

**CPS Energy Storage Inverter**

# The world's most advanced utility-scale energy storage inverter

Featuring a highly-efficient three-level topology, the CPS-3000 and CPS-1500 inverters are designed for four-quadrant energy storage applications and provide the perfect balance of performance, reliability, and cost effectiveness.

The CPS-3000 is a 3,000kVA, outdoor-rated unit that can be paralleled for project size scaling. It consists of two 1,500kVA power blocks. The CPS-1500 is available in both indoor and outdoor configurations, and likewise is parallelable to meet the needs of any grid-tied or microgrid application. Outdoor-rated CPS inverter models are enclosed in a NEMA 3R container that can be easily moved and allows for placement on gravel or concrete pylons for cost-effective installation.

The CPS-3000 and CPS-1500 inverters contain all required protective features, including an AC output breaker and DC disconnect switch. This creates a cost savings compared to other inverters that require additional add-on items needed for battery integration. In addition, our patented Dynamic Transfer™ feature monitors grid stability and will disconnect and transition to stand-alone mode if a disturbance is detected.



## Key Technologies

- Islanded Operation (UF Mode)
- Dynamic Transfer
- Black Start
- Frequency Compensation Mode (F-Comp)
- Volt-VAR Compensation Mode (E-Comp)
- AC Current Limiting (In-Rush Current Handling in UF Mode)

## TECHNICAL SPECIFICATIONS

### CPS-1500

#### Electrical

AC Input Voltage:	350V <sub>AC</sub> / 480V <sub>AC</sub> / 600V <sub>AC</sub>
Grid Frequency:	60 Hz
Maximum Apparent Power:	875kVA (@350V <sub>AC</sub> ) 1200kVA (@480V <sub>AC</sub> ) 1500kVA (@600V <sub>AC</sub> )
Maximum Real Power:	875kW (@350V <sub>AC</sub> ) 1200kW (@480V <sub>AC</sub> ) 1500kW (@600V <sub>AC</sub> )
Maximum AC Current:	1444 A <sub>RMS</sub>
DC Voltage Range:	550=1500V <sub>DC</sub> (@350V <sub>AC</sub> ) 740-1500V <sub>DC</sub> (@480V <sub>AC</sub> ) 900-1500V <sub>DC</sub> (@600V <sub>AC</sub> )
Maximum DC Current:	1720A <sub>DC</sub>
Power Factor:	0 – 1.00 Leading or Lagging
Current Harmonics:	IEEE 1547 Compliant, <5% TDD
Maximum Efficiency:	98.5%
CEC Efficiency:	97%

#### 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 1/IP 20 (Indoor) NEMA 3R/IP 54 (Outdoor)
Dimensions (HxWxD):	81" x 55" x 33" (Indoor) 102" x 96" x 118" (Outdoor)
Weight:	3,080 lbs (Indoor) 7,920 lbs (Outdoor)

#### Certifications & Standards Compliance

UL 1741 SA	CSA 22.2 #107.1
IEEE 1547	IEEE 519

#### Hardware Protections

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

#### 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-1500 Indoor

## TECHNICAL SPECIFICATIONS

### CPS-3000

#### Electrical

AC Input Voltage:	350V <sub>AC</sub> / 480V <sub>AC</sub> / 600V <sub>AC</sub>
Grid Frequency:	60 Hz
Maximum Apparent Power:	1750kVA (@350V <sub>AC</sub> ) 2400kVA (@480V <sub>AC</sub> ) 3000kVA (@600V <sub>AC</sub> )
Maximum Real Power:	1750kW (@350V <sub>AC</sub> ) 2400kW (@480V <sub>AC</sub> ) 3000kW (@600V <sub>AC</sub> )
Maximum AC Current:	1444 A <sub>RMS</sub> x 2
DC Voltage Range:	550=1500V <sub>DC</sub> (@350V <sub>AC</sub> ) 740-1500V <sub>DC</sub> (@480V <sub>AC</sub> ) 900-1500V <sub>DC</sub> (@600V <sub>AC</sub> )
Maximum DC Current:	1720A <sub>DC</sub> x 2
Power Factor:	0 – 1.00 Leading or Lagging
Current Harmonics:	IEEE 1547 Compliant, <5% TDD
Maximum Efficiency:	98.5%
CEC Efficiency:	97%

#### 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):	102" x 96" x 118"
Weight:	11,000 lbs

#### Certifications & Standards Compliance

UL 1741 SA	CSA 22.2 #107.1
IEEE 1547	IEEE 519

#### Hardware Protections

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

#### 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-3000 Outdoor

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