



# ACTIVE POWER

## CLEANSOURCE® XT MMS 480V - 60hz Modular UPS Systems



**40%**  
TCO Savings



**12x**  
Less Likely  
to Fail



**9x**  
Less Carbon  
Emissions

# CLEANSOURCE® XT MMS

## Modular UPS Systems

### Overview

CLEANSOURCE® XT Modular UPS System offers a wide range of modular and redundant backup power systems from 250kW to 2000kW. The built-in flywheel energy storage takes up less than half the footprint of battery based systems, delivers efficiency up to 98% and lowers total cost of ownership by up to 40% over the life of the product. This field proven technology is based on a highly fault tolerant IGBT architecture designed to protect all critical loads, such as data centers, industrial processes and healthcare applications. Stored energy will provide ride-through up to 2 minutes depending upon configuration, making the CLEANOURCE® XT MMS a clear alternative to modular static UPS systems reliant on battery storage. The XT MMS modular UPS system has more than enough energy storage for diesel starting and synchronization, even when paralleling generating sets. Elimination of batteries saves space and weight, reduces site testing and maintenance and removes the need for routine replacement after a few years of service life.



**40%**  
TCO Savings

- Permanent energy storage
- Up to 98% energy efficient
- Less expensive to install and commission



**12x**  
Less Likely to Fail

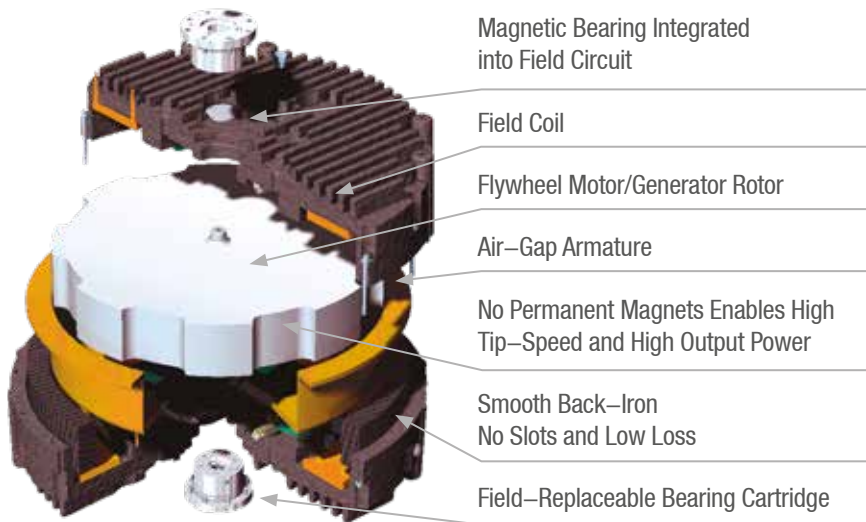
- Most reliable energy storage system
- Minimize risk and disruption from maintenance and replacement



**9x**  
Less Carbon Emissions

- 90% less carbon used in UPS manufacture
- Over 40% less carbon emitted over 15 years

### Flywheel Technology

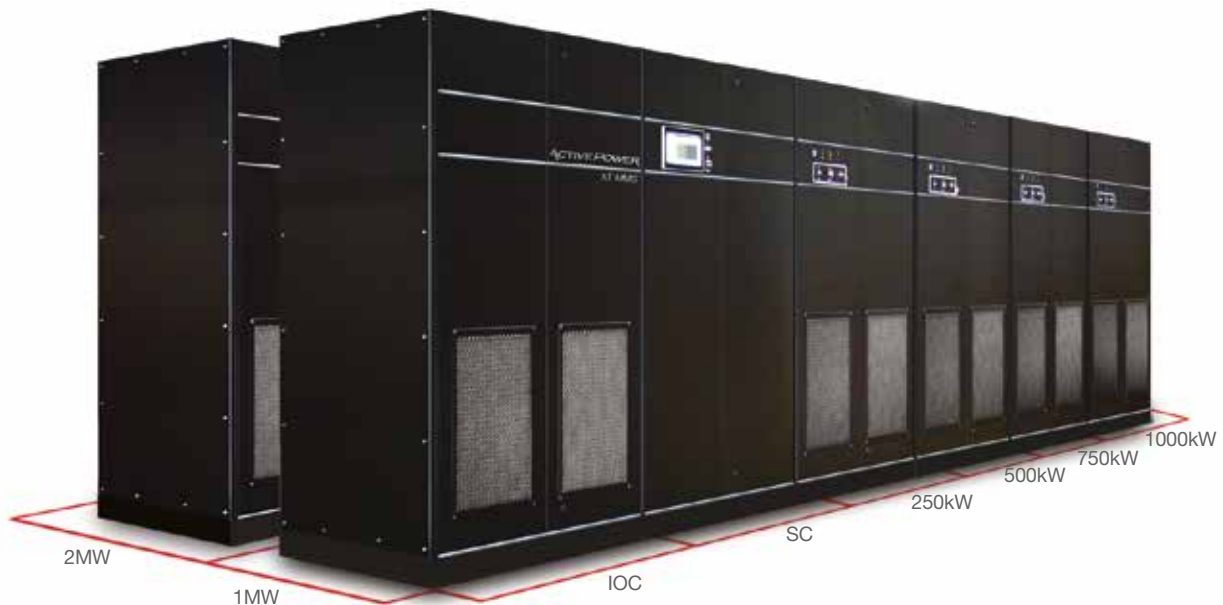
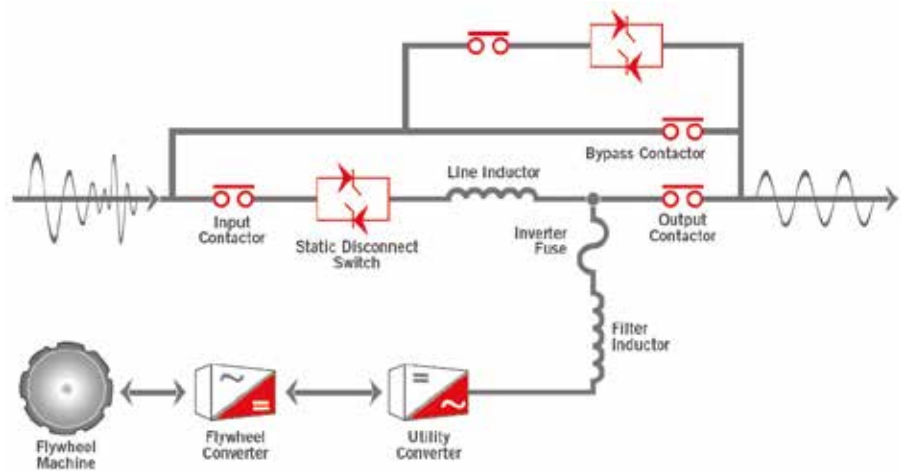


### Key Benefits and Features

- Extended Ride-through up to 2 minutes
- Up to 98% efficient
- Half the space of legacy battery based UPS
- Field expandable
- Redundant fans and control power units
- Lower cooling requirements
- Lower maintenance and service
- Cost-effective installation
- Color LCD touch-screen display
- Remote monitoring
- Built-in power factor correction
- Generator compatibility
- Dual input and integrated maintenance bypass option
- Seismic provisions – consult factory
- 20-year design life
- 250kW building blocks expandable to 2MW

## Parallel Online Architecture

The CLEANSOURCE® XT Modular UPS is based on Active Power's Parallel Online Architecture which provides excellent isolation between input and output, while delivering Class 1 voltage regulation and dynamically cancelling effects of non-linear load harmonics. This topology continuously provides online power protection to your operation, creating a clean sinusoidal output waveform and protecting critical operations against all nine IEEE power disturbances in a power dense, reliable, and energy efficient package.



## Modular & Scalable Architecture

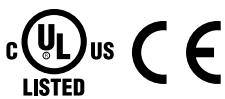
CLEANSOURCE® XT MMS G and Z series UPS systems are modular and capable of multiple redundancy levels (N+1, N+2,...). Customers may readily expand their systems in line with their own growth needs by adding further modules over time. Each system consists of an input/output cabinet (IOC), a system cabinet (SC) and the ability to connect up to four 250kW modules with built in wireway. In total, 8 modules can operate in a single system, providing up to 2000kW of high efficiency, battery - free UPS power.

- CLEANSOURCE® XT MMS G Series UPS can be configured up to 500kW N+1
- CLEANSOURCE® XT MMS Z Series UPS can be configured up to 2000kW

CleanSource XT MMS Product Line: XT G-Series (250-500kW) and XT Z-Series (250-2000kW)

MODEL	XT250G	XT500G	XT250Z	XT500Z	XT750Z	XT1000Z
<b>RATING</b>						
Maximum kVA	275	550	275	550	825	1100
Maximum kW	250	500	250	500	750	1000
<b>INPUT</b>						
Voltage <sup>1</sup>	480 VAC 3-phase, 3-wire plus ground (4-wire optional)					
Voltage Range	+10% / -15% (programmable)					
Frequency	60 Hz +/- 10% maximum (programmable). +/- 3% (default)					
Power Factor	0.99 at rated load and nominal voltage					
Harmonic Current Distortion	Linear Load	<2% at 100% load				
	Non-Linear	<8% at 100% load				
Current - Nominal (480 VAC)	312A	623A	311A	623A	934A	1245A
Current - Max. Continuous	400A	800A	400A	800A	1200A	1600A
Current - Max. Non-Continuous	420A	840A	420A	840A	1260A	1680A
Surge Withstand	Meets IEEE 587/ANSI C62.41					
Walk-In	1 to 15 seconds (programmable)					
<b>OUTPUT</b>						
Voltage	480 VAC 3-phase, 3-wire plus ground (4-wire optional)					
Voltage regulation	Steady state	+/-1% for +/-10% input				
	Flywheel mode	+/-1% steady state				
	Transient	+/-1% within 50 mSec for 100% load step				
Voltage distortion <sup>2</sup>	<1% linear loads and <5% for 100% non-linear loads					
Frequency	60Hz (mains synchronized) (normal operation +/- 0.2% free running)					
Slew Rate	Adjustable from 0.2Hz/second to 3.0Hz/second					
Current - Nominal (480 VAC)	331A	662A	31AA	662A	992A	1323A
Overload Capability-Mains Operation	Cont. 10 min 5 min 1 min 10s lmd. 105% <110% <125% <150% <200% >200%					
UPS Efficiency <sup>3</sup>	97.5%					
<b>ENERGY STORAGE</b>						
Type	Integrated Steel Flywheel spinning at 10,000 RPM					
Flywheel Runtime (% Load)	100% 75% 50% 25% 24.5s 32s 47s 84s					
Flywheel Recharge Time <sup>3</sup>	< 3 min (nominal) at 65 kW					
<b>GENERAL</b>						
Internal Maintenance Bypass Panel	Yes (optional)			No (external only)		
N+1 Redundant Module	Yes (optional)			Yes (optional)		
OSHPD Seismic Rated	Consult factory			Consult factory		
<b>ENVIRONMENTAL</b>						
Audible Noise	<80 dBA at 1 meter					
Operating Temperature	32 to 104°F (0 to 40°C)					
Storage Temperature	-13 to 158°F (-25 to 70°C)					
Humidity	5% to 95% (non-condensing)					
Altitude	Up to 3,000 feet (914m) / 1.2 C derating for every 1000ft above 3000ft					
Emissions and Immunity	FCC Clas A, EN 6204-2					
Heat Rejection - Online	6.4kW / 21,851BTU/Hr	12.8kW / 43,701BTU/Hr	6.4kW / 21,851BTU/Hr	12.8kW / 43,701BTU/Hr	19.2kW / 65,552BTU/Hr	25.6kW / 87,402BTU/Hr
<b>PHYSICAL DATA</b>						
Height	78.0in / 1,981mm Excl. Wireway. 96.0in / 2,438mm Inc. Wireway					
Width	127.0 in / 3,226 mm	170.0 in / 4,318 mm	127.0 in / 3,226 mm	170 in / 4,318 mm	213.0 in / 5,410 mm	156.0 in / 6,502 mm
Depth	34.0 in / 865 mm	34.0 in / 865 mm	34.0 in / 865 mm	34.0 in / 865 mm	34.0 in / 865 mm	34.0 in / 865 mm
Weight	6,375lbs / 2,892 kg	10,875 lbs / 4,933 kg	6,750 lbs / 3,063 kg	11,250 lbs / 5,103 kg	15,750 lbs / 7,144 kg	20,250 lbs / 9185 kg
Cable Entry	Top or Bottom					
Safety	UL 1778 Listed. CUL CAN/CSA 22.2 No. 107.1 Listed					

<sup>1</sup> From grounded WYE source. <sup>2</sup> EN 62040-3. <sup>3</sup> kW recharge value is per flywheel



[www.activepower.com](http://www.activepower.com)

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