

# Powerware® 9315-160

## Features

- ▶ DC Expert™ battery management system
  - ▶ +/- 3% battery run time
  - ▶ Battery health indication
- ▶ Powerware Hot Sync® Redundant capability
- ▶ Large display panel provides metering, statistics, alarm history and an active mimic screen
- ▶ Prioritized cooling of components
- ▶ Flexible communication capability
  - Local communications
    - Monitor panel
    - Illuminated indicators
    - Control panel
  - Remote communications
    - Relay interface contacts
    - Building alarm contacts (programmable)
    - Summary alarm contacts
    - RS232 port (standard)
    - EPO kit
    - Remote monitor panel
- ▶ Communications options
  - Embedded communications slot to accept the following cards:
    - ConnectUPS-X SNMP/Web card
    - Multi-server card (S-RS232 serial port output)
    - Single port serial card
  - Expansion chassis available for increased communications capabilities
- ▶ Intelligent input filter option



Model 100 100kVA/80kW  
 Model 130 130kVA/104kW  
 Model 160 160kVA/128kW

### 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:** 0.95 typical at full load with input filter. Input current distortion less than 7% with input filter

### Battery Specifications

**Battery type:** Sealed, valve regulated lead acid  
**Recharge time:** 10-12 times the discharge time to 95%  
**Other battery options:** Wet cell and nickel-cadmium batteries; open racks available

*For battery run times and configurations, refer to Bulletin BAT01FXA.*

*Specifications subject to change without notice.*

### Environmental Specifications

**Ambient temperature:** 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 65 dBA at 1 meter; in accordance with ISO 7779  
**Electrostatic discharge:** Withstands 25kV 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)

### 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:** ±0.005 Hz  
**Frequency sync range:** ±0.5 Hz  
**Frequency slew rate:** 1 Hz/second maximum  
 Voltage adjustment range (operator): ±5%

### 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  
*Note: Dual feed input not available for 208V or 220V input. Specifications subject to change without notice.*

## Powerware Recommends

Software	Connectivity	Service	System Solutions
<ul style="list-style-type: none"> <li>&gt; PowerVision®</li> <li>&gt; LanSafe™</li> <li>&gt; FORESEER®</li> </ul>	<ul style="list-style-type: none"> <li>&gt; ConnectUPS-X SNMP/WEB card</li> <li>&gt; Multi-server card</li> </ul>	<ul style="list-style-type: none"> <li>&gt; ProActive Service Plan</li> <li>&gt; Preventive Maintenance</li> <li>&gt; CELLWATCH®</li> </ul>	<ul style="list-style-type: none"> <li>&gt; Powerware Hot Sync™</li> <li>&gt; PF² Flywheel</li> <li>&gt; PDM</li> <li>&gt; RPP</li> <li>&gt; External Maintenance Bypass</li> </ul>

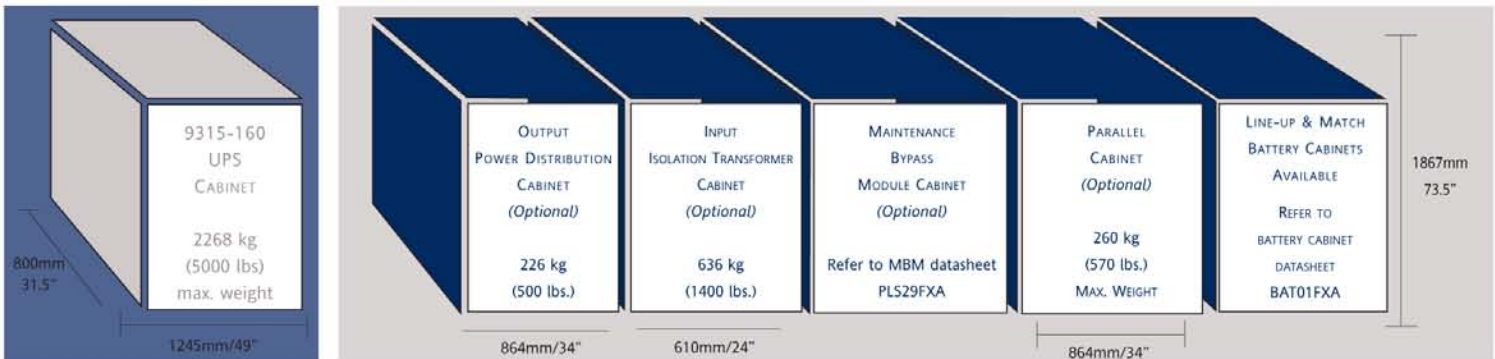
*Please contact your sales representative for a solution tailored to your specific needs.*

Powerware® 9315-160		Model 100 100kVA/80kW							Model 130 130kVA/104kW							Model 160 160kVA/128kW						
Input Voltage	Volts	480	480	208	220	600	600	400	480	480	208	220	600	600	400	480	480	208	220	600	600	400
Output Voltage	Volts	208	480	208	208	600	208	400	208	480	208	208	600	208	400	208	480	208	208	600	208	400
<b>Input Voltage Range</b>																						
Minimum	Volts	408	408	177	187	510	510	340	408	408	177	187	510	510	340	408	408	177	187	510	510	340
Maximum	Volts	528	528	229	242	660	660	440	528	528	229	242	660	660	440	528	528	229	242	660	660	440
Input / Output Frequency	Hz	60	60	60	60	60	60	50/60	60	60	60	60	60	60	50/60	60	60	60	60	60	60	50/60
<b>AC Input (With input filter) - Standard in U.S.</b>																						
Nominal Amps	Amps	112	112	256	243	89	89	128	140	140	320	304	112	112	160	174	174	418	395	146	146	209
Maximum Amps	Amps	139	139	320	303	111	111	160	174	174	400	379	139	139	200	200	200	480	454	167	167	240
<b>AC Input (Without input filter)</b>																						
Nominal Amps	Amps	128	128	302	285	105	105	159	160	160	377	356	128	128	192	209	209	492	465	171	171	244
Maximum Amps	Amps	160	160	377	356	131	131	198	200	200	471	445	160	160	240	240	240	565	534	196	196	280
<b>Bypass Input</b>																						
Nominal Amps	Amps	120	120	278	262	96	96	146	156	156	361	341	125	125	188	192	192	444	420	154	154	231
<b>AC Output</b>																						
Nominal Amps	Amps	278	120	278	278	96	278	146	361	156	361	361	125	361	188	444	192	444	444	154	444	231
10 Minutes Max.	Amps	348	150	348	348	120	348	183	452	195	452	452	157	452	235	555	240	555	555	193	555	289
<b>DC Link</b>																						
Nominal DC Voltage	Volts	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	480	
Float Voltage	Volts	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	540	
End of Discharge	Volts	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401	401	
Maximum Amps	Amps	200	200	200	200	200	200	200	260	260	260	260	260	260	320	320	320	320	320	320	320	
<b>Physical Attributes (w/o batt.)</b>																						
Installed Weight	Lbs	3150	3150	5000	5000	5000	5000	3975	3150	3150	5000	5000	5000	5000	3975	3150	3150	5000	5000	5000	5000	3975
Installed Width	Inches	49	49	73	73	49	49	49	49	49	73	73	49	49	49	49	49	73	73	49	49	49
<b>System Efficiencies (Typical)</b>																						
@ 100% Load	%	93	93	91	91	92	92	92	93	93	92	92	92	92	93	93	92	92	92	92	92	
@ 75% Load	%	92	92	91	90	92	92	92	93	93	91	91	92	92	93	93	92	92	92	92	92	
@ 50% Load	%	91	91	88	88	89	89	91	91	91	89	89	89	91	93	93	91	91	92	92	92	
<b>Full Load Heat Dissipation</b>																						
BTU/Hr. (x1000)		20.5	20.5	27.0	27.0	23.8	23.8	23.8	26.7	26.7	30.9	30.9	30.9	30.9	30.9	32.9	32.9	38.0	38.0	38.0	38.0	38.0
KCal/Hr. (x1000)		5.18	5.18	6.81	6.81	5.99	5.99	5.99	6.74	6.74	7.78	7.78	7.78	7.78	7.78	8.29	8.29	9.58	9.58	9.58	9.58	9.58
Inverter Efficiency (Full Load) %		94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	94	



Easily adjustable for 380 or 415 VAC Inut/Output, 50 or 60 Hz  
End of Discharge based on 1.67 V/cell. Maximum Amps based on 1.8V/cell

## Physical Dimensions and Weights



Specifications subject to change without notice.  
All previously mentioned corporate names and brands are registered as trademarks by their respective companies.  
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Denmark: 45.3686.7910  
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Italy: 39.02.66.04.05.40  
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