



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 lighting
and UL1778 UPS Standards, by CSA

Harsh Environment Unit (HEU)

2.1 to 17KW

Key Features:

- **Electronics maintain normal output when tested to 136°F (58°C) and minus -29°F (-34°C) temperatures .**
- **Designed for remote locations where input voltage can swing from +20% to -35%.**
- **Automatic monthly and annual self-testing.**
- **Latest technology microprocessor controlled electronics with PWM (Pulse Width Modulated) design for true Sign Wave output.**
- **Double Conversion, “no break” online system powers all lamp types, including LED.**
- **Continuous self-diagnostic and self-testing system. Automatically tests every 30 days and 12 months.**
- **Optional remote monitoring capabilities.**
- **Heavy-duty NEMA 3R enclosure includes weatherproof gasket, convection cooling.**
- **Optional battery heater.**

Built like a tank, the HEU is specifically designed for outdoor locations and hostile environments. This unit has been proven for several years in the field to operate efficiently in extreme temperatures, harsh weather conditions, and withstand physical abuse and vandalism.

Unique in the market, the HEU is the only outdoor central lighting inverter listed to UL924 and UL1778 UPS standards. The HEU is the solution to fulfill power requirements for emergency egress lighting in a wide variety of very challenging applications.

- **Rugged steel (painted) enclosure is standard.**
- **Optional aluminum or stainless steel for exceptional corrosion resistance in very harsh environments.**
- **Tamper-proof triple-locking design includes internal steel bars, key-lock, and padlocking door handle.**

Harsh Environment Unit Specifications

INPUT SPECIFICATIONS

Nominal Input Voltage	120, 208, 240, 277, or 480 VAC single phase
Input Voltage Range	+10% to -15%
Input Frequency	60Hz ±3%
Power Factor	1.0 Unity
Overcurrent Protection	Circuit Breaker
Power Connection	Hard Wired (terminal block)
Input Configuration	2 wire (hot, neutral) plus ground

OUTPUT SPECIFICATIONS

Output Rating	2.1, 3, 5, 6, 8, 10, 12.5, 15, and 17kW (Normal Mode/Emergency Mode)
Voltage	120, 208, 240, 277 VAC, Single Phase
Voltage Regulation	±3% No Load to Full Load; ±3% High Line to Low Line
Frequency	60 Hz ±0.25 Hz
Wave-shape	Sine Wave
Harmonic Distortion	<5% THD; <3% Single Harmonic
Crest Factor	Up to 3 to 1
Power Factor	1.0 unity
Overload Protection	115% for Ten (10) Minutes; 125% Surge Fault Current Limited by Ferroresonant Design
Noise Rejection	-120 dB Common Mode; -60 dB Normal Mode
Operating Temp. (Electronics Only)	Test for -40°F. (-40°C) to 136°F. (58°C)

PHYSICAL SPECIFICATIONS

Accessibility	All Servicing is through the front Bottom
Cable Entry	Four (4) Mounting Holes Provided to Anchor Enclosure to Pedestal

BATTERY SPECIFICATIONS


Battery Run Time	90 min
Battery Type	Sealed, Maintenance-Free, Lead Calcium
Nominal DC Link	48 or 120 VDC link
Overcurrent Protection	Circuit Breaker



OPTIONS

- Secondary Auxiliary Circuit Breakers (up to 16 or 24 One-pole OCB's) Normally On, Normally On, Normally Off w/ Delay, Trip Alarm
- Extended Warranty and Service Plans
- Make Before Break Internal Maintenance Bypass Switch and Electronic Maintenance Bypass Switch
- TVSS for 120, 208, 240 and 277V
- Runtime up to 13 Hours
- Rotatable Lifting Brackets
- Fast Transfer
- Battery Thermal Runaway with Dry Contact
- Wireless Battery Monitoring System: Ability to Monitor Individual Batteries Including Battery Impedance
- High Isolation Transformer with Harmonic Reduction (up to K-50)
- Heater Strip with Thermostat Control
- Dry Contact Normally Open
- Dry Contact "Form C" Normally Open and/or Normally Closed
- (5) Form "C" Contacts alarms
- Load Control Relays

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.

KW	INPUT - OUTPUT VOLTAGES	MODEL NUMBERS	DC Voltages	CABINET SIZE (W x H x D)	WEIGHT (LBS)
2.1	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU3.0A0100N1-VA HU3.0B1300N1-VA HU3.0D0400N1-VA HU3.0R2500N1-VA HU3.0H2500N1-VA HU3.0X5800T1-VA HU3.0Y5899T1-VA	96	40" x 76" x 20"	896
3.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU3.0A0100N1 HU3.0B1300N1 HU3.0D0400N1 HU3.0R2500N1 HU3.0H2500N1 HU3.0X5800T1 HU3.0Y5899T1	96		1066
5.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU5.0A0100N1 HU5.0B1300N1 HU5.0D0400N1 HU5.0R2500N1 HU5.0H2500N1 HU5.0X5800T1 HU5.0Y5899T1	120		1284
6.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU6.0B1300N1 HU6.0D0400N1 HU6.0R2500N1 HU6.0H2500N1 HU6.0X5800T1 HU6.0Y5899T1	144	52" x 80" x 33.5"	1284
8.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU8.0B1300N1 HU8.0D0400N1 HU8.0R2500N1 HU8.0H2500N1 HU8.0X5800T1 HU8.0Y5899T1	192		1464
10	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU10B1300N1 HU10D0400N1 HU10R2500N1 HU10H2500N1 HU10X5800T1 HU10Y5899T1	192		2870
12.5	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU12B1300N1 HU12D0400N1 HU12R2500N1 HU12H2500N1 HU12X5800T1 HU12Y5899T1	192		3777
15.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU15B1300N1 HU15D0400N1 HU15R2500N1 HU15H2500N1 HU15X5800T1 HU15Y5899T1	240		4512
17.0	120/120 208/208 240/240 277/277 480/277 X / 208, 277, 120/240 Y / 277 & 480	HU17B1300N1 HU17D0400N1 HU17R2500N1 HU17H2500N1 HU17X5800T1 HU17Y5899T1	240	4512	

* 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.
 Consult factory for other power ratings and back-up times.



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