

Life Is On

Schneider  
Electric



# Symmetra PX 100 kW

Scalable from 10 kW to 100 kW

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

The Schneider Electric Symmetra™ PX 100 kW is a world-class, high-efficiency, ENERGY STAR® qualified power protection system designed to cost-effectively provide redundancy and high levels of availability. Its two-rack footprint seamlessly integrates into today's state-of-the-art data center designs. Made up of swappable power modules, battery modules, a static bypass switch, and intelligent management modules, this architecture can scale power and runtime in increments of 10 kW up to 100 kW as demand grows or when higher levels of availability are required in your data center.

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# Symmetra PX 100 kW

## Features and benefits

The Symmetra PX family serves as the core power train that drives Schneider Electric InfraStruxure™ systems for small, medium, and large data centers. Self-diagnostic capabilities enhance the manageability of the Symmetra PX 100 kW and increase overall data center reliability. Standardized, factory-assembled modules mitigate the risk of human error during installation or routine maintenance procedures. If a module requires replacement, a meantime to repair of less than 10 minutes enhances availability. Symmetra PX 100 kW fits seamlessly onto the data center floor or in the back room. In two standard Schneider Electric NetShelter™ SX racks, the Symmetra PX 100 kW delivers the high availability, extreme agility, and low total cost of ownership you have come to expect from the Symmetra PX family.

High-performance, right-sized, 3-phase power protection with high efficiency and availability for small and medium data centers or high-density zones.

- Fault-tolerant (N+1) design for the highest level of availability
- High-efficiency power modules (95% efficiency)
- Swappable power and battery modules for easy expansion and fast meantime to repair
- ENERGY STAR qualified
- Space-saving, high-density design
- Modular batteries with integrated monitoring
- Rackbased for agility and aesthetics
- Lowest total cost of ownership

## Symmetra PX 100 kW features

### Availability

- Swappable power, battery, and intelligence modules
- N+0 or N+1 redundancy
- Toolless module replacement
- Self-diagnosing, field-replaceable modules
- Redundant intelligence module
- Swappable static bypass switch

### Scalability

- Scalable for capacity (100 kW N+0) or redundancy (up to 90 kW N+1)
- Add power modules to increase capacity in 10 kW increments
- Extended battery runtime available
- Intelligent battery management
- One-year warranty and startup service included

### Manageability

- Embedded network management
- Remote access over HTTP, HTTPS, Telnet, SSH, SNMP
- Local access at PowerView™ display interface
- Configurable alarm notifications
- StruxureWare™ Data Center Expert compatible

### Total cost of ownership

- Unity power factor corrected
- Up to 95% efficient
- Integrated monitoring of battery modules
- One-year warranty and start-up service included

### Flexibility

- Compatible with modular, configurable, and iBusway for Data Center power distribution solutions
- Integrates into existing power distribution solutions if they match the UPS requirements

### Typical applications

- Small/medium data centers
- High-density zones of large data centers

# Symmetra PX 100 kW

## Symmetra PX 100 features

### 1. High-density footprint

With 100 kW of power protection and runtime supplied in the compact footprint of two standard Schneider Electric™ NetShelter SX racks, your load is protected by a mere 14 square feet of UPS equipment, allowing you to reclaim floor space for your IT equipment.

### 2. Main intelligence module and redundant intelligence module

Backup for the swappable main intelligence module provides the maximum possible availability for your system.

### 3. Swappable 10 kW high-efficiency power module

High-efficiency power modules reduce power and cooling costs, saving you money while delivering the optimal power protection your data center deserves.

### 4. Dual-mains input

Dual-mains input allows for top or bottom feed connection to two separate power inputs for increased availability.

### 5. Built-in static bypass switch

The 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.

### 6. Embedded network management card

Provides UPS status and event notification to simplify UPS and power distribution unit (PDU) management. Two SmartSlot™ positions support dry contact, environmental monitoring, and building management system (modbus/Jbus) cards.

### 7. LCD display interface

Offers a clear text-based overview of alarms, status data, and system configuration options in a central location.

### 8. Swappable battery module

Connected in parallel for increased availability, these swappable battery modules feature advanced battery monitoring and temperature-compensated battery charging that extend battery life. Swappability lowers the cost of replacement and mean time to repair. Up to four battery frames can be installed for longer runtimes.

### 9. Advanced battery management

With advanced monitoring capabilities, Symmetra PX 100 kW UPS detects failing battery units before they become a problem — no add-on battery management system necessary. Each battery unit in the battery module records its battery performance and monitors its temperature, reporting this data to the UPS. The Symmetra PX 100 also continually calculates the battery charge percentage and discharge characteristics. During utility power failure or battery self-test, the UPS performs battery diagnostics on each battery unit and generates an alarm if significant performance deviations are detected.



# Symmetra PX 100 kW

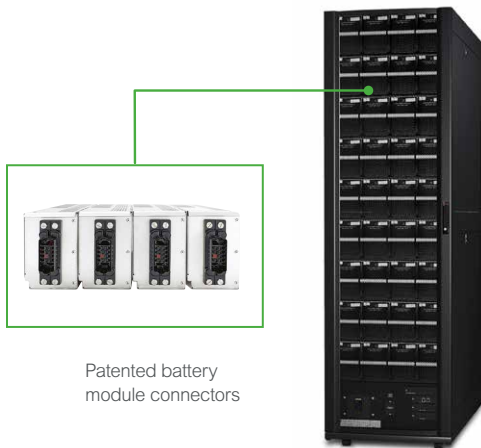
## Symmetra PX 100 features (continued)

### Best-in-class energy efficiency

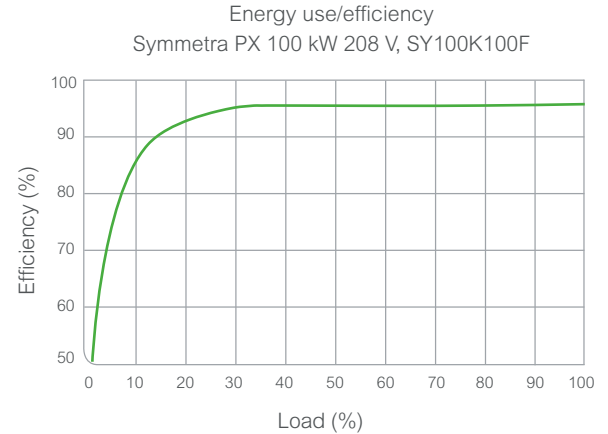
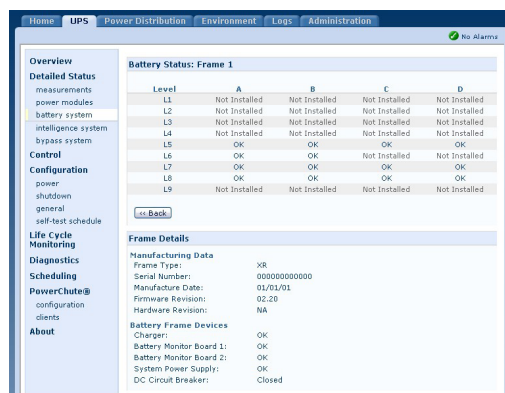
Schneider Electric is proud to be the first company whose UPSs earned the ENERGY STAR — and our tradition of high-efficiency performance continues with the Symmetra PX 100 kW.

Symmetra PX 100 kW is the most efficient modular UPS in its class with up to 95% efficiency, reducing your operating costs and carbon footprint, and making it the eco-conscious core of a modern data center.

The ENERGY STAR program is aimed at reducing pollutants caused by the inefficient use of energy, while also making it easy for consumers to identify and purchase the most energy-efficient products. The ENERGY STAR program distinguishes UPS systems with efficiency ratings in the top 25% of the market. Qualified UPSs perform with excellence at 25, 50, 75, and 100% load levels, as verified by an independent certification body. By requiring consistent measurement methodology and the publication of test results, the ENERGY STAR program empowers consumers to make informed UPS comparisons.



Patented battery module connectors



Curve fit to measured efficiency data. All measurements taken in normal operating mode, at typical environmental conditions, with nominal electrical input and balanced resistive load. (PF = 1.0) output

The Symmetra PX 100 kW efficiency curve is nearly flat down to 25% load, saving power and cooling costs and significantly reducing your overall total cost of ownership.

### Modular batteries

Modular batteries can be added or replaced quickly and easily.

- Simply slide the battery module into place. All DC connections are preconfigured and insulated — no cable installation or contact with DC terminals required.
- Patented rear connectors enable toolless connection and disconnection.

Parallel strings increase availability.

- One row of modules makes one string. All battery modules support the load, so no individual battery is a single point of failure.

Now, even batteries look great in the data center.

- No messy-looking cables — battery connections are made inside the battery unit case.
- Fully integrated system housed in a standard IT rack form factor.

Batteries are monitored at the individual module level.

- Each individual module monitors current, voltage, and temperature and reports the information to the UPS.
- No time wasted — the online battery chart helps you quickly identify and replace faulty modules. See battery data that interests you and receive (configurable) alarm notifications.



# Symmetra PX 100 kW

## Power distribution options

Choose the power distribution solution that meets your data center's unique needs.

### 100 kVA modular PDU

The Schneider Electric 100 kVA modular PDU is designed exclusively for use with Symmetra PX 100 kW, which monitors and publishes PDU status. The 100 kVA modular PDU enhances the Symmetra PX 100 UPS with these features:

- 600 V, 480 V, or 208 V input, and 208 V output
- Distribution and MBP in a single 600 mm rack
- High-efficiency NEMA-rated TP-1 isolation transformers
- Toolless addition of new circuits — factory-assembled and tested power distribution modules (PDMs) snap into place
- PDMs include self-diagnostic capabilities, branch current monitoring, and breaker position monitoring
- Fully rated subfeed



Symmetra PX 100 with 100 kVA modular PDU

### InfraStruxure PDU

The Schneider Electric InfraStruxure PDU is a panelboard PDU with a twist — breakers and cordsets that match your site requirements are installed at the factory, bringing agility, availability, and speed of deployment to your data center.

#### 150 kVA InfraStruxure PDU:

- 480 V input, 208 V output
- 600 mm footprint
- Complete the solution with the 300 mm maintenance bypass panel

#### Custom 100 kVA InfraStruxure PDU:

- 600 V, 480 V, or 208 V input, and 208 V output
- 600 mm footprint



150 kVA InfraStruxure PDU

## Monitor any Schneider Electric PDU

While each PDU has unique features that make it ideally suited to your data center, all Schneider Electric power distribution options allow you to monitor your power savings, configure your system settings and alarm thresholds, and customize alarm notifications remotely using a Web browser, StruxureWare Data Center Expert, or your building management system.

# Symmetra PX 100 kW

## Power distribution options (continued)

### iBusway for Data Center solution

Install the iBusway for Data Center solution to provide reliable, efficient, adaptable power distribution above your IT racks:

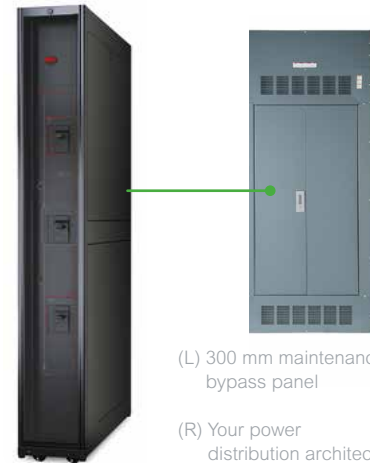
- Up to 400 A capacity
- Zero IT floor footprint
- Up to 20 openings every 10 feet
- Totally enclosed Busway Straight housing is UL listed



iBusway for  
Data Center solution

### Connect Symmetra PX 100 to your existing power distribution architecture

When you replace your aging legacy UPS with the high-efficiency ENERGY STAR qualified Symmetra PX 100, you can save money in two ways — through efficiency incentives or rebates potentially supported in your region and by using your existing power distribution architecture to supply power to the load. Add the 300 mm maintenance bypass panel to transfer power to utility during maintenance procedures.



(L) 300 mm maintenance  
bypass panel

(R) Your power  
distribution architecture

## Symmetra PX 100 kW

### StruxureWare for Data Centers software suite

In the data center environment, our Symmetra PX 100 UPS is fully managed through StruxureWare for Data Centers, an integrated suite of Data Center Infrastructure Management 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. EcoStruxure provides efficient, modular, high-availability power protection that your business-critical applications require.



### A comprehensive portfolio of services

Schneider Electric Critical Power and Cooling Services 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.



# Symmetra PX 100 kW

## Options



### Extended runtime frames

To increase the number of minutes your load can remain on battery, add optional battery extended runtime frames. A maximum of four battery frames can be connected to the Symmetra PX 100.



### Symmetra PX 100 bottom feed side car

The 300 mm bottom feed side car, which supports raised-floor applications, enables bottom feed installation of utility power to the UPS.



### 300 mm maintenance bypass panel

The 300 mm maintenance bypass panel isolates the UPS from the critical load during service procedures. Designed for use with the 150 kVA InfraStruxure PDU or your third-party power distribution solution.



28.8 kVA configurable rack distribution panel



144 kVA modular RPP



72 kVA modular RDP

### Remote power panel options for PDU subfeed

For unique power distribution demands, or to expand the power distribution capabilities of the 100 kVA modular PDU or 150 kVA InfraStruxure PDU, use the subfeed to power a modular or configurable remote power panel.

## Seismic kits



Seismic kit for 600 mm Symmetra PX battery cabinets



Seismic kit for 300 mm Symmetra PX 100, Symmetra PX 250/500, and modular PDU frames



Seismic kit for 600 mm Symmetra PX 100 and Symmetra PX 250/500 frames



### Management cards

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

- **Dry contact I/O SmartSlot card:** 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 specifications

UPS rating kVA/KW (PF=1)	Symmetra PX 100 UPS
<b>Mains input (Normal operation)</b>	
Grid system	3 phases + Neutral + Ground
Voltage range (full load)	177 – 239 V
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 (Nominal Vin, 10% charging batteries)	327 A
Input current limit	360 A
Protection	Backfeed contactor
<b>Bypass input (Bypass operation)</b>	
Grid system	3 phases + Neutral + Ground
V nominal	208 V
V range	+/-10%
Frequency (nominal)	50/60 Hz
Frequency (range)	+/-0.1 Hz, +/-3 Hz, +/-10 Hz (user selectable)
Nominal input current	278 A @ 208 V
Maximum overload input current	347 A
<b>Output</b>	
Power rating	100 kW
Output power factor	PF=1
Grid system	3 phases + Neutral + Ground
V nominal	208 V L-L
Nominal output current	278 A
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/sec.
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
<b>Efficiency</b>	
Normal operation	up to 95%
<b>Mechanical</b>	
Maximum dimensions (HxWxD)	79.1 x 47.2 x 42.1 in. (2011 x 1200 x 1070 mm)
Maximum Weight	4054 lb. (1808 kg)
Maximum shipping weight	4434 lb. (2021 kg)
<b>UPS maximum capacity</b>	
10 kW power modules	10
Battery modules	1 module = 1 row
<b>Regulatory compliance</b>	
UL1778 second edition, FCC Part 15, CE, EN/IEC 62040-3, OSHPD	