

# Symmetra® PX

**Modular Scalable Ultra-High Efficiency Power  
Protection for Data Centers**

Symmetra PX250/500kW  
Scalable from 25kW to 500kW



**High Performance  
3 Phase Modular,  
Scalable Power  
Protection with  
Industry Leading  
Efficiency, Capacity  
and Performance for  
Medium to Large Data  
Centers and Mission  
Critical Environments**

- > Patented Ultra High Efficiency (96%)
- > Double Conversion technology
- > Modular and Scalable
- > Redundant power & runtime protection in single unit
- > High Density Design
- > Parallel Capable
- > Low TCO
- > Unity Power Factor Corrected
- > Rack based for agility and aesthetics



For More Information:  
(866) 787-3271  
Sales@PTSdcs.com





 + APC = peace of mind  
by schneider Electric

# Symmetra® PX

**Right sized, Modular, Scalable, 3-Phase Power Protection with industry leading availability, efficiency and performance for any size data center or high density power zone**

The APC Symmetra PX 250/500kW is a world class, redundant, scalable, ultra-high efficiency power protection system designed to cost effectively provide high levels of availability. Seamlessly integrating into today's state-of-the-art data center designs, the Symmetra PX250/500kW is a true modular system. Made up of dedicated and redundant hot-swappable modules--power, intelligence, battery and bypass, all engineered into a design that is easily and efficiently serviceable, this architecture can scale power and runtime as demand grows or as higher levels of availability are required.

The Symmetra PX family serves as the core power train that drives APC InfraStruXure® systems for small, medium and large data centers. Highly manageable, the Symmetra PX 250/500kW features self-diagnostic capabilities and standardized modules which mitigate the risk of human error resulting in increased overall data center reliability.



Symmetra PX500kW



Symmetra PX250kW

The Symmetra PX,250/500kW delivers the high availability, extreme agility, and low TCO you have come to expect from the Symmetra PX family. With industry leading power density, the Symmetra PX has the ability to fit seamlessly onto the data center floor, into the backroom or against any wall with no rear access required. Other features include automated predictive diagnostics, increased overload capacity, extended battery life and on-the-fly firmware upgrades which all lead to a highly predictable, efficient & simplified UPS architecture. The Symmetra PX 250/500kW systems can scale in increments of 25KW up to 500KW. A future firmware release will enable four systems to be paralleled to deliver up to 2000kW of power protection.

**The right-sized UPS for demanding business critical applications**

# Symmetra® PX Features & Benefits



- 1 Long Life Battery Module**  
Connected in parallel for increased availability the 5-8yr expected life reduces systems lifetime costs (TCO)
- 2 Premium Line-Up/Remote External Battery Enclosure**  
A total of 8 enclosures can be connected to the UPS either in-row or remotely allowing the UPS to be configured to your data center requirements, while offering extended runtimes & availability.
- 3 Ultra-High Efficiency (96%) Power Module down to 35% loading**  
Provides the flexibility to scale power capacity in 25kW Increments and adds N+1 capability as well as a fully rated double conversion inverter for providing more real power
- 4 Dual Mains Input/Output**  
Allows for connection to 2 separate power inputs for increased availability – top or bottom
- 5 Maintenance Bypass with Distribution (MBwD)**  
Space saving design that provides power distribution to your load and if required isolation from the UPS while maintaining power to your critical loads
- 6 Built-in Static Bypass Switch**  
Hot swappable, the SSW enables the UPS to transfer the load to utility power, without interruption, in case of heavy overload or faulty conditions
- 7 Redundant Intelligence Module**  
Back-up for the Main Intelligence Module provides increased availability
- 8 High Density Footprint**  
Space saving & More flexibility on where you place the UPS
- 9 10” LCD Touch Screen Display**  
Offers a clear graphical / text based overview of alarms, status data, instructional help that minimize the risk of operator errors
- 10 System Wide Firmware Updates**  
On-the-fly upgrades via USB port on back of display. Makes firmware updates easy and increases system availability

# Symmetra® PX

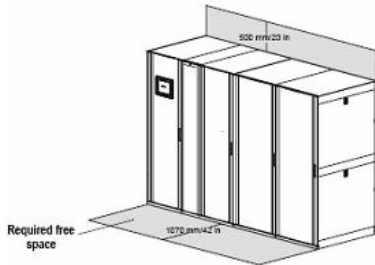
## The High Density, Ultra-Efficient, Scalable, Modular UPS

### Scalable & Modular

- > 250kW / 500kW configuration populated at lower capacity enables one-time installation service
  - Scalable from 25kW to 500kW
  - Parallel 4 systems to 2MW (future firmware release)
- > Additional battery frames scale runtime
- > Inherently N+X redundant
- > Hot swap power & battery modules
- > Combined maintenance bypass and sub-feed distribution panels
- > All components conform to ISX form-factor (78.7" x 42.1" HxD) (1991mm x 1070mm HxD)



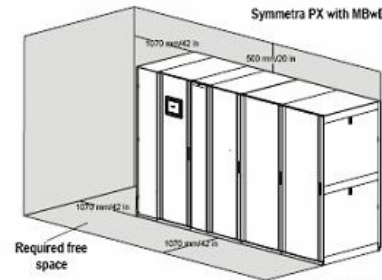
Symmetra PX without MBwD



### High Density

- > The Highest Power Density in its class
- > Frees up valuable data center space
  - 250kW in 3.3 sq/m (includes battery footprint)
  - 500kW in 5.7 sp/m (includes battery footprint)

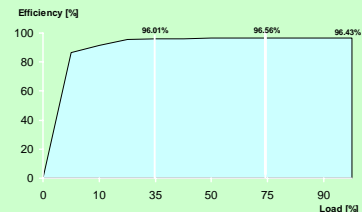
Symmetra PX with MBwD



### Ultra-Efficient

96% efficient to 35% loading, the PX250/500kW saves you on your power & cooling costs, significantly reducing your overall Total Cost of Ownership.

Symmetra PX 500kW.



### Configuration Flexibility

- > Modular architecture offer the flexibility that today's data center require
  - White Space, Back Room, Wall Space
  - Line up Batteries, remote Batteries
  - Top Feed, Bottom Feed
  - Single Feed, Dual Feed
- > 250kW to 500kW expansion
  - One additional power frame
  - 500kW Static Switch
  - Additional power modules
- > Support up to 8 battery frames for extended runtime applications



# The most comprehensive range of services

## Start-Up & Assembly included as standard

**No Hidden Costs.** Valued at up to \$13,000, these services give you the peace of mind that the Symmetra PX250/500kW will give you the protection and performance that your critical systems require.

## On Site Services

On Site Repair Services are designed to get you the help you need on location to bring your business back up and running in a time frame compatible with your business requirements.

A factory trained technician will arrive on site to diagnose or repair your system:

- available in 4 hour
- Next Day
- Next Business Day responses times.

## Project Management

Our industry experienced project managers are trained to guide

- project coordination
- communication
- project budget management
- avoiding costly overruns
- saving you both time and money.



## Preventive Maintenance Services

APC Preventive Maintenance Service helps you to:

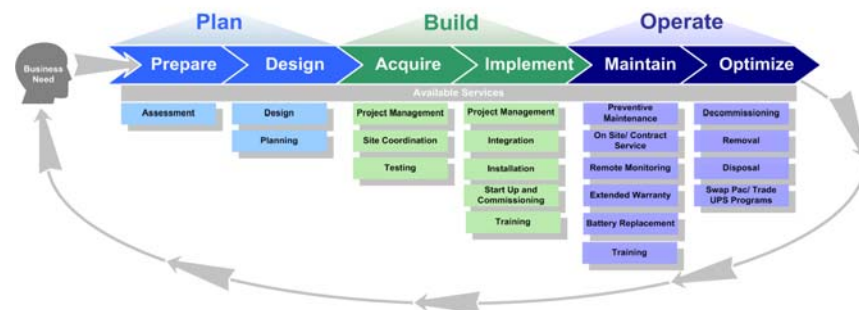
- prevent problems before they occur
- keep your systems running at maximum efficiency.

An examination of your system designed to ensure optimal performance.

## Assembly Service

Service provides customers with APC authorized service personnel on site to ensure proper assembly of your Symmetra PX UPS System.

## Life Cycle of Mission Critical Applications



# Technical Characteristics

UPS Rating kVA/KW (PF = 1)	250kW	500kW
<b>Mains Input (Normal Operation)</b>		
Grid system	3 phases + neutral + ground, 3 phases + ground (Dual/Single mains)	
V range	+/- 15% for full performance (340 – 460V at 400V) or (408 - 552V at 480V)	
Freq. Range	40-70 Hz with 10 Hz/sec slew rate	
PF	>0.995 @ load = 100%, > 50%, >0.97 @ load > 25%	
I thd	< 5% at full load	
Nom. input current	378A @ 400V or 315 @ 480V	756A @ 400V or 630 @ 480V
Max. input current (Nominal Vin, 10 % charging batts)	316A @ 400V or 346@ 480V	831A @ 400V or 693@ 480V
Input current limit	347A @ 400V or 372@ 480V	894A @ 400V or 745 @ 480V
Max Input short-circuit level	65kA (50kA with standard MBwD)	
Protection	Backfeed contractor	
<b>Bypass Input (Bypass operation)</b>		
Grid system	3 phases + neutral + ground / 3 phases + ground	
V nom	380V / 400V / 415V / 480V L-L	
V range	+/-10% (from selected voltage)	
Freq. nom.	50/60 Hz	
Freq. Range	+/-0.5%, +/-1%, +/-2%, +/-4%, +/-6% and +/-8% (user selectable)	
Nom. input current	361A @ 400V or 301 @ 480V	722A @ 400V or 601 @ 480V
Max overload input current	397A @ 400V or 376 @ 480V	794A @ 400V or 752 @ 480V
<b>Output</b>		
Power rating	250kW	500kW
Grid system	3 phases + neutral + ground / 3 phases + ground	
V nom	480V L-L	
Nom. output current	361A @ 400V or 301 @ 480V	722A @ 400V or 601 @ 480V
Max battery operation time	Unlimited	
Frequency regulation	50/60 Hz bypass synchronized, 50/60 Hz +/-0.1% free running	
Sync. slew rate	Programmable to 0.25, 0.5, 1, 2, 4, 6 Hz/sec	
Overload (Normal and Battery operation)	150% for 30 seconds, 125% for 10 min, 100% continuous	
V thd	< 2% from 0 to 100% linear load, < 6% full non-linear load according to IEC/EN62040-3	
Load PF	from 0.5 leading to 0.5 lagging without any derating	
<b>Efficiency</b>		
Normal operation	> 96% at 35% - 100% load	
Battery operation	> 96% at 35% - 100% load	
<b>Mechanical</b>		
UPS-stand alone no batteries Size HxWxD	78.7*63*42.1" (1991mm * 1600mm * 1070mm)	78.7*86.6*42.1" (1991mm * 2200mm * 1070mm)
Weight	2330 lbs / 1057 kg	3797 lbs / 1722 kg
UPS w. MBwD and battery solution - 6 min. Size HxWxD	78.7*121.9*42.1" (1991mm*3100mm*1070mm)	78.7*204.7*42.1" (1991mm*5200mm*1070mm)
Weight	9940 lbs / 4509 kg	18377 lbs / 8336 kg

Preliminary – Subject to change without notice

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