

CPS-2500 Energy Storage Inverter

Industry-Leading Power Density, Flexibility, and Response Time

Featuring a highly efficient three level topology, the CPS-2500 inverter is purpose-built for energy storage applications, providing the perfect balance of performance, reliability, and cost-effectiveness.

The CPS-2500 is a 1169kVA to 2672kVA bidirectional four quadrant capable converter. Available in outdoor-rated configurations, units can be paralleled for project size scaling to meet the needs of any grid-tied or microgrid application.

Capable of connecting to an 800VAC 3 phase grid connection, the CPS-2500 offers industry-leading power density and efficiency. The CPS-2500 allows DC input configuration flexibility to enable large duration battery connections or reduce balance of system costs through input consolidation.

The CPS-2500 inverter contains all required protective features, including an AC output breaker and DC pre-charge. This creates a cost savings compared to other inverters that require additional items for battery integration.



System Advantages

- Seamless transfer from grid-tied to stand-alone mode with patented Dynamic Transfer feature
- Scalable to any grid-tied or microgrid application with paralleled units
- Cost savings by eliminating additional purchase of protective features
- Certified to UL 1741 Ed. 3, including SB smart inverter requirements

Key Technologies

- Islanded Operation (UF Mode)
- Dynamic Transfer
- Black Start (In-Rush Current Handling in UF Mode)
- Frequency Compensation Mode (F-Comp)
- VAR Compensation Mode (E-Comp)
- AC Current Limiting
- LVRT with Active Current Injection
- Multiple Parallel Inverter Microgrid Mode

TECHNICAL SPECIFICATIONS

Electrical

AC Input Voltage:	800V _{AC} / 690V _{AC} / 660V _{AC} / 630V _{AC} / 600V _{AC} / 540V _{AC} / 480V _{AC} / 415V _{AC} / 350V _{AC}
Grid Frequency:	60 Hz
Maximum Apparent Power:	2672 kVA (@ 800V _{AC}) 2304 kVA (@ 690V _{AC}) 2204 kVA (@ 660V _{AC}) 2104 kVA (@ 630V _{AC}) 2004 kVA (@ 600V _{AC}) 1803 kVA (@ 540V _{AC}) 1603 kVA (@ 480V _{AC}) 1386 kVA (@ 415V _{AC}) 1169 kVA (@ 350V _{AC})
Maximum Real Power:	2672 KW (@ 800V _{AC}) 2304 KW (@ 690V _{AC}) 2204 KW (@ 660V _{AC}) 2104 KW (@ 630V _{AC}) 2004 KW (@ 600V _{AC}) 1803 KW (@ 540V _{AC}) 1603 KW (@ 480V _{AC}) 1386 KW (@ 415V _{AC}) 1169 KW (@ 350V _{AC})
Maximum AC Current:	1928A _{RMS}
DC Voltage Range:	511-1500V _{DC} (@350-800V _{AC})
Maximum DC Current:	2340A _{DC}
Power Factor:	Four Quadrant
Current Harmonics:	IEEE 1547 Compliant, <5% TDD
Maximum Efficiency:	98.58 @1500V _{DC} & 98.70 @1280V _{DC}

Environmental

Operating Temp:	-30 to +60°C, De-rated above +45°C
Max Elevation:	1000 Meters Full Power Up to 3000 Meters with Derating
Cooling:	Forced Air Cooled
Enclosure:	NEMA 3R/IP 54
Dimensions (HxWxD):	79.72" x 85.04" x 43.3"
Weight:	3,970 lbs

Certifications & Standards Compliance

UL1741 Ed. 3
IEEE 1547
CSA 22.2 #107.1
IEEE 519

Hardware Protections

AC Breaker with Shunt Trip
AC Surge Protection
DC Input Fuses
DC Pre-Charge

Software Protections

Battery Voltage and Current Curtail Limits to Protect Battery
AC Current Limiting Pending
DC Over/Under Voltage, Over Current Faults
AC Over/Under Voltage, Over/Under Frequency, Over Current Faults
Anti-islanding Protection (Open Phase at Inverter Terminals)
Temperature Monitoring and Protective Power Curtailment

