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Schneider  
Electric



# Symmetra PX 48 kW

Scalable from 16 to 48 kW

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

**The right-sized UPS for demanding business-critical applications**

The Schneider Electric Symmetra™ PX 48 kW UPS is a world-class, high-efficiency, all-in-one power protection system designed to cost-effectively provide redundancy and high levels of availability. With a single-rack footprint, the Symmetra PX 48 All-in-One UPS provides up to 48 kW of power protection for 400 V deployments, as well as scalable power distribution and swappable batteries.



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# Symmetra PX 48 kW

## Features and benefits

### Features and benefits

Seamlessly integrating into today's state-of-the-art data center designs, the Symmetra PX 48 kW UPS is a true modular system. Made up of swappable modules — power, intelligence, battery, bypass, and distribution — this architecture can scale power and runtime in increments from 16 to 48 kW as demand grows or higher levels of availability are required in your data center. Self-diagnostic capabilities enhance the manageability of the Symmetra PX 48 kW UPS and increase overall data center reliability.

The Symmetra PX family serves as the core power train that drives Schneider Electric InfraStruxure™ systems for small, medium, and large data centers. Standardized, factory-assembled modules mitigate the risk of human error during installation or routine maintenance procedures, and, with no rear access required, the Symmetra PX 48 kW UPS fits seamlessly onto the data center floor, into the backroom, or against any wall. In one rack, the Symmetra PX 48 kW UPS delivers the high availability, extreme agility, and low total cost of ownership (TCO) you have come to expect from the Symmetra PX family.

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

- Power, runtime protection, and distribution in a single frame
- Modular and scalable
- High-efficiency double conversion technology (95%)
- High-density design
- Low TCO
- Unity power factor corrected
- Rack-based for agility and aesthetics
- Front access only

## Symmetra PX

### Availability

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

### Total cost of ownership

- TÜV-verified high efficiency (95% at 30% load)
- Unity power factor corrected
- Integrated monitoring of modular batteries
- One-year warranty and startup service included

### Scalability

- Scalable 16 kW power modules
- Adaptable 16 to 48 kW power capacity
- Extended battery runtime available

### Manageability

- Dual-mains input, top or bottom feed
- Embedded network management
- Remote access over HTTP, HTTPS, Telnet, SSH,

### SNMPv1&3

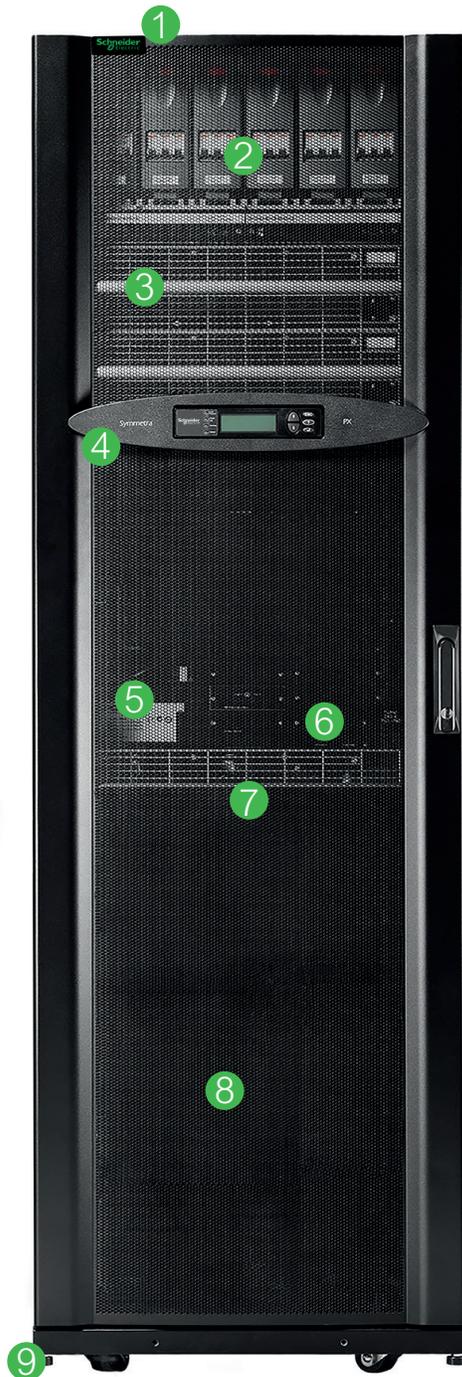
- Local access at PowerView™ display interface
- Configurable alarm notifications
- StruxureWare™ Data Center Expert compatible

### Typical applications

- Small data centers
- High-density zones of small or medium data centers

# Symmetra PX 48 kW

## Features and benefits



### 1. Dual mains input/output

Allows for top or bottom feed connection to two separate power inputs for increased availability.

### 2. Modular power distribution

Adapt the modular power distribution solution to meet changing demand with easy-to-install power distribution modules. Monitor breaker positions and simplify power management with output metering and branch current/circuit monitoring.

### 3. High-efficiency (95%) power module — down to 30% loading

Independently verified by TÜV, these high-efficiency double conversion power modules reduce power and cooling costs, saving you money while delivering the optimal power protection your data center deserves

### 4. LCD display interface

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

### 5. Main intelligence module and redundant intelligence module

Back-up for the main intelligence module provides the maximum possible availability for your system.

### 6. Network management card

Provides UPS status and event notification. Two SmartSlot™ positions support dry contact, building management system (modbus/Jbus), and additional network management cards.

### 7. 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.

### 8. Swappable 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. Additional battery frames can be added for longer run times.

### 9. High-density footprint

The all-in-one solution requires front-facing access only, which provides more flexibility on where you place the space-saving UPS and enables the Symmetra PX 48 kW to be put anywhere, even against a wall — which leaves more room for IT equipment.

# Symmetra PX 48 kW

The high density, efficient, scalable, modular UPS

## Scalability and modularity

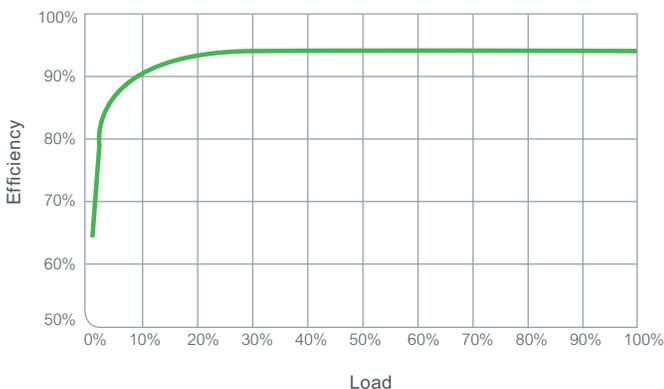
- Scalable from 16 to 48 kW
- One-time installation service
- Modular components simplify future expansion as your load grows
- N+1 redundant up to 32 kW
- Integrated modular power distribution
- Swappable power, battery, and breaker modules
- All components conform to NetShelter™ SX form-factor
  - (78.7 x 23.6 x 42.1 inch HxWxD)
  - (1991 x 600 x 1070 mm HxWxD)

## High-density and flexible configuration

- Single-rack design gives Symmetra PX the highest power density in its class
- Frees up valuable data center space with up to 48 kW in 0.642 sq/m (battery footprint included)
- Integrated power, runtime, and distribution maximize solution density footprint
- Modular architecture simplifies installation by offering the flexibility that today's data centers require
  - White space or against a wall
  - Top feed, bottom feed
  - Single feed, dual feed
- 16 to 48 kW expansion with scalable power, battery, and power distribution modules
- Front access only; no rear access is required

## Energy efficiency

95% efficient to 30% loading, the Symmetra PX 48 kW saves power and cooling costs, significantly reducing your overall TCO.



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



# Symmetra PX 48 kW

## Features and benefits

### 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



Patented battery module connectors



### 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

Level	A	B	C	D
L1	Not Installed	Not Installed	Not Installed	Not Installed
L2	Not Installed	Not Installed	Not Installed	Not Installed
L3	Not Installed	Not Installed	Not Installed	Not Installed
L4	Not Installed	Not Installed	Not Installed	Not Installed
L5	OK	OK	OK	OK
L6	OK	OK	Not Installed	Not Installed
L7	OK	OK	OK	OK
L8	OK	OK	OK	OK
L9	Not Installed	Not Installed	Not Installed	Not Installed

## StruxureWare for Data Centers Software Suite

Schneider Electric UPSs 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.

The 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 (DCIM) software fully integrates Symmetra PX 48 kW 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.



# Symmetra PX 48 kW

## Features and benefits



### Extended runtime (XR) 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 48 kW UPS.

### Power distribution

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 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:

- **Network management card:** One management card is included with the UPS; it enables you to monitor and control the UPS over the network. Optionally, install a second management card for redundancy.
- **Dry contact/environmental cards:** 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 48 kW

A comprehensive portfolio of services

## Critical Power & Cooling Services (CPCS)



Schneider Electric Critical Power & Cooling Services (CPCS) 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, and quick on-site response. Response time upgrades are available.

### Remote 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

Rated power (kVA/kW)		48 kw
<b>Mains input (Normal operation)</b>		
Grid system	3 phases + neutral + ground	
Voltage range (full load)	340 – 477 V	
Frequency range	40 – 70 Hz with 10 Hz/sec slew rate	
Power factor (PF)	>0.98 @ load > 50%	
I thd	< 5%	
Nominal input current	77 A @ 380 V, 73 A @ 400 V, or 70 A @ 415 V	
Maximum input current (Nominal Vin, 10% charging batteries)	<u>84.4 A @ 380 V, 80.2 A @ 400 V, or 77.3 A @ 415 V</u>	
Input current limit	98.3 A @ 380 V/400 V/415 V	
Maximum input short-circuit level	30 kA	
Protection	Backfeed contactor	
<b>Bypass input (Bypass operation)</b>		
Grid system	3 phases + neutral + ground	
Voltage (nominal)	380 V/400 V/415 V	
Voltage (range)	+/-10% (from selected voltage)	
Frequency (nominal)	50/60 Hz	
Frequency (range)	+/-0.1 Hz, +/-3 Hz, +/-10 Hz (user selectable)	
Nominal input current	73 A @ 380 V; 69 A @ 400 V; 67 A @ 415 V	
Maximum overload input current	84.4 A @ 380 V; 80.2 A @ 400 V; 77.3 A @ 415 V	
<b>Output</b>		
Power rating	48 kW	
Grid system	3 phases + neutral + ground	
Voltage (nominal)	380 V/400 V/415 V L-L	
Output Current (nominal)	73 A @ 380; 69 A @ 400 V; 67 A @ 415 V	
Maximum battery operation time	Unlimited	
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 60 seconds, 125% for 10 min, 100% continuous	
V thd	< 2% from 0 to 100% linear load, < 6% full nonlinear load according to IEC/EN62040-3	
Load PF	from 0.5 leading to 0.5 lagging without any derating	
<b>Efficiency</b>		
Normal operation	≥ 95% at 35% – 100% load; ≥90% @ 15% – 34% load	
Battery operation	≥ 94% at 25% – 100% load; ≥90% @ 15% – 34% load	
<b>Mechanical</b>		
Maximum dimensions (HxWxD)	1991 x 600 x 1070 mm	
Net weight	796 kg	
Shipping weight	858 kg	
<b>UPS frame maximum capacity</b>		
16 kW power modules	3	
Battery modules	4	
Power distribution modules	6	
<b>Regulatory compliance</b>		
CE, UL1778, EN/IEC 62040-1-1, EN/IEC/UL60950-1, EN50091-2/IEC 62040-2 (class A), FCC15A, EN/IEC 62040-3		