

Symmetra PX

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

Symmetra™ PX 48kW
Scalable from 16kW to 48kW



**High Performance,
Right-Sized
3-Phase Power
Protection with
Industry-Leading
Efficiency, Availability,
and Performance for
Small Data Centers or
High Density Zones**

- > Power, runtime protection, and distribution in a single frame
- > Modular and scalable without forced shutdowns
- > High efficiency double conversion technology (95%)
- > High-density design
- > Low TCO
- > Unity power factor corrected
- > Rack-based for agility and aesthetics
- > Front access only
- > Long-life batteries (5-8 years)

Symmetra PX

Right-sized, modular, scalable, 3-phase power protection with industry-leading efficiency, availability, and performance for small data centers or high density power zones

The APC Symmetra PX 48kW is a world-class, high-efficiency, all-in-one power protection system designed to cost-effectively provide redundancy and high levels of availability. With a single-rack footprint, the Symmetra PX 48 All-in-One UPS provides up to 48kW of power protection for 400V deployments, as well as hot-scalable power distribution and hot-swappable long-life batteries.

Seamlessly integrating into today's state-of-the-art data center designs, the Symmetra PX 48kW is a true modular system. Made up of hot-swappable modules - power, intelligence, battery, bypass, and distribution, this architecture can scale power and runtime in increments of 16kW up to 48kW as demand grows or higher levels of availability are required in your data center. Self-diagnostic capabilities enhance the manageability of the Symmetra PX 48kW and increase overall data center reliability.

The Symmetra PX family serves as the core power train that drives APC InfraStruxure™ systems for small, medium and large data centers. Standardized, factory-assembled modules mitigate the risk of human error during installation or routine maintenance procedures, and with no rear access required, the Symmetra PX 48kW fits seamlessly onto the data center floor, into the backroom, or against any wall.

In one rack, the Symmetra PX 48kW delivers the high availability, extreme agility, and low TCO you have come to expect from the Symmetra PX family.

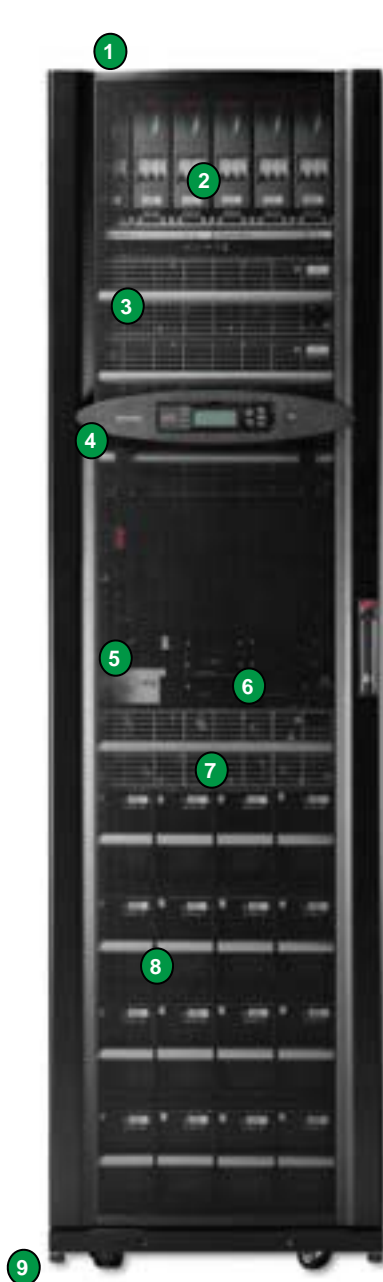


Symmetra PX 48kW

The right-sized UPS for demanding business critical applications

Symmetra PX

Features & Benefits



- 1 Dual Mains Input/Output**
Allows for top or bottom feed connection to 2 separate power inputs for increased availability.
- 2 Modular power distribution**
Adapt the configurable, modular power distribution solution to meet changing demand—without a forced shutdown. Monitor breaker positions and simplify power management with output metering and branch current/circuit monitoring.
- 3 High Efficiency (95%) Power Module - down to 30% loading**
Independently verified by TÜV, these high-efficiency double conversion power modules reduce power & cooling costs, saving you money, while delivering the optimal power protection your data center deserves
- 4 LCD Display Interface**
Offers a clear text-based overview of alarms, status data, and system configuration options.
- 5 Main Intelligence Module and Redundant Intelligence Module**
Back-up for the Main Intelligence Module guarantees the maximum possible availability for your system.
- 6 Network Management Card**
Provides UPS status and event notification. Two SmartSlot positions support Dry Contact, Environmental Monitor, Building Management System (Modbus/Jbus), and additional Network Management Cards.
- 7 Built-in Static Bypass Switch**
The hot-swappable Static Bypass Switch transfers the load to utility power without interruption in case of heavy overload or faulty conditions, and ensures that even in 125% overload conditions, the data center remains operational.
- 8 Hot-Swappable Long-Life Battery Module**
Connected in parallel for increased availability, these hot-swappable battery modules feature advanced battery monitoring and temperature-compensated battery charging that extends battery life. The resulting 5-8yr expected life of the batteries reduces the system's lifetime costs (TCO), and hot swappability lowers the cost of replacement and Mean Time To Repair (MTTR). Additional battery frames can be added for longer run times.

9 High Density Footprint

The all-in-one solution requires front-facing access only, which provides more flexibility on where you place the space-saving UPS and enables the Symmetra PX 48kW to be put anywhere, even against a wall – which leaves more room for IT equipment.

Symmetra PX

The High Density, Efficient, Scalable, Modular UPS

Scalability & Modularity

- > Scalable from 16kW to 48kW
- > One-time installation service
- > Modular components simplify future expansion as your load grows
- > N+1 redundant up to 32kW
- > Integrated modular power distribution
- > Hot swap power, battery, and breaker modules
- > All components conform to NetShelter™ SX form-factor
(78.7 x 23.6 x 42.1in HxWxD)
(1991 x 600 x 1070mm HxWxD)

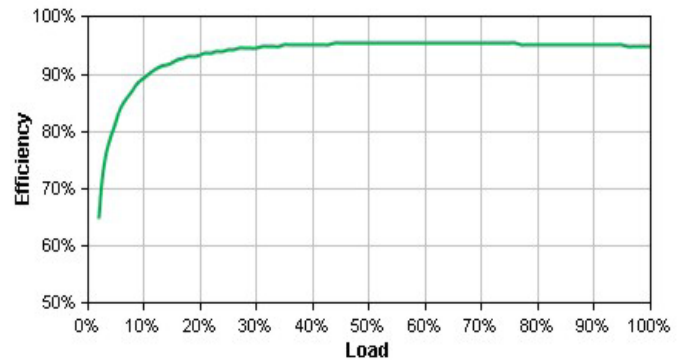


High Density & Flexible Configuration

- > Single-rack design gives Symmetra PX the highest power density in its class
- > Frees up valuable data center space with up to 48kW in 0.642 sq/m (battery footprint included)
- > Integrated power, runtime, and distribution maximize solution density footprint
- > Modular architecture simplifies installation by offering the flexibility that today's data centers require
 - White space or against a wall
 - Top Feed, Bottom Feed
 - Single Feed, Dual Feed
- > 16kW to 48kW expansion with hot-scalable power modules and power distribution modules
- > Front access only; no rear access is required

Energy Efficiency

95% efficient to 30% loading, the PX 48kW saves power and cooling costs, significantly reducing your overall Total Cost of Ownership.



Independently Verified by TÜV

Symmetra PX

Comprehensive Service Offering

Warranty

- > 1 Year Parts, Labor and Travel included
- > Next Business Day Response Time
- > 8 Hour and 4 Hour Response Upgrade available in many locations

Start-Up

- > Start-up service with 5x8 scheduling is included at no charge with each Symmetra PX 48 UPS to ensure optimal performance.
- > Start-up service is required for full coverage under the Factory Warranty.
- > Optionally, you can upgrade to 7x24 scheduling.

Preventive Maintenance Service

- > An examination of your system designed to ensure optimal performance.
- > 5x8 scheduling is standard, with an option to upgrade to 7x24 scheduling.

Assembly service

- > APC authorized service personnel will be dispatched to your site to ensure proper assembly of the Symmetra PX.

On-Site Services

- > 4-hr, Next Day, or Next Business Day response-time options.
- > A factory trained technician will arrive on site to diagnose or repair your system.

Project Management

- > Complete your data center project on time and within budget.



Additional APC Products Enhancing the System

Row Cooling

Energy efficient cooling from low to high density racks and zones

- Intelligent controls
- Close-coupled cooling
- Thermal containment options



InfraStruxure Central

A vendor-neutral, scalable monitoring system

- Open architecture
- Scalable to 4025 devices
- Capacity Planning and Asset Management



Advantage Plans

Comprehensive packages of services designed to provide hassle-free maintenance

- Next Business Day or faster onsite response
- Preventive Maintenance Visit
- Remote Monitoring Service



Symmetra PX

Accessories

Extended Runtime (XR) Frames

To increase the number of minutes your load can remain on battery, add optional Battery Extended Runtime frames. A maximum of 4 battery frames can be connected to the Symmetra PX 48, which enables the UPS to supply power to a 48kW load for up to 102 minutes.



Power Distribution

When demand rises and expansion becomes necessary, there is no need to schedule downtime to add a breaker. Power distribution modules plug into a touch-safe backplane that shields users from dangerous amperage. The power distribution system simplifies power management by including output metering, branch current/circuit monitoring, and auto-detection by the InfraStruXure suite of management options. Multiple power ratings and power cord lengths for low to high power guarantee compatibility and convenient installation.



Management Cards

Two SmartSlot positions can be used to expand the monitoring capabilities of the UPS with these APC management cards:

- > Network Management Card: One Management Card is included with the UPS; it enables you to monitor and control the UPS over the network. Optionally, install a second Management Card for redundancy.
- > Dry Contact/Environmental Cards: Monitor the conditions of the UPS and its environment using external devices such as sensors.
- > Building Management System (Modbus/Jbus) Card: Enable a Building Management System to monitor the UPS.



Technical Characteristics

UPS Rating kVA/KW (PF = 1)		48kW
Mains Input (Normal Operation)		
Grid system	3 phases + neutral + ground	
Voltage range (full load)	340-477V	
Frequency range	40-70Hz with 10 Hz/sec slew rate	
Power factor (PF)	>0.98 @ load > 50%	
I thd	< 5%	
Nominal input current	77A @ 380V, 73A @ 400V, or 70A @ 415V	
Maximum input current (Nominal Vin, 10% charging batteries)	84.4A @ 380V, 80.2A @ 400V, or 77.3A @ 415V	
Input current limit	98.3A @ 380V / 400V / 415V	
Maximum input short-circuit level	30kA	
Protection	Backfeed contactor	
Bypass Input (Bypass operation)		
Grid system	3 phases + neutral + ground	
Voltage (nominal)	380V / 400V / 415V	
Voltage (range)	+/-10% (from selected voltage)	
Frequency (nominal)	50/60Hz	
Frequency (range)	+/-0.1Hz, +/-3Hz, +/-10Hz (user selectable)	
Nominal input current	73A @ 380V; 69A @ 400V; 67A @ 415V	
Maximum overload input current	84.4A @ 380V; 80.2A @ 400V; 77.3A @ 415V	
Output		
Power rating	48kW	
Grid system	3 phases + neutral + ground	
Voltage (nominal)	380V / 400V / 415V L-L	
Output current (nominal)	73A @ 380; 69A @ 400V; 67A @ 415V	
Maximum battery operation time	Unlimited	
Frequency regulation	50/60Hz bypass synchronized, 50/60Hz +/-0.1% free running	
Synchronized slew rate	Programmable to 0.25, 0.5, 1, 2, 4, 6Hz/sec	
Overload (normal and battery operation)	150% for 60 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	
Efficiency		
Normal operation	≥ 95% at 35% - 100% load; ≥90% @ 15% - 34% load	
Battery operation	≥ 94% at 25% - 100% load; ≥90% @ 15% - 34% load	
Mechanical		
Maximum dimensions (HxWxD)	1991 x 600 x 1070mm	
Net weight	796kg	
Shipping weight	858kg	
UPS Frame Maximum Capacity		
16kW power modules	3	
Battery modules	4	
Power distribution modules	6	
Regulatory Compliance		
CE, UL1778, EN/IEC62040-1-1, EN/IEC/UL60950-1, EN50091-2 / IEC62040-2 (class A), FCC15A, EN/IEC62040-3		

Preliminary – Subject to change without notice