Symmetra PX 250/500

Modular, scalable, high efficiency power protection for medium and large data centers.

100-500 kW (400/480V)

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Life Is On Schneider Electric

High-performance, right-sized power protection

The Symmetra™ PX 250/500 UPS is a 100-500 kW (400V/480V) 3-phase uninterruptible power supply featuring high-performance, right-sized, modular, scalable power protection with high availability and efficiency for medium and large data centers and mission-critical environments.

The Schneider Electric Symmetra PX 250/500 UPS is a high-performance power protection system designed to provide high levels of availability and redundancy while simplifying the right-sizing of your data center.

Symmetra PX 250/500 is a true modular system, consisting of swappable power modules, battery modules, a static bypass switch, and intelligent management modules that facilitate easy and efficient service. This architecture can scale power and runtime as demand grows, and redundancy as higher levels of availability are required.

Symmetra PX 250/500 fits seamlessly onto the data center floor or the electrical room. Highly manageable, the EcoStruxure-connected Symmetra PX 250/500 features self-diagnostic capabilities and standardized modules that mitigate the risk of human error. Other features delivering increased data center reliability include automated predictive diagnostics, increased overload capacity, extended battery life, and on-the-fly firmware upgrades.

Maximum availability thanks to modular architecture

Critical system components built as modules for faster serviceability and fault tolerance.

Symmetra PX 250/500 evolves with your business, thanks to N+1 redundancy at the module or system level, scalability, and fast mean time to repair.

Flexible installation options

With embedded support for back-to-back installation, dual mains input, and top or bottom feed, Symmetra PX is well-suited to meet the installation requirements of any site.

Battery flexibility, including Lithium-ion batteries

Increase availability and reduce TCO with long-life, intelligent energy storage.

EcoStruxure IT

Monitor, manage, and model your IT infrastructure, and get service support, anytime, anywhere*.

High efficiency at low loads

Provides up to 96% efficiency down to 50% of load.

Typical applications

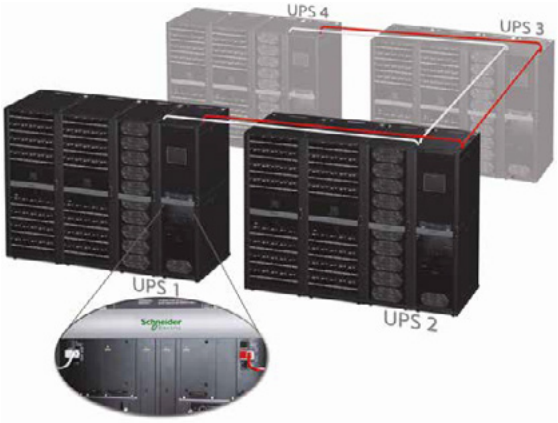
- Medium and large data centers
- Cloud computing
- Co-location facilities

*Check with your Schneider Electric representative for availability.

Scalable and available

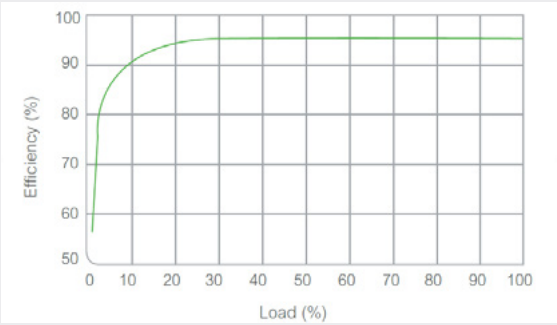
High availability: scalable, modular, and parallelable

- 250 kW/500 kW configuration populated at lower capacity enables one-time installation service
  - Each UPS is scalable from 100 kW to 500 kW
  - Parallel up to four systems for capacity (2 MW) or redundancy (1.5 MW N+1)
- Additional battery frames scale runtime
- N+0 or N+1 module- or system-level redundancy
- Integrated parallel functionality
- External source synchronization included



High efficiency

At 96% efficient to 50% loading and 95% efficient to 25% loading, Symmetra PX 250/500 kW conserves energy and cuts back your power and cooling costs, reducing your overall total cost of ownership.



Configuration flexibility

- Modular architecture offers the flexibility that today's data center requires:
  - Install in the white space, back room, or against the wall
  - Battery options include line-up-and-match or remote modular battery cabinets
  - Unity power factor
  - Top and bottom feed supported
  - Single or dual feed configurations
- Expand from 250 kW to 500 kW load capacity with:
  - One additional power frame
  - 500 kW static switch
  - Additional power modules
- Supports up to four UPS units in parallel with custom switchgear
- Extended runtime support, with up to eight battery frames
- Optional combined maintenance bypass and subfeed distribution panel
- All components conform to NetShelter architecture form-factor (78.7 x 42.1 in H x D) (1991 x 1070 mm H x D)

Flexible battery options

Lithium-ion batteries

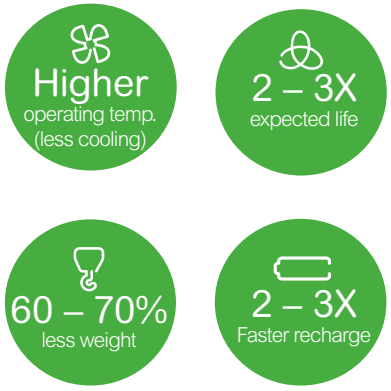
Save space and the environment

Galaxy Lithium-ion Battery Cabinets achieve total space savings of up to 70% compared with VRLA battery solutions. Pair your Symmetra PX 250/500 with Galaxy Lithium-ion Battery Cabinets to lower your total cost of ownership.

As a first mover with a vast installed base, Schneider Electric has developed our own Galaxy Lithium-ion battery solution that also delivers these benefits:

- Optimize TCO and achieve sustainability targets by doubling your battery life
- Recharge 2-3x faster than VRLA solutions
- Simplify and speed up installation with our internal power supply
- Enhance battery safety with three levels of battery management system (BMS)

Lithium-ion compared to VRLA batteries



Modular VRLA 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, so no cable installation or contact with DC terminals is 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

Batteries are monitored at the individual module level

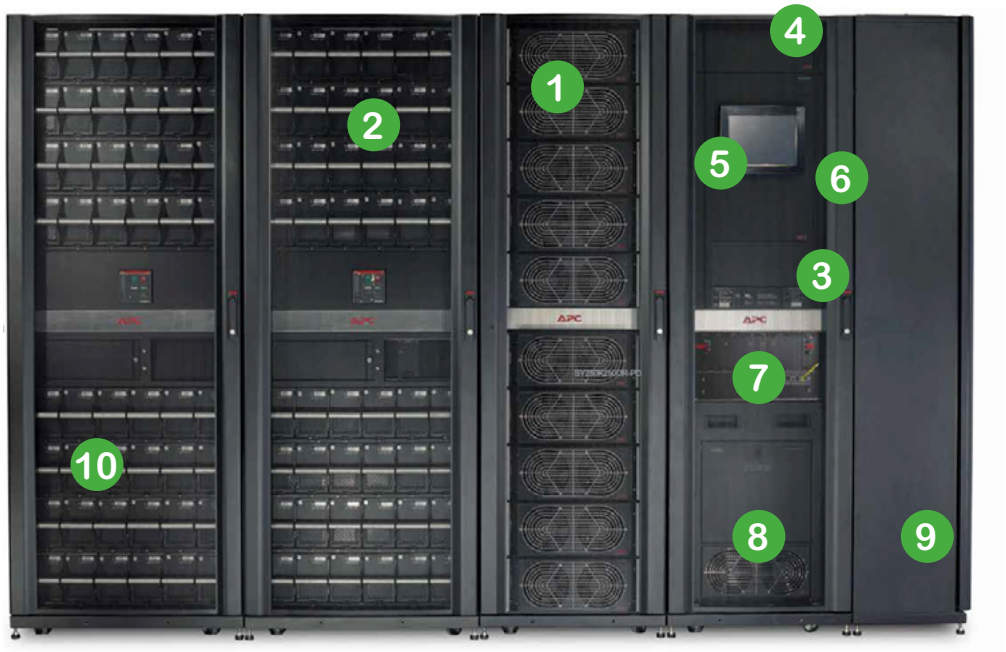
- Each individual module monitors current, voltage, and temperature and reports the information to the UPS
- No time wasted — the online battery chart helps you quickly identify and replace faulty modules
- See the battery data that interests you — alarm notifications are user configurable

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

Symmetra PX 250/500

Features and benefits



1. **High-efficiency power module power module — 96% in full protection mode**
   Provides the flexibility to scale power capacity in 25 kW increments and adds N+1 capability as well as a fully rated Double Conversion inverter for providing more real power.
2. **Modular batteries**
   Connected in parallel for increased availability, swappable battery modules feature advanced battery monitoring and temperature-compensated charging, extending battery life.
3. **Parallel capability**
   Further enhance your data center's resilience by adding system-level redundancy to your modular Symmetra PX 250/500.
4. **Dual mains input/output**
   Allows for connection to two separate power inputs for increased availability — top or bottom.
5. **10-inch LCD touch-screen display**
   Offers a clear graphical/text-based overview of alarms, status data, and instructional help that minimizes the risk of operator errors.
6. **Systemwide firmware updates**
   A USB port on back of the display enables on-the-fly upgrades, making firmware updates easy and increasing system availability.
7. **Redundant intelligence module**
   Backup for the main intelligence module provides increased availability.
8. **Built-in static bypass switch**
   The swappable static bypass switch enables the UPS to transfer the load to utility power without interruption in case of heavy overload or faulty conditions.
9. **Maintenance bypass with distribution**
   Space-saving design that provides power distribution to your load and, if required, isolation from the UPS while maintaining power to your critical loads.
10. **Premium line-up/remote external battery enclosure**
    Eight enclosures can be connected to the UPS either in-row or remotely, allowing the UPS to be configured to your data center requirements while offering extended runtimes and availability.

Options and 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 eight battery frames can be connected to the Symmetra PX 250/500 to extend runtime.

Battery sidecar

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

Bottom feed frame

For some configurations greater than 250 kW, use the bottom feed frame to support dual bottom feed utility input.

Galaxy Lithium-ion battery cabinet

Install Galaxy Lithium-ion battery cabinets to optimize total cost of ownership with low maintenance and long battery life. A maximum of 8 Galaxy Lithium-ion Battery Cabinets can be connected to the Symmetra PX 250/500 to extend runtime.

Battery breaker enclosure

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

Galaxy Power Distribution Units

The Schneider Electric 400 & 500 kVA Power Distribution Units (PDU) are reliable, scalable, and intelligent high-density power distribution units ideal for large data centers. They offer flexible configuration, with factory installed and tested Square D breaker panels configured to meet the unique needs of your site. The compartmental design isolates each installation, operation, and maintenance task, and the PDU is EcoStruxure-enabled, for anytime, anywhere monitoring.

Symmetra PX 250/500 kits

Battery breaker enclosure fuse kits (500 A/1,000 A)

Air filters

Optional terminal blocks

Parallel cables

Third-party switchgear kit

Seismic kits*

*Check with your Schneider Electric representative for availability.

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

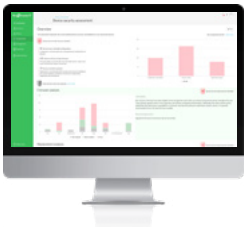
Sustainable

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.

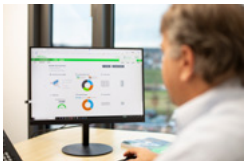
Try it now: www.ecostruxureit.com/ecostruxure-it-expert/#trial



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.

Technical specifications

UPS rating kVA/kW (PF = 1)	250 kW	500 kW
Mains input (Normal operation)		
Grid system	Single feed: 3 phases + neutral + ground, 3 phases + ground Dual feed: 3 phases + ground, 3 phases + neutral + ground	
Grid parallel system	Single feed: 3 phases + neutral + ground Dual feed: 3 phases + ground	
Voltage range	+/-15% at full load (340V-460V at 400V [408V-552V at 480V]) -50% to +15% at reduced loads (200V at 400V [240V at 480V])	
Frequency range	40 – 70 Hz with 10 Hz/sec slew rate	
Power factor (PF)	> 0.995 at load = 100% > 0.99 at load > 50% > 0.97 at load > 25%	
THDi (full load)	< 5%	
Nominal input current	378 A @ 400V (315 A @ 480V)	756 A @ 400V (630 A @ 480V)
Maximum input current (nominal vin, 10% charging batts)	416 A @ 400V (346 A @ 480V)	831 A @ 400V (693 A @ 480V)
Input current limit	447 A @ 400V (372 A @ 480V)	894 A @ 400V (745 A @ 480V)
Input short-circuit level	65 kA/3 cycles (50 kA with standard maintenance bypass with distribution (MBwD) cabinet)	
Protection	Backfeed contactor	
Output		
Power rating	250 kW	500 kW
Grid system	3 phases + neutral + ground, 3 phases + ground	
Voltage nominal	380V / 400V / 415V / 480V L-L	
Nominal output current	361 A @ 400V (301 A @ 480V)	722 A @ 400V (601 A @ 480V)
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 operation and battery operation)	150% for 60 seconds, 125% for 10 min, 125% continuous at 480V and 110% continuous at 400 V in bypass operation*	
V thd	< 2% from 0 to 100% linear load, < 3% full nonlinear load according to IEC/EN62040-3	
Load PF	from 0.5 leading to 0.5 lagging without any derating	
Bypass input (bypass operation)		
Grid system	Single feed: 3 phases + neutral + ground, 3 phases + ground. Dual feed: 3 phases + ground	
Voltage (nominal)	380V / 400V / 415V / 480V L-L	
Voltage (range)	+/-10% (from selected voltage)	
Frequency (nominal)	50/60 Hz	
Frequency (range)	+/-0.5%, +/-1%, +/-2%, +/-4%, +/-6% and +/-8% (user selectable)	
Nominal bypass current	361 A @ 400V (301 A @ 480V)	722 A @ 400V (601 A @ 480V)

* This is a thermal performance rating. The continuous overload is not supported by the recommended input protection of the maintenance bypass. Preliminary — subject to change without notice.

Technical specifications

UPS rating kVA/kW (PF = 1)	250 kW	500 kW
Efficiency		
Normal operation and battery operation, 480V systems	>96% at 50-100% load; >95% at 25-49% load	
Normal operation, 400V systems	>95.5% at 50-100% load; 95.5% at 25-49% load	
Battery operation, 400V systems	>96% at 50-100% load; >95.5% at 25-49% load	
Mechanical: Stand-alone UPS, no batteries		
Size (H x W x D)	1,991 x 1,600 x 1,070 mm (78.7 x 63 x 42.1 in.)	1,991 x 2,200 x 1,070 mm (78.7 x 86.6 x 42.1 in.)
Weight	1,057 kg (2,330 lb.)	1,722 kg (3,797 lb.)
Mechanical: UPS with MBwD and 6 min. battery runtime		
Size (H x W x D)	1,991 x 3,100 x 1,070 mm (78.7 x 121.9 x 42.1 in.)	1,991 x 5,200 x 1,070 mm (78.7 x 204.7 x 42.1 in.)
Weight	4,509 kg (9,940 lb.)	8,336 kg (18,377 lb.)
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 to 8 months @ 25°C; 1 to 2 months @ 45°C	
Operating temperature*	0 to 40°C (32 to 104°F)	
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, OSHPD		

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

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