



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 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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Electric

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
- 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
- EcoStruxure IT connected

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 or configurable 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. Includes two SmartSlot positions.

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.

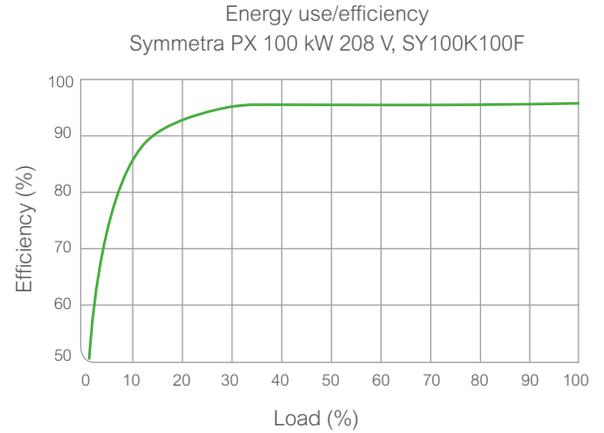


Symmetra PX 100 kW

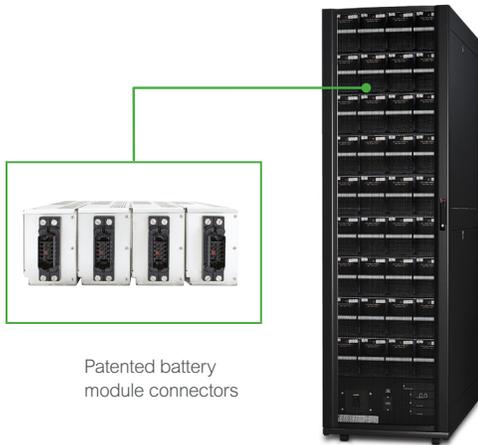
Symmetra PX 100 features (continued)

Energy efficiency

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.



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



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:

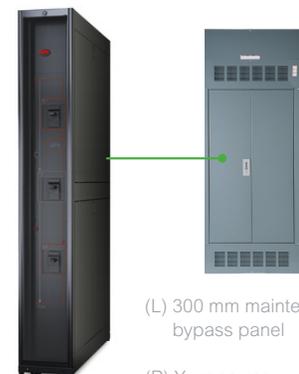
- 600 V, 480 V, or 208 V input, and 208 V output
- 600 mm footprint



150 kVA InfraStruxure PDU

Connect Symmetra PX 100 to your existing power distribution architecture

With Symmetra PX 100, you can use 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

Visibility and peace of mind

EcoStruxure IT enables resilient, secure, and sustainable data centers and IT environments

Schneider Electric's comprehensive Data Center Infrastructure Management (DCIM) solution, EcoStruxure IT, ensures business continuity by enabling secure monitoring, management, insights, planning, and modeling — whether from a single IT rack to hyper-scale IT — on-premises, in the cloud, and at the edge.



Resilient



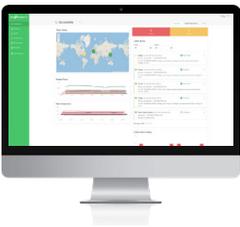
Secure



Sustainable

Easy visibility

Monitoring and management software streamlines data center device management:



EcoStruxure IT Expert provides you a hands-on approach with **cloud-based** monitoring software that synthesizes and analyzes performance and alert data into proactive recommendations and enables wherever-you-go visibility from any device. Try it now: www.ecostruxureit.com/ecostruxure-it-expert/#trial



EcoStruxure Data Center Expert is a scalable end-to-end **on-premise** monitoring software that collects, organizes, and distributes critical device information, providing a comprehensive view of your company-wide, multi-vendor physical infrastructure.

24/7 peace of mind

Digital services proactively monitor your critical devices:



EcoStruxure Asset Advisor* for secure power and cooling provides you a hands-off approach with 24/7 remote monitoring service by the Schneider Electric Connected Services Hub experts.

We monitor and troubleshoot, you relax.

Operations, optimized

Planning and modeling software transforms data into performance insights:



EcoStruxure IT Advisor is a data center infrastructure planning and modeling solution that provides Data Center Managers in large enterprises and colocation data centers with full insights into their infrastructure to improve profitability, sustainability, and resiliency.

* Contact your local representative for availability.

Comprehensive on-site services

Start-up service: included with UPS

- Commission the installation in accordance with manufacturer's recommendations. Ensure optimal system performance from Day 1

Schneider Electric-certified installation services

- Expert configuration of your equipment for optimal performance and reliability

Maintenance services

- Ensure proper care of your mission-critical applications
- Preventive maintenance and response time upgrades, where available

Flexible service plans/ on-site extended warranty

- Hassle-free system maintenance
- Improve uptime at a predictable cost

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.

Technical specifications

UPS rating kVA/KW (PF=1)	Symmetra PX 100 UPS
Mains input (Normal operation)	
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
Bypass input (Bypass operation)	
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
Output	
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
Efficiency	
Normal operation	up to 95%
Mechanical	
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)
UPS maximum capacity	
10 kW power modules	10
Battery modules	1 module = 1 row
Regulatory compliance	
UL1778 second edition, FCC Part 15, CE, EN/IEC 62040-3	