

Uninterruptible Power Supply (UPS)



UPS 500iG SERIES MULTI MODULE SYSTEM

250 kVA / 225 kW, 50 Hz
500 kVA / 450 kW, 50 Hz

Caterpillar is leading the power generation marketplace with Power Quality Solutions engineered to deliver unmatched flexibility, expandability, reliability, and cost effectiveness.

FEATURES

PRODUCT FEATURES

- Smallest available footprint
- 98% total system efficiency
- Simple cost-effective installation
- Modular, scalable, and redundant architecture
- Low service and maintenance
- Cost-effective lifecycle cost
- Harmonic cancellation
- Transient protection
- High-speed voltage regulation
- Power factor correction
- Low input current distortion
- Top and bottom cable entry
- 40° C rating on entire system
- Rapid recharge time
- Utilizes flywheel energy storage technology
- Color Touch-screen operator interface
- Optional generator set start module
- Optional paralleling capability

RELIABLE POWER PROTECTION FOR CRITICAL APPLICATIONS

Cat® UPS systems provide constant power protection against surges, sags, and power interruptions that can disrupt operations or cause loss of valuable data or system capacity. Additionally, the use of the optional generator set start module can dramatically increase generator set starting reliability in a continuous power configuration.

SUPERIOR DESIGN

Superior system design and the use of robust digital components throughout the system yield the most reliable and trouble-free UPS system on the market. Protection is delivered in the industry's smallest package with the highest efficiency and superior performance.

LOWER TOTAL COST

The high operating efficiency means yearly savings versus traditional battery UPS products. In addition, lower Cat UPS heat rejection reduces up front HVAC costs and electrical consumption over the life of the product.

GENERATOR SET INTEGRATION

By cancelling harmonic distortion, the 500iG Series operates seamlessly with generator sets to provide a higher total electrical load capacity without oversizing the generator set. The 500iG Series effectively insulates the generator set from block loads and transient, and can improve its fault clearing capabilities. Programmable integration with standby generator sets assures greater system reliability and improves the total system operation.

WORLDWIDE PRODUCT SUPPORT

- Parts Distribution Centers are located worldwide with available service support through Caterpillar and the Cat Dealer Network.
- Factory certified service technicians are trained to support every aspect of your Cat UPS system.

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FACTORY INSTALLED STANDARD AND OPTIONAL EQUIPMENT

STANDARD FEATURES	OPTIONAL FEATURES
Battery free, flywheel energy storage	24-volt DC, generator set starting power
IGBT Based Bi-directional converter	Remote SNMP/MODBUS monitoring
Integral modem – remote communication	Remote Status Panel (8 status LED's)
Local Emergency Power Off (EPO)	Automated Internal Maintenance Bypass
Remote notification and monitoring via Ethernet and e-mail	Remote EPO
RS232 or RS485 serial connection	Ability to parallel up to 7 systems
UPS View – advanced real-time monitoring software	Redundant flywheel and UPS
10" color touch-screen operator interface	External Synchronization input
Programmable input and output contacts	Separate Bypass Input
Redundant cooling fans	Field Expandable
High Speed Voltage regulation and Power Factor Correction	External Maintenance Bypass Control
Back feed protection	
Harmonic cancellation	
Monitoring and alarms for all critical components with intelligent self-diagnostics	
Top/Bottom cable entry	
Redundant Control Power	
Static Bypass Switch	
Superior Power Conditioning	
High Overload Capacity	

SPECIFICATIONS

INPUT	
Voltage	380/400/415 VAC 3-phase, 4 wire + ground
Voltage Range	+10% / -15% (programmable), +/- 10% at 380VAC
Frequency	50 Hz (+/-)10% max. (programmable)
Power Factor	0.99 at rated load and nominal voltage
Harmonic Current Distortion	
Linear Load	<3% at 100% load
Non-linear load	<8% with 100% load
Surge Withstand	Meets IEEE 587 / ANSI C62.41
Walk-in	1 to 15 seconds (programmable)

OUTPUT	
Voltage	380/400/415 VAC 3-phase, 4 wire + ground
Voltage Regulation	
Steady-state	+/-1% of nominal for +/-10% input
Transient	+/-1% within 50 milliseconds for 100% load step
Flywheel mode	+/-1% steady state
Voltage distortion ⁽¹⁾	<3% linear loads and <5% 100% non-linear loads
Frequency	50 Hz (mains synchronized) normal operation +/- .2% free running
Slew Rate	Adjustable from 0.2 Hz/second to 3.0 Hz/second
Overload Capability (normal operation)	
Continuous	Up to 105%
10 Minutes	125%
2 Minutes	150%
30 Seconds	200%
10 milliseconds	>200%

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TECHNICAL DATA

Model	UPS 250iG	UPS 500iG	
Maximum kVA	250	500	
Maximum kW	225	450	
Input Voltage (nominal)	380/400/415 VAC 3-phase 4 wire plus		
Output Voltage (nominal)	380/400/415 VAC 3-phase 4 wire plus		
Input Current (amps)			
At 380 VAC	358	709	
At 400 VAC	340	674	
At 415 VAC	328	650	
Maximum Continuous	400	800	
Maximum Non-Continuous	420	840	
Output Current			
At 380 VAC	380	761	
At 400 VAC	361	723	
At 415 VAC	348	696	
System Efficiency	97%	98%	
Heat Rejection	BTU/Hr	19,946	39,893
	kW	5.8	11.7

DIMENSIONS & WEIGHTS

UPS 250iG		
Depth	865 mm	34.0 in
Width	3,226 mm	127.0 in
Height	2,442 mm	96.0 in
Weight	3,164 kg	7,050 lbs
UPS 500iG		
Depth	865 mm	34.0 in
Width	4,318 mm	170.0 in
Height	2,442 mm	96.0 in
Weight	5,205 kg	11,550 lb
UPS 500iG N+1		
Depth	865 mm	34.0 in
Width	5,410 mm	213.0 in
Height	2,442 mm	96.0 in
Weight	7,280 kg	16,050 lb

ENVIRONMENTAL

Acoustical Noise	<72 dBA at 1 meter
Temperature	
Operating	32 to 104°F 0 to 40°C
Storage	-13 to 158°F -25 to 70°C
Humidity	5% to 95%(non-condensing)
Altitude	Up to 3,281 feet Up to 1000 meters

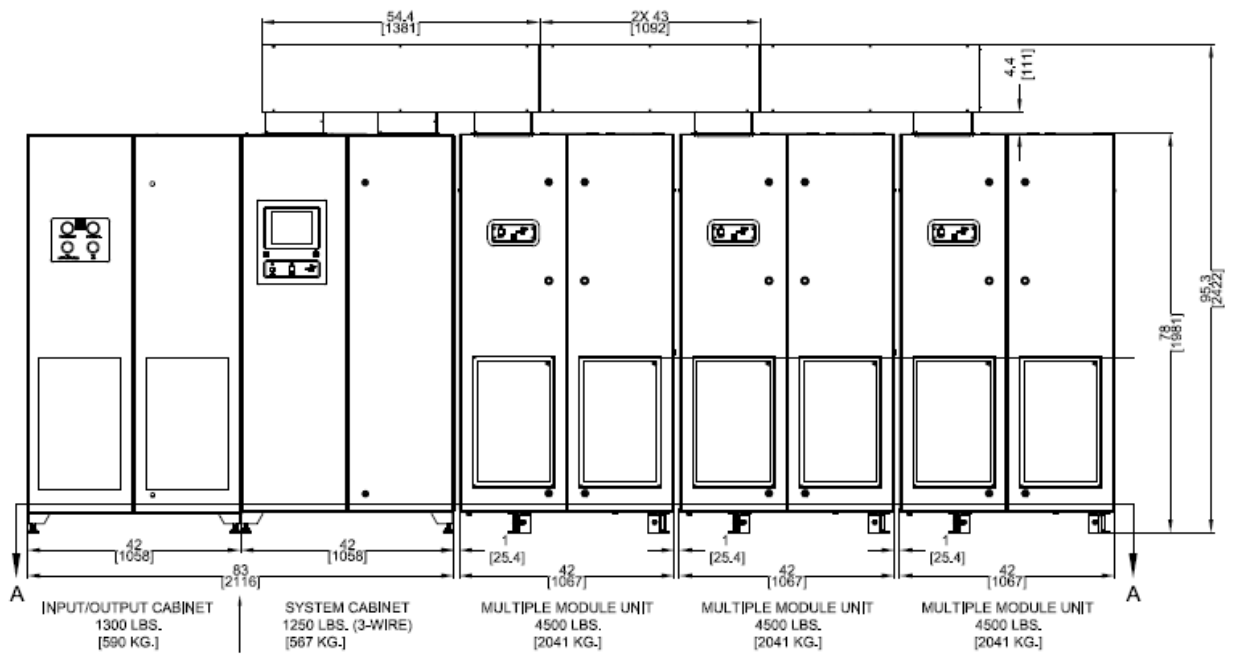
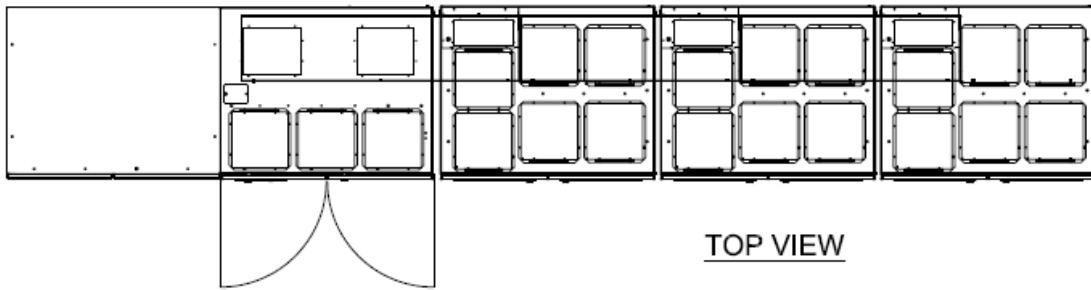
RIDE THROUGH TIME (SEC)

Model	100% Load	75% Load	50% Load	25% Load
UPS 250iG	14	19	28	52
UPS 500iG				

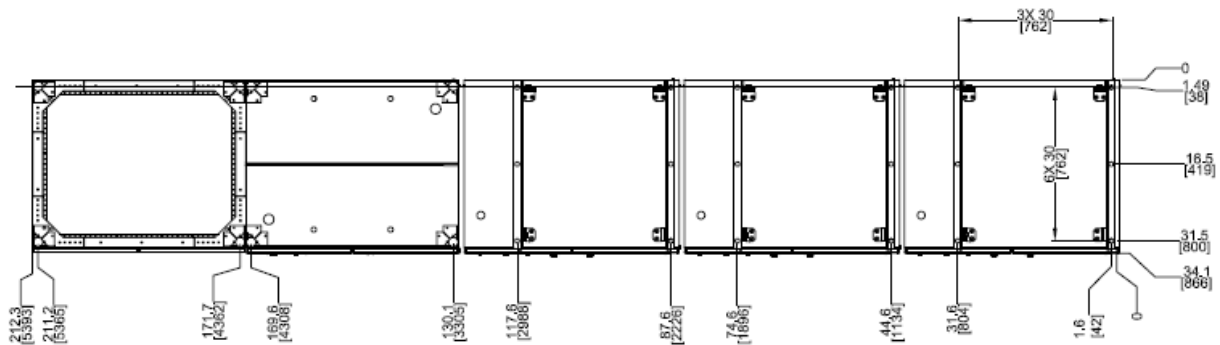
CERTIFICATIONS

CE Mark
EN62040
IEEE 587
ANSI C62.41

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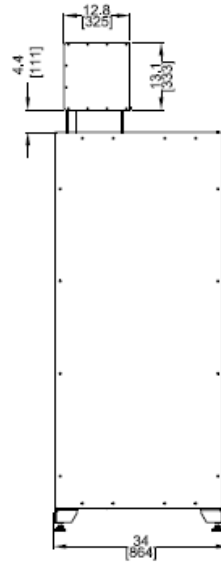


ELEVATION VIEW

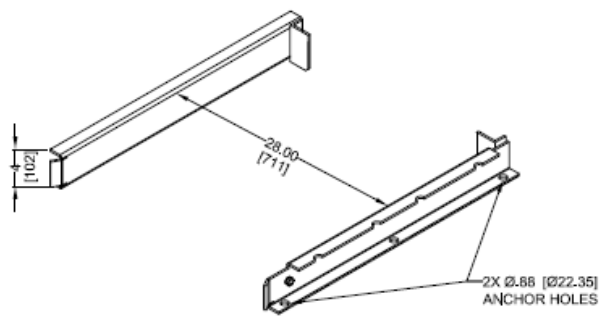


SECTION A-A PLAN VIEW

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LEFT SIDE VIEW



CLEAT ANCHOR HOLES

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