

Life Is On

Schneider
Electric



Symmetra PX 20

Scalable to 20 kW

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

The Symmetra™ PX 20 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 and power distribution 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 20 kW N+1 as demand grows or when higher levels of availability are required in your data center.

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Symmetra PX 20

Features and benefits

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 20 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 all-in-one Symmetra PX 20 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 (TCO) you have come to expect from the Symmetra PX family.

High-performance, right-sized, modular, scalable, three-phase power protection with ultra-high availability and efficiency for small data centers.

- ENERGY STAR qualified
- Power protection, battery backup runtime, and configurable power distribution 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 quick expansion and reduced MTTR
- Factory-assembled, configurable power distribution panel reduces installation time
- Space-saving and aesthetic one-rack design

Symmetra PX 20

Availability

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

Scalability

- Adaptable 10 kW to 20 kW power capacity
- N+0 or N+1 redundancy up to 20 kW N+1
- Scalable 10 kW power modules
- Extended battery runtime available

Manageability

- Dual-mains input, top or bottom feed
- 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
- Start-up service and one-year warranty included

Symmetra PX 20

Symmetra PX 20 features

1. 39-pole configurable power distribution unit (PDU)

Highly customizable, factory-tested power distribution solution fits the needs of any data center — within the single-rack footprint of the UPS.

2. Main intelligence module and redundant intelligence module

Backup for the swappable main intelligence module guarantees 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. Fully rated inverter

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

5. LCD display interface

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

6. 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.

7. Network management card

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

8. Static bypass switch module

A 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 percent overload conditions, the data center remains operational.

9. Maintenance bypass panel

Maintenance bypass is included in this all-in-one UPS.

10. Advanced battery management

With advanced monitoring capabilities, the Symmetra PX 20 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 20 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 20

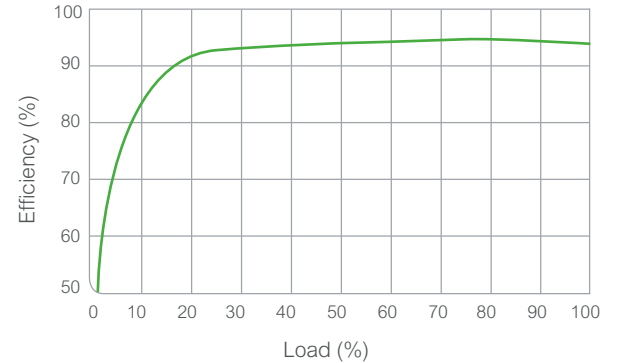
Symmetra PX 20 features (continued)

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 20 kW. Symmetra PX 20 kW is the most efficient modular UPS in its class. It reduces your operating costs and carbon footprint, making it the eco-conscious core of a modern data center.

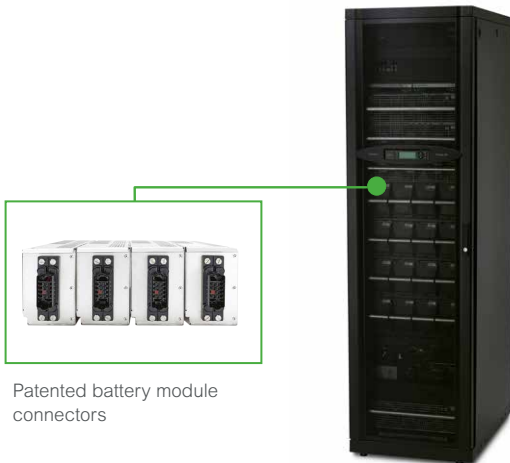
The ENERGY STAR program is aimed at reducing pollutants caused by the inefficient use of energy, while also making it easy for consumers to identify and purchase the most energy-efficient products. This program distinguishes UPS systems whose efficiency ratings are in the top 25 percent of the market. 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 make informed UPS comparisons.

Energy use/efficiency
Symmetra PX 20 kW 208 V, ISX20K20F



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 20 kW efficiency curve is nearly flat down to 25 percent load, saving power and cooling costs and significantly reducing your overall TCO.



Patented battery module connectors

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.

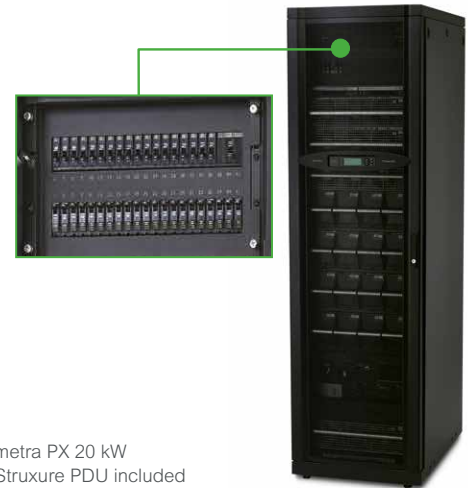
- Each individual module monitors current, voltage, and temperature and reports the information to the UPS.
- No time wasted — the online battery chart helps you quickly identify and replace faulty modules.
- See the battery data that interests you — alarm notifications are user-configurable

Symmetra PX 20

Configured-to-order distribution

InfraStruxure power distribution unit included

Symmetra PX 20 includes a configured-to-order, factory-assembled, 39-pole InfraStruxure PDU tailored to your site requirements. Customized breaker and cord sets also reduce cable clutter — your site's layout defines the length of cord connector sets. With extensive configuration options, the Symmetra PX 20 delivers the flexibility and management that data centers require while answering the needs of today's businesses with quick installation and rapid start-up time.



Symmetra PX 20 kW
InfraStruxure PDU included
in Symmetra PX 20 kW
all-in-one UPS

Distribution options

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

Connectors

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 20

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 20 kW.

Seismic kits



Seismic kit for
Symmetra PX 20 batteries



Seismic kit for Symmetra PX 20
and 60 kVA InfraStruxure PDUs



Management cards

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

- **Dry contact/environmental cards**
Monitor the conditions of the UPS and its environment using external devices such as sensors.
- **Building management system (modbus/J-bus) card**
Enable a building management system to monitor the UPS.



Symmetra PX 20



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.

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 20 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.



Technical specifications

UPS rating kVA/KW (PF=1)		Symmetra PX 20 kW all-in-one
Mains input (Normal operation)		
Grid system	Three phases + neutral + ground	
Voltage range (full load)	177 V – 240 V	
Frequency range	50/60 Hz +/-3 Hz (auto sensing)	
Power factor (PF)	0.99%	
I thd (full load)	< 6%	
Nominal input current	61.3 A	
Maximum input current (Nominal Vin, 10% charging batteries)	70.9 A	
Input current limit	89.4 A	
Bypass input (bypass operation)		
Grid system	Three phases + neutral + ground	
V nominal	208 V	
V range	183 V – 233 V	
Frequency (nominal)	60 Hz	
Frequency (range)	40 Hz – 70 Hz	
Overload output current	69.4 A @ 125% (continuous)	
Output		
Power rating	20 kVA/20 kW	
Grid system	Three phases + neutral + ground	
V nominal	208 V	
Nominal output current	55.5 A @ 100% continuous	
Frequency regulation	Optional +/-0.1 Hz and +/-10 Hz setting from front panel (synchronized to mains > 57 to 63 Hz)	
Synchronized slew rate	1 Hz/s	
Overload (normal and battery operation)	83.3 A @ 150% for 30 seconds	
V thd	< 2% @ 100% resistive load, < 6% computer load as defined by EN 50091-3/IEC 62040-3	
Load PF	0.5 to 1.0	
Efficiency		
Normal operation	up to 95%	
Mechanical		
Maximum dimensions (HxWxD)	81.5 x 23.5 x 35.6 in. (2,068 x 597 x 905 mm)	
Maximum Weight	1,803 lb. (818 kg)	
Maximum shipping weight	665 lb. (301 kg)	
UPS maximum capacity		
10 kW power modules	3 (20 kW N+1)	
Battery modules	3 (20 kW N+1)	
Breakers	39 available breaker positions	
Regulatory compliance		
UL 1778, CSA, FCC Part 15 Class A, IEC 61000-3-2, IEC 61000-3-3, OSHPD		

Preliminary — subject to change without notice.