Symmetra PX 40

Scalable from 10 kW to 40 kW

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

The SymmetraTM PX 40 kW is a world-class, high-efficiency, 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.

se.com

Life Is On | Schneider Electric

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.

- 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 PowerViewTM display interface
- Configurable alarm notifications
- StruxureWareTM 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.
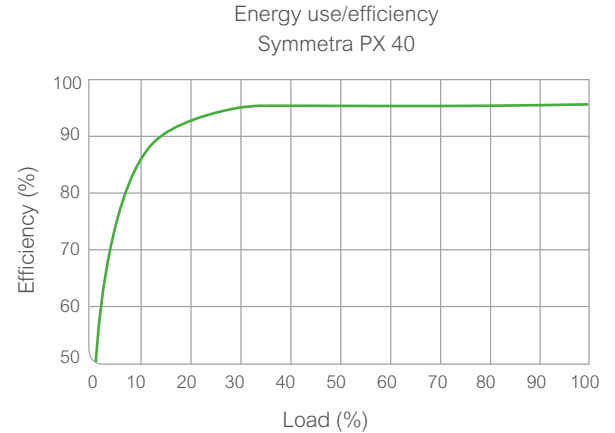
Symmetra PX 40

Symmetra PX 40 features (continued)

Energy efficiency

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.

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.

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.

Patented battery module connectors

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 EcoStruxure IT 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.
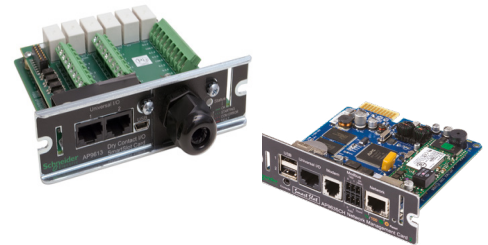
Visibility and peace of mind

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.
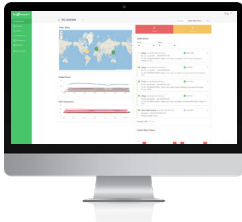
Resilient　　　**Secure**　　　**Sustainable**

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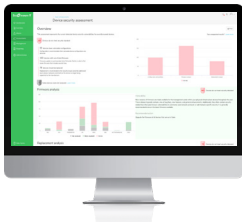
EcoStruxure Data Center Expert is a scalable end-to-end **on-premise** monitoring software that collects, organizes, and distributes critical device information, providing a comprehensive view of your company-wide, multi-vendor physical infrastructure.

24/7 peace of mind

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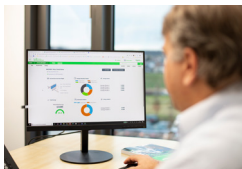
EcoStruxure Asset Advisor* for secure power and cooling provides you a hands-off approach with 24/7 remote monitoring service by the Schneider Electric Connected Services Hub experts.

We monitor and troubleshoot, you relax.

Operations, optimized

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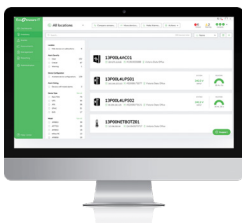
EcoStruxure IT Advisor is a data center infrastructure planning and modeling solution that provides Data Center Managers in large enterprises and colocation data centers with full insights into their infrastructure to improve profitability, sustainability, and resiliency.

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

---

* Contact your local representative for availability.

Technical specifications

Symmetra PX 40	
Input	
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
Bypass (optional)	
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
Output	
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
Efficiency	
AC-AC at nominal mains	up to 95%
Mechanical	
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)
Environmental	
Storage temperature	5 °F to 104 °F (-15 °C to 40 °C)
Operating temperature*	32 °F to 104 °F (0 °C to 40 °C)
Approvals	
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.

se.com

Life Is On | Schneider Electric