



## Outdoor Emergency Lighting Inverter

# HE-3 for Outdoor

10 to 60 kVA, Three Phase

### True Galvanic isolation design

The ultimate UPS solution – providing uninterrupted power and protection against noise, lightning, and leakage current.

### Designed to protect against a floating neutral

Ensures the safety of personnel and UPS.

### Advanced digital signal processing

Increased reliability and efficiency through the use of DSP, IGBT and advanced switching components.



### Green Mode Operation

Hybrid design, customer selectable for green mode (fast transfer less than 2ms.).

### Modular design for ease of troubleshooting and maintenance

Quick change components speed repairs and cut down time.

### Redundant Multi-CPU design allows the software and hardware to work together as a team

This results in the highest reliability possible.

### The most intelligent and safe battery test circuitry available today

- No risk of AC output failure during test of failed batteries
- Maximizes battery bank protection when leakage or a ground fault is present

### Battery Exerciser

User selectable

### Hi-Tech fan speed control

Increases fan life expectancy while reducing audible noise

### Individualized inverter support on each phase

Maintains specified characteristics, even with 100% unbalanced load.

### Intelligent, fully temperature compensated battery charger

- Prolongs battery life
- Selectable high charging capacity for large capacity extended backup time battery banks

### Optimum design for heat dissipation

The control and power circuits are separated to reduce operating temperature for high reliability under adverse operating conditions.

### Battery Power start feature

The unit can be started with or without the AC mains using battery power alone eliminating large surge currents.

### A selection of optional accessories to meet your particular needs are available

- Remote control panel
- 3-Phase PC monitoring software
- Battery monitoring module
- 3-Phase SNMP card
- Emergency Power Off Switch
- Input harmonic filter – reduces T.H.D. (Total Harmonic Distortion) of the input current



Listed to  
UL1778 and UL924

## Outdoor Applications

Production Facility  
Testing Lab  
Telecommunications  
Industrial  
Government  
Public Building  
Schools  
Healthcare  
Cruise & Cargo Ship  
Banking  
Printing Facility



# HE-3 Specifications

**Power Rating:** 10, 20, 30, 40, 50, 60 kVA

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

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

**Output Frequency (Inverter Operation):** 60 Hz  $\pm$  1 Hz

**Voltage Regulation:**  $\pm$ 1% at 100% unbalanced load

**Output Voltage Wave Form:** Sine-Wave <2% THD.

**Crest Factor:** 3:1 Typical

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

**Isolation:** True galvanic isolated

**Battery:** Sealed maintenance-free VRLA or Long Life Battery (available upon request)

**Recharge Time:** Varies per KVA and conforms to UL924.

**Environmental:**

**Humidity:** 0 - 90% (non-condensing)

**Operating Temperature:** UPS: 0° to 58°C. (32° - 136°F)

Battery: 20° to 25°C. (68° - 77°F) higher temperature batteries are available for special order

**Storage Temperature:** -20° to 60°C. (-4° - 140°F) electronics only.

**Altitude:** Up to 5,000 ft

**Inverter Cabinet:** 34"W x 63"H x 31.5"D

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

**Outer Cabinet:** 71"W x 83"H x 45"D

Battery	Sealed Lead Acid VRLA
No. of batteries	29
Voltage Range	295 - 410V
Low Batt Volt (warning)	320 VDC
Low Batt Shut Down	295 VDC
Boost Charge	402 VDC
Float Charge	390 VDC

KVA/ KW	Input - Output Voltages	MODEL NUMBERS	DC Volt.	BTU/ Hr (std. mode)	BTU/ Hr (green mode)	Weights (lbs)	
						UPS	Each Battery Cab (#) of cab
10 / 8	208/120 - 208/120 480/277 - 480/277	PW010B05ATT3-HE PW010H09ATT3-HE	348	2218	1742	840	2187 (1)
20 / 16	208/120 - 208/120 480/277 - 480/277	PW020B05ATT3-HE PW020H09ATT3-HE	348	4436	2873	1083	4014 (1)
30 / 24	208/120 - 208/120 480/277 - 480/277	PW030B05ATT3-HE PW030H09ATT3-HE	348	6483	4310	1260	4594 (1)
40 / 32	208/120 - 208/120 480/277 - 480/277	PW040B05ATT3-HE PW040H09ATT3-HE	348	8871	5747	1414	3536 (2)
50 / 40	208/120 - 208/120 480/277 - 480/277	PW050B05ATT3-HE PW050H09ATT3-HE	348	10236	5687	1525	3536 (2)
60 / 48	208/120 - 208/120 480/277 - 480/277	PW060B05ATT3-HE PW060H09ATT3-HE	348	11942	6824	1724	4594 (2)

**STANDARD FEATURES**

- 6 pulse or 12 pulse controlled rectifier (12 pulse for 80 kVA & up)
- Input main circuit breakers
- Data and events LCD display
- Built-in Transient Voltage Surge Suppressor
- EMI suppression
- PWM methodology (DSP)
- Isolation transformer at output for True galvanic isolation
- Modular design to facilitate ease and speed of service
- Cold start function: UPS can be started with battery power only without an AC source
- Green Mode Operation
- Multi-CPU design: Several CPUs are employed in control circuit and critical functions are designed with parallel redundancy for added reliability
- Protection against misuse: circuit breaker on/off sensor, and power supply sensor, the user cannot cause UPS damage by operator error.
- Intelligent charger: UPS will automatically recharge with temperature compensation.
- Intelligent battery test
- Redundant power supply
- RS-232 / RS-485 for various accessory options
- External Shutdown- two pairs of terminals for UPS shut down
- DB9 Connection-4 of RS-485 & 1 of RS-232:

The following are some connection examples of optional modules

- CNR21 (RS-232): UPSCOM- Software for PC Monitoring, SNMP card
- CNR9 (RS-485): DCMAN- Battery Monitoring Module
- CNR10 (RS-485): UPSCAN- Remote Control Panel
- CNR12,13,14,15,17,18,19 (RS-485): UPSCALL- Auto Dialing Module
- CNR11: for transferring RS-485 into RS-232

**OPTIONS**

- Remote control panel UPSCAN™
- Software for PC monitoring UPSCAN™
- Auto dialing module UPSCAN™
- Battery Monitoring module DCMAN™
- Output Circuit Breaker
- Battery Exerciser
- 8 Dry contacts: INVON,OVL,FAULT, SS, BYPASS, BACK-UP, BATL, COM.

Specifications are subject to change without prior notification.

