

# Three Phase Emergency Central Lighting Inverter

The Wave Rider III incorporates state of the art technology with PWM (Pulse Width Modulated), double conversion design for emergency lighting applications. The Wave Rider is always online, eliminating noise, spikes, sags and brownouts. 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 is the best design solution for emergency lighting power for a wide range of commercial and industrial applications.

## KEY FEATURES of the Wave Rider:

- Double Conversion, "no-break" online system powers all lamp types, including HID.
- Latest technology microprocessor controlled electronics with PWM (Pulse Width Modulated) design for true Sine Wave output.
- Automatically tests every 30 days and 12 months.
- Efficiency: 94% Online / 98% Standby
- Continuous self-diagnostic and self-testing system.
- LCD backlit panel for comprehensive monitoring of power line conditions and Inverter status.
- RS232 and RS485 Ports
- Optional remote monitoring, including the advanced Global Monitoring System (GMS)
- Sealed maintenance-free lead calcium batteries with 10 year prorata warranty.
- Battery Exerciser
- Modular cabinet design for ease of installation, small footprint with shallow 18" depth, convenient front access. Stackable with optional bracket.
- Generator Compatible



# Wave Rider™ III

## Three Phase, Emergency Central Lighting Inverter

### Applications

For a wide range of commercial and industrial applications, from 8,000 to 40,000 watts maximum lighting load.

Typical installations:

- Office Buildings
- Factories
- Hospitals
- Hotels & Motels
- Schools & Universities
- Shopping Centers
- Warehouses
- Casinos
- Airports
- Military Installations
- Apartment Buildings
- Supermarkets
- Train & Bus Terminals



**8 to 40 kW**  
**Three Phase**

**HID, Incandescent, Fluorescent, LED**  
**208Y/120 or 480Y/277 VAC**

**Modular Design, Front Access,**  
**Small Footprint 18" deep**

**U.L. Listed to UL924 Lighting**  
**and UL1778 UPS Standards, by CSA**

**A Full Line Power Protection Company.**

# Wave Rider III

## Three Phase, Emergency Central Lighting Inverter

### SPECIFICATIONS

**Power Factor:** 1.0

**Power Rating:** 8, 12, 16, 20, 24, 32, and 40 KW

**Input Voltage:** 208Y/120 or 480Y/277 VAC (-20% to +15%)

**Output Voltages:** 208Y/120 or 480Y/277 VAC

**Output Frequency (Inverter Operation):** 60 Hz  $\pm$ 0.5 Hz

**Voltage Regulation:**  $\pm$ 3%, Regulated within CBEMA curve

**Output Wave Form:** Sine-Wave < 5% THD.

**Efficiency:** 94% Online / 98% Standby

**Crest Factor:** 3:1 Typical

**Surge Protection:** The inverter will protect itself and the load against surges as defined in ANSI/IEEE C62.41 Categories A and B.

**Isolation:** Complete from line. Output neutral bonded to ground

**Noise Isolation:** -120 dB Common-Mode; -60 dB Transverse-Mode

**Battery:** 10 year pro rated maintenance-free (AGM) battery

**Recharge Current:** Conforms to UL924 Standards

**External Battery:** Provisions for hardwire connection of optional external battery cabinets or DC source.

**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 25°C. (-4° - 77°F)

**Altitude:** Up to 10,000 ft

**Safety Agencies:** CSA Listed to UL1778, UL924, NFPA101, NFPA70, NEC, and OSHA

**Cabinet Sizes:**

Standard Cabinet Layout:  
Inverter Cabinet 39"W x 18"D x 68"H  
Battery cabinets 51"W x 30.5"D x 70"H

KW	INPUT VOLTAGE	OUTPUT VOLTAGE	MODEL NUMBER	* Total Weight (lbs)	(Qty) Size of Cabinets
8	208Y/120	208Y/120	WR010B05LHT3-VA	2475	(2) 39"
	480Y/277	480Y/277	WR010H09LHT3-VA	2475	
	480Y/277	208Y/120	WR010H05LHT3-VA	2475	
12	208Y/120	208Y/120	WR015B05LHT3-VA	4670	(1) 39" & (1) 51"
	480Y/277	480Y/277	WR015H09LHT3-VA	4670	
	480Y/277	208Y/120	WR015H05LHT3-VA	4670	
16	208Y/120	208Y/120	WR020B05LHT3-VA	5239	
	480Y/277	480Y/277	WR020H09LHT3-VA	5239	
	480Y/277	208Y/120	WR020H05LHT3-VA	5239	
20	208Y/120	208Y/120	WR025B05LHT3-VA	6247	
	480Y/277	480Y/277	WR025H09LHT3-VA	6247	
	480Y/277	208Y/120	WR025H05LHT3-VA	6247	
24	208Y/120	208Y/120	WR030B05LHT3-VA	6287	
	480Y/277	480Y/277	WR030H09LHT3-VA	6287	
	480Y/277	208Y/120	WR030H05LHT3-VA	6287	
32	208Y/120	208Y/120	WR040B05LHT3-VA	10730	(1) 39" & (2) 51"
	480Y/277	480Y/277	WR040H09LHT3-VA	10730	
	480Y/277	208Y/120	WR040H05LHT3-VA	10730	
40	208Y/120	208Y/120	WR050B05LHT3-VA	11263	(5) 39" or (1) 39" & (2) 51"
	480Y/277	480Y/277	WR050H09LHT3-VA	11263	
	480Y/277	208Y/120	WR050H05LHT3-VA	11263	

\* Total Weights are approximate.

Standard Battery Back-up time is 90 minutes @ full load.  
Other back-up times are available - contact factory.

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Specifications are subject to change without prior notification.

### STANDARD FEATURES

- On-Line Central Lighting Inverter
- Back-lit LCD Display (4 lines) for monitoring
- RS 232 & RS 485 ports for metering, measuring and diagnostic.
- Pre-wired for Global Monitoring System (GMS)
- High Frequency PWM with Digital Signal Processing Technology
- Make Before Break Internal Maint. Bypass Switch
- Input and Output Circuit Breaker
- Generator Compatible with Automatic Governor (Slew Rate 2Hz/sec.)
- Inverter Test Switch
- Battery Breaker
- Stackable Cabinets
- Battery Management Software
- Automatically tests every 30 days and 12 months.

### OPTIONS

- Secondary Auxiliary Circuit Breakers (up to 14 one-pole OCB's): Normally On, Normally Off, Normally Off w/ Delay, Trip Alarm
- Form 'C' Contacts (5), (N.o.)
- Secondary Normally On/Off Terminal Block selection
- Remote Status Panel Unit with Audible Alarm and Silence Switch
- Local Audible Alarm with Silence Switch
- Input Current Harmonic Filter, 10% & 5% (This option will not be offer with Secondary Auxiliary Circuit Breakers)
- Make Before Break External Maint. Bypass Switch
- Main Input and/or Output Circuit Breaker (with custom KAIC)
- Built-in Secondary Distribution
- External Attachable Panelboard (20-42 poles)
- EMI Filter
- Input Transient Voltage Surge Suppressor (TVSS)
- Harmonic Tolerance (up to K-50)
- Stackable Cabinet Rack to save floor space
- Certified Zone 4 Seismic Bracket
- Extended Warranty and Service Plans
- **G-Battery (Sealed Lead-Calcium VRLA Battery):** Maintenance free battery that requires no addition of water over the life of the battery. **20-years Warranty Life at 77°F (25°C).** Warranty is two-years full replacement plus an additional eight-teen years pro-rata.
- **Global Monitoring System (GMS)**
  - LOCAL**
    - Local PC via RS232 and RS485
    - Event logging up to 500
  - REMOTE**
    - **Dial-up**
      - Voice (10 event logging), numeric pager
      - Voice, data, fax, pager, PC, e-mail, event logging up to 500
      - Voice, data, fax, pager, PC, e-mail, and measurement (500 event logging plus graphic)
    - **Web/SNMP:** System status, measurement, alarm notification, event logging and password protected configuration.

Consult Factory for more features and choices of remote communication.



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