

Symmetra MW

Scalable from 400kW to 1600kW
Parallel-capable up to 6.4MW

Ultra-high efficiency for medium to large
data centers, buildings, and facilities



Ultra energy efficient, modular, scalable,
three-phase power protection with
industry-leading performance for
large data centers and mission-critical
environments

- Ultra-high efficiency (97%) in full protection mode
- Low total cost of ownership
- Fault-tolerant, robust platform design
- Parallel capable for capacity or redundancy
- Scalable power protection – pay as you grow
- Modular design provides inherent redundancy
- Universal battery support
- Unity input power factor corrected
- Robust design protects loads of all types
- Network manageable

Features and Benefits

Think big, think scalable - The world's largest modular UPS

Symmetra™ MW redefines high-power UPS technology as a modular, fault-tolerant UPS in the 400-1600kW range. As the only UPS capable of scaling up to 1.6MW in a single module and paralleling UPSs to provide up to 6.4MW of power, Symmetra MW is ideal for large data centers or complete buildings. Symmetra MW is also ideally suited for healthcare and other critical facility protection requirements with rigorous and changing electrical demands. Setting a new standard for low cost of ownership, Symmetra MW delivers best-in-class efficiency and a reduction in rating of electrical infrastructure- wires, transformers, and even generators.

The Symmetra MW's modularity increases availability through internal N+1 configurability and multi-module paralleling features. The fault-tolerant design and predictive failure notification provide further reliability. Slide-in/out power modules, manageable external batteries, and self-diagnosing features greatly reduce mean time to repair. Symmetra MW provides a customizable system in a standardized design for any large, on-demand, and network-critical physical infrastructure.

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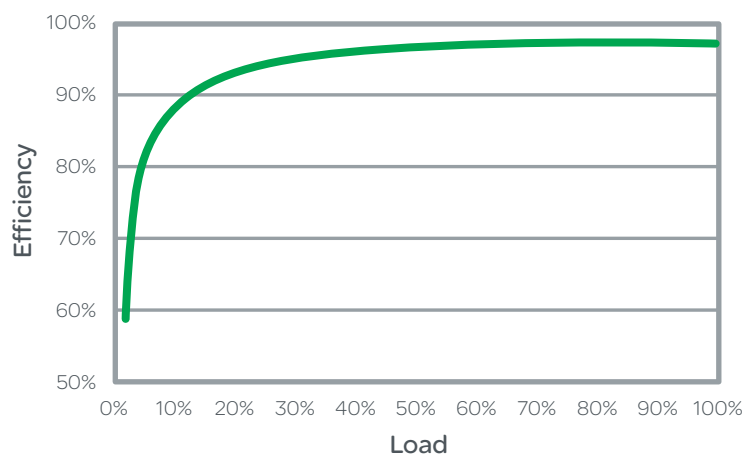
At the national average rate of €0.10/Watt, a 1600kW Symmetra MW can save €46000/year compared to a 1600kW UPS with 94% efficiency.*

Using power at 97% efficiency in full protection mode reduces the power cost per watt delivered to critical equipment by preventing electrical losses.

Ultra-high efficiency means less heat rejection, lower cooling costs, and reduced overall Total Cost of Ownership

- 97% Efficient at > 85% load (850 KW load on 1 MW)
- 96% Efficient at > 45% load (450 KW load on 1 MW)
- 94% Efficient at > 24% load (240 KW load on 1 MW)

**Figures calculated using APC UPS Efficiency Comparison Calculator*



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.

Accessories

UPSync

Synchronize multiple independent modules or parallel systems automatically when supplying downstream Static Transfer Switches

Mega-Tie

Mega-Tie can be used in 2N UPS configurations to seamlessly transfer the load from one output bus to another, allowing for maintenance on the isolated system without the need to transfer to bypass

EPO

Provides a single point of emergency equipment shutdown for up to eight APC™ InfraStruxure™ devices and one third-party device



Kits

Air filter



Relay I/O board



TCP/IP Modbus® Gateway



Symmetra MW Features



1 Ultra-high efficiency in full protection mode

With over 97% efficiency at full load, 96% efficiency at 50% load, and above 94% efficiency at 25% load, Symmetra MW delivers significant electrical cost savings without putting the load at risk.

2 Modular design

Available power can be scaled to optimize loading, or to allow expansion as needed – you can buy for the future, and populate the UPS for the current load.

- Modular design allows N+1 redundancy in the single-module unit
- Paralleling capability allows N+1 redundancy at the system level

3 10-inch LCD touch screen

Provides a complete system overview with audible and visible alarms; graphs and text descriptions display system status, power flow, and metering information

4 Fault tolerant design

Built-in redundancies prevent individual component failures from affecting the load; standardized power modules insure robust performance, easy maintenance, and rapid repairs without jeopardizing the critical load.

5 Robust delta-conversion platform

- Online topology constantly provides conditioned power
- High overload capability (200% for 60 seconds, 25% for 10 minutes, 150% on battery for 30 seconds)
- High fault-clearing capability (200kAIC short-circuit withstand rating)

6 Unity power factor corrected

Lowers infrastructure and generator costs

7 200kW power modules

Modular, scalable power makes it easy to pay as you grow; standardized modules simplify repair and replacement strategy - one service engineer can easily add or replace modules

Technical Specifications

400V Symmetra MW (kW/kVA)	400	600	800	1000	1200	1400	1600
Input							
Nominal input voltage	400V						
Grid system	4-wire 3P + PEN, 5-wire 3P + N + GND						
Voltage range	+/-15%						
Frequency	50hz						
Frequency range	+/-8%						
Power factor (PF)	1						
I thd (full load)	<5% at full load						
Nominal input current	595	893	1190	1488	1786	2083	2381
Maximum input current	727	1091	1455	1819	2182	2546	2910
Maximum input short-circuit level	200kAIC						
Output							
Power rating	400kVA	600kVA	800kVA	1000kVA	1200kVA	1400kVA	1600kVA
Voltage (nominal)	400V						
Nominal output current	577	866	1155	1443	1732	2021	2309
Frequency	50Hz						
Overload (normal and battery operation)	200% for 60 seconds 125% for 10 minutes On battery: 150% for 30 seconds						
V thd	3% max at linear load						
Efficiency							
AC-AC at nominal mains	97% @ 100% load; 96% @ 50% load; 94% @ 25% load						
Environmental							
Storage temperature, UPS, and batteries	-20 to 40°C (-4 to 113°F)						
Operating temperature*	0-40°C (32-104°F)						
Operating relative humidity	0-95% non-condensing						
Operating altitude	0-1000m (0-3280ft) @ full load						
Regulatory compliance							
Approvals	CE, ISO9001, ISO14001						
EMC/EMI/RFI	EN50091-2, IEC62040-3						

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