

CRUCIAL POWER PRODUCTS

Central Lighting Inverter

Three Phase (UPS or IPS)
Online or Fast Transfer (under 2ms)
LED, Incandescent, Fluorescent, HID
208Y/120 or 480Y/277 VAC
Listed to UL924 lighting
and UL1778 UPS Standards



Wave RiderTM 3

8 to 50KW

Key Features:

- **Double Conversion, fast transfer or stand by systems available to power all lamp types, including HID, LED**
- **Efficiency: 98% Standby - Fast Transfer / 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)**
- **Battery Exerciser**
- **Optional Battery Sentinel Battery Monitoring System**

The Wave Rider 3 incorporates state of the art technology with PWM (Pulse Width Modulated), double conversion design for emergency lighting applications. 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 3 is the best design solution for emergency lighting power for a wide range of commercial and industrial applications.

- **Sealed maintenance-free lead calcium batteries with 10 year Pro-Rata warranty.**
- **RS232 and RS485 (Optional)**
- **Modular cabinet design for ease of installation, small footprint with shallow 18" depth, convenient front access.**
- **Generator compatible**
- ***Standard Warranty**

Specifications are subject to change without prior notification

*Standard warranty is eighteen (18) months from ship date or twelve (12) months from start up, whichever occurs first. Optional second year warranty with factory performed preventative maintenance available.

Wave Rider™ 3 Specifications

Power Rating: 8, 12, 16, 20, 24, 32, 40 and 50KW

Input Voltage:

208Y/120V or 480Y/277 VAC
(+10% / -15%)

Output Voltage:

208Y/120V or 480Y/277 VAC

Output Frequency (Inverter Operation):

60Hz ± 0.5Hz

Voltage Regulation:

±3%, Regulated within CBEMA curve

Output Voltage Wave Form:

Sine-Wave < 5% THD.

Efficiency: 94% Online / 98%

Standby - Fast Transfer (Typical)

Power Factor: 0.8

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: -120dB Common-Mode, -60dB Transverse-Mode

Battery: Sealed, Maintenance-Free, Lead-Acid VRLA (Standard) 10 year

Recharge Time: 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 70°C (-4° to 158°F)

Altitude: Up to 6,000 ft

Safety Agencies:

CSA Listed to UL1778, UL924, NFPA101, NFPA70, NEC, and OSHA

Cabinet Size:

Standard Cabinet Layout:

Inverter Cabinet: 39"W x 68"H x 18"D

Battery Cabinet: 51"W x 70"H x 30.5"D

Standard Features

- On-Line Central Lighting Inverter
- Back-lit LCD Display (4lines) for monitoring
- 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
- Battery Management Software
- Automatically tests every 30 days and 12 months

Options

- Fast Transfer (Under 2ms)
- Secondary Auxiliary Circuit Breakers (Up to 20 positions): Normally On, Normally Off
- Normally Off w/ Delay, Trip Alarm
- Aux CB with Trip indicator
- Dry Contact Normally Open
- Dry Contact "Form C" Normally Open and/or Normally Closed
- Secondary Normally On/Off Terminal Block selection
- Remote status panel unit with audio alarm and silence switch
- Local Audio Alarm with Silence Switch
- Input current harmonic filter, 10% & 5% (This option will not be ordered with secondary auxiliary circuit breakers)
- Main Input and/or Output Circuit Breaker (with custom KAIC)
- EMI Filter
- Delta Input (using external transformer)
- 4 position External wrap around Bypass Switch
- Battery Cabinet Fan Exhaust (also with Dry Contact)
- Battery Thermal Runaway with Dry Contact
- Battery to Normal power, Adjustable Time Delay
- 42 Position Panel Board: Attachable, free standing, ships loose (with main disconnect)
- Wireless battery monitoring system: Ability to monitor individual batteries including battery impedance
- Input Transient Voltage Surge Suppressor (TVSS)
- Harmonic Tolerance (up to K-50)
- Certified Zone 4 Seismic Bracket
- Extended Warranty and Service Plans
- 12 Hour Battery charger
- **G-Battery (Seal Lead-Calcium VRLA Battery):**
Maintenance free batter that requires no addition of water over the life of the battery. 20-years Warranty Life (may increase cabinet size) at 77°F (25°C). Warranty is two-years full replacement plus an additional eighteen years pro-rata.
- **Global Monitoring System (GMS):**
 - LOCAL
 - Local PC via RS232 and RS485
 - Event logging up to 500 with touch screen
 - REMOTE
 - Web/SNMP: System status, measurement, alarm notification, event logging and password protected configuration.

KVA/ KW	INPUT - OUTPUT VOLTAGES	MODEL NUMBERS	DC VOLTS	BTU/ HR	TOTAL WEIGHTS (LBS)	
					INVERTER CABINET	(#) OF BATTERY CABINET
10/8	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR010B05LHT3-VA WR010H09LHT3-VA WR010H05LHT3-VA	192	3032	(1 Cabinet)	39W x 68H x 18D (1 Cabinets)
					1083 lbs	1392 lbs
15/12	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR015B05LHT3-VA WR015H09LHT3-VA WR015H05LHT3-VA	192	4549	(1 Cabinet)	51W x 70H x 30.5D (1 Cabinets)
					1446 lbs	3224 lbs
20/16	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR020B05LHT3-VA WR020H09LHT3-VA WR020H05LHT3-VA	192	6066	(1 Cabinet)	51W x 70H x 30.5D (1 Cabinets)
					1679 lbs	3560 lbs
25/20	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR025B05LHT3-VA WR025H09LHT3-VA WR025H05LHT3-VA	288	7582	(1 Cabinet)	51W x 70H x 30.5D (1 Cabinets)
					1679 lbs	4545 lbs
30/24	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR030B05LHT3-VA WR030H09LHT3-VA WR030H05LHT3-VA	288	9098	(1 Cabinet)	51W x 70H x 30.5D (1 Cabinets)
					1719 lbs	4568 lbs
40/32	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR040B05LHT3-VA WR040H09LHT3-VA WR040H05LHT3-VA	312	12131	(1 Cabinet)	51W x 70H x 30.5D (2 Cabinets)
					2066 lbs	8664 lbs
50/40	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR050B05LHT3-VA WR050H09LHT3-VA WR050H05LHT3-VA	480	15164	(1 Cabinet)	51W x 70H x 30.5D (2 Cabinets)
					2463 lbs	8800 lbs
62/50	208Y/120 - 208Y/120 480Y/277 - 480Y/277 480Y/277 - 208Y/120	WR050B05LHT3 WR050H09LHT3 WR050H05LHT3	480	18000	(1 Cabinet)	51W x 70H x 30.5D (2 Cabinets)
					2565 lbs	12700 lbs

* Total Weight/BTU are approximate.

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

Consult Factory for more features and choices of remote communication.
Consult Factory for exact number of battery cabinets



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