



1200 SERIES UPS, SINGLE MODULE SYSTEM

1200 kVA/960 kW, 60 Hz

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

FEATURES

1200 SERIES UPS

- Top and bottom cable entry
- Reliable kinetic store energy
- Generator set starter power option
- Smallest available footprint
- 97% total system efficiency
- Harmonic cancellation
- Transient protection
- High-speed voltage regulation
- Power factor correction
- 40° C rating on entire system
- Remote monitoring
- Low input current distortion
- Simple installation
- Low maintenance
- Field expandable ride-through
- Color user interface display

ULTRA-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 gen set start feature can dramatically increase gen set start 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

High system efficiency means thousands of dollars in yearly savings. High efficiency means low heat dissipation, which also lowers air-cooling costs and total electrical consumption during the life of product use.

GENERATOR SET INTEGRATION

By cancelling harmonic distortion, the 1200 Series operates seamlessly with generator sets to provide a higher total electrical load capacity without over-sizing the generator set. The 1200 Series effectively insulates the generator set from block loads and transients, 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

LEHE3445

FACTORY INSTALLED STANDARD & OPTIONAL EQUIPMENT

STANDARD FEATURES	OPTIONAL FEATURES
Full rated continuous duty static bypass switch	24 volt DC, generator set starting power
Redundant control power supplies	Additional flywheel energy storage units for added ride-through
Local Emergency Power Off (EPO)	UPS View — monitoring/communication software
RS232 or RS485 serial connection	Remote EPO
Feature rich 10.4" color touch screen, graphic user interface	Remote status panel
56kbps Modem	SNMP Communication
Programmable input and output contacts	MODBUS Communication
Redundant cooling fans	Maintenance bypass
Auto restart (programmable)	Output Isolation Breaker
Back feed isolation contactor	Ethernet communication port
Dual-flywheel energy storage cabinets	Seismic mounting
Monitoring and Alarm I/O contacts	Parallel N+1 Redundancy
Voltage regulator and power factor enhancer	4 Wire I/O (480/277 VAC)
Harmonic cancellation circuit	

SPECIFICATIONS

INPUT	
Voltage	480 VAC 3 phase, 3-wire plus ground (from grounded wye source)
Voltage Range	+10%/–15% (programmable)
Frequency	60 Hz
Power Factor	0.99 at rated load and nominal voltage
<i>Harmonic Current Distortion</i>	
Linear load	<3% at 100% resistive load
Non-linear load	<8% with 100% non-linear load
Input frequency	60 Hz
Surge Withstand	Meets IEEE 587/ANSI C62.41
Walk-in	1 to 15 seconds (programmable)
Bypass Source	Same as input source — Synchronized frequency, phase and voltage
Bypass Voltage Window	±20% (programmable within range)
OUTPUT	
Voltage	480 VAC 3 phase, 3-wire plus ground
<i>Voltage regulation</i>	
Steady-state	±1% of nominal for ±10% input balanced or unbalanced load 0.8 lag to 0.9 lead pf; 7% at –15% input voltage
Transient	±5% of nominal for 100% load step; ±2% of nominal loss/return or input
Recovery Time	50 millisecond maximum
Bypass Trigger	Programmable up to ±10%

<i>Frequency Regulation</i>	
Normal Operation	Synchronized to input
Free Running	0.1% of nominal
Synch Window	Adjustable over a range of at least 0.3 Hz to 3 Hz
Frequency Slew Rate	Adjustable over a range of at least 0.2 Hz/second to 5 Hz/second
Load Power Factor	0.8 lag to 0.9 lead for specified regulation and rating. 0.4 lag to 0.7 lead with reduced regulation of load
<i>Voltage Unbalance & Distortion</i>	
Balanced Load	<1% voltage unbalance and <1° phase displacement
50% Unbalanced Load	<3% voltage unbalance and <3° phase displacement
Linear Load	<3% THD <2% SHD
100% Non Linear Voltage Distortion	<5% THD
Voltage Imbalance	The UPS is capable of supporting any combination of unbalanced load that does not exceed the maximum phase currents and the total output limitations of the UPS
<i>Overload Capability (nominal line without bypass)</i>	
Continuous	105%
1 Minute	125%
5 Seconds	Up to 150%

DIMENSIONS & WEIGHTS

<i>All Cabinets</i>		
Depth	1016 mm	40.0 in
Cabinet height (w/out DC bus)	1981 mm	78.0 in
System height (w/DC bus)	2438 mm	96.0 in
<i>Individual Cabinets</i>		
<i>4-wire (option)</i>		
Width	1981 mm	78.0 in
Weight	3448 kg	7600 lb
<i>Maintenance By-pass (option)</i>		
Width	533 mm	21.0 in
Weight	907 kg	2000 lb
<i>Bottom Entry (option)</i>		
Width	1067 mm	42.0 in
Weight	272 kg	600 lb
<i>Input/Output</i>		
Width	1067 mm	42.0 in
Weight	1134 kg	2500 lb
<i>Static Switch</i>		
Width	1067 mm	42.0 in
Weight	907 kg	2000 lb
<i>Control (Note: ships attached to Inverter Cabinet)</i>		
Width	914 mm	36.0 in
Weight	907 kg	2000 lb
<i>Inverter (Note: ships attached to Control Cabinet)</i>		
Width	1067 mm	42.0 in
Weight	771 kg	1700 lb
<i>Energy Storage/each — 2 per standard system</i>		
Width	1067 mm	42.0 in
Weight	3040 kg	6700 lb



TECHNICAL DATA

Maximum kVA	1200
Maximum kW	960
Input voltage	480
Output voltage	480
AC input current Nominal amps	1205
Maximum amps incl. recharge	1600
AC output current nominal amps	1445
System efficiency (3-wire system)	97%

ENVIRONMENTAL

Acoustical noise	<77 kBA at 1.524 m (5 ft)
<i>Temperature</i>	
Operating	0° C to 40° C (4° F to 104° F)
Storage	-25° C to 70° C (-13° F to 158° F)
Humidity	5% to 95% (non-condensing)
Altitude	Up to 914.4 m (3000 ft); (derate operating temperature range for higher elevation)
Emissions and Immunity	FCC Class A, Subpart J of Part 15/EN 50091-2

SAFETY

UL 1778 Listed
CUL CAN/CSA 22.2 No. 107.1 Listed

RIDE THROUGH TIMES (SEC)

Number of Energy Storage Cabinets	100% load	75% load	50% load	25% load
2	13.5	17	26	50
3	20	25	39	75
4	27	34	52	100

U N I N T E R R U P T I B L E
P O W E R S U P P L Y

 **CATERPILLAR®**

U.S. sourced

LEHE3445 (12-03)

www.CAT-ElectricPower.com

© 2003 Caterpillar
All rights reserved.
Printed in U.S.A.

Materials and specifications are subject to change without notice.
The International System of Units (SI) is used in this publication.