

Uninterruptible Power Supply (UPS)



UPS 300 SERIES SINGLE MODULE SYSTEM

150 kVA / 120 kW, 60 Hz
300 kVA / 240 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

PRODUCT FEATURES

- Smallest available footprint
- 98% total system efficiency
- Simple cost-effective installation
- 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

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 300 Series operates seamlessly with generator sets to provide a higher total electrical load capacity without oversizing the generator set. The 300 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)	4 wire input and output
Remote notification and monitoring via Ethernet and e-mail	Remote EPO
RS232 or RS485 serial connection	Internal Maintenance Bypass
UPS View – advanced real-time monitoring software	
10" color touch-screen operator interface	
Programmable input and output contacts	
Redundant cooling fans	
High Speed Voltage regulation and Power Factor Correction	
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	

SPECIFICATIONS

INPUT	
Voltage	480 VAC 3-phase, 3 wire + ground (4-wire optional)
Voltage Range	+10% / -15% (programmable)
Frequency	60 Hz (+/-)10% max. (programmable)
Power Factor	0.99 at rated load and nominal voltage
Harmonic Current Distortion	
Linear Load	<3% at 100% resistive load
Non-linear load	<8% with 100% non-linear load
Surge Withstand	Meets IEEE 587 / ANSI C62.41
Walk-in	1 to 15 seconds (programmable)

OUTPUT	
Voltage	480 VAC 3-phase, 3 wire plus 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	60 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) ⁽²⁾	
Continuous	Up to 105%
10 Minutes	125%
2 Minutes	150%
30 Seconds	200%
10 milliseconds	>200%

(1) In accordance with EN 62040-3

(2) UPS 150 overload capacity max 10msec>150%

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TECHNICAL DATA

Model	UPS 150	UPS 300	
Maximum kVA	150	300	
Maximum kW	120	240	
Input Voltage (nominal)	480 VAC 3-phase 3 wire plus ground		
Output Voltage (nominal)	480 VAC 3-phase 3 wire plus ground		
Input Current (amps)			
Nominal (480 VAC)	152	299	
Maximum Continuous	200	400	
Maximum Non-Continuous	240	420	
Output Current			
Nominal (480 VAC)	181	361	
System Efficiency	97%	98%	
Heat Rejection	BTU/Hr	16,940	20,992
	kW	5.0	6.2

DIMENSIONS & WEIGHTS

UPS 150		
Depth	865 mm	34.0 in
Width	1488 mm	58.6 in
Height	1981 mm	78.0 in
Weight	2200 kg	4850 lbs
UPS 300		
Depth	865 mm	34.0 in
Width	1488 mm	58.6 in
Height	1981 mm	78.0 in
Weight	2495 kg	5500 lbs

ENVIRONMENTAL

Acoustical Noise	<70 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 3,000 feet Up to 914 meters

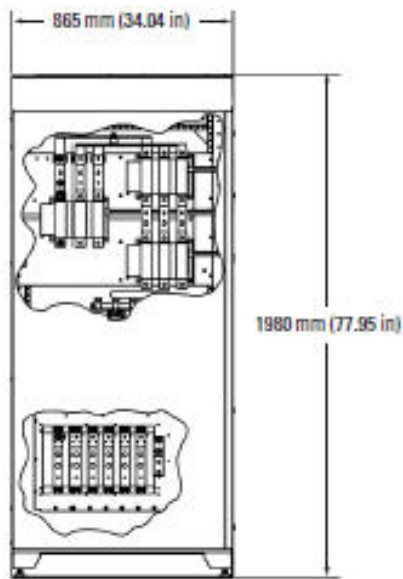
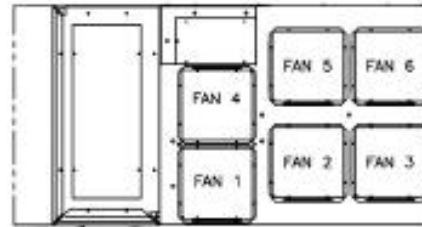
RIDE THROUGH TIME (SEC)

Model	100% Load	75% Load	50% Load	25% Load
UPS 150	27	36	52	87
UPS 300	14	19	28	52

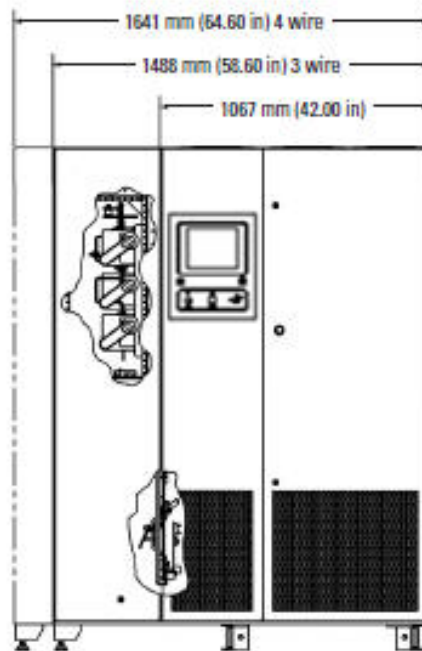
CERTIFICATIONS

UL 1778 listed
CUL CAN/CSA 22.2 No. 107.1 listed
EN62040-3

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SIDE VIEW



**FRONT VIEW
150 & 300 kVA**

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