CLEANSOURCE® *PLUS* SMS

Single Modular UPS Systems

Overview

Active Power's Single Module System Flywheel UPS is the perfect combination of reliability, efficient and power density for any mission critical application. Designed with highly predictable, battery-free energy storage, the Single Module System offers unmatched total cost of ownership for high availability organizations.

Total Cost of Ownership

Up to 40% TCO savings through 98% energy efficiency, lower installation costs and permanent storage.

Reliability

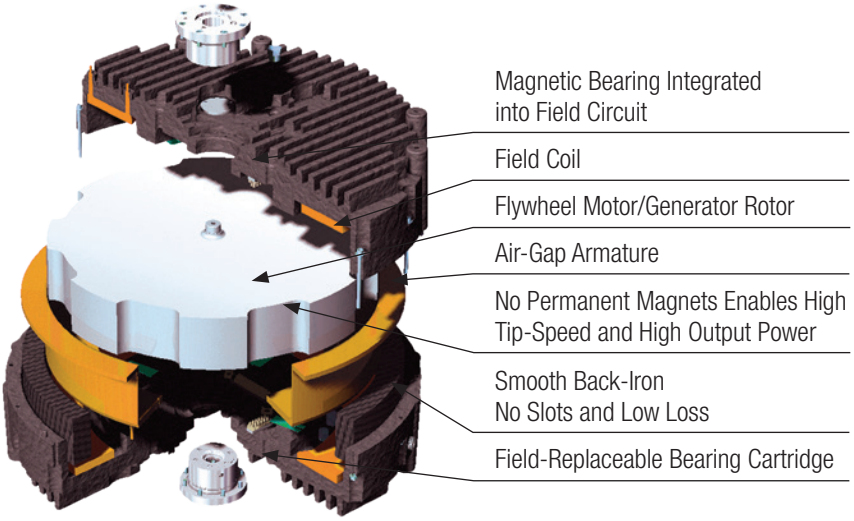
Most reliable energy storage system on the market and proven to be 12 times less likely to fail over battery based applications.

Sustainability

Over 40% less carbon emissions over 15 years to help you achieve your sustainability goals.

Flywheel Technology

- ✓ **Wide ambient temperature range - 0°C to 40°C**
- ✓ **High density, high efficiency design**
- ✓ **Stores 6.2 MJ of energy**
- ✓ **Up to 2 minutes of runtime (load dependent)**



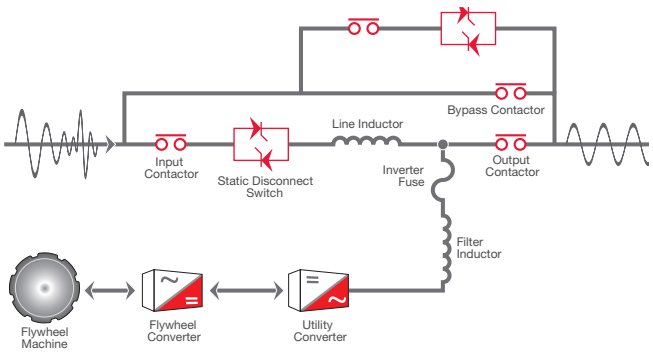
Key benefits and features

- ✓ **Up to 98% efficient**
- ✓ **Half the space of legacy battery based UPS**
- ✓ **Parallel up to 8 systems**
- ✓ **Redundant fans and control power units**
- ✓ **Lower installation costs**
- ✓ **Less heat rejection**
- ✓ **Lower cooling requirements**
- ✓ **Lower maintenance and service**
- ✓ **Cost-effective installation**
- ✓ **Color LCD touch-screen display**
- ✓ **Remote monitoring capability**
- ✓ **Built-in power factor correction**
- ✓ **Generator compatibility**
- ✓ **Dual input option**
- ✓ **Integrated maintenance bypass option**
- ✓ **Seismic provisions (optional)**
- ✓ **20-year design life**
- ✓ **GenStart option**

50Hz | 300 kW | 380/400/415V

Parallel Online Architecture

The CLEANSOURCE® *PLUS* SMS 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 data center, 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.



Product Specifications Model *PLUS* SMS 300i

RATING	
Maximum kVA	333
Maximum kW	300

INPUT	
Voltage[1]	380/400/415 VAC 3-phase, 4-wire plus ground
Voltage Range [2]	+10% / -15% at 400/415V (programmable)
Frequency [3]	50 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 Load[4]	<8% at 100% load
Current - Nominal (380 VAC)	472A
Current - Nominal (400 VAC)	449A
Current - Nominal (415 VAC)	432A
Current - Maximum Continuous	530A
Current - Maximum Non-Continuous	560A
Surge Withstand	Meets IEEE 587/ANSI C62.41
Walk-In	1 to 15 seconds (programmable)
Internal Backfeed Protection	Yes

OUTPUT				
Voltage	380/400/415 VAC 3-phase, 4-wire plus ground			
Voltage regulation				
Steady state	+/-1% for +/-10% input			
Flywheel mode	+/-1% steady state			
Transient	+/-1% within 50 mSec for 100% load step			
Voltage distortion [4]	<1% linear loads and <5% for 100% non-linear loads			
Inverter	PWM with IGBT switching			
Frequency	50Hz (mains synchronized) (normal operation +/- 0.2% free running)			
Load Power Factor Range	0.7 lagging / 0.9 leading without derating			
Slew Rate	Adjustable from 0.2Hz / second to 3.0Hz/second			
Current - Nominal (380 VAC)	506A			
Current - Nominal (400 VAC)	481A			
Current - Nominal (415 VAC)	464A			
Overload Capability-Mains Operation	Cont. 10 min 105% <110%	5 min <125%	1 min <150%	10s lmd. <200% >200%
UPS Load	25%	50%	75%	100%
Efficiency – energy storage online	93.6%	96.2%	96.7%	97.6%

ENERGY STORAGE	
Type	Integrated Steel Flywheel spinning at 10,000 RPM
Flywheel Runtime (% Load)	100% 75% 50% 25% 20s 27s 39s 73s
Flywheel Recharge Time	< 3 min (nominal) at 65 kW

GENERAL	
Input Source	Single or Dual
Parallel Capability	Yes, up to 8 systems
Internal Static Bypass	Included
Display	10-inch Color Touchscreen Graphical Display
Withstand Capability	65kA
Remote Monitoring	Yes (optional)
External Customer Contacts	8 Input and 8 Outputs (programmable)
Internal Maintenance Bypass	Yes (optional)

ENVIRONMENTAL	
Audible Noise	<75 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 ft (914m) 1.2 C derating for every 1000ft above 3000ft
Emissions and Immunity	EN 62040-2
Heat Rejection - Online	7.4 kW / 25,265BTU/hr

PHYSICAL DATA	
Height	1,981 mm
Width	1,488 mm
Depth	865 mm
Weight	2,177 kg
Cable Entry	Top or Bottom

SAFETY
EN 62040-1

[1] From grounded WYE source
[2] +/-10% at 380 VAC
[3] 60Hz available
[4] EN 62040-3

CE

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PILLER
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