

ILLUMINATOR CIII

3-PHASE EMERGENCY LIGHTING
INVERTER SYSTEM



TYPICAL APPLICATIONS:

- Office Buildings
- Shopping Malls
- Hotel/Apartment Complexes
- 911 Facilities
- Hospitals/Nursing Homes
- Subways, Tunnels & Bridges
- Prisons



THE ILLUMINATOR CIII

The Illuminator CIII is a central inverter system for emergency lighting applications. Culminating in more than 35 years of emergency lighting inverter experience, this product contains features and benefits that clearly set it apart from any other product. Listed below are a few highlights:

PERFORMANCE The Illuminator CIII works with any type of lighting load. It will work with incandescent, fluorescent, HID, quartz re-strike, LED, or halogen. It will work with these loads at cold starts for all normally off circuits or regular normally on circuits.

DIAGNOSTICS With self-diagnostic and self-testing capabilities and over 120 parameters stored for Test, Event, and Data Logs, you are assured all NFPA codes are met.

RELIABILITY This product is the company's third generation of IGBT-based inverter technology. Rock solid design with 2x ratings of all critical components. LVD disconnect for long power outages eliminates battery drain.

BATTERIES Front access for easy installation and service. Sealed lead calcium VRLA batteries standard.

APPROVALS UL listed to UL924, Emergency Lighting and Power Equipment, meets and exceeds the requirements of OSHA for emergency lighting and power, NFPA70, NFPA110, NFPA101, UBC, and SBCCI. N.Y. City approval #45228.

APPLICATIONS



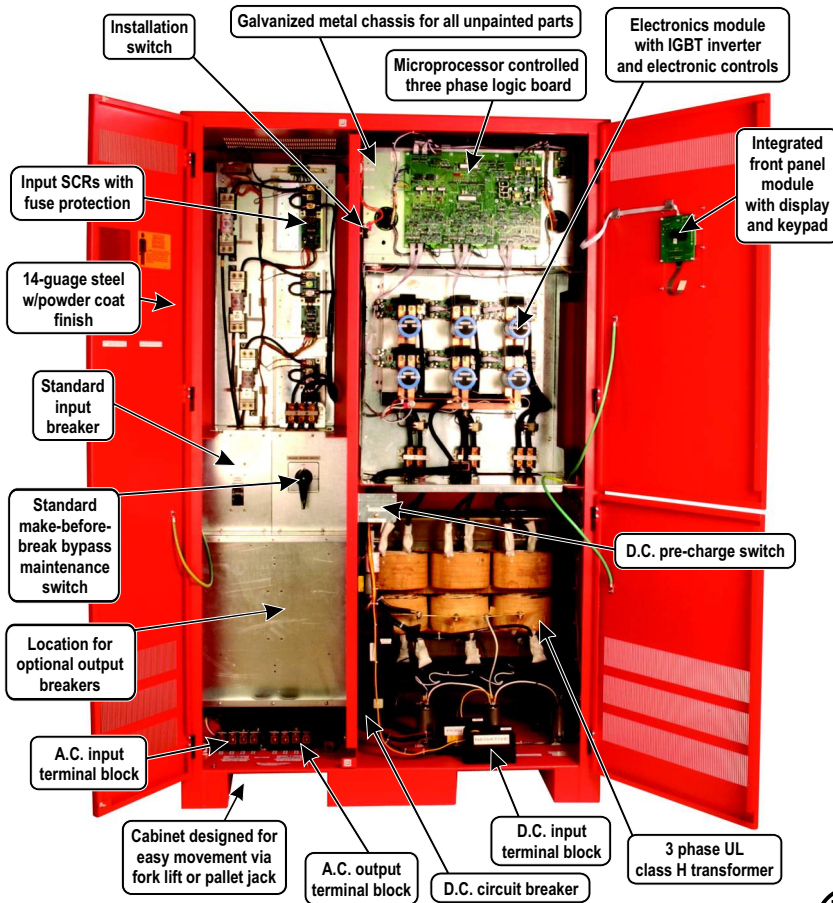
Typical 4.8 - 16.7k

Typical 24 - 50k

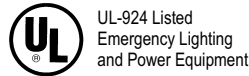
“Electronics Only” shown

- 911 Facilities
 - Airports
 - Apartment/Condominium Complexes
 - Assisted Living Centers, Nursing Homes
 - Banks, Financial Institutions
 - Casinos
 - City, County, State, Federal Buildings
 - Grocery Stores/Homes Center Stores
 - Hospitals
 - Hotels, Motels
 - Industrial
 - Medical Offices
 - Military Complexes
 - Movie/Performing Arts Theaters
 - Office Buildings
 - Parking Garages
 - Prisons
 - Race Tracks
 - Railroad, Subway, Bus Stations
 - Religious Facilities
 - Restaurants
 - Retail Department Stores
 - Schools, Colleges, Day Care Centers
 - Shopping Malls
 - Sport Facilities
 - Toll Booths
 - Tunnels and Bridges
- Designed to work with power factor corrected and the latest T5 and T5-HO electronic ballasts.
 - Central Inverters can eliminate unit equipment in architecturally sensitive applications.
 - Eliminate maintenance costs of individual testing of unit equipment and battery powered ballasts. All tests and diagnostics are performed and recorded automatically.

SYSTEM DESIGN FEATURES



24kVA - 50kVA
Electronics Cabinet



INVERTER - Third generation IGBT-based inverter with dynamic pulse-by-pulse current limiting and inrush protection. Short circuit and overload protected by microprocessor and PWM integration for maximum reliability.

WAVEFORM - Pure PWM sine wave, less than 3% THD with 0.5 lead and 0.5 lag load capabilities. Microprocessor and crystal controlled.

THERMAL PERFORMANCE - Bonded fin heat sink technology for maximum thermal performance. Fan energized only on inverter mode which increases reliability and reduces preventative maintenance. No air filters required.

BATTERY CHARGER - Integrated, software-controlled, 2-step, temperature compensated, 24-hour recharge for 90 minute run system is standard.

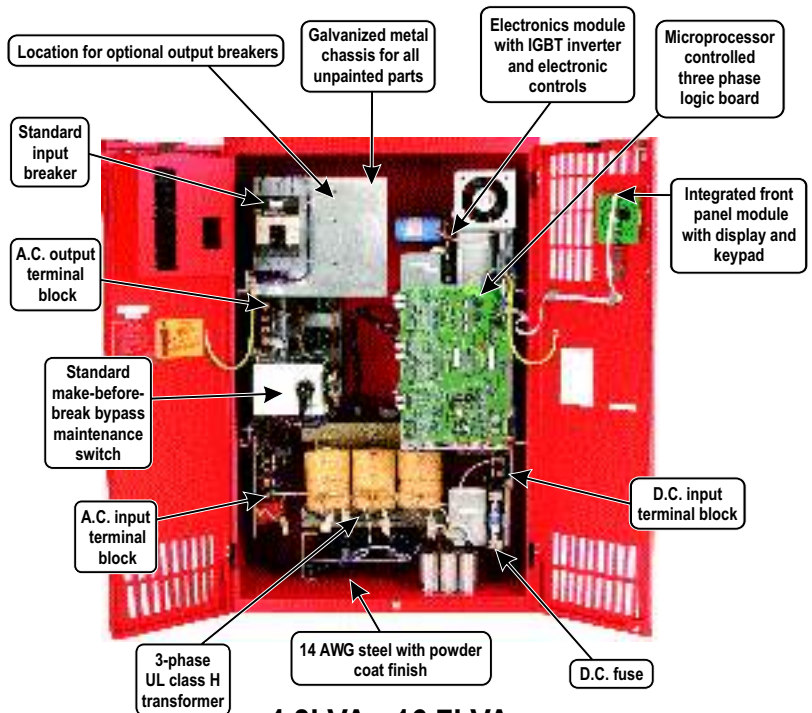
MODULAR - Innovative modular sub-assembly design leads the industry with less than 15 minute MTTR.

CONSTRUCTION - Enclosure is #14 gauge steel with powder-coated surface. Hinged doors with security locks for easy front access and maintenance.

BATTERIES - Front access, maintenance-free, sealed lead calcium VRLA batteries are standard. Significantly reduces footprint installation and maintenance time and increases safety.

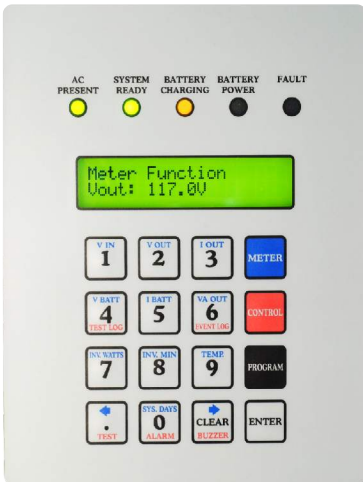
SMALL FOOTPRINT (ELECTRONICS CABINET) -
4.8kVA - 16.7kVA: 25" (depth) x 30" (width)
24kVA - 50kVA: 31" (depth) x 44" (width)

CONTROL PANEL - Self-testing per NFPA and UL standards. Memory logs of over 120 parameters contained in Test, Event and Fault Logs. Easy to read alpha-numeric display with user-friendly keypad integrates Systems Meter, Control, and Program functions.



4.8kVA - 16.7kVA
Electronics Cabinet

SYSTEM DISPLAY FUNCTIONS



NOTE: All displayed meter functions are relative to the inverter.

METER FUNCTIONS

- AC Voltage Input
- AC current Output
- Battery Current
- Inverter Watts
- System Days
- AC Voltage Output
- Battery Voltage
- VA Output
- Ambient Temperature
- Inverter Minutes

PROGRAM FUNCTIONS

- Date
- Time
- Month Test Date/Set Month Test Time
- Yearly Test Date/Set Yearly Test Time
- Load Fault Reduction Setting
- Low Battery Alarm
- Near Low Battery Alarm
- Low AC Voltage Alarm
- High AC Voltage Alarm
- Ambient Temperature Alarm

CONTROL FUNCTIONS

- Test Log & Event Log (75 Logs Stored): Date, Time, Duration, Output Voltage, Output Current, Ambient Temperature, Alarms Present.
- Alarm Log (50 Logs Stored) Date, Time, Alarm Type
- Test
- Buzzer On/Off



SYSTEM OPTIONS

OUTPUT CIRCUIT BREAKER

Maximum output breakers available: 4.8k up to 16.7k systems - 12 unsupervised (1- pole), 9 supervised (1-pole). 24k up to 50k systems - 36 unsupervised (1-pole), 24 supervised (1-pole). Combinations of 1, 2 and 3 pole breakers available (consult factory).

OUTPUT TRIP ALARM (SUPERVISED BREAKER)

An audible and visual alarm activates when an output distribution circuit breaker is open or has tripped.

STATUS MONITORING CONTACTS

Individual form "C" dry contacts capable of monitoring system and option statuses (Inverter On, Inverter Off, AC Present, High Temperature, Summary Alarm, System Bypass*, and OTA*)

*Requires purchase of Maintenance Bypass and/or Output Trip Alarm options)

SUMMARY FORM C CONTACTS

Form "C" contacts rated at 5 amps maximum at 250VAC/30VDC. Dry contacts will change state when any system alarm activates. Contacts change states with the following alarms: High/low battery charger fault, near low battery, low battery, load reduction fault, output overload, high/low AC input volts, high ambient temperature, inverter fault, and with optional output trip alarm.

FAX MODEM

Automatically sends a fax reporting a summary alarm, utility failure alarm, and output failure alarm to up to 8 user-programmable phone numbers.

BATTERY OPTIONS

S - Battery (Sealed Lead-Calcium) (Standard)

Maintenance-free, valve regulated lead calcium battery. Constructed with a rugged polypropylene case. No special room ventilation required. 10-year designed life expectancy. Warranty: 1 year full, 9 years prorated.

G - Battery (Sealed Lead-Calcium)

Maintenance-free, long life, valve regulated lead calcium battery. Constructed with a polypropylene jar, installed in a modular steel tray to create its own enclosure. Does not require any special room ventilation. 20-year designed life expectancy. Warranty: 1 year full, 19 years prorated.

N - Battery (Nickel-Cadmium)

Minimum maintenance wet cell requiring addition of distilled water periodically. This battery type provides a wider operating range. Constructed with a translucent, heavy-duty polypropylene case. This case is marked with a high/low line to check electrolyte level. 25-year designed life expectancy. Warranty: 1 year full, 19 years prorated.



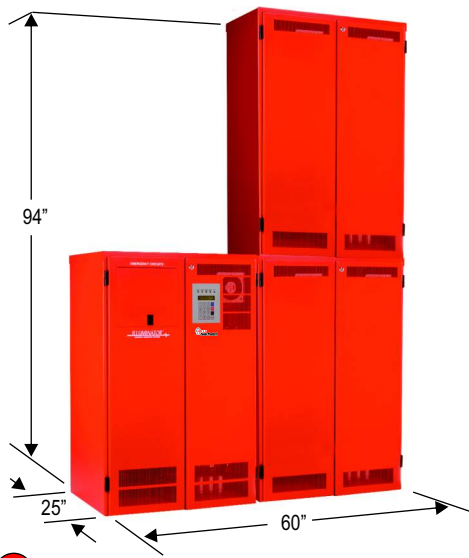
SYSTEM CONFIGURATIONS FOR 90 MINUTE BATTERIES



Systems shown are standard mounting. Contact factory for seismic mounting dimensions. Cabinets cannot be stacked for seismic mounting.

Model Size	Type S & G Battery	
	System Configuration	Total Weight (lbs.)
4.8kVA	A	1,633
6.0kVA	A	1,855
8.0kVA	A	2,247
10.0kVA	B	2,835
12.5kVA	B	3,279
16.7kVA	B	4,063
24kVA	C	6,390
33kVA	D	8,630
40kVA	D	10,150
50kVA	D	11,980

Type N Battery: Call for Configurations and estimates.



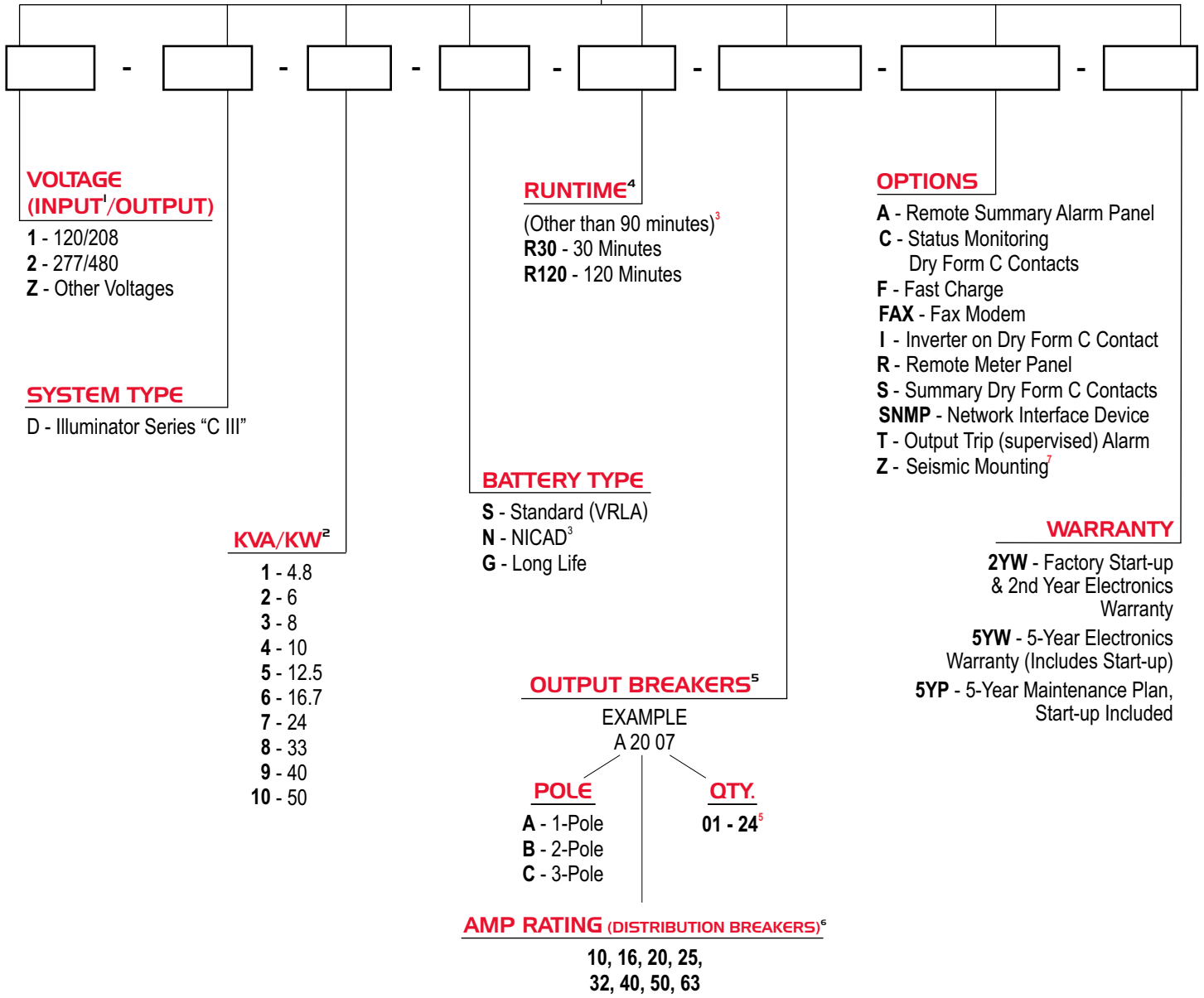
C

D

Model Number	UPS Electronics Module								Batteries		Battery Module								Tot. Sys. Wt.				
	Power Rating (kVA)		Power Rating (kW)		Efficiency (@ full load)		Audible Noise (dBA @ 1m)		Heat Loss (BTU)		Cabinet Dimensions		Total Battery Weight lbs/kg	Number of Batteries	Voltage (VDC)		Current (Amperes)			Run Time (mins)		Number of Battery Cabinets	
	Model	Rating	Model	Rating	Model	Rating	Model	Rating	Model	Rating	Model	Rating			Model	Rating	Model	Rating		Model	Rating	Model	Rating
	Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Width in/cm	Height in/cm		Depth in/cm	Weight lbs/kg	Width in/cm	Height in/cm
D-1-S	4.8	4.8	98	45	326	30/77	47/120	25/64	535/243	888/403	12	144	39	90	30/77	47/120	25/64	210/96	1	1633/741			
D-2-S	6.0	6.0	98	45	408	30/77	47/120	25/64	535/243	1110/504	15	180	39	90	30/77	47/120	25/64	210/96	1	1855/842			
D-3-S	8.0	8.0	98	45	544	30/77	47/120	25/64	535/243	1480/672	20	240	39	90	30/77	47/120	25/64	232/106	1	2247/1020			
D-4-S	10.0	10.0	98	45	680	30/77	47/120	25/64	639/290	1776/806	24	144	81	90	30/77	47/120	25/64	420/191	2	2835/1286			
D-5-S	12.5	12.5	98	45	850	30/77	47/120	25/64	639/290	2220/1007	30	180	81	90	30/77	47/120	25/64	420/191	2	3279/1488			
D-6-S	16.7	16.7	98	45	1136	30/77	47/120	25/64	639/290	2960/1343	40	240	81	90	30/77	47/120	25/64	464/211	2	4063/1843			
D-7-S	24.0	24.0	98	45	1632	44/112	72/183	31/79	1250/567	4440/2014	60	240	117	90	48/112	72/183	31/79	700/318	1	6390/2899			
D-8-S	33.0	33.0	98	45	2244	44/112	72/183	31/79	1250/567	6080/2758	40	240	160	90	48/112	72/183	31/79	1300/590	2	8630/3915			
D-9-S	40.0	40.0	98	45	2720	44/112	72/183	31/79	1450/658	7400/3357	100	240	194	90	48/112	72/183	31/79	1300/590	2	10150/4604			
D-10-S	50.0	50.0	98	45	3400	44/112	72/183	31/79	1460/663	9120/4137	60	240	243	90	48/112	72/183	31/79	1400/635	2	11980/5435			

ORDERING GUIDE

EXAMPLE MODEL NUMBER: 1-D-4-S-A2007-F-T-S-2YW



1) Standard input voltage is 4-Wire Wye. 3-Wire Delta Input requires external isolation transformer.
 2) KVA = KW
 3) Non-standard cabinets.
 4) Standard battery run time is 90 minutes. Additional runtimes available. Contact factory.
 5) Maximum output breakers available: 4.8k up to 16.7k systems - 12 unsupervised (1- pole), 9 supervised (1-pole).
 24k up to 50k systems - 24 unsupervised (1-pole), 24 supervised (1-pole). Combinations of 1, 2 and 3 pole breakers
 available (consult factory).
 6) Higher AMP ratings available - contact factory.
 7) Anchorage based on calculations, for systems requiring shaker table testing please contact factory

ACCESSORIES
MOD - Modem
EMBP^A - External Maintenance Bypass Switch
 A) Cannot purchase External Maintenance Bypass Switch with Branch Circuit Breaker options.

SYSTEM SPECIFICATIONS

INPUT

Voltage	120/208 or 277/480VAC 3-phase 4-wire +10% -15%. (Wye configuration)
Input Power Walk-in	Limiting inrush current to less than 125%, 10 times for 1 line cycle
Input Frequency	60Hz, +/- 3%
Synchronizing Slew Rate	1Hz per second nominal
Protection	Input Circuit Breaker
Harmonic Distortion	< 10%
Power Factor	0.5 lag/lead
System Short Circuit Rating	65k AIC

OUTPUT

Voltage	120/208 or 277/480VAC 3-phase 4-wire. (Wye or Delta configuration)
Static Voltage	Load current change +/-4%, battery discharge +/-4%
Dynamic Voltage	+/- 3% for +/-25% load step change, +/-6% for a 50% load step change, recovery within 3 cycles
Harmonic Distortion	< 3% THD for linear load
Output Frequency	60Hz +/- 0.05Hz during emergency mode
Load Power Factor	0.5 lag to 0.5 lead
Inverter Overload	115% for 5 minutes, 280% for 12 line cycles 125% for 10 minutes
Protection	Output Circuit Breaker (optional)
Crest Factor	2.8

BATTERY

Type	Valve-regulated sealed lead-calcium. See page 3 for additional battery options.
Charger	Microprocessor controlled for various battery types and temperature compensating (recharge per UL924 spec).
Protection	Automatic low-battery disconnect; automatic restart upon utility return.
Disconnect	Fuse (4.8 - 16.7kVA); fuse/circuit breaker 24kVA and above.
Optional Runtimes	Extended runtimes available.

ENVIRONMENTAL

Altitude	< 10,000 feet (above sea level) without de-rating.
Operating Temperature	Inverter: 0° to -40°C (32° to 104°F) Battery: 20° to 30°C (68° to 86°F) per UL-924
Storage Temperature	-20° to 70°C (-4° to 158°F) (electronics only)
Relative Humidity	< 95% (non-condensing).

GENERAL

Design	Stand-by UPS. PWM inverter type utilizing IGBT technology with 2ms transfer time. 98% efficiency.
Generator Input	Compatible with generators.
Control Panel	Microprocessor controlled 2 x 20-character display with touch pad controls & functions, 5 LED indicators & alarm.
Metering	Input & Output Voltage, Battery Voltage, Battery & Output Current, Output VA, Temperature, Inverter Wattage.
Alarms	High/Low Battery Charger Fault, Near Low Battery, Low Battery, Load Reduction Fault, Output Overload, High/Low AC Input Volts, High Ambient Temperature, Inverter Fault, Output Fault, Optional Circuit Breaker Trip.
Communications	RS-232 port (DB9); Programmable monthly and yearly testing (meets NFPA 101 Life Safety Code requirements).
Manual Maintenance Bypass	Standard (Internal).
Alarm Contacts	Optional Form "C" contacts: Summary; inverter on; status monitoring
Warranty	1 year standard warranty includes all parts, labor, & travel expenses within 48 contiguous states. 10 years prorated warranty on batteries. Extended warranties, preventative maintenance and customized service plans are available.
Factory Start-up	Purchase factory start-up & receive 1 additional year of electronics warranty.
5 Year Maintenance Plan	Purchase 5 year maintenance plan & receive free factory start-up.
5 Year Electronic Warranty	Purchase 5 year electronic warranty & receive free factory start-up.

PHYSICAL

Cabinet	Free-standing NEMA Type 1.
Cooling	Forced air, during emergency mode. Convection cooled during normal operation. No filters required.
Cable Entry	Top, side, and bottom.
Access	Front only.



Illuminator Series CR/DR
Single and Three Phase
Outdoor System 3kVA to 8kVA



Illuminator Series E/IE
Single Phase
1.5kVA to 16.7kVA



Illuminator Series EM
Single Phase
1kW to 208kW



44 S. Commerce Way
Bethlehem, PA 18017
Phone: (610) 868-3500
Fax: (610) 868-8686

www.myerspowerproducts.com