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

MYERS Power Products

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 or halogen. It will work into 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

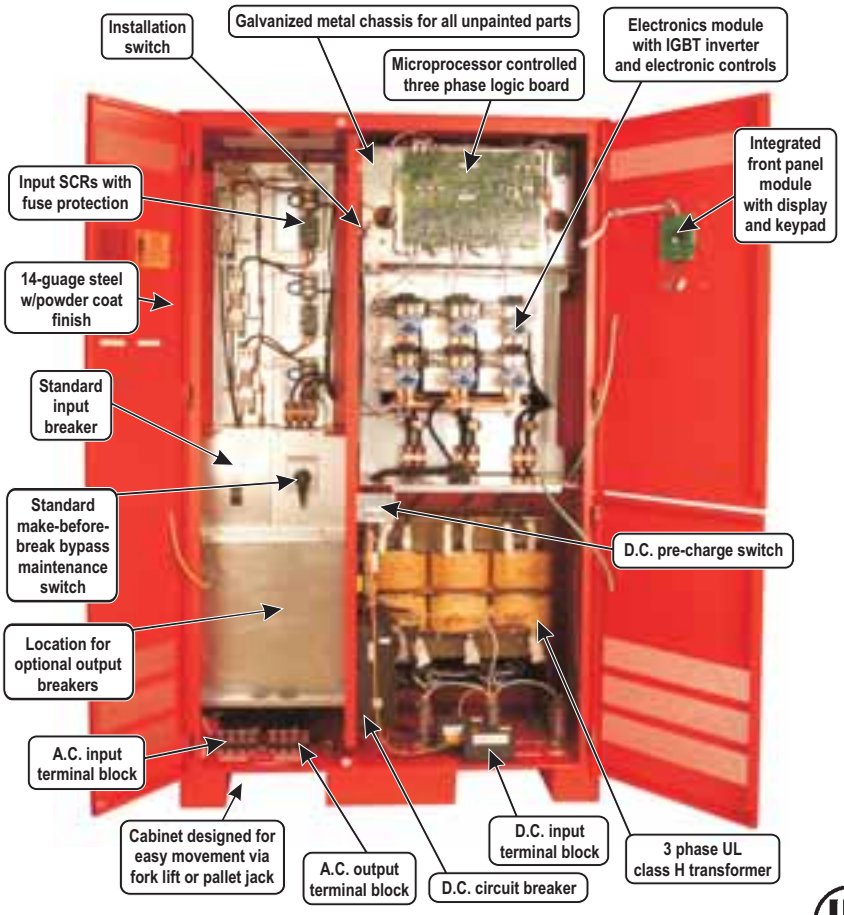
Unit for configurations A & B

Unit for configurations C & D

- 911 Facilities
- Airports
- Apartment/Condominium Complexes
- Assisted Living Centers, Nursing Homes
- Banks, Financial Institutions
- Casinos
- City, County, State, Federal Buildings
- Grocery Stores/Home Center Stores
- Hospitals
- Hotel, 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

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 needed.

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

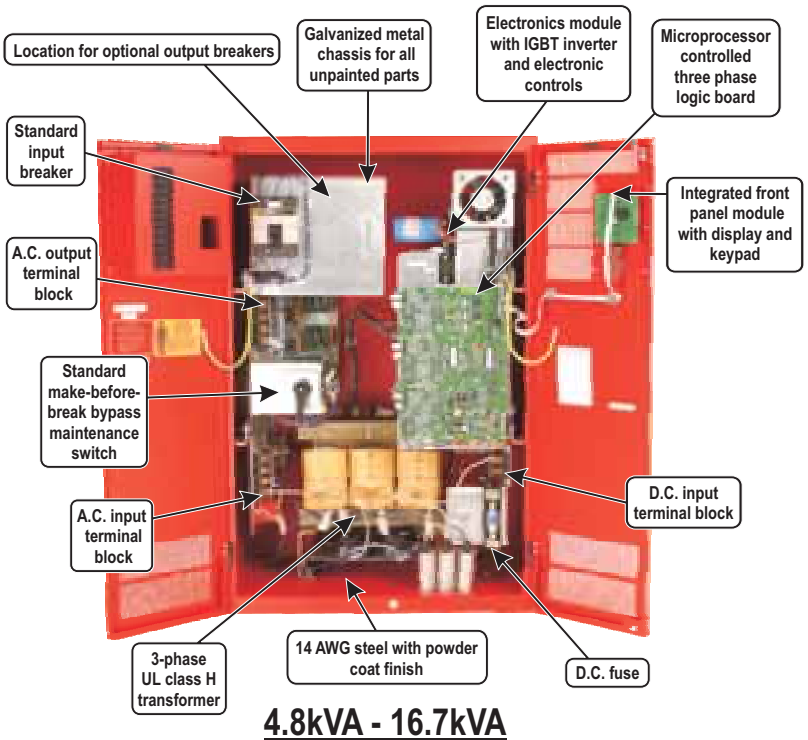
MODULAR - Innovative modular sub-assembly design leads the industry with less than 15 minute MTTR.

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

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

SYSTEM DISPLAY FUNCTIONS

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

METER FUNCTIONS

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

PROGRAM FUNCTIONS

- Set Date
- Set Time
- Set Month Test Date/Set Month Test Time
- Set Yearly Test Date/Set Yearly Test Time
- Set Load Fault Reduction Setting
- Set Low Battery Alarm
- Set Near Low Battery Alarm
- Set Low AC Voltage Alarm
- Set High AC Voltage Alarm
- Set 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 un-supervised (1- pole), 9 supervised (1-pole). 24k up to 50k systems - 24 unsupervised (1-pole), 16 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.

FAST CHARGE

This is a battery charger upgrade which decreases the time to recharge a fully discharged battery bank to a full charge. The recharge time is decreased from the standard 24-hour period to a 12-hour period.

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.

AUTO-DAILER

Automatically dials up to 4 user-programmable phone numbers upon any alarm conditions. Capable of leaving a user-programmable digital or audible message. A dedicated phone line is required.

BATTERY OPTIONS

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

A maintenance-free, valve regulated lead calcium battery. Constructed with a rugged polypropylene case. No special room ventilation required. 10-year designed life expectancy.

G - Battery (Sealed Lead-Calcium)

A maintenance-free, long life, valve regulated lead calcium battery. Constructed with a polypropylene jar, which is installed in a modular steel tray to create its own enclosure. Does not require any special room ventilation. 20-year designed life expectancy.

N - Battery (Nickel-Cadmium)

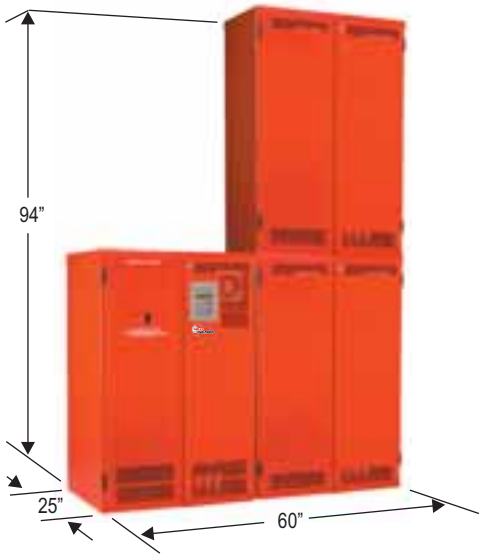
A minimum maintenance wet cell requiring addition of distilled water periodically. This battery type provides a wider operating range. Constructed with a translucent, heavy-duty polypropylene case. This case is marked with a high/low line to check electrolyte level. 25-year designed life expectancy.

SYSTEM CONFIGURATIONS FOR 90 MINUTE BATTERIES

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.

A



B

C

D

Model Number	UPS Electronics Module: Power Rating (kVA)	Power Rating (kW)	Efficiency (@ full load)	Audible Noise (dBA @ 1m)	Heat Loss (BTU)	Cabinet Dimensions: Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Batteries: Total Battery Weight lbs/kg	Number of Batteries	Battery Module: Voltage (VDC)	Current (Amperes)	Run Time (mins)	Cabinet Dimensions: Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Number of Battery Cabinets	Tot. Sys. Wt.
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

[ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ] - [ ]

VOLTAGE (INPUT[1]/OUTPUT)

1 - 120/208
2 - 277/480
Z - Other Voltages

SYSTEM TYPE

D - Illuminator Series "C III"

KVA/KW[2]

1 - 4.8
2 - 6
3 - 8
4 - 10
5 - 12.5
6 - 16.7
7 - 24
8 - 33
9 - 40
10 - 50

BATTERY TYPE

S - Standard (VRLA)
N - NICAD[3]
G - Long Life

RUNTIME[4]

(Other than 90 minutes)[3]
R15 - 15 Minutes
R30 - 30 Minutes
R60 - 60 Minutes
R120 - 120 Minutes
R180 - 180 Minutes
R240 - 240 Minutes

OUTPUT BREAKERS[5]

EXAMPLE
A 20 07

POLE

A - 1-Pole
B - 2-Pole
C - 3-Pole

QTY.

01 - 24[5]

AMP RATING (DISTRIBUTION BREAKERS)[6]

10, 16, 20, 25, 32, 40, 50, 63

OPTIONS

A - Remote Summary Alarm Panel
F - Fast Charge
I - Inverter on Dry Contact
R - Remote Meter Panel
S - Summary Form C Contacts
T - Output Trip Alarm
Z - Seismic Mounting

WARRANTY

2YW - Factory Start-up & 2nd Year Electronics Warranty

5YW - 5-Year Electronics Warranty (Includes Start-up)

5YP - 5-Year Maintenance Plan, Start-up Included

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.
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), 16 supervised (1-pole). Combinations of 1, 2 and 3 pole breakers available (consult factory).
6) Higher AMP ratings available - 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

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, 125% for 12 line cycles
Protection	Output Circuit Breaker (optional)

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) and fuse/circuit breaker 24kVA and above.
Optional Runtimes	Extended runtimes available.

ENVIRONMENTAL

Altitude	< 10,000 feet (above sea level) without de-rating.
Operating Temperature	20 to 30 degrees Celcius.
Storage Temperature	-20° to 70° Celsius (electronics only).
Relative Humidity	< 95% (non-condensing).

GENERAL

Design	Stand-by UPS. PWM inverter type utilizing IGBT technology with 2mS transfer time.
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 Summary Form "C" contacts.
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 and side on 4.8kVA - 16.7kVA; side only on 24kVA - 50kVA.
Access	Front only.

ALSO AVAILABLE FROM MYERS POWER PRODUCTS:

ILLUMINATOR E & IE

1.5 kVA TO 16.7 kVA SINGLE PHASE

ILLUMINATOR CM

500 VA TO 2000 VA SINGLE PHASE

MYERS Power Products, Inc.

2000 Highland Avenue
Bethlehem, PA 18020
Phone: (610) 868-3500
Fax: (610) 868-8686

www.myerspowerproducts.com