



Power Wave 4

Three Phase, 8 to 400kW

A POWERFUL INVERTER SOLUTION

Best high-capacity Three Phase solution you can get, UL1778 and UL924 listed and meeting strict standards from NFPA — with its versatile design and exceptional reliability, the Power Wave 4 inverter is the ultimate solution to meet all your emergency lighting needs.



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STANDARD FEATURES

- ✓ 90 Minute Backup Design at Full Load
- ✓ Listed to UL924 and UL1778 Standards
- ✓ Compatible with Self-Ballast Fluorescent, Incandescent, Halogen, Quartz Re-strike, HID, HPS and LED
- ✓ True Online Double Conversion Technology with **Zero Transfer Time**
- ✓ Pure Sinusoidal Waveform
- ✓ High Frequency Pulse Width Modulation (PWM) for Conditioned Power to the Load
- ✓ Internal Maintenance Bypass Switch
- ✓ Field Selectable: UPS Double Conversion or Green Mode (Standby)
- ✓ Independent Phase Control
- ✓ Global Monitoring (GMS 1): Local Event Logger with Memory (PC Connections vis RS232 and RS485) 500 Events
- ✓ Input Breaker, Output Breaker and DC Breaker
- ✓ Microprocessor Controlled LCD with visual status and Event indicators
- ✓ Self-Testing and Battery Exerciser with LCD Display

OPTIONAL FEATURES

- Global Monitoring (GMS):
 - GMS 2: Remote Monitoring with Local Network Connection (WiFi, Ethernet or Modem)
 - GMS 3: Remote Monitoring with Cellular Network Connection
- Remote Status Panel
- Battery Monitoring (String or Per Battery)
- TVSS Input Transient Voltage Surge Suppressor (Class C)
- Dry Contacts Normally Open
- Dry Contacts Normally Closed
- Normally ON or Normally OFF Auxiliary Output Circuit Breakers (20 Max)
- Custom Rated KAIC Breakers
- 65 KAIC Total System Short Circuit Current Rating
- Thermal Runaway Control (IFC 1206.2)
- External Maintenance Bypass Switch
- Seismic Brackets
- Long Life Battery 20 Year Warranty
- Maintenance:
 - Extended Warranty
 - Preventative Maintenance Plans



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120-DS-2-24



SPECIFICATIONS

Power Wave 4

Three Phase
10-500kVA (8 to 400kW)

*All units are 90 minutes battery backup time @ full load.
Consult factory for backup times (up to 120 minutes)

SAFETY STANDARDS

UL924, UL1778, NFPA101, NFPA70, NEMA, and ANSI
Listed to UL924 and UL1778 Standards

INPUT

AC Voltage: $\pm 15\%$
Frequency: 50/60Hz ± 7

OUTPUT

AC Voltage Regulation: $\pm 1\%$
Wave Form: Sinusoidal
Harmonic Distortion: Less than 2% THD
Frequency Tolerance: ± 0.1 Hz

PROTECTION

Overload: Less than 110% Load: Continuous,
125-150%: 5 min, Higher than 150%: 30 sec

BATTERY

Battery: Sealed, Maintenance-free, Lead-Acid,
VRLA (Standard) 10 years
Recharge Time: Varies per kVA, conforms to UL924

NOISE ISOLATION

Isolation: True Galvanic Isolated

ENVIRONMENT (Electronics)

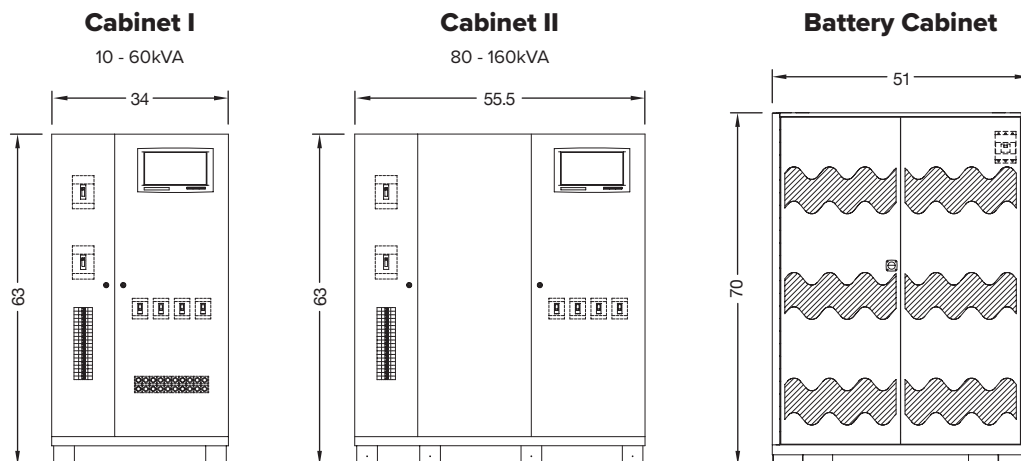
Operating Temperature: 0° to 40°C (32° - 104°F)
Storage Temperature: -20° to 70°C (-4° - 158°F)
Humidity: 0% to 90% (non-condensation)
Altitude: Up to 5,000 ft
Audible Noise: Less than 65dBA at 1 meter/39.4 in.

Cabinet Dimensions

(Inches) Width x Height x Depth

Cabinet I 34"W x 63"H x 31.5"D
Cabinet II 55.5"W x 63"H x 31.5"D
Battery Cabinet 51"W x 70"H x 30.5"D

Each model comes with both inverter and battery cabinets. Larger capacity will require additional battery cabinets. Size and weight will vary depending on capacity



Model Numbers

Unit Name	Capacity kVA/kW	Input (VOLTS)	Output (VOLTS)
PW Power Wave 4	010 10/8	B 208Y/120	05ATT3 208Y/120
	020 20/16	H 480Y/277	09ATT3 480Y/277
	030 30/24		
	040 40/32		
	050 50/40		
	060 60/48		
	080 80/64		
	100 100/80		
	120 120/96		
	160 160/128		
	200 200/160		
	240 240/192		
	300 300/240		
	400 400/320		
	500 500/400		

kW equates to real power.

BTU / Weight

Capacity kVA/kW	BTU/HR		Cabinets - 90MIN (LBS) (# OF CABINETS)			Cabinets - 120MIN (LBS) (# OF CABINETS)		
	STANDARD	GREEN	INVERTER	TOP	FRONT	INVERTER	TOP	FRONT
10/8	3374	1742	840 (1)	2430 (1)	2975 (1)	840 (1)	2430 (1)	2975 (1)
20/16	6747	2873	1083 (1)	3213 (1)	3990 (1)	1083 (1)	3416 (1)	3990 (1)
30/24	10120	4310	1260 (1)	4361 (1)	4135 (1)	1260 (1)	4535 (1)	5034 (1)
40/32	12131	5747	1414 (1)	3213 (2)	5034 (1)	1414 (1)	3416 (2)	3990 (2)
50/40	15164	5687	1525 (1)	3427 (2)	3990 (2)	1525 (1)	3867 (2)	4153 (2)
60/48	18197	6824	1724 (1)	3867 (2)	4135 (2)	1724 (1)	4923 (2)	5034 (2)
80/64	24263	9099	2276 (1)	4615 (2)	5034 (2)	2276 (1)	3707 (1) 4729 (2)	5034 (3)
100/80	30329	11373	2984 (1)	3707 (1) 4729 (2)	5034 (3)	2984 (1)	3416 (1) 4923 (2)	5034 (3)
120/96	32395	10130	3138 (1)	3416 (2) 4923 (2)	5034 (3)	3138 (1)	4923 (4)	5034 (4)
160/128	43193	13507	3868 (1)	*	5060 (4)	3868 (1)	*	5060 (5)
200/160	53992	16884	5746 (1)	*	5060 (5)	5746 (1)	*	5060 (6)
240/192	64790	20206	6229 (1)	*	5060 (6)	6229 (1)	*	*
300/240	80988	25326	7293 (1)	*	*	7293 (1)	*	*
400/320	94942	33768	9061 (1)	*	*	9061 (1)	*	*
500/400	118678	42210	10166 (1)	*	*	10166 (1)	*	*

The approximation is worst case BTU output, measured during recharge following a discharge.

Warranty

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.



ORDERING GUIDE

PROJECT NAME :

REP / DISTRIBUTOR :

ORDER NUMBER **DOES NOT** REFLECT MODEL NUMBER. PLEASE CONSULT FACTORY.

ELECTRICAL DESIGNER / ENGINEER :

DATE :

Power Wave 4

Example: PW-48-B05-S90-N08A40-FT-FC-GMS3-PM2

PW-

PW

MODEL SERIES

PW:
Power Wave 4

48

CAPACITY KW/KVA

08: 8/10
16: 16/20
24: 24/30
32: 32/40
40: 40/50
48: 48/60
64: 64/80
80: 80/100
96: 96/120
128: 128/160
160: 160/200
192: 192/240
240: 240/300
320: 320/400
400: 400/500

B05

VOLTAGE INPUT/OUTPUT

INPUT	OUTPUT
B - 208Y/120	05 - 208Y/120
H - 480Y/277	09 - 480Y/277

*Input 'B' not compatible with Output '09'

S90

BATTERY TYPE

S90: Standard @ 90min
***L90:** Long Life @ 90 min
H90: Hi Temp @ 90 min
U90: USA @ 90 min
(required for BAA and BABA compliance)
***S120:** Standard @ 120min
***L120:** Long Life @ 120 min
H120: Hi Temp @ 120 min
U120: USA @ 120 min
(required for BAA and BABA compliance)
***Long Life 20 Yr. Pro Rata Battery.**

N08A40

AUX BREAKERS (UL1077)

AUX BREAKERS EXAMPLE

N 08 A 40

OUTPUT

N: Normally ON
F: Normally OFF
****FD:** Normally OFF w/ Time Delay

BREAKERS

***01 - 20** (Max 20)

AMP RATING**

10, 15, 20, 25, 30, 40, 50, 60
STANDARD: 20 AMP

VOLTAGE

A - 120V, 1P
B - 208V, 2P
C - 240V, 2P
D - 277V, 1P
E - 480V, 2P
F - 208Y/120, 3P
G - 480Y/277, 3P

* Only up to 20 poles.

** Allows you to have individual circuits remain on battery even when utility is restored for a period of time. Must be a normally OFF circuit.

***Consult factory for custom amp rating.

FT + FC + GMS3

OPTIONS

PICK ANY:

X: Seismic Mounting
LCR20A(#): Load Control Relay, Single Flex Stud Mounting (#): Qty
LCR20(#): Load Control Relay, No Flex (#): Qty
EB: Ex. Maintenance Wraparound Bypass Switch
TVSS: Input Transient Voltage Surge Suppressor (Class C)
SCCR: 65 KAIC Total System Short Circuit Current Rating
DS: Drip Shield Hood
CL: Corbin Lock

BATTERY OPTIONS

FC: Fast Charge (12 hrs or less)
TR: Thermal Runaway Control (IFC 1206.2)

MONITORING OPTIONS

DO: Dry Contact Open Signal*
DC: Dry Contact Closed Signal*

*Must select either Normally Open or Normally Closed not both.

A: Local Audible Alarm with Silencer Switch
CP: RS 232 Connecting Port
P: Remote Status Panel (Hard Wired with Extended Cable)

SYSTEM TRANSFER

TD(B): User Selectable Time Delay to Battery for Capacitor Discharge During EM (Standard 45 Millisecondst)
TD(U): User Selectable Time Delay Back to Utility During Power Restoration for Facility Inrush

BATTERY MONITORING SYSTEM (BMS)

PICK ONE:

SM: String Monitoring
BM: Battery Monitoring
BM-TS: Temperature Sensor

GLOBAL MONITORING SYSTEM (GMS)

PICK ONE:

GMS 2: Testing Logs with Remote Accessibility Through Local Network
GMS 3: Testing Logs with Remote Accessibility through Local Network and GPRS for Cellular Text Alerts

PM2

WARRANTY & SERVICES

PICK ANY:

Blank: Standard Onsite Startup, Training and Warranty

ADDITIONAL:

EXT: First Year On site Preventative Maintenance (Includes Additional One Year Extended Warranty)

PM (2-3): Additional Onsite Preventative Maintenance (Once Per Year, up to 3 Years)

T1: Additional 4 Hour Training at Time of Start Up

T2: Additional Training day up to 8 hours



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