet: 6613.9 lb (3 T)	
Lifting provisions	Forklift slots and lifting rings	
Fire suppression	NFPA 68 compliant 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	
System monitoring	Ethernet / RS485	
<b>Key System Components</b>		
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	
<b>Warranty</b>		
Standard	3 years	
Extended terms	5 and 10 years	