

Symmetra PX

Scalable from 10 kW to 500 kW
Parallel-capable up to 2,000 kW

High-performance, right-sized, modular, hot-scalable, three-phase power protection with ultra-high availability and efficiency for any size data center or high-density power zone



Industry-leading efficiency, availability, and performance for small, medium, and large data centers and mission critical environments

- Redundant power and runtime protection in a single unit
- Fault-tolerant (N+1) design for the highest level of availability
- Corrected unity power factor using double conversion technology
- Modular and scalable without forced shutdowns
- Space-saving high-density design
- Rack-based for agility and aesthetics

Features and benefits

The APC Symmetra™ PX UPS units are world-class, redundant, hot-scalable, high-efficiency power protection systems designed to provide high levels of availability. Seamlessly integrating into today's state-of-the-art data center designs, the Symmetra PX UPS units are true modular systems. 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, each Symmetra PX offer features self-diagnostic capabilities and standardized modules which mitigate the risk of human error, resulting in increased overall data center reliability. Optional N+1 module-level redundancy further enhances power protection and peace of mind without increasing the footprint of your power protection solution.

The Symmetra PX family delivers high availability, extreme agility, and low TCO in an aesthetic form factor. With industry-leading power density, the Symmetra PX has the ability to fit seamlessly onto the data center floor or into the back room. Other features include automated predictive diagnostics and extended battery life which lead to a highly predictable, efficient, and simplified UPS architecture.

Symmetra PX features

Availability

- Automatic internal bypass
- Self-diagnosing, field-replaceable power modules, battery modules, and intelligence modules
- Redundant intelligence module
- Hot-swappable static bypass switch
- Configurable for N+0 or N+1 module-level redundancy
- Modules feature less than 10-minute average mean time to repair (MTTR)

Scalability

- Extended battery runtime available
- Hot-scalable power modules
- Hot-swappable battery modules
- Toolless module replacement
- Aesthetic NetShelter™ form factor

Total Cost of Ownership

- Unity power factor corrected (kW=kVA)
- Intelligent battery management
- Battery modules with integrated monitoring
- One-year warranty and startup service included

Manageability

- Network management included
- Remote access to system data over HTTP, HTTPS, Telnet, SSH, and SNMP (v1&3)
- Secondary network management card supported
- Configurable alarm notifications
- StruxureWare™ Data Center Expert compatible
- SmartSlot™ environmental monitoring, dry contact/environmental, or building management system cards

StruxureWare for Data Centers Software Suite

In the data center environment, our Symmetra PX UPSs are fully managed through StruxureWare for Data Centers, an integrated suite of Data Center Infrastructure Management (DCIM) applications. It enables businesses to prosper by managing their data centers across multiple domains, providing actionable intelligence for an ideal balance of high availability and peak efficiency throughout the entire data center life cycle. StruxureWare is a key element of Schneider Electric EcoStruxure™ — an integrated hardware and software system architecture for intelligent energy management.

Symmetra PX 20

Modular power protection.

Configurable distribution. One enclosure.

Preserve valuable space in your small data center or data center closet with the Symmetra PX 20 kW. Its all-in-one design includes modular power protection, modular battery backup, and user-configurable power distribution, optimizing every square inch of its footprint to ensure that your power-protection and distribution needs are met.

Features

- Adaptable 10 to 20 kW power capacity, with the option of N+0 or N+1 redundancy up to 20 kW N+1
- Configurable power distribution: a highly customizable, factory-tested power distribution solution fitting the needs of any data center
- Dual-mains input, top or bottom feed
- PowerView™ display interface: an easy-to-read LCD screen allowing you to view UPS, battery, and power distribution status and configure settings
- Secondary network management card
- Extended runtime battery frames: Up to four line-up-and-match battery frames can be added for increased runtime.

Support and Service

Included:

- One-year warranty
- Startup service

Optional:

- Preventive maintenance
- On-site warranty extension
- Advantage plans

Approvals

- UL 1778
- CSA
- FCC Part 15 Class A
- IEC 61000-3-2
- IEC 61000-3-3



Scalable to 20 kW N+1

Symmetra PX 40

Compact footprint, robust protection

With Symmetra PX 40, you don't have to pay a footprint penalty for peace of mind. This modular UPS supports the installation of up to five 10 kW power modules, providing up to 40 kW N+1 redundancy from a single enclosure. Providing 40 kW of power and runtime protection in a single-rack footprint, Symmetra PX 40 is ideal for small or medium data centers.

Features

- Adaptable 10 to 40 kW power capacity, with the option of N+0 or N+1 redundancy up to 40 kW N+1
- PowerView display interface: an easy-to-read LCD screen allowing you to view UPS, battery, and power distribution status and configure settings
- Extended runtime battery frames (maximum of four)
- Optional 40 kW configurable power distribution units: a highly customizable, factory-tested power distribution

Options

- Configurable 40 kW InfraStruxure power distribution units with maintenance bypass panel
- Service bypass panel

Approvals

- ULc Listed
- EN 50091-1
- EN 50091-2
- FCC Part 15 Class A
- ISO 14001
- ISO 9001
- UL 1778
- UL 60950

Support and Service

Included:

- One-year warranty
- Startup service

Optional:

- Preventive maintenance
- On-site warranty extension
- Advantage plans



Scalable to 40 kW N+1

Symmetra PX 100

The right-sized UPS for demanding business critical applications

Providing redundancy and high levels of availability in a two-rack footprint, the modular, hot-scalable Symmetra PX 100 provides up to 100 kW of power protection for 208 V deployments. Its high-performance, hot-swappable batteries reduce total cost of ownership.

Features

- Scalable from 10 kW to 100 kW N+0 (10 kW to 90 kW N+1)
- Aesthetic APC NetShelter SX form factor
- Hot-swappable battery modules
- Dual input, top or bottom* feed
- PowerView display interface
- Optional 100 kW modular PDU: providing quick expansion of the power distribution system with factory-assembled power distribution modules
- Extended runtime battery frames: Up to four battery frames can be added for increased runtime.

Options

- 300 mm bottom feed side car
- 100 kW modular power distribution unit with maintenance bypass panel and fully rated subfeed breaker (available without transformer, or with a 600:208 V, 480:208 V, or 208:208 V transformer)
- Seismic kits
- 300 mm maintenance bypass panel

Support and Service

Included:

- One-year warranty

- Startup service

Optional:

- Assembly
- Preventive maintenance
- On-site warranty extension
- Advantage plans



Scalable to 100 kW

Approvals

- UL 1778 second edition
- FCC Part 15 Class A
- CE
- EN/IEC 62040-3
- OSHPD
- ENERGY STAR®

*300 mm bottom feed side car required for some bottom feed configurations

Symmetra PX 250/500 kW

Modular, scalable, ultra-high-efficiency power protection for data centers worldwide

The APC Symmetra PX 250/500 kW is a world-class, ultra-high-efficiency power protection system designed to cost effectively provide high levels of availability while simplifying rightsizing of your data center. The Symmetra PX 250/500 kW systems can scale in increments of 25 kW up to 500 kW, and four systems can be paralleled to deliver up to 2 MW of power protection (1.5 MW with N+1 system-level redundancy).



- > Scalable from 25 kW to 500 kW
- > Parallel-capable up to 2 MW

Features

- Supporting up to four UPS units in parallel with custom switchgear
- Parallelable for capacity (2 MW) or system-level redundancy (1.5 MW N+1)
- Patented ultra-high efficiency (96% at 35% load, 95% at 25% load)
- N+0 or N+1 module-level and system-level redundancy
- Hot-swappable battery modules with integrated monitoring
- Energy monitoring displays the kWh output of each UPS
- Dual mains, top or bottom feed
- 10-inch LCD touchscreen providing local access to UPS status and configuration menus
- System-wide firmware updates via the USB port on back of display
- Support for remote battery installation (battery sidecar required)

Approvals

- CE
- EN/IEC 62040-2 (class A)
- FCC part 15
- EN/IEC 62040-3
- EN/IEC 62040-1-1
- UL 1778
- UL 60950-1
- CSA C22.2 No. 107.3-05
- UL/ULc listed
- ENERGY STAR

Support and Service

Included:

- One-year warranty
- Startup service

Optional:

- Assembly
- Preventive maintenance
- On-site warranty extension
- Advantage plans

Symmetra PX 250/500 options

Extended Runtime (XR) Frames

Install a maximum of eight battery frames to increase runtime. Modular, hot-swappable batteries can be replaced by a trained user in under 10 minutes while the UPS load remains fully protected.



Battery Breaker Enclosure

Install the battery breaker enclosure, then use third-party battery cabinets to supply runtime to the load.



Third-Party Battery Cabinet

Front-access battery systems provide high energy storage density while eliminating the need to reach over energized cables or battery terminals to install, maintain, or replace batteries.



Power Distribution

Modular power distribution mitigates the need to predict the future requirements and configurations of your data center. Factory-assembled power distribution modules quickly plug in to a 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 StruxureWare for Data Centers suite of management options. Multiple power ratings and power cord lengths for low-to-high power guarantee compatibility and convenient installation.



Battery Sidecar

Install the batteries remotely, then connect the batteries by cables to the UPS.



Bottom Feed Frame

For some configurations greater than 250 kW, use the bottom feed frame to support dual bottom-feed utility input.



Symmetra PX 250/500 kits



Battery Breaker Enclosure
Fuse Kits (500 A and 1000 A)



Air Filters



Optional Terminal Blocks



Parallel Cables



Third-party Switchgear Kit

Seismic Kits (not shown)

Technical specifications

Symmetra PX 20 kW

Input

Grid system	3P + N + G
Voltage range	177 – 240 V
Frequency	50/60 Hz +/- 3 Hz (auto sensing)
Frequency range	40 – 70 Hz
Power factor (PF)	0.99 at full load
I thd (full load)	< 6%
Nominal input current	61.3 A @ 208 V
Maximum input current	70.9 A (Nominal Vin, 10% charging batteries)
Input current limit	89.4 A

Output

Power rating	20 kW
Grid system	3P + N + G, 3P + G
Voltage (nominal)	208 V
Nominal output current	55.5 A @ 208 V
Maximum output current (in bypass @ 125% overload)	69.4 A @ 208 V
Frequency	Output frequency: 57 – 63 Hz, configurable for +/-0.1 Hz and +/-10 Hz
Synchronized slew rate	1 Hz/s
Overload (normal and battery operation)	150% for 30 seconds
V thd	< 2% 100% resistive load < 6% computer load as defined by EN 50091-3/IEC 62040-3
Load PF	0.5 to 1.0

Bypass

V nominal	208 V
Frequency (nominal)	60 Hz
Frequency (range)	40 – 70 Hz
Nominal input current	61.3 A
Maximum overload input current (125% continuous)	115 A

Efficiency

AC–AC at nominal mains	91.50%
DC–AC at nominal battery voltage	94%

Mechanical

Dimensions (H x W x D)	2,070 x 610 x 902 mm (81.5 x 24 x 35.5 in.)
Weight	UPS, no modules: 301 kg (665 lb.) UPS fully populated: 818 kg (1,803 lb.)

Environmental

Storage temperature, UPS, and batteries	-15 to 40 °C (5 to 104 °F)
Operating temperature*	0 to 40 °C (32 to 104 °F)
Full load loss at nominal mains (BTU)	5,942 BTU/hr.

Regulatory compliance

CSA, FCC Part 15 Class A, IEC 61000-3-2, IEC 61000-3-3, UL 1778

*For optimum battery life, the operating temperature range is 18 – 27 °C (64 – 80 °F).

Technical specifications

Symmetra PX 40 kW

Input

Grid system	3P + N + G
Voltage range	166 – 240 V
Frequency	50/60 Hz
Frequency range	40 – 70 Hz
Power factor (PF)	> 0.96 @ 50% load > 0.99 at 100% load
I thd (full load)	< 6%
Nominal input current	123 A @ 208V
Maximum input current	162 A (continuous, at min. mains voltage)
Maximum input short-circuit level	30 kA

Output

Power rating	40 kW
Grid system	3P + N + G
Voltage (nominal)	208 V
Nominal output current	111 A @ 208 V
Maximum output current (in bypass @ 125% overload)	139 A @ 208 V
Frequency	Output frequency: 57 – 63 Hz, synchronized to input
Overload (normal and battery operation)	150% for 30 seconds
V thd	100% linear load: < 2% THD max. and 1% single harmonic 100% non-linear load: < 5% THD max.
Load PF	From 0.9 leading to 0.8 lagging without any derating

Bypass

V nominal	208 V
Voltage (range)	+/-15% of nominal
Frequency (nominal)	60 Hz
Frequency (range)	40 – 70 Hz
Nominal input current	125 A
Maximum overload input current (125% continuous)	155 A

Efficiency

AC–AC at nominal mains	> 91.5 % @ 100% load
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Mechanical

Dimensions (H x W x D)	2,080 x 600 x 915 mm (82 x 24 x 36 in.)
Weight	UPS, no modules: 275 kg (600 lb.) UPS fully populated: 775 kg (1,708 lb.)

Environmental

Storage temperature, UPS, and batteries	-15 to 40 °C (5 to 104 °F)
Operating temperature*	0 to 40 °C (32 to 104 °F)
Full load loss at nominal mains (BTU)	11,611 BTU/hr.

Regulatory compliance

ULc Listed, EN 50091-1, EN 50091-2, EN 50091-3, FCC Part 15 Class A, ISO 14001, ISO 9001, UL 1778, UL 60950

*For optimum battery life, the operating temperature range is 18 – 27 °C (64 – 80 °F).

Technical specifications

Symmetra PX 100 kW

Input

Grid system	3P + N + G
Voltage range	177 – 239 V
Frequency	50/60 Hz
Frequency Range	40 - 70 Hz
Power factor (PF)	> 0.98% @ > 25% load
I thd (full load)	< 5%
Nominal input current	297 A
Maximum input current	327 A (Nominal Vin, 10% charging batteries)
Input current limit	360 A
Maximum input short-circuit level	30 kA

Output

Power rating	100 kW
Grid system	3P + N + G
Voltage (nominal)	208 V
Nominal output current	278 A @ 208 V
Frequency	Frequency regulation: 50/60 Hz bypass synchronized, 50/60 Hz +/-0.1% free running
Synchronized slew rate	Programmable to 0.25, 0.5, 1, 2, 4, 6 Hz/s
Overload (normal and battery operation)	150% for 30 seconds
V thd	< 2% @ 100% resistive load, < 6.5% @ 100% SMPS load
Load PF	From 0.5 leading to 0.5 lagging without any derating

Bypass

V nominal	208 V
Voltage (range)	+/-10%
Frequency (nominal)	50/60 Hz
Frequency (range)	+/-0.1 Hz, +/-3 Hz, +/-10 Hz (user-selectable)
Nominal input current	278 A @ 278 V
Maximum overload input current (125% continuous)	347 A

Efficiency

AC-AC at nominal mains	up to 95%
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Mechanical

Dimensions (H x W x D)	2,011 x 1,200 x 1,070 mm (79.2 x 47.2 x 42.1 in.)
Maximum weight	2849.5 lb (1292.5 kg)

Environmental

Storage temperature, UPS, and batteries	-15 to 40 °C (5 to 104 °F)
Operating temperature*	0 to 40 °C (32 to 104 °F)

Regulatory compliance

UL 1778 second edition, FCC Part 15, CE, OSHPD, ENERGY STAR

*For optimum battery life, the operating temperature range is 18 – 27 °C (64 – 80 °F).

Technical specifications

Symmetra PX 250		Symmetra PX 500	
Input			
Grid system	Single feed: 3P + N + G, 3P + G Dual feed: 3P + G		
Grid parallel system	Single feed: 3P + N + G Dual feed: 3P + G		
Voltage range	+/- 15% for full performance; 408 – 552 V @ 480 V		
Frequency	50/60 Hz		
Frequency range	40 – 70 Hz with 10 Hz/s slew rate		
Power factor (PF)	> 0.995 at load = 100% > 0.99 at load > 50% > 0.97 at load > 25%		
I thd (full load)	< 5%		
Nominal input current	315 A @ 480 V	630 A @ 480 V	
Maximum input current	346 A @ 480 V (Nominal Vin, 10% charging batteries)	693 A @ 480 V (Nominal Vin, 10% charging batteries)	
Input current limit	372 A @ 480 V	745 A @ 480 V	
Maximum input short-circuit level	65 kA (50 kA with standard MBwD)		
Ouput			
Power rating	250 kW	500 kW	
Grid system	3P + N + G, 3P + G		
Voltage (nominal)	380 V/400 V/415 V/480 V L-L		
Nominal output current	301 A @ 480 V	601 A @ 480 V	
Maximum output current (in bypass @ 125% overload)	376 A @ 480 V	752 A @ 480 V	
Frequency	Output frequency: 55 – 65 Hz, configurable for +/- 0.1, 1, 2, 4, 6, 8% Frequency regulation: 50/60 Hz bypass synchronized, 50/60 Hz +/-0.1% free running		
Synchronized slew rate	Programmable to 0.25, 0.5, 1, 2, 4, 6 Hz/s		
Overload (normal and battery operation)	150% for 60 seconds, 125% for 10 min. 100% continuous		
V thd	< 2% from 0 to 100% linear load, < 3% full non-linear load according to IEC/EN 62040-3		
Load PF	From 0.5 leading to 0.5 lagging without any derating		
Bypass			
V nominal	380 V/400 V/415 V/480 V L-L		
Voltage (range)	+/-10% (from selected voltage)		
Frequency (nominal)	50/60 Hz		
Frequency (range)	+/-0.5%, +/-1%, +/-2%, +/-4%, +/-6%, and +/-8% (user-selectable)		
Nominal input current	301 A @ 480 V	601 A @ 480 V	
Maximum overload input current (125% continuous)	376 A @ 480 V	752 A @ 480 V	
Efficiency			
AC–AC at nominal mains	> 96% at 50 – 100% load		
DC–AC at nominal battery voltage	> 95% at 25 – 49% load		

Technical specifications (continued)

	Symmetra PX 250	Symmetra PX 500
Mechanical		
Dimensions (H x W x D)	Minimum (standalone UPS, no batteries): 1,991 x 1,600 x 1,070 mm (78.7 x 63 x 42.1 in.) Maximum (UPS with MBwD and 6 min. battery runtime): 1,991 x 3,100 x 1,070 mm (78.7 x 121.9 x 42.1 in.)	Minimum (standalone UPS, no batteries): 1,991 x 1,600 x 1,070 mm (78.7 x 63 x 42.1 in.) Maximum (UPS with MBwD and 6 min. battery runtime): 1,991 x 5,200 x 1,070 mm (78.7 x 204.7 x 42.1 in.)
Weight	Minimum (standalone UPS, no batteries): 1,057 kg (2,330 lb.) Maximum (UPS with MBwD and 6 min. battery runtime): 4,509 kg (9,940 lb.)	Minimum (standalone UPS, no batteries): 1,722 kg (3,797 lb.) Maximum (UPS with MBwD and 6 min. battery runtime): 8,336 kg (18,377 lb.)
Environmental		
Storage temperature, UPS only	-30 to 70 °C (-22 to 158 °F)	
Storage temperature, UPS, and batteries	-15 to 40 °C (5 to 104 °F) battery self discharge: approximately 6 – 8 months @ 25 °C; 1 – 2 months @ 45 °C	
Operating temperature*	0 to 40 °C (32 to 104 °F)	
Full load loss at nominal mains (BTU)	42,759 BTU/hr.	85,517 BTU/hr.
Regulatory compliance		
UL Listed, ULc Listed, CE, EN/IEC 62040-2 (class A), FCC part 15, EN/IEC 62040-3, EN/IEC 62040-1-1, UL 1778, UL 60950-1, CSA C22.2 No. 107.3-05, OSHPD, ENERGY STAR		

*For optimum battery life, the operating temperature range is 18 – 27 °C (64 – 80 °F).

A Comprehensive Portfolio of Services

Schneider Electric Critical Power & Cooling Services (CPCS) provides the expertise, services, and support you need for your building, industry, power, or data center infrastructure. Our world-class life cycle services offer a smart way to install and maintain your critical applications, ensuring your systems are always running at peak performance.

