



Powerware

Powerware® 9315-500 Uninterruptible Power System

Product Focus

Model 400 400 kVA/360 kW/320 kW
Model 500 500 kVA/450 kW/400 kW



Features

- DC Expert® battery management system featuring: +/- 3% battery runtime; Battery health indication
- Powerware Hot Sync™ technology for parallel redundancy and capacity scalability
- Large display panel provides metering, statistics, alarm history and an active mimic screen
- Prioritized cooling of components
- Power Management Software compatibility
 - PowerVision®, LanSafe®, FORESEER®
 - Software Suite CD is bundled with the UPS
- Connectivity options
 - ConnectUPS-X Web Card, Modbus Card, Single port serial Card
 - Environmental Monitoring Probe for ambient temperature and humidity monitoring (requires the Web Card option)
 - Expansion Chassis available for increased communications capabilities
- Intelligent input filter option

Output Specifications

Voltage THD:	Less than 5% (100% non-linear load with 3:1 crest factor); less than 3% (100% linear load)
Voltage regulation:	Better than ±1%
Transient response:	Less than 5% for 100% load step; full recovery within 1 cycle
Frequency:	(free run) ±0.005 Hz
Frequency sync range:	±0.5 Hz
Frequency slew rate:	1 Hz/second maximum
Output Power Factor Rating:	0.8 lagging to 0.9 leading without load derating

Environmental Specifications

Ambient temp:	0°C to +40°C
Storage:	-20°C to +70°C
Relative humidity:	5-95% non-condensing
Altitude:	1500 meters (5000ft.) at 40°C ambient temperature without load derating
Audible noise:	Less than 72 typically dBA at 1 meter; in accordance with ISO 7779
Electrostatic discharge:	Withstands 8 kV without damage or disturbance to the load; exceeds requirements of IEC 801-2
EMC:	Meets FCC Class A and EN 50091-2 (CISPR 22, Class A)

Safety

UL1778 Listed	cUL CAN/CSA C22.2 NO.107.1-M91 Listed EN 50091-1 All cabinets provide seismic mounting features Selectable DC ground fault detection capability
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Input Specifications

Voltage range:	(See chart on other side)
Frequency range:	(60 Hz) 57-63 Hz; (50 Hz) 47-53 Hz
Surge protection:	Meets ANSI C62.41, Category A & B, EN 50091-2 and EN 50082-2
Power factor:	0.96 typical at full load with input filter.
Input current distortion:	less than 7% with input filter

Battery Specifications

Matching cabinets:	Line-up and remote available
Battery type:	Sealed, valve regulated lead acid
Recharge time:	10-12 times the discharge time to 95%
Other battery options:	Wet cell batteries; open racks available

For battery runtimes and configurations, refer to Bulletin BAT01FXA

Communications

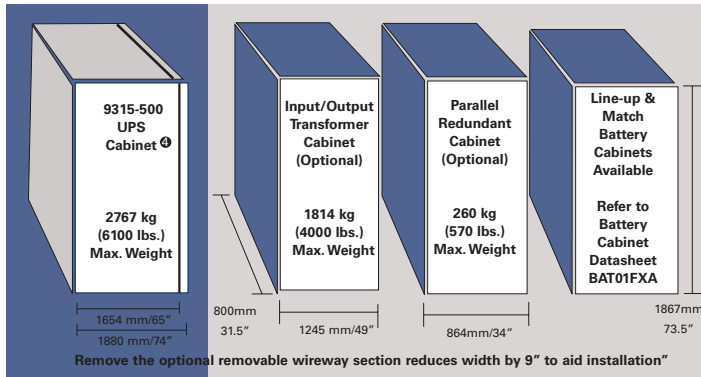
Software Compatibility:	PowerVision®, LanSafe®, FORESEER®
Communication Cards:	Connect UPS-X Web Card Modbus Card Single port serial Card Environmental Monitoring Probe (EMP)*

* Requires Connect UPS-X Web Card

POWERWARE 9315-500 PERFORMANCE CHARACTERISTICS

		Model 500				Model 400					
		500 kVA/ 400 kW	500 kVA/ 450 kW ^①	500 kVA/ 400 kW	500 kVA/ 450 kW ^①	400 kVA/ 320 kW	400 kVA/ 360 kW ^①	400 kVA/ 320 kW	400 kVA/ 360 kW ^①	400 kVA/ 320 kW	400 kVA/ 360 kW ^①
Input voltage	Volts	480	480	600	600	480	480	480	480	208	208
Output voltage	Volts	480	480	600	600	480	480	208	208	208	208
Input voltage range											
Minimum -15	Volts	408	408	510	510	408	408	408	408	177	177
Maximum +10	Volts	528	528	660	660	528	526	528	528	229	229
Input / output frequency	Hz	60	60	60	60	60	60	60	60	60	60
AC input (with input filter)											
Nominal amps	Amps	528	605	422	484	410	468	410	468	944	1077
Maximum amps ^②	Amps	640	720	512	576	560	626	560	626	1280	1440
AC input (without input filter)											
Nominal amps	Amps	648	729	518	583	521	585	521	585	1199	1346
Maximum amps ^②	Amps	800	850	640	658	640	715	640	715	N/A	N/A
Bypass input											
Nominal amps	Amps	601	601	480	480	480	480	1110	1110	1110	1110
AC output											
Nominal amps	Amps	601	601	480	480	480	480	1110	1110	1110	1110
10 minutes max.	Amps	750	750	600	600	600	600	1388	1388	1388	1388
DC link											
Nominal DC voltage	Volts	480	480	480	480	480	480	480	480	480	480
Float voltage	Volts	540	540	540	540	540	540	540	540	540	540
End of discharge ^③	Volts	401	401	401	401	401	401	401	401	401	401
Maximum amps ^④	Amps	1000	1120	1000	1120	800	901	800	901	800	901
Physical attributes (w/o batt.)											
Installed weight	Lbs	6100	6100	14,100	14,100	6100	6100	10,100	10,100	14,100	14,100
Installed width	Inches	74	74	123	123	74	74	123	123	123	123
System efficiencies (typical)											
@ 100% load	%	93.5	93.0	92.5	92.0	94.0	93.7	93.0	92.7	92.0	91.7
@ 75% load	%	93.0	92.6	92	91.5	93.5	93.3	92.5	92.4	91.5	91.5
@ 50% load	%	92.0	92.0	91	91	93	93	92	92	91	91
Full load heat dissipation^⑤											
BTU/Hr. (x1000)		119.5	134.9	122.9	138.3	95.6	107.9	107.6	119.7	119.0	133.9
KCal/Hr. (x1000)		30.1	34.0	31.0	34.9	24.1	27.2	27.1	30.2	30.0	33.7
Inverter efficiency (full load)	%	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0	95.0

Physical Dimensions and Weights^⑥



- ① Optional 0.9 Power Factor
 - ② Maximum amps equals full load current plus battery recharge current.
 - ③ End on Discharge based on 1.67 v/cell. Maximum Amps based on 1.8 v/cell.
 - ④ All accessories feature plug and play capability.
 - ⑤ Refer to Installation Manual for actual system Line-ups.
 - ⑥ Heat rejection data is worst case to ensure cooling capacity (includes losses from filters and transformers).
- Shipping pallet and packaging adds 50 to 300 lbs. per shipping unit.
- Specifications subject to change without notice.



**PowerChain
Management[®]
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