Symmetra PX

Scalable from 16 kW to 500 kW. Parallel-capable up to 2,000 kW

High performance, right-sized, modular, hot-scalable, three-phase power protection with ultra high availability and efficiency for any size data center or high density power zone

Industry-leading efficiency, availability, and performance for small, medium, and large data centers and mission critical environments

• Redundant power and runtime protection in a single unit
• Fault-tolerant (N+1) design for the highest level of availability
• Unity power factor corrected using double conversion technology
• Modular and scalable without forced shutdowns
• Space-saving high density design
• Rack-based for agility and aesthetics
Features and benefits

The APC Symmetra™ PX UPS units are world-class, redundant, hot-scalable, high-efficiency power protection systems designed to cost effectively provide high levels of availability. Seamlessly integrating into today’s state-of-the-art data center designs, the Symmetra PX UPS units are true modular systems. Made up of dedicated and redundant hot-swappable modules – power, intelligence, battery, and bypass, all engineered into a design that is easily and efficiently serviceable. This architecture can scale power and runtime as demand grows or as higher levels of availability are required.

The Symmetra PX family serves as the core power train that drives APC InfraStruxure™ systems for small, medium, and large data centers. Highly manageable, each Symmetra PX offer features self-diagnostic capabilities and standardized modules which mitigate the risk of human error, resulting in increased overall data center reliability. Optional N+1 module-level redundancy further enhances power protection and peace of mind without increasing the footprint of your power protection solution.

The Symmetra PX family delivers high availability, extreme agility, and low TCO in an aesthetic form factor. With industry-leading power density, the Symmetra PX has the ability to fit seamlessly onto the data center floor or into the back room. Other features include automated predictive diagnostics and extended battery life which lead to a highly predictable, efficient, and simplified UPS architecture.

### Symmetra PX features

<table>
<thead>
<tr>
<th>Availability</th>
<th>Total Cost of Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automatic internal bypass</td>
<td>Unity power factor corrected (kW=kVA)</td>
</tr>
<tr>
<td>Self-diagnosing, field-replaceable</td>
<td>TÜV-verified efficiency ratings</td>
</tr>
<tr>
<td>power, battery, and intelligence</td>
<td>Intelligent battery management</td>
</tr>
<tr>
<td>modules</td>
<td>One-year warranty and startup service</td>
</tr>
<tr>
<td>Redundant intelligence module</td>
<td>included</td>
</tr>
<tr>
<td>Hot-swappable static bypass switch</td>
<td>Manageability</td>
</tr>
<tr>
<td>Configurable for N+0 or N+1 module-level redundancy</td>
<td>Network management included</td>
</tr>
<tr>
<td>Modules feature less than ten minute average Mean Time to Repair</td>
<td>Remote access to system data over HTTP, HTTPS, Telnet, SSH, and SNMP (v1&amp;3)</td>
</tr>
<tr>
<td>Scalability</td>
<td>Secondary Network Management</td>
</tr>
<tr>
<td>Extended battery runtime available</td>
<td>Card supported</td>
</tr>
<tr>
<td>Hot-scalable power modules</td>
<td>Configurable alarm notifications</td>
</tr>
<tr>
<td>Hot-swappable battery modules</td>
<td>StruxureWare™ Central compatible</td>
</tr>
<tr>
<td>Toolless module replacement</td>
<td>SmartSlot™ environmental monitoring,</td>
</tr>
<tr>
<td>Aesthetic NetShelter™ form factor</td>
<td>dry contact/environmental, or building</td>
</tr>
<tr>
<td></td>
<td>management system cards</td>
</tr>
</tbody>
</table>

### About APC InfraStruxure Systems

The APC InfraStruxure solution fully integrates power, cooling, racks, security/management components, and services to create a seamless network-critical physical infrastructure (NCPI), which is the foundation upon which all highly available networks depend. InfraStruxure solutions can turn any new or existing room into an integrated and complete world-class data center.
Symmetra PX 48 kW

Modular power protection. Modular distribution. One enclosure.
Preserve valuable space in your small data center or data center closet with the Symmetra PX 48 kW. Its all-in-one design includes hot-swappable modular power protection, battery backup, and power distribution, optimizing every square inch of its footprint to ensure that your power protection and distribution needs are met. Because the modules are hot-swappable by a trained user, Mean Time to Repair is reduced to ten minutes or less.

Features
- Adaptable 16 to 48 kW power capacity, with the option of N+0 redundancy up to 48 kW or N+1 redundancy up to 32 kW
- Embedded modular power distribution
- Dual-mains input, top or bottom feed
- PowerView™ display interface: An easy-to-read LCD screen allows you to view UPS, battery, and power distribution status and configure settings

1 Power distribution modules
Enable safe expansion of the power distribution solution without a forced shutdown. The Modular PDU also monitors breaker positions and simplifies power management with output metering and branch current/circuit monitoring.

2 Power modules
16 kW power modules supply 95 percent efficiency down to 30 percent loading, reducing power and cooling costs.

3 Battery modules
Powerful 9AH battery modules feature advanced battery monitoring and temperature-compensated battery charging that extends battery life.

Modular Expansion Options
- 16 kW power modules
- Battery modules
- Power distribution modules

Additional Options
- Secondary Network Management Card
- Extended runtime battery frames: Add up to four line up and match battery frames to extend runtime

Approvals
- CE
- UL 1778
- EN/IEC 62040-1-1
- EN/IEC/UL 60950-1
- EN 50091-2, IEC 62040-2 (class A)
- FCC15A
- EN/IEC 62040-3

Support and Service
Included:
- One-year warranty
- Startup service

Optional:
- Preventive maintenance
- On-site warranty extension
- Advantage plans
Symmetra PX 96/160 kW

The right-sized UPS for demanding business critical applications

The Symmetra PX 96/160 kW UPS is a true modular system, made up of hot-swappable power, battery, intelligence, and bypass modules that facilitate easy installation and efficient service. This architecture can scale in increments of 16 kW up to 160 kW as demand grows or higher levels of availability are required in your data center.

Features

• Adaptable 16 to 48 kW power capacity, with the option of N+0 redundancy up to 48 kW or N+1 redundancy up to 32 kW
• Embedded modular power distribution
• Dual-mains input, top or bottom feed
• PowerView display interface: An easy-to-read LCD screen allows you to view UPS, battery, and power distribution status and configure settings

1 Power distribution modules
16 kW power modules supply 95 percent efficiency down to 30 percent loading, reducing power and cooling costs.

2 Battery modules
Powerful, high-performance battery modules feature advanced battery monitoring and temperature-compensated battery charging that extends battery life.

3 Modular power distribution
Optional modular power distribution and maintenance bypass with no footprint penalty.

Modular Expansion Options
• 16 kW power modules
• 9AH battery modules
• Power distribution modules

Additional Options
• Extended runtime battery frames: Add a maximum of four battery frames to extend runtime

Approvals
• CE
• UL 1778
• EN/IEC 62040-1-1
• EN/IEC/UL 60950-1
• EN 50091-2/IEC 62040-2 (class A)
• FCC15A
• EN/IEC 62040-3

Support and Service
Included:
• One-year warranty
• Startup service

Optional:
• Preventive maintenance
• On-site warranty extension
• Advantage plans

Scalable to 160 kW
Symmetra PX 250/500 kW

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

The APC Symmetra PX 250/500 kW is a world-class, ultra-high efficiency power protection system designed to cost-effectively provide high levels of availability while simplifying right-sizing of your data center. The Symmetra PX 250/500 kW systems can scale in increments of 25 kW up to 500 kW, and four systems can be paralleled to deliver up to 2 MW of power protection (1.5 MW with N+1 system-level redundancy).

Scalable from 25 kW to 500 kW
Parallel-capable up to 2 MW

Features
• Supports up to four UPS units in parallel with custom switchgear
• Parallelable for capacity (2 MW) or system-level redundancy (1.5 MW N+1)
• Patented ultra-high efficiency (96% at 35% load, 95% at 25% load)
• N+0 or N+1 module-level and system-level redundancy
• High-performance 9AH batteries
• Energy monitoring displays kWh output of each UPS
• Dual mains, top or bottom feed
• 10 inch LCD touchscreen provides local access to UPS status and configuration menus
• System-wide firmware updates via the USB port on back of display
• Support for remote battery installation (battery sidecar required)

Approvals
• CE
• EN/IEC 62040-2 (class A)
• FCC part 15
• EN/IEC 62040-3
• EN/IEC 62040-1-1
• UL 1778
• UL 60950-1
• CSA C22.2 No. 107.3-05
• UL/ULc Listed

Support and Service
Included:
• One-year warranty
• Startup service

Optional:
• Assembly
• Preventive maintenance
• On-site warranty extension
• Advantage plans
Symmetra PX 250/500 options

Extended Runtime (XR) Frames
Install a maximum of eight battery frames to increase runtime. Modular, hot-swappable batteries can be replaced by a trained user in under ten minutes while the UPS load remains fully protected.

Battery Sidecar
Install the batteries remotely, then connect the batteries by cables to the UPS.

Battery Breaker Enclosure
Install the battery breaker enclosure, then use third-party battery cabinets to supply runtime to the load.

Bottom Feed Frame
For some configurations greater than 250 kW, use the Bottom Feed Frame to support dual bottom-feed utility input.

Symmetra PX 250/500 kits

Battery Breaker Enclosure
Fuse Kits (500 A and 1000 A)

Air filters

Optional Terminal Blocks

Parallel Cables

Third-party Switchgear Kit
Modular Power Distribution Features

What is Modular Power Distribution?
Modular Power Distribution is a solution comprised of a Modular Power Panel and one or more Power Distribution Modules (PDMs).

- Symmetra PX 48 kW has an integrated Modular Power Panel
- Symmetra PX 96/160 kW features an optional Power Distribution Unit with Maintenance Bypass Panel and Batteries with no footprint penalty
- Symmetra PX 250/500 is compatible with the APC 277 kW Modular Remote Power Panel

Modular RPP
The source of amperage for the distribution, housing the hot-pluggable power backplane, the main circuit monitoring bus, and the support structure for the PDMs. Each Modular RPP shares the same basic design, which enables simple plug-and-play for any Distribution Modules into any Modular RPP of common voltage.

Power Distribution Modules
Each PDM consists of an industry standard circuit breaker, branch current monitoring (BCM), output cable and connector plug combined into a hot-swappable module that feeds power to IT racks.

1. Add Circuits in Less than Ten Minutes
   Automatic recognition of the module type, ampacity, and cord length by the PDU simplifies load balancing and circuit addition.

2. One-phase and Three-phase Power Distribution Modules
   A hot-swappable latching module houses a standard circuit breaker, current transducers, and position sensors. The entire assembly is attached to a pre-terminated cord-set with multiple length options; each module is programmed to know how long its cable is.

3. Touch-safe Backplane
   Shields users from dangerous voltages; standardized connectors in the backplane enable users to add a new circuit without hot work or shutdowns.

4. Integrated Monitoring Solution
   While the legendary PowerView display provides information locally at the UPS or standalone PDU, a Network Management Card relays vital information to the monitoring platform of choice.

5. Residual Current Device (RCD)
   Further enhancing safety, select Power Distribution Modules include protection from leakage current.

6. Locking Connectors Improve Availability and Safety
   Connector safety features — including a positive locking mechanism, complete isolation at all touch-points, and robust interoperability — enable standardization across all corporate locations.
StruxureWare Central

Centralized management of critical physical infrastructure.
Keep track of all your infrastructure devices, no matter how large or dispersed your IT enterprise. StruxureWare Central collects and organizes all power, cooling, and environmental data so that you get a single, consolidated view.

- Real-time device monitoring and immediate event notification, enabling quick assessment of critical situations.
- Third-party device support — monitor any networked SNMP compliant device regardless of vendor.
- Centralized alert repository — access historical alerts from several devices through one central database. Sort alerts by type, date, appliance, or device group.
- Advanced reporting — users can generate reports from any monitored device, create and save custom reports for visibility at any time, and schedule reports to recur automatically.

Minimize your response time to critical physical infrastructure situations — receive alerts via mobile phones (SMS), Web applications (HTTP Post), and email.

Add-on surveillance application enhances visibility of a company's critical assets, and creates a centralized searchable repository of all surveillance events.

Service Options

Included services
Factory Warranty
One-year on-site service that includes parts, labor and travel. This warranty covers repairing or replacing any defective parts, including on-site labor and travel.

Start-up
This valuable service ensures the Symmetra PX is fully configured on-site by company certified field service personnel, that the electrical installation has been done correctly, and that the system is started up to ensure optimal performance. The result is reduced risk of failure and increased product quality. Startup must be performed by Schneider Electric Critical Power & Cooling Services personnel in order to receive full coverage under the Factory Warranty.

Optional services
On-site Warranty Extension
A factory trained technician will arrive on-site to diagnose or repair the system. Includes parts, labor, and travel, with Next Business Day response. An Annual Site Inspection visit is also included.

Advantage Plans
Comprehensive packages of services designed to give you extended peace of mind that your system will receive the service it needs to operate at peak performance and with maximum availability. Includes tech support, next business day on-site response, preventive maintenance, and remote monitoring service. The Advantage Ultra Plan also includes parts, labor, and travel.

Preventive Maintenance Visit (PM)
An examination of the system designed to ensure optimal performance, help prevent problems before they occur, and keep systems running at maximum efficiency. An annual PM visit is recommended for the Symmetra PX UPS, following the Factory Warranty period.

On-site Response Upgrade
Upgrade from standard next business day to eight-hour or four-hour response time is available in many locations. Applicable to Factory Warranty, On-site Warranty Extension, or Advantage Plans.

Scheduling Upgrade
Upgrades standard scheduling for PM or Startup from 5x8 to 7x24 off-business hours.
## Technical specifications

### Symmetra PX 48 kW

**Input**
- **Grid system**: 3P + N + G
- **Voltage range**: 340 - 477 V @ full load
- **Frequency**: 50 Hz
- **Frequency range**: 40 - 70 Hz with 10 Hz/s slew rate
- **Power factor (PF)**: > 0.99 @ load > 25%, > 0.95 @ load > 15%, > 0.90 @ load > 10%
- **I thd (full load)**: < 5%
- **Nominal input current**: 77 A @ 380 V, 73 A @ 400 V, 70 A @ 415 V
- **Maximum input current**: 84.4 A @ 380 V, 80.2 A @ 400 V, 77.3 A @ 415 V
- **Input current limit**: 98.3 A @ 380 V/400 V/415 V
- **Maximum input short-circuit level**: 30 kA

**Output**
- **Power rating**: 48 kW
- **Grid system**: 3P + N + G
- **Voltage (nominal)**: 380/400/415 V L-L
- **Nominal output current**: 73 A @ 380 V, 69 A @ 400 V, 67 A @ 415 V
- **Maximum output current (in bypass @ 110% overload)**: 91 A @ 380 V, 87 A @ 400 V, 83 A @ 415 V
- **Frequency**: 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/s
- **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 non-linear load according to IEC/EN 62040-3
- **Load PF**: From 0.5 leading to 0.5 lagging without any derating

**Bypass**
- **V 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 (125% continuous)**: 84.4 A @ 380 V, 80.2 A @ 400 V, 77.3 A @ 415 V

### Efficiency
- **AC–AC at nominal mains**: ≥ 95% at 35% - 100% load, ≥ 90% at 15% - 34% load
- **DC–AC at nominal battery voltage**: ≥ 94% at 25% - 100% load, ≥ 90% at 15% - 34% load

### Mechanical
- **Dimensions (HxWxD)**: 1,991 x 600 x 1,070 mm
- **Weight**: 796 kg

### Environmental
- **Storage temperature, UPS, and batteries**: -15 to 40 °C with batteries, approximately 6 - 8 months @ 25 °C battery self discharge, 1 - 2 months @ 45 °C
- **Operating temperature**: 0 to 40 °C (32 to 104 °F)
- **Full load loss at nominal mains (BTU)**: 7,719

### Regulatory compliance

*For optimum battery life, the operating temperature range is 18 to 27 °C (64 to 80 °F).*
## Technical specifications

<table>
<thead>
<tr>
<th><strong>Input</strong></th>
<th><strong>Symmetra PX 96 kW</strong></th>
<th><strong>Symmetra PX 160 kW</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grid system</td>
<td>3P + N + G, 3P + G</td>
<td></td>
</tr>
<tr>
<td>Voltage range</td>
<td>340 - 477 V @ full load</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50 Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency range</td>
<td>40 - 70 Hz with 10 Hz/s slew rate</td>
<td></td>
</tr>
<tr>
<td>Power factor (PF)</td>
<td>&gt; 0.99 at load &gt; 25%, &gt; 0.95 at load &gt; 15%, &gt; 0.90 at load &gt; 10%</td>
<td></td>
</tr>
<tr>
<td>I thd (full load)</td>
<td>&lt; 5%</td>
<td></td>
</tr>
<tr>
<td>Nominal input current</td>
<td>155 A @ 380 V, 146 A @ 400 V, 142 A @ 415 V</td>
<td>256 A @ 380 V, 243 A @ 400 V, 234 A @ 415 V</td>
</tr>
<tr>
<td>Maximum input current (Continuous, at 340 V mains voltage)</td>
<td>175 A @ 380 V, 400 V, or 415 V</td>
<td>290 A @ 380 V, 400 V, or 415 V</td>
</tr>
<tr>
<td>Maximum input short-circuit level</td>
<td>30 kA</td>
<td></td>
</tr>
</tbody>
</table>

| **Output** | | |
| Power rating | 96 kW | 160 kW |
| Grid system | 3P + N + G | | |
| Voltage (nominal) | 380 V/400 V/415 V | | |
| Nominal output current | 147 A @ 380 V, 139 A @ 400 V, 134 A @ 415 V | 243 A @ 380 V, 231 A @ 400 V, 223 A @ 415 V |
| Frequency | 50/60 Hz bypass synchronized, 50/60 Hz +/-0.1% free running | | |
| Synchronized slew rate | Programmable to 0.25, 0.5, 1, 2, 4, Hz/s | | |
| Overload (normal and battery operation) | Normal: 150% for 60 seconds, 125% for 10 min, 100% continuous, Battery: 150% for 60 seconds | | |
| V thd | < 2% from 0 to 100% linear load, < 6% full non-linear load according to IEC/EN 62040-3 | | |
| Load PF | From 0.5 leading to 0.5 lagging without any derating | | |

| **Bypass** | | |
| Nominal input current | From 0.5 leading to 0.5 lagging without any derating | | |
| 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 | 147 A @ 380 V, 139 A @ 400 V, 134 A @ 415 V | 243 A @ 380 V, 231 A @ 400 V, 223 A @ 415 V |
| Maximum overload input current (125% continuous) | 184 A @ 380 V, 174 A @ 400 V, 167 A @ 415 V | 304 A @ 380 V, 289 A @ 400 V, 278 A @ 415 V |

| **Efficiency** | | |
| AC–AC at nominal mains | ≥ 95% at 35% - 100% load, ≥ 90% at 15% - 34% load | | |
| DC–AC at nominal battery voltage | ≥ 94% at 25% - 100% load, ≥ 90% at 15% - 34% load | | |

| **Mechanical** | | |
| Dimensions (HxWxD) | 1,991 x 1,200 x 1,080 mm | 1,991 x 1,800 x 1,080 mm |
| Weight | 1,814 kg | 2,806 kg |

| **Environmental** | | |
| Storage temperature, UPS and batteries | -15 to 40 °C with batteries, approximately 6 - 8 months @25 °C battery self discharge, 1 - 2 months @ 45 °C | | |
| Operating temperature* | 0 to 40 °C (32 to 104 °F) | | |
| Full load loss at nominal mains (BTU) | 17,244 BTU/hr | 28,729 BTU/hr |

**Regulatory compliance**


*For optimum battery life, the operating temperature range is 18 to 27 °C (64 to 80 °F).
### Technical specifications

<table>
<thead>
<tr>
<th></th>
<th>Symmetra PX 250 kW</th>
<th>Symmetra PX 500 kW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Input</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grid system</td>
<td>Single feed: 3P + N + G, 3P + G</td>
<td>Single feed: 3P + N + G, 3P + G</td>
</tr>
<tr>
<td>Grid parallel system</td>
<td>Single feed: 3P + N + G, Dual feed: 3P + G</td>
<td>Single feed: 3P + N + G, Dual feed: 3P + G</td>
</tr>
<tr>
<td>Voltage range</td>
<td>+/- 15% for full performance, 340 - 460 V at 400 V</td>
<td></td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency range</td>
<td>40 - 70 Hz with 10 Hz/s slew rate</td>
<td></td>
</tr>
<tr>
<td>Power factor (PF)</td>
<td>&gt; 0.995 at load = 100%, &gt; 0.99 at load &gt; 50%, &gt; 0.97 at load &gt; 25%</td>
<td></td>
</tr>
<tr>
<td>I thd (full load)</td>
<td>&lt; 5%</td>
<td></td>
</tr>
<tr>
<td>Nominal input current</td>
<td>378 A @ 400 V</td>
<td>756 A @ 400 V</td>
</tr>
<tr>
<td>Maximum input current</td>
<td>447 A @ 400 V</td>
<td>831 A @ 400 V</td>
</tr>
<tr>
<td>(Nominal Vin, 10% charging batteries)</td>
<td>(Nominal Vin, 10% charging batteries)</td>
<td></td>
</tr>
<tr>
<td>Input current limit</td>
<td>447 A @ 400 V</td>
<td>894 A @ 400 V</td>
</tr>
<tr>
<td>Maximum input short-circuit level</td>
<td>65 kA (50 kA with standard MBwD)</td>
<td></td>
</tr>
<tr>
<td><strong>Output</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Power rating</td>
<td>250 kW</td>
<td>500 kW</td>
</tr>
<tr>
<td>Grid system</td>
<td>3P + N + G, 3P + G</td>
<td></td>
</tr>
<tr>
<td>Voltage (nominal)</td>
<td>380 V/400 V/415 V/480 V L-L</td>
<td></td>
</tr>
<tr>
<td>Nominal output current</td>
<td>361 A @ 400 V</td>
<td>722 A @ 400 V</td>
</tr>
<tr>
<td>Maximum output current (in bypass @ 110% overload)</td>
<td>397 A @ 400 V</td>
<td>902 A @ 400 V</td>
</tr>
<tr>
<td>Frequency</td>
<td>Output frequency: 55 - 65 Hz, configurable for +/- 0.1, 1, 2, 4, 6, 8%, Frequency regulation: 50/60 Hz bypass synchronized, 50/60 Hz +/- 0.1% free running</td>
<td></td>
</tr>
<tr>
<td>Synchronized slew rate</td>
<td>Programmable to 0.25, 0.5, 1, 2, 4, 6 Hz/s</td>
<td></td>
</tr>
<tr>
<td>Overload (normal and battery operation)</td>
<td>150% for 30 seconds, 125% for 10 min, 100% continuous</td>
<td></td>
</tr>
<tr>
<td>V thd</td>
<td>&lt; 2% from 0 to 100% linear load, &lt; 3% full non-linear load according to IEC/EN 62040-3</td>
<td></td>
</tr>
<tr>
<td>Load PF</td>
<td>From 0.5 leading to 0.5 lagging without any derating</td>
<td></td>
</tr>
<tr>
<td><strong>Bypass</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>V nominal</td>
<td>380 V/400 V/415 V/480 V L-L</td>
<td></td>
</tr>
<tr>
<td>Voltage (range)</td>
<td>+/-10% (from selected voltage)</td>
<td></td>
</tr>
<tr>
<td>Frequency (nominal)</td>
<td>50/60 Hz</td>
<td></td>
</tr>
<tr>
<td>Frequency (range)</td>
<td>+/-0.5%, +/-1%, +/-2%, +/-4%, +/-6%, and +/-8% (user-selectable)</td>
<td></td>
</tr>
<tr>
<td>Nominal input current</td>
<td>361 A @ 400 V</td>
<td>722 A @ 400 V</td>
</tr>
<tr>
<td>Maximum overload input current (125% continuous)</td>
<td>397 A @ 400 V</td>
<td>794 A @ 400 V</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC–AC at nominal mains</td>
<td>≥ 96% at 35% - 100% load</td>
<td></td>
</tr>
<tr>
<td>DC–AC at nominal battery voltage</td>
<td>≥ 96% at 25% - 100% load</td>
<td></td>
</tr>
</tbody>
</table>

11 | Symmetra PX
Technical specifications continued

<table>
<thead>
<tr>
<th>Mechanical</th>
<th>Symmetra PX 250</th>
<th>Symmetra PX 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (HxWxD)</td>
<td>Minimum (standalone UPS, no batteries): 1,991 x 1,600 x 1,070 mm</td>
<td>Minimum (standalone UPS, no batteries): 1,991 x 2,200 x 1,070 mm</td>
</tr>
<tr>
<td></td>
<td>Maximum (UPS with MBwD and 6 min battery runtime): 1,991 x 3,100 x 1,070 mm</td>
<td>Maximum (UPS with MBwD and 6 min battery runtime): 1,991 x 5,200 x 1,070 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>Minimum (standalone UPS, no batteries): 1,057 kg</td>
<td>Minimum (standalone UPS, no batteries): 1,722 kg</td>
</tr>
<tr>
<td></td>
<td>Maximum (UPS with MBwD and 6 min battery runtime): 4,509 kg</td>
<td>Maximum (UPS with MBwD and 6 min battery runtime): 8,336 kg</td>
</tr>
</tbody>
</table>

Environmental

| Storage temperature, UPS only | -30 to 70 °C (-22 to 158 °F) |
| Storage temperature, UPS, and batteries | -15 to 40 °C (5 to 104 °F) Battery self discharge: approximately 6 - 8 months @ 25 °C; 1 - 2 months @ 45 °C |
| Operating temperature* | 0 to 40 °C (32 to 104 °F) |
| Full load loss at nominal mains (BTU) | 30,946 BTU/hr | 61,893 BTU/hr |

Regulatory compliance

UL Listed, ULc Listed, CE, EN/IEC 62040-2 (class A), FCC part 15, EN/IEC 62040-3, EN/IEC 62040-1-1, UL 1778, UL 60950-1, CSA C22.2 No. 107.3-05

*For optimum battery life, the operating temperature range is 18 to 27 °C (64 to 80 °F).