

30kW, Storage Inverter for North America

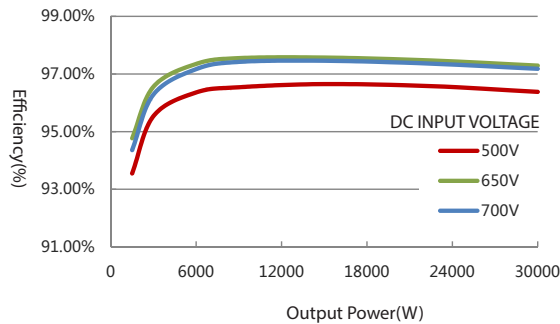
The CPS 30kW energy storage inverter is designed for use in commercial and industrial scale grid-tied energy storage systems. The inverter is optimized to meet the needs of the most demanding behind the meter energy storage applications including demand charge reduction, power quality, load shifting, and ancillary grid support services such as frequency response and voltage support. The CPS 30kW energy storage inverter is designed specifically for the North American environment and is based on the same platform as the >40,000 CPS commercial string inverters already operating on the US grid. High efficiency, parallel operation, wide operating voltages, broad temperature ranges and a NEMA 4X enclosure make this an ideal building block for any commercial or industrial energy storage application. The CPS 30kW energy storage inverters ship with touch safe fusing, monitoring, and load break AC and DC disconnect switches.



CPS ECB 30KTL-O/US

Efficiency Curve

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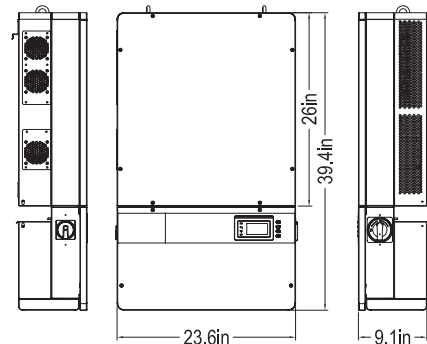
High Efficiency

- Maximum efficiency of 98% Discharge; 97.6% Charge
- 3-level topology with advanced controls
- Transformerless design

High Reliability

- "Electrolyte-free design" for long-term reliability
- Standard warranty: 5 years, extension up to 20 years
- Advanced thermal design with variable speed fans
- Ground-fault detection and interruption circuit

Dimensions



Broad Adaptability

- NEMA 4X, suitable for indoor and outdoor applications
- Utility interactive controls: Active power derating, reactive power control
- Optional CPS Flex Gateway enables remote FW upgrades
- Separate wiring box design
- Integrated load break AC and DC disconnects
- Advanced Smart-Grid features (CA Rule 21)
- 150ms response to set point commands
- Compatible with high voltage Li-Ion battery racks



Model Name	CPS ECB 30KTL-O/US
DC Input	
Nominal DC Input Power	31kW
Max. DC Input Voltage ¹	900Vdc
Nominal DC Input Voltage	650Vdc
DC Full Power Voltage Range	450~800Vdc
DC Operation Voltage Range ¹	250~900Vdc
Max. DC Input Current	70A
Number of DC Inputs	4 x 30A Fuse Holders
DC Disconnection Type	Load rated DC switch
AC Output	
Rated AC Output Power	29.99kW
Max. AC Output Power	33kVA
Rated Grid Voltage	480VAC
Grid Voltage Range ²	422-528Vac
Rated Grid Frequency	60HZ
Grid Frequency Range ²	57~63Hz
Continuous AC Power - Charge	20kW/25kVA
Continuous AC Power - Discharge	29.99kW
Maximum Continuous AC Current	40A
Grid Connection Type	3 phase/PE/N (Neutral optional)
Total Harmonic Distortion	<3%
Power Factor	>0.99 (±0.8 adjustable)
AC Disconnection Type	Load rated AC switch
DC Output	
Continuous DC Power - Charge	20kW/25kVA
Output Voltage Range	0~900V
System	
Topology	Transformerless
Max. Efficiency	97.5%
CEC Efficiency	97.0%
Environment	
Protection Degree	NEMA 4X
Cooling	Variable speed cooling fans
Operating Temperature Range	-22°F to +140°F/- 30°C to +60°C (derating from +113°F/+45°C)
Storage Temperature Range	-40°F to +158°F/-40°C to +70°C
Operating Humidity	0-95%, non-condensing
Operating Altitude	13123.4ft/4000m (derating from 6561.7ft/2000m)
Display and Communication	
User Interface and Display	LCD+LED
Communication	Modbus RS485 and Ethernet XML HTTPS
Modbus Data Mapping	CPS
Mechanical	
Dimensions (WxHxD)	600×1000×230mm
Weight	Inverter:122lbs/55kg; Wirebox:20lbs/9kg
AC Termination	Screw Clamp Terminal Block (Wire range: #8 - 1AWG CU, #6- 1AWG AL)
DC Termination	Screw Clamp Terminal Block (Wire range: #4- 1AWG CU, #3- 1AWG AL)
Safety	
Safety and EMC Standard	UL1741:2010, IEEE1547; FCC PART15
Grid Standard and SRD	IEEE 1547-2003 (R2008), IEEE 1547.1-2005(R2011), Rule 21
Warranty	
Standard	5 years
Extended Terms	Up to 20 years

1) Exceeding the Max. DC Input Voltage may cause permanent damage to the equipment.

2) The "Output Voltage Range" and "Output Frequency Range" may differ according to the specific grid standard.