

CPS-1250/CPS-2500 Energy Storage Inverters

Industry-Leading Power Density and Configuration Flexibility

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

The CPS-1250 and CPS-2500 are bidirectional four quadrant capable converters. 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-1250 and CPS-2500 offer 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 inverters contain 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
- 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

CPS-2500 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:	-35 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



CPS-1 250 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:	1336 kVA (@ 800V _{AC}) 1152 kVA (@ 690V _{AC}) 1102 kVA (@ 660V _{AC}) 1052 kVA (@ 630V _{AC}) 1002 kVA (@ 600V _{AC}) 902 kVA (@ 540V _{AC}) 802 kVA (@ 480V _{AC}) 693 kVA (@ 415V _{AC}) 585 kVA (@ 350V _{AC})
Maximum Real Power:	1336 KW (@ 800V _{AC}) 1152 KW (@ 690V _{AC}) 1102 KW (@ 660V _{AC}) 1052 KW (@ 630V _{AC}) 1002 KW (@ 600V _{AC}) 902 KW (@ 540V _{AC}) 802 KW (@ 480V _{AC}) 693 KW (@ 415V _{AC}) 585 KW (@ 350V _{AC})
Maximum AC Current:	964ARMS
DC Voltage Range:	511-1500V _{DC} (@350-800V _{AC})
Maximum DC Current:	1170 _{ADC}
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 De-rating
Cooling:	Forced Air Cooled
Enclosure:	NEMA 3R/IP 54
Dimensions (HxWxD):	79.72" x 49.0" x 43.3"
Weight:	1,980lbs

Certifications & Standards Compliance

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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
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