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Electric



# Symmetra PX 40

Scalable from 10 kW to 40 kW

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

The Symmetra™ PX 40 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 single-rack footprint seamlessly integrates power protection into today's state-of-the-art data center designs. Made up of swappable power, battery, bypass, and intelligence modules, this architecture can scale power and runtime in increments of 10 kW up to 40 kW N+1 as demand grows or when higher levels of availability are required in your data center.

[schneider-electric.com](https://www.schneider-electric.com)

# Symmetra PX 40

## 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 40 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 mean time to repair (MTTR) of less than 10 minutes enhances availability. The Symmetra PX 40 kW fits seamlessly onto the data center floor or in the back room, delivering 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, three-phase power protection with high efficiency and availability for small and medium data centers.

- ENERGY STAR qualified
- Power protection and battery backup runtime in a single rack
- Fault-tolerant (N+1) design for the highest level of availability
- Unity power factor corrected (kVA = kW)
- Swappable power and battery modules for easy expansion and fast MTTR
- Space-saving and aesthetic one-rack design

## Symmetra PX 40

### Availability

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

### Scalability

- Adaptable 10 kW to 40 kW power capacity
- N+0 or N+1 redundancy up to 40 kW N+1
- Scalable 10 kW power modules
- Extended battery runtime available

### 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 percent efficient
- Integrated monitoring of battery modules
- Startup service and one-year warranty included

# Symmetra PX 40 kW

## Symmetra PX 40 features

### 1. Main intelligence module and redundant intelligence module

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

### 2. 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.

### 3. Fully rated inverter

In the power modules, improve return on investment by providing more real power, as output power equals input power ( $kW = kVA$ ).

### 4. LCD display interface

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

### 5. Scalable battery module

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

### 6. Network management card

Provides UPS status and event notification to simplify UPS management. Two SmartSlot™ positions support dry contact and building management system (modbus/j-bus) cards.

### 7. Advanced battery management

With advanced monitoring capabilities, Symmetra PX 40 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 performance and monitors its temperature, reporting this data to the UPS. The Symmetra PX 40 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.

### 8. Modular static bypass switch

Enables the UPS to transfer the load to utility power, without interruption, in case of heavy overload or faulty conditions.



# Symmetra PX 40

## Symmetra PX 40 features (continued)

### Best-in-class energy efficiency

Schneider Electric is proud to be the first company whose UPS units earned the ENERGY STAR certification, and our tradition of high-efficiency performance continues with the Symmetra PX 40 kW. Symmetra PX 40 kW is the most efficient modular UPS in its class, reducing your operating costs and carbon footprint, which makes it the eco-conscious core of a modern data center.

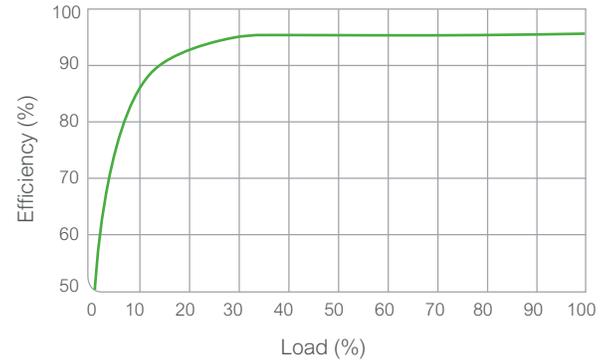
The ENERGY STAR program is aimed at reducing pollutants caused by the inefficient use of energy, while also making it easy for consumers to identify and purchase the most energy-efficient products. This program distinguishes UPS systems with efficiency ratings in the top 25 percent of the market. Qualified UPS units perform with excellence at 25, 50, 75, and 100 percent 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 accurately compare UPS units from multiple vendors.



Patented battery module connectors



Energy use/efficiency  
Symmetra PX 40



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 40 kW efficiency curve is nearly flat down to 25 percent 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 the battery data that interests you — alarm notifications are user configurable.

# Symmetra PX 40

## Configured-to-order distribution

### 40 kVA InfraStruxure PDU

The 40 kVA InfraStruxure power distribution unit (PDU) is a panelboard PDU with a twist — breakers and cord sets that match your site requirements are installed at the factory, bringing agility, availability, and speed of deployment to your data center. It is designed exclusively for use with Symmetra PX 40 kW and enhances it with these features:

- 600 V, 480 V, or 208 V input and 208 V output
- Distribution and maintenance bypass in a single rack
- High-efficiency, NEMA®-rated TP-1 isolation transformers

### Configurable power accessories

Configurable power distribution accessories deliver the flexibility and management that data centers require. A comprehensive selection of single- and three-phase whips, breakers, connector sets, and current monitoring accessories provide agility, availability, and management in the data center.

### Breakers

Square D™ by Schneider Electric bolt-on breakers are shipped preinstalled and match your site specifications.

#### Options:

- 1-pole: 15 A, 20 A, 30 A
- 2-pole: 15 A, 20 A, 30 A
- 3-pole: 20 A, 30 A, 50 A, 60 A

### Cord and connector sets

Connectors are shipped preinstalled.

#### Options:

- L21-20
- L5-15
- L6-30
- L21-30
- L5-20
- Hubbell CS8354C
- L15-30
- L5-30
- 60 A IEC 309
- L14-20
- L6-15
- L14-30
- L6-20



# Symmetra PX 40

## Accessories



### 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 40 kW.



### Service bypass panel

Use the wall-mounted service bypass panel to safely perform maintenance procedures on your Symmetra PX 40 without downtime — the bypass panel safely and smoothly transfers the load to utility power until your work is complete.



### Modular PDUs

Modular power distribution mitigates the need to predict the future requirements and configurations of your data center. Factory-assembled power distribution modules plug into 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.

## 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.



# Symmetra PX 40

## StruxureWare for Data Centers software suite

Schneider Electric UPS units and secure power systems are a core component of any architecture designed for highly critical applications, such as data centers, industry environments, infrastructure, and buildings.

Intelligent energy management of these systems is enabled by Schneider Electric EcoStruxure™ integrated hardware and software system architecture. StruxureWare software applications and suites are a key element of the EcoStruxure architecture. The software helps maximize system reliability and optimize operational efficiency.

StruxureWare for Data Centers software suite collects and manages real-time information about assets, resource use, and operation status throughout the data center life cycle. This data center infrastructure management software fully integrates Symmetra PX 40 UPS. With full system visibility, managers can monitor and apply this information in order to optimize data center performance to meet IT-, business-, and service-oriented goals.



## A comprehensive portfolio of services

Schneider Electric Critical Power & Cooling Services provides the highest quality services and solutions by trained and trusted professionals. Our world-class services offer a smart way to build, operate, and maintain your critical applications, ensuring the right people, in the right place, at the right time.

### Assembly and start-up service

Assembly and start-up service by a certified Field Service Engineer (FSE) ensures full factory warranty coverage. A Schneider Electric-certified installation ensures your equipment is properly and safely configured for optimal performance. This service features a standard eight-hour, five-day response time, with upgrades available for off-business hours.

### On-site warranty extension service

In the event of a system issue, an FSE will arrive by the next business day (or faster with upgrades) to isolate, diagnose, and correct the problem in as little time as possible, minimizing downtime.

### Advantage plans

Flexible service packages offer hassle-free system maintenance to improve uptime at a predictable cost. The Advantage Plus, Prime, Ultra, and Max are full-service packages that include technical support, preventive maintenance, quick on-site response, and remote monitoring. Response time upgrades are available.

### Remote monitoring service (RMS)

RMS is an economical and easy-to-use Web-based service that lets you quickly respond to environmental or system changes. Trained technicians provide secure 24-hour monitoring of your physical infrastructure to diagnose and resolve problems before they become critical.

### Preventive maintenance

Preventive maintenance on-site examinations of your critical systems are designed to prevent problems and keep your system running at maximum efficiency.



## Technical specifications

Symmetra PX 40	
<b>Input</b>	
Grid system	Three phases + neutral + ground
Voltage range	166 V – 240 V
Nominal input current	123 A
Maximum input current (continuous, at minimum mains voltage)	162 A
Frequency	50/60 Hz
<b>Bypass (optional)</b>	
Full-load output rating	40 kW
Max. continuous input current (at minimum mains)	155 A
Max. continuous output current + 125% overload (bypass mode only)	139 A
Nominal output current	111 A
Nominal input current	125 A
<b>Output</b>	
Power rating	40 kVA/40 kW
Voltage nominal	208 V
Nominal output current	111 A
Maximum output current (in bypass only at 125% overload, per phase)	139 A
Output frequency (online, in bypass)	Synchronized to input
Frequency (on battery)	50/60 Hz
<b>Efficiency</b>	
AC-AC at nominal mains	up to 95%
<b>Mechanical</b>	
Size (HxWxD)	82 x 24 x 36 in. (2,080 x 600 x 915 mm)
Weight: fully loaded enclosure	1,700 lb. (775 kg)
Weight: enclosure without power or battery modules	600 lb. (275 kg)
<b>Environmental</b>	
Storage temperature	5 °F to 104 °F (-15 °C to 40 °C)
Operating temperature*	32 °F to 104 °F (0 °C to 40 °C)
<b>Approvals</b>	
cUL Listed, EN 50091-1, EN 50091-2, FCC Part 15 Class A, ISO 14001, ISO 9001, UL 1778, UL 60950	

\*The operating temperature range for optimum battery life is 64 °F to 80 °F (18 °C to 27 °C)  
Preliminary — subject to change without notice.

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