



# CRUCIAL POWER PRODUCTS

## Central Lighting Inverter

Single Phase  
Online or Fast Transfer (under 2ms)  
LED, Incandescent, Fluorescent, HID  
120, 208, 240, 277, 480 Volts  
Listed to UL924 & UL1778 Standards



## Wave Rider<sup>TM</sup> 1

2.1 to 17KW

### Key Features:

- **Fast Transfer-Standby and Double Conversion, “no-break” online systems available.**
- **Efficiency: 98% Standby - Fast Trans / 94% On-Line (Typical)**
- **Automatic monthly and annual self-testing**
- **Latest technology microprocessor controlled electronics with PWM (Pulse Width Modulated) design for true Sign Wave output**
- **Continuous self-diagnostic and self-testing system**
- **LCD backlit panel for comprehensive monitoring of power line conditions and inverter status**
- **Optional remote monitoring, including the advanced Global Monitoring System (GMS)**
- **Optional Battery Sentinel Battery Monitoring System**
- **Battery Exerciser**
- **Modular cabinet design for ease of installation, small footprint with shallow 18” depth, convenient front access, optional certified Zone 4 seismic brackets available**
- **Generator compatible**

The Wave Rider I incorporates state of the art technology with PWM (Pulse Width Modulated), standby design for emergency lighting applications.

**The Wave Rider “Energy Conserver” is available in both Fast Transfer and standby models.**

When utility power fails, the Inverter provides uninterrupted output power to the emergency lighting circuits, in compliance with UL924 Life Safety Code for 90 minutes of egress illumination.

The Wave Rider 1 is the best design solution for emergency lighting power for a wide range of commercial and industrial applications.

- **Built-in Power Factor correction (Saves approx. 10% on utility bill)**
- **Sealed maintenance-free lead calcium batteries with 10 year pro-rata warranty.**
- **2 Year Warranty\* (optional)**

\*Second Year, months 13 to 24 only valid with factory performed preventive maintenance

# Wave Rider™ 1 Specifications

**Power Rating:** 2.1, 3, 5, 6, 8, 10, 12.5, 15 & 17 kW  
**Input Voltage:** 2.1 - 5KW, 6KW; 120, 208, 240, 277, or 480 VAC (-15% to +10%)  
 8 - 17KW; 208, 240, 277, or 480 VAC (-15% to +10%)  
**Output Voltage:** 120, 208, 240, 277, or 480 VAC. 120/240: 120/208; 120/277; 480 & 277  
**Output Frequency (Inverter Operation):** 60Hz ±0.5Hz.  
**Voltage Regulation:** +3% Typical  
**Output Voltage Wave Form:** Sine-wave.  
**Optional Input Protection:** Input Circuit Breaker provided protection to the unit, load, and personnel and is rated at (10 KAIC) standard, higher interruption up to 65 (KAIC) optional.  
**Output Protection:** Internal Electronic overload protection. Circuit breaker provides inherent over-load protection. Factory selectable voltage 120, 208, 240, 277, or 480 for input or output voltages. If input is different from output or output different from input, an internally mounted transformer is required.  
**Surge Protection:** The inverter will protect itself and the load against surge as defined in ANSI/IEEE C62.45 category A and B.  
**Noise Isolation:** -120 dB. Common-Mode., 60 dB. Transverse-Mode  
**Isolation:** Output is completely isolated from input and with multi voltages  
**Efficiency:** 98% standby - fast transfer / 94% online  
**Power Factor:** Unity

**Crest Factor:** 3:1  
**Battery:** Sealed, Maintenance-free, Lead-Acid, VRLA (Standard) 10 years  
**Battery Management System:** Utilizes a microprocessor technology to monitor the batteries critical levels and apply charging cycles in a method to substantially increase battery life.  
**Housing:** Free standing NEMA 1 Enclosure powder coated paint Front access only Multiple conduit entries. Refer to chart for dimensions.  
**Recharge Time:** Conforms to UL924  
**Environmental:**  
**Humidity:** 0 - 95 RH w/ no condensation  
**Operating Temperature:**  
 UPS: 0° to 40°C. (32°-104°F)  
 Battery: 20° to 25°C. (68°-77°F)  
**Storage Temperature:** -20° to 70°C. (-4° - 158°F)  
**Safety Agencies:** CSA Listed to UL 924, UL 924A, UL1778

## OPTIONS

- Secondary Auxiliary Circuit Breakers (up to 16 or 24 one pole OCB's): Normally On, Normally Off, Normally Off w/ Delay, Trip Alarm
- Dry Contact Normally Open
- Dry Contact "Form C" Normally Open and/or Normally Closed
- Remote Status Panel Unit with Audio Alarm and Silence Switch
- Local Audio Alarm with Silence Switch
- Make Before Break Internal Maintenance Bypass Switch
- External Maintenance Bypass Switch (wrap around type)
- Main Input and/or Output Circuit Breaker (with custom KAIC)
- Input Transient Voltage Surge Suppressor (TVSS)
- Battery Thermal Runaway
- Certified Zone 4 Seismic Bracket: Adds approx. 4" of additional floor space to each side of cabinet
- Extended Warranty and Service Plans
- Long Life Battery: Check with factory for number of cabinets
- Battery Monitoring System
- Event logging Monitoring via RS232 and RS485
- Monitoring via RS232 and RS485

## Optional Global Monitoring System (GMS)

- Provide SNMP MIB to monitor & log UPS status
- Auto-sense 10M/100M Fast Ethernet
- Manage & configure via Telnet, Web Browser or NMS
- Support TCP/IP, UDP, SNMP, TelNet, SNMP, PPP, HTTP, SMTP Protocol
- Sending both of SNMP TRAP and Email for events notifications.
- Auto email daily Battery Backup history report (configurable)
- Basic NetAgent: LAN or WIFI
- Advance NetAgent: LAN, WIFI, Dial-up Modem, or GPRS Modem

Consult factory for more features and choices of remote communication. Specifications are subject to change without prior notification.

KW	INPUT - OUTPUT VOLTAGES	MODEL NUMBERS	DC Voltages	CABINET SIZE	WEIGHT (LBS)
2.1	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR2.1A0100N1 WR2.1B1300N1 WR2.1D0400N1 WR2.1R2500N1 WR2.1H2500N1 WR2.1X5800T1 WR2.1Y5899T1	96	39"W x 68"H x 18"D 48"H Optional	896 lbs
3.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR3.0A0100N1 WR3.0B1300N1 WR3.0D0400N1 WR3.0R2500N1 WR3.0H2500N1 WR3.0X5800T1 WR3.0Y5899T1	96	39"W x 68"H x 18"D 48"H Optional	1066 lbs
5.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR5.0A0100N1 WR5.0B1300N1 WR5.0D0400N1 WR5.0R2500N1 WR5.0H2500N1 WR5.0X5800T1 WR5.0Y5899T1	120	39"W x 68"H x 18"D	1284 lbs
6.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR6.0A0100N1 WR6.0B1300N1 WR6.0D0400N1 WR6.0R2500N1 WR6.0H2500N1 WR6.0X5800T1 WR6.0Y5899T1	144	39"W x 68"H x 18"D	1284 lbs
8.0	208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR8.0B1300N1 WR8.0D0400N1 WR8.0R2500N1 WR8.0H2500N1 WR8.0X5800T1 WR8.0Y5899T1	192	39"W x 68"H x 18"D	1464 lbs
10	208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR010B1300N1 WR010D0400N1 WR010R2500N1 WR010H2500N1 WR010X5800T1 WR010Y5899T1	192	51"W x 70"H x 30.5"D	2870 lbs
12.5	208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR012B1300N1 WR012D0400N1 WR012R2500N1 WR012H2500N1 WR012X5800T1 WR012Y5899T1	192	51"W x 70"H x 30.5"D	3777 lbs
15.0	208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR015B1300N1 WR015D0400N1 WR015R2500N1 WR015H2500N1 WR015X5800T1 WR015Y5899T1	240	51"W x 70"H x 30.5"D	4512 lbs
17.0	208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	WR017B1300N1 WR017D0400N1 WR017R2500N1 WR017H2500N1 WR017X5800T1 WR017Y5899T1	240	51"W x 70"H x 30.5"D	4512 lbs

\* Input Voltage "X": A= 120, B= 208, D= 240, R= 277, H= 480 VAC  
 \* Input Voltage "Y": R= 277 or H= 480 VAC  
 \* Output Voltage "5800" = 120/240, or 280, or 277 VAC  
 \* Output Voltage "5899" = 277 & 480 VAC

All units are 90 minutes battery back-up time at full load.  
 For other back-up times (up to 6 hours), consult factory.  
 Consult factory for 120V and other voltages.



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