ILLUMINATOR CR & DR

CENTRAL EMERGENCY LIGHTING INVERTER FOR OUTDOOR APPLICATIONS

MYERS Power Products

ILLUMINATOR CR & DR

The Illuminator Series CR & DR is an emergency lighting inverter available in single or three phase for installation outdoors. The inverter transfers to emergency mode within 2mS when utility power is lost which allows the system to support all types of lighting loads including HID. The outdoor rated cabinet allows installation in remote locations and where space in not available indoors. Combining more than thirty years of experience, this product uses the latest technologies to provide all of the features and benefits for a truly reliable emergency lighting system.

Performance: The Illuminator CR & DR is designed to work with all types of lighting loads. The system will support HID, incandescent, fluorescent, quartz and halogen lamps. It is designed to work with both normally on and optional normally off circuits.

Diagnostics: The proven self-diagnostic and self-testing features provide over 120 parameters. It also supports three separate logs for Test, Event, and Alarm. The features are designed to insure that the system meets all current and pertinent NFPA codes.

Reliability: This product continues using Myers Power Products third generation of IGBT based inverter technology. The system incorporates 2X ratings on all critical components. The LVD (Low Voltage Disconnect) provision eliminates excessive battery drain during prolonged power outages.

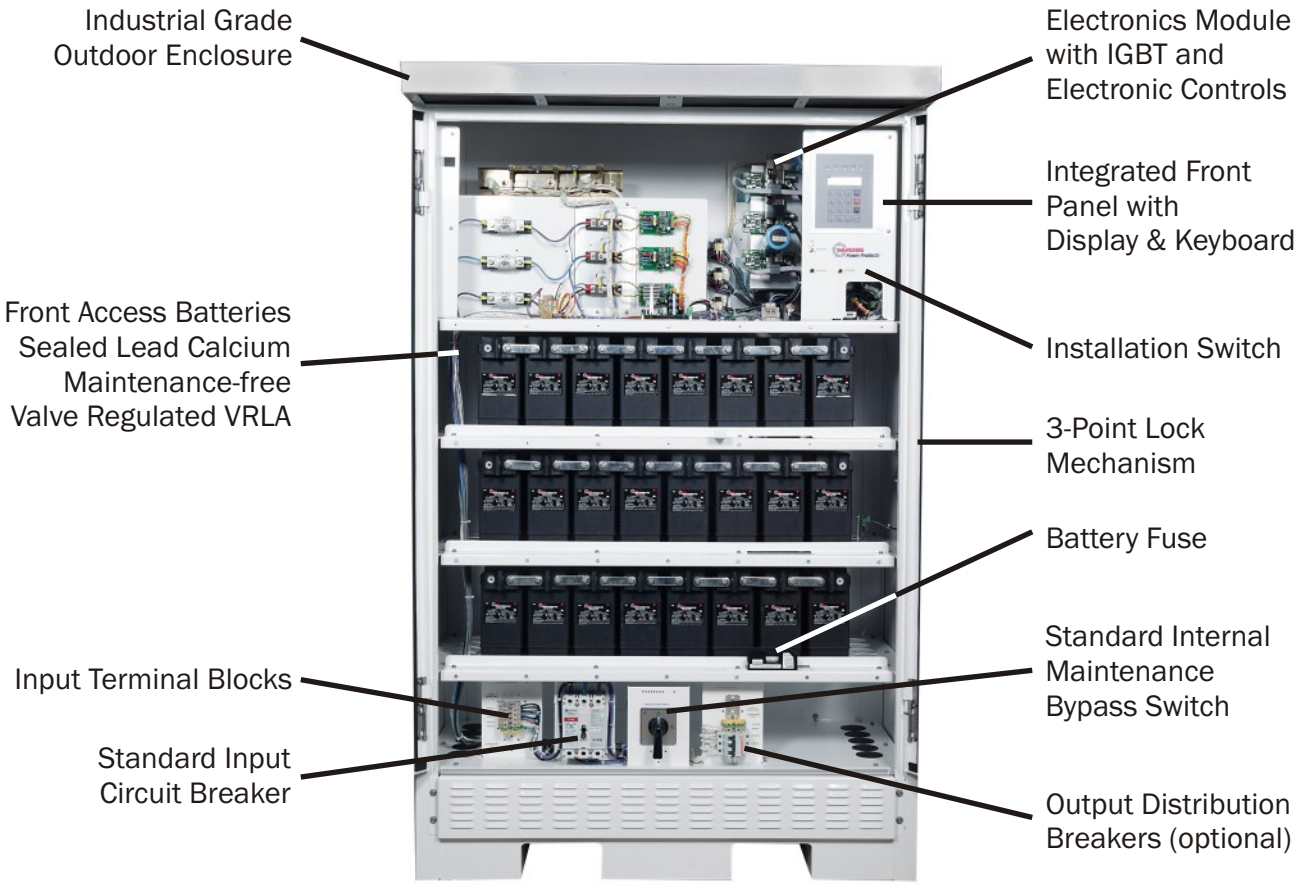
Batteries: The system utilizes standard sealed lead calcium VRLA batteries. Batteries feature front access terminals for easier installation and maintenance.

Approvals: Tested by Underwriters Laboratory, the system is listed UL924, Emergency Lighting and Power equipment. The system meets and exceeds the requirements of OSHA for emergency lighting and power. It also meets all of the following standards: NFPA70, NFPA110, NFPA101, and SBCCI.

APPLICATIONS

- Athletic Stadium Lighting
- Parking Garages
- Light Rail Platforms
- Airports
- Strip Malls
- Restaurants
- Toll Booths
- Tunnels
- Bridges
- Assisted Living Centers
- Banks/Financial Institutions
- Government Facilities
- Hospitals
- Casinos
- Theaters
- Office Buildings
- Correctional Facilities
- Religious Institutions
- Schools/Colleges
- Designed to work with all types of lamps and all styles of electronic ballasts.
- Intended to replace unit equipment in architecturally sensitive areas.
- The central location of the system provides a single point of maintenance.
- The integral microprocessor-based front meter panel automatically performs and records the required monthly and yearly tests.

SYSTEM DESIGN FEATURES



Unit shown with dead front covers and mounting brackets removed

Inverter: IGBT based inverter with dynamic pulse current limiting and inrush protection. Short circuit and overload protected by microprocessor and PWM integration for maximum reliability.

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

Thermal Performance: Temperature controlled cooling fans are used to help extend battery life which increases reliability and reduces preventative maintenance.

Battery Charger: An integrated 2 step system with temperature controlled 24 hour recharge for 90 minute system is standard.

Modular: MTTR (Mean time to repair) of 15 minutes or less leads the industry by utilizing our innovative modular sub-assembly design.

Construction: An outdoor rated cabinet constructed of powder coated cold rolled steel is standard. The hinged doors incorporate a three point lock keyed to Corbin 60. Doors swing wide to allow for easy access to the internal components. Seismic zone 4 brackets standard.

Batteries: The front access, maintenance free, sealed lead calcium VRLA batteries are the Myers standard. They significantly reduce installation and maintenance time while increasing safety.

Footprint: A single cabinet footprint designed to accommodate both single and three phase inverters. The dimensions are: 30" (depth), 48" (width) and 76" (height)

Control Panel: Our proven front meter panel meets the self-testing requirements of NFPA and UL. The easy to read display with a user friendly keypad integrates Systems Meter, Control and Program functions. The three separate memory logs (Test, Event and Alarm) contain over 120 parameters.

SYSTEM DISPLAY FUNCTIONS

All displayed metered functions match the inverter

METER FUNCTIONS

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

PROGRAM FUNCTIONS

- Set Date
- Set Time
- Set Month Test Date/Time
- Set Yearly Test Date/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 and Alarms Present
- Alarm Log (50 Logs Stored): Date, Time, Alarm Type
- Test
- Buzzer On/Off

SYSTEM OPTIONS

FAX MODEM
Enables the inverter system to send a fax when the following conditions exist: utility failure, output failure and summary alarm.

TIME DELAY (Requires normally off circuit)
Delays retransfer of inverter for 15 minutes to continue supplying emergency power to the normally off output.

OUTPUT CIRCUIT BREAKERS
Maximum output circuit breakers available: 14 unsupervised (1-pole), 8 supervised (1-pole). Breakers are rated from 10 through 60 amps; 2-pole and 3-pole breakers are also available.

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

HEATER
Microprocessor controlled convection heater is designed to extend the operating temperature range's low end from 50°F down to -4°F.

STAINLESS STEEL ENCLOSURE
Constructed of Stainless steel to provide an extra measure of protection in potentially corrosive environments.

MAINTENANCE BYPASS SWITCH (Internal. Included in base model.)
Manual make-before-break switch to bypass inverter during maintenance.

REMOTE METER PANEL
Allows a second fully functional front meter panel to be mounted external to the inverter up to 150 feet away. (100 feet std.)

SUMMARY ALARM CONTACTS (Included in base model.)
Form "C" contacts rated at 5 amps maximum at 250VAC/30VDC. Dry contacts will change state when any system alarm activates. Contacts change state 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 circuit breaker trip alarm.

FAST CHARGE
A battery charger upgrade which decreases the time to recharge a fully discharged battery to full charge. The recharge time is reduced from 24 to 12 hours.

NORMALLY OFF OUTPUT
This output circuit is dedicated for emergency-only equipment. Emergency-only equipment operates during power outages and when the system is on battery backup. This option leaves selective load circuits off during normal utility power conditions.

REMOTE SUMMARY ALARM PANEL
A wall mountable box containing an audible alarm with silence switch and light that will activate upon any system alarm.

INVERTER ON FORM C CONTACT
Form "C" dry contacts that will change state when the inverter transfers to battery operation.

BATTERIES

S - BATTERY (5-year sealed lead-calcium)
A maintenance free valve regulated lead calcium battery, utilizing the Myers standard front access terminals. The battery is constructed with a rugged polypropolene case. The batteries have a 5-year life expectancy.

G - LONG LIFE BATTERY (10-year sealed lead-calcium)
A maintenance free valve regulated lead calcium battery, utilizing the Myers standard front access terminals. The battery is constructed with a rugged polypropolene case with a metal jacket. The batteries have a 10-year life expectancy.

ORDERING GUIDE

Example Model Number:
1-CR-4-S-BA2007-F-T-S-N-2YW

SYSTEM TYPE
CR - Illuminator Series "CR" (1 Phase)
DR - Illuminator Series "DR" (3 Phase)

VOLTAGE (INPUT-OUTPUT)[1]
1 - 120-120, 1PH
2 - 120-120/277, 1PH
3 - 208-120, 1PH
4 - 240-120, 1PH
5 - 277-120, 1PH
6 - 277-277, 1PH
7 - 277-277/120, 1PH
8 - 120/208-120/208, 3PH
9 - 277/480-277/480, 3PH
Z - Other Voltages[9]

KVA/KW[2]
3 - 3.0[3]
4 - 4.0
5 - 5.0
6 - 6.5
7 - 8.0

BATTERY TYPE
S - Standard (VRLA)
G - Long Life

RUNTIME[4]
(Other than 90 minutes)
R120 - 120 Minutes [8]

OUTPUT BREAKERS[6]
Example: B A 20 07

OUTPUT
B - Normally On
N - Normally Off [5]

VOLTAGE
A - 120, 1 pole
B - 208, 2 pole
C - 240, 2 pole
D - 277, 1 pole
E - 120/208, 3 pole
F - 277/480, 3 pole

AMP RATING
10, 15, 20, 25, 30, 40, 50, 60

QUANTITY
01 - 14[6]
(List all circuit breaker requirements separately
ex: BA2007 - NA1001

WARRANTY[7]
2YW - Factory Start-Up Extended 2-Year Electronics Warranty
5YP - 5-Year Preventative Maintenance Plan, Start-Up Included
5YW - 5-Year Extended Electronics Warranty

OPTIONS
A - Remote Summary Alarm Panel
FAX-Fax Modem
F - Fast Charge (12 Hour)
H - Heater (Battery)[10]
I - Inverter On Dry Contact
R - Remote Meter Panel
S - Stainless Steel Cabinet
T - Output Trip (Supervised) Alarm
V - Time Delay (15 minute) (Requires "Normally Off" circuit)

1) Note: 1PH = 1 phase; 3PH = 3 phase
2) KVA = KW
3) Not available in 3 phase "DR" 90-minute run systems.
4) Standard battery run time is 90 minutes.
5) Normally off loads systems cannot exceed 20% of total KVA rating with any combination of H.I.D. loads.
6) Maximum output breakers available: 14 unsupervised (1-pole), 8 supervised (1-pole). Breakers provided are 20A unless specified unless specified otherwise. A 2-pole breaker occupies 2 positions. A three pole breaker occupies 3 positions.
7) One year warranty is standard.
8) 120 minute run NOT available on 8kVA system.
9) Requires external NEMA 3R transformer cabinet.
10) Extends low end of operating temperature range from 50°F to -4°F.

ACCESSORIES
MOD - Modem

SYSTEM SPECIFICATIONS

Model Reference	Electronics Module: Power Rating (Kw/kVA)	# of Phases	Efficiency @ Full Load	[1]Audible Noise (dBA @ 1m)	Heat Loss (BTU)	Cabinet Dimensions: Width[4] in/cm	Height in/cm	Depth in/cm	Weight lbs/kg	Batteries[2]: Weight	Number of Batteries	Voltage (VDC)	Current (Amperes)	Run Time (mins)[3]
CR-3	3.0	1	98	45	255	48/122	76/193	30/76	805/365	740/335	10	120	37	90
CR-4	4.0	1	98	45	340	48/122	76/193	30/76	805/365	888/403	12	144	40	90
CR-5	5.0	1	98	45	408	48/122	76/193	30/76	805/365	1110/504	15	180	40	90
CR-6	6.5	1	98	45	544	48/122	76/193	30/76	805/365	1480/672	20	240	39	90
CR-7	8.0	1	98	45	680	48/122	76/193	30/76	805/365	1776/806	24	144	82	90
DR-4	4.0	3	98	45	326	48/122	76/193	30/76	995/451	888/403	12	144	39	90
DR-5	5.0	3	98	45	408	48/122	76/193	30/76	995/451	1110/504	15	180	39	90
DR-6	6.5	3	98	45	544	48/122	76/193	30/76	995/451	1480/672	20	240	39	90
DR-7	8	3	98	45	680	48/122	76/193	30/76	1099/499	1776/806	24	144	81	90

1 During Emergency mode.
2 Batteries are installed internally to the Electronics Module
3 UL Rating with 90 minute run: 50° to 104°F (10° to 40°C)
with optional heater -4° to 104°F (-20° to 40°C)
Note: UL rating accounts for battery performance which can be affected by temperature.
4 Factory installed floor mount brackets; add 2.5' to each side (53"W total)

SYSTEM SPECIFICATIONS

Input	Voltage	Series CR: 120 or 277VAC, 1PH, 2W+G; Series DR: 120/208 or 277/480VAC, 3PH, 4W+G; +10/-15%. Contact factory for other voltages
	Power Walk-in	Walk-in limiting inrush current to less than 125%, 10 times for 1 line cycle
	Frequency	60Hz +/- 3%
	Synchronizing Slew Rate	1Hz per second nominal
	Protection	Input Circuit Breaker
	Harmonic Distortion	< 10%
	Power Factor	Unity (kVA=kW)
Output	Voltage	Series CR: 120 or 277VAC, 1PH, 2W+G; Series DR: 120/208 or 277/480VAC, 3PH, 4W+G. Contact factory for other voltages.
	Static Voltage	Load current change +/-2%, battery discharge +/-12.5%
	Dynamic Voltage	+/- 2% for +/-25% load step change, +/-3% for a 50% load step change, recovery within 3 cycles
	Harmonic Distortion	< 3% THD for linear load
	Overload	Fuse protected
	Frequency	60Hz +/- .05Hz during emergency mode
	Load Power Factor	.5 lag to .5 lead
	Inverter Overload	115% for 5 minutes; 125% for 12 line cycles.
	Protection	Optional Main Circuit Breaker and/or optional branch breakers
Battery	Type	Front access valve-regulated sealed lead-calcium.
	Charger	Microprocessor controlled and temperature compensating (recharge per UL924 specification)
	Protection	Automatic low-battery disconnect; automatic restart upon utility return.
	Disconnect	Fuse
	Transport	Built-in handles.
Environmental	Altitude	< 10,000 feet (above sea level) without derating
	Operating Temperature	50° to 104°F (10° to 40°C) and -4° to 104°F (-20° to 40°C) with optional heater (maintaining 90 minute run UL-924 rating)
	Storage Temperature	-4° to 158°F (-20° to 70°C) (electronics only)
	Relative Humidity	< 95% (non-condensing)
General	Design	Standby no break. PWM inverter type utilizing IGBT technology with 2mS transfer time.
	Generator Input	Compatible with generators.
	Control Panel	Microprocessor controlled 2 x 20-character LCD display with touch pad controls/functions, 5 LED indicators & alarm status indicator.
	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)
	Manual Maintenance Bypass	Internal (standard)
	Alarm Contacts	Summary Form "C" Contacts (standard)
	Warranty	1 year standard warranty includes all parts, labor, & travel expenses within 48 contiguous states. 5 years pro-rated warranty on batteries. Up to 10 years pro-rated battery warranty available. Preventative maintenance and customized service plans are available.
	Factory Start-up	Purchase factory start-up & receive 1 additional year of electronics warranty.
	5 Year Service Plan	Preventative maintenance plan. Includes labor and travel. Purchase 5 year service plan & receive free factory start-up.
Physical	Cabinet	NEMA type 3R, freestanding, two-door, powder coat CRS standard; stainless steel enclosure optional.
	Cooling	Forced Air. Temperature controlled fans.
	Cable Entry	Sides and bottom
	Access	Front ONLY
	Seismic Zone 4	Standard
	Locking Device	3-Point locking latch with Corbin 60 lock

ALSO AVAILABLE FROM MYERS POWER PRODUCTS:

ILLUMINATOR SERIES E

1.5kVA TO 16.7kVA SINGLE PHASE

ILLUMINATOR SERIES CIII

4.8kVA TO 50kVA THREE PHASE

ILLUMINATOR SERIES CM

500VA TO 2000VA SINGLE PHASE

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