

# Symmetra Megawatt II<sup>®</sup>

High Performance 3 phase Modular, Scalable Power Protection with Industry leading Efficiency, Capacity and Performance.

Symmetra MW II<sup>®</sup> 400KW-1600KW

**Ultra High Efficiency for Medium to Large Data Centers, Buildings and Facilities.**

**Modular, scalable power protection with industry leading efficiency, capacity and performance for large scale mission critical environments and data centers.**

- > Ultra-high Efficiency means low TCO
- > Modular
- > Right Sized
- > Fault tolerant
- > Scalable Power
- > Parallel Capable for Capacity or Redundancy
- > Robust platform design
- > Universal Battery Support
- > Network Manageable



# Symmetra Megawatt II®

High Performance 3 phase Modular, Scalable Power Protection with Industry leading Efficiency, Capacity and Performance.

## Symmetra MW II® 400-1600KW



- 1 Modular, scalable power to right size the UPS to existing and future loads.
- 2 Inverter section modules are easily added or replaced by one person.
- 3 Touch screen LCD displays System status, power flow and metering information.
- 4 Static Switch is rated for continuous duty @ 125% overload, and 200kAIC withstand rating.
- 5 Fault tolerant design insures that individual component failures don't affect the load.
- 6 Over 94% Efficiency at 25% load. 97% efficiency at Full Load.

The Symmetra Megawatt II is easily paralleled for increased capacity and/or redundancy. Up to 8 Symmetra Megawatt II units may be paralleled, depending on the availability of adequately sized circuit protection devices.

UPSync™ is an available option that allows multiple Symmetra Megawatt II modules to maintain synchronous operation regardless of the availability of an input power source while in parallel operation.

MegaTie™ allows maintenance on connected modules without power interruption to the critical load.

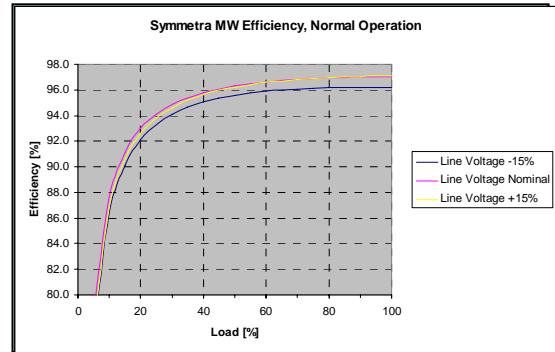
# Enterprise Power Protection

## Efficiency and Reliability

### Ultra High Efficiency

High Efficiency means lower power cost per watt delivered to critical equipment. This also means less heat rejection, and a lower cooling costs.

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



### Scalable Power Capacity

Available power can be scaled to optimize loading, or to allow expansion as needed.

- > Ampacity can be scaled for Redundancy or Capacity
- > Buy for the future, populate for current load
- > Easily parallel multiple units of mixed sizes

### Fault Tolerance, and Simplified Maintenance

Modular inverters insure robust performance, easy maintenance, and rapid repairs without jeopardizing the critical load.

- > Power modules can be added or changed by one person
- > Individual containment assures isolation of components.
- > Standardized modular components simplify stocking spares.



# Symmetra MW II Standard Specifications

Symmetra MW	SYMF400 to SYMF1600
<b>Input Specifications</b>	
Input Voltage	3 x 400/230v (KH), 3 x 480v (KG)
Input Configuration	3 phase + N + PE (G) for KH, 3 phase + PE (G) for KG
Input Frequency	50 Hz or 60 Hz
Input Power Factor	~1
Input (Utility) Voltage Tolerance	+/- 15%
I THD	< 5% at full load
Maximum Short Circuit Withstand Rating	200 kA
Backfeed Protection	Built-in Backfeed Contactor
<b>Output</b>	
Output Voltage	3 x 400/230v (KH), 3 x 480v (KG)
Output Voltage Distortion	Maximum 3% Linear Load
Efficiency Battery Operation	> 95%
Efficiency Full Load	97%
<b>Battery System</b>	
Nominal Battery Voltage	2 x 384 VDC
Typical Float Voltage	2 x 432 VDC (2.25 Volts Per Cell)
<b>Communications and Management</b>	
Communication Interface	Web/Network interface (Ethernet, SNMP)
Control Panel	Advanced 10" Color LCD Touch Screen User Interface
Audible Alarms	Audible and Visual Alarms, Prioritized by Severity
Indicators and Controls	Self Diagnosing with Surveillance of Critical Components
<b>Environmental</b>	
Operating Temperature	0-40 C (32-140 F)
Operating Relative Humidity	0-95% Non-Condensing
Storage Relative Humidity	0-95% Non-Condensing
Operating Altitude	0-1000M (0-3300')
Storage Altitude	0-15000M (0-49,500')

# Symmetra MW II 400 V (KH) Specifications

Series Specific Specifications	SWMF400-1600 KH						
Model	SYMF400	SYMF600	SYMF800	SYMF1000	SYMF1200	SYMF1400	SYMF1600
Nominal Input Voltage	3 x 400/230 V						
Nominal Input Current	595 A	893 A	1191 A	1488 A	1849 A	2156 A	2464 A
Nominal Output Voltage	3 x 400/230 V						
Nominal Output Current	577 A	866 A	1155 A	1443 A	1793 A	2091 A	2390 A
<b>Battery System</b>							
Nominal Battery Voltage	2 x 384 VDC						
End of Discharge (EOD) Battery Voltage	2 x 326 VDC						
Max. Battery Current @ EOD	638 A	957 A	1277 A	1596 A	1917 A	2337 A	2556 A
<b>Physical</b>							
Dimensions HxD (mm)	2032 H x 1067 D						
Dimension L (mm)	2114	2536	3716	4138	4646	5068	5490
Weight (kg)	2500	3200	4270	5090	6310	7016	7722
Minimum Clearance Around UPS	Top Clearance 500 mm (W/IP21 Drip Cover 200 mm). Front Clearance 1000 mm						
<b>Environmental</b>							
Altitude	1000 m = 100%load; 1500 m = 95% load; 2000 m = 91% load; 2500 m = 86% load; 3000 m = 82% load						
Audible Sound, nominal Max. @1 m from unit (db(A))	74	74	75	75	75	75	75
Heat Rejection BTU/Hr	41,000	61,420	81,900	102,360	122,840	143,310	163, 780
Protection Class	IP20 Standard, IP21 Optional						
<b>Regulatory</b>							
Safety	IEC60950 3 <sup>rd</sup> edition; EN50091-1-1						
EMC/EMI/RFI	EN50091-2, IEC62040-3						
Approvals	CE, ISO 9001, ISO 14001						
<b>Additional Equipment and Options Available</b>							
Ancillary Equipment	Input and Output Switchboard, Maintenance Bypass Switchboard, Battery Systems and Disconnect Equipment						
Professional Services	Project Consultation, Project Management						
Service, Maintenance and Repair	Services available from the Schneider Service Solution Team for the Symmetra MW II include startup and the new Advantage Plus Plan and Advantage Ultra Plan. These services packages are designed to provide system maintenance at a predictable and affordable price.						

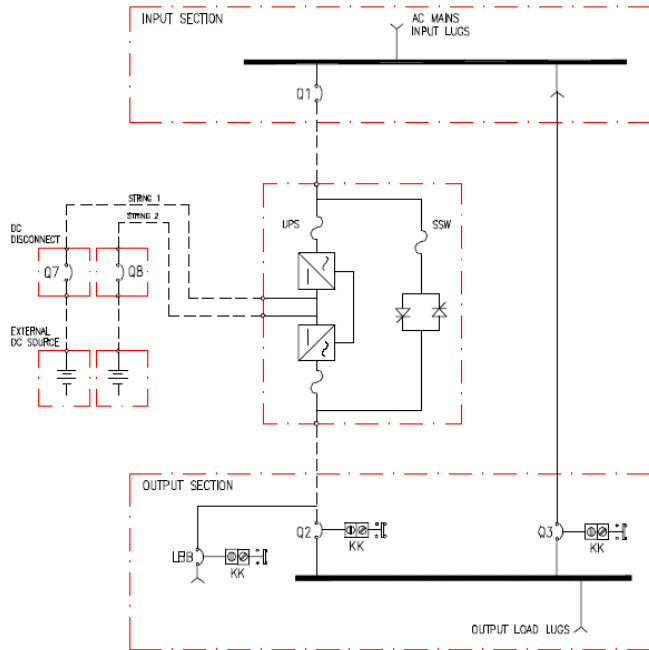
# Symmetra MW II 480 V (KG) Specifications

Series Specific Specifications	SWMF400-1600 KG						
Model	SYMF400	SYMF600	SYMF800	SYMF1000	SYMF1200	SYMF1400	SYMF1600
Nominal Input Voltage	3 x 480 V						
Nominal Input Current	595 A	893 A	1191 A	1488 A	1849 A	2156 A	2464 A
Nominal Output Voltage	3 x 480 V						
Nominal Output Current	577 A	866 A	1155 A	1443 A	1793 A	2091 A	2390 A
<b>Battery System</b>							
Nominal Battery Voltage	2 x 384 VDC						
End of Discharge (EOD) Battery Voltage	2 x 326 VDC						
Max. Battery Current @ EOD	638 A	957 A	1277 A	1596 A	1917 A	2337 A	2556 A
<b>Physical</b>							
Dimensions HxD (mm)	2032 H x 1067 D						
Dimension L (mm)	2114	2536	3716	4138	4646	5068	5490
Weight (kg)	2500	3200	4270	5090	6310	7016	7722
Minimum Clearance Around UPS	Top Clearance 20" (W/NEMA 3 Drip Cover 8"). Front Clearance 42"						
<b>Environmental</b>							
Altitude	3000 Ft. = 100%load; 4500 Ft. = 95% load; 6000 Ft. = 91% load; 7500 Ft. = 86% load; 9000 Ft. = 82% load						
Audible Sound, nominal Max. @1 m from unit (db(A))	74	74	75	75	75	75	75
Heat Rejection BTU/Hr	41,000	61,420	81,900	102,360	122,840	143,310	163, 780
Protection Class	NEMA 1Standard, NEMA 3 Optional						
<b>Regulatory</b>							
Safety	IEC60950 3 <sup>rd</sup> edition; EN50091-1-1						
EMC/EMI/RFI	EN50091-2, IEC62040-3						
Approvals	UL 1778, CE, ISO 9001, ISO 14001						
<b>Additional Equipment and Options Available</b>							
Ancillary Equipment	Input and Output Switchboard, Maintenance Bypass Switchboard, Battery Systems and Disconnect Equipment,						
Professional Services	Project Consultation, Project Management						
Service, Maintenance and Repair	Services available from the Schneider Service Solution Team for the Symmetra MW II include startup and the new Advantage Plus Plan and Advantage Ultra Plan. These services packages are designed to provide total system maintenance at a predictable and affordable price.						



# System One Line Diagram

## Internal Bypass System with Single Utility Input



## External Bypass System with Dual Utility Input

