

ILLUMINATOR E & IE

CENTRAL INVERTER FOR EMERGENCY LIGHTING

LINE PRESENT
BATTERY CHARGING
SYSTEM READY
NO ALARMS

The logo features a stylized blue arc with horizontal lines on the left, followed by the text "CENTRAL INVERTER SYSTEM" in a bold, red, sans-serif font with a black outline. The text is arranged in three lines: "CENTRAL", "INVERTER", and "SYSTEM".



MYERS

Power Products

THE ILLUMINATOR

ILLUMINATOR SERIES IE

The Illuminator Series IE is an interruptible lighting inverter. It transfers to inverter mode (battery power) when utility power is interrupted for more than one line cycle. This series is capable of supporting full capacity of normally off load. The Series IE is best suited for fluorescent and incandescent lighting loads and systems that require large lighting loads that are normally off (illuminate only during emergency conditions).

ILLUMINATOR SERIES E

The Illuminator Series E is an uninterruptible lighting inverter. It transfers to inverter mode (battery power) when utility power is interrupted for less than 1mS. The line inter-active design eliminates excessive transfers to battery power. The Series E is best suited for HID lighting loads and systems that do not require large loads that are normally off (illuminate only during emergency conditions).

	H.I.D. Compatible	V.T.D. Available	Line Interactive	Norm. Off Load Capability
SERIES E	Yes	No	Yes	20% Maximum of System Capacity
SERIES IE	No	Yes	No	Full System Capacity

APPLICATIONS



- 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 Art 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 all electronic power factor corrected 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



6.0 - 16.7kVA shown.



INVERTER

Fourth 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 leading and 0.5 lagging loads. 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.

BATTERY CHARGER

Integrated 3 step with equalize, temperature controlled, 24-hour recharge for 90 minute system is standard.

MODULAR

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

CONSTRUCTION

Enclosure is cold-rolled steel with powder-coated surface. Hinged doors with security 3-point locking system for easy access and maintenance.

BATTERIES

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

SMALL FOOTPRINT

25" (depth) x 30" (wide) 1.5 - 5kVA, or 25" (depth) x 48" (wide) 6 - 16.7kVA.

CONTROL PANEL

Self-testing and self-diagnostics per NFPA and UL standards. Memory logs of over 1525 parameters contained in Test, Event and Fault Logs. Easy to read alpha-numeric display with user-friendly keypad integrates Systems' Meter, Alarm, Control and Program functions.

SYSTEM DISPLAY FUNCTIONS



NOTE: All displayed meter 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 (75 Logs Stored): Date, Time, Alarm Type
- Test
- Buzzer On/Off

SYSTEM OPTIONS

E-MAIL/FAX MODEM

User can enable/disable and program alarms that will trigger messages to e-mail, fax and/or voice mail destinations. User can set up specific alarm events that will alert service or maintenance personnel. The system will transmit monthly and yearly tests per NFPA requirements. Bi-directional communication eases system diagnostics and data retrieval through the RS-232 serial communication port.

VARIABLE TIME DELAY (Available on Series IE only)

Delays retransfer of inverter to continue supplying emergency power to the normally off output; programmable up to 15 minutes after the return of utility power.

OUTPUT CIRCUIT BREAKER

Maximum output breakers available: 12 unsupervised (1-pole), 8 supervised (1-pole) for 1.5 - 5 kVA, and 24 unsupervised (1-pole), 15 supervised (1-pole) for 6 - 16.7 kVA.

OUTPUT TRIP ALARM

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

MAINTENANCE BYPASS

This device is internally mounted in the system and permits maintenance personnel to easily bypass the inverter and connect directly to the AC utility power. The "make before break" switch isolates the electronics or inverter system to allow performance of routine maintenance or servicing.

DIMMER BYPASS (Available on Series IE only)

Internal relay(s) with overload protection that will force dimmer controlled circuits to full illumination upon utility failure.

REMOTE METER PANEL

Allows a second fully functional front meter panel to be mounted external to the inverter up to 150 feet away.

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 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, test failure, and optional circuit breaker trip alarm.

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.

NORMALLY OFF OUTPUT (Standard on Series IE)

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

REMOTE SUMMARY ALARM PANEL

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

INVERTER ON FORM C CONTACT

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

BATTERY OPTIONS

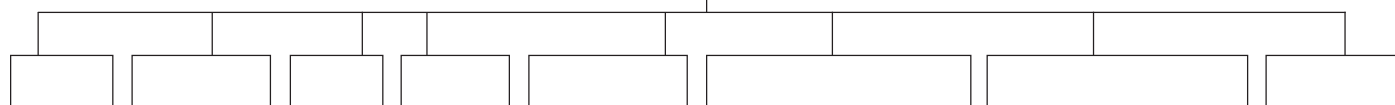
S - BATTERY (Sealed Lead-Calcium) (Standard)

A maintenance free, valve regulated lead calcium battery. Constructed with a rugged polypropylene case. Does not require any special room ventilation. 10-year 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 steel container. Does not require any special room ventilation. 20-year life expectancy.

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



SYSTEM TYPE

E - Illuminator Series "E"
IE - Illuminator Series "IE"

BATTERY TYPE

S - Standard (VRLA)
G - VRLA 20-Year

OUTPUT BREAKERS⁵

Example: **B A 20 07**

WARRANTY⁸

2YW - Factory Start-Up
Extended 2-Year
Warranty
5YP - 5-Year Preventative
Maintenance Plan,
Start-Up Included
5YW - 5-Year Extended
Electronics Warranty
SMP⁹ - Service Monitoring
Plan

VOLTAGE (INPUT/OUTPUT)¹

1 - 120-120
2 - 120-120/277
3 - 208-120
4 - 240-120/240
5 - 277-120
6 - 277-277
7 - 277-277/120
8 - 208-120/240
9 - 347-347
Z - Other Voltages

KVA/KW²

1 - 1.5
2 - 2.25
3 - 3.0
4 - 3.75
5 - 5.0
6 - 6.0
7 - 8.0
8 - 10.0
9 - 12.5
10 - 16.7

RUNTIME³

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

OUTPUT

B - Normally On
N - Normally Off⁴

VOLTAGE

A - 120
B - 208
C - 240
D - 277
Z - Other

AMP RATING

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

QUANTITY

01 - 24⁵
(List all circuit breaker
requirements separately,
ex: **BA2007** - **NA1001**)

OPTIONS

A - Remote Summary
Alarm Panel
D - Dimmer Bypass (IE Only)⁷
E - E-Mail/Fax Modem
F - Fast Charge
I - Inverter On Dry Contact
M - Maintenance Bypass⁶
N - Normally Off Output
(Std. on IE)⁴
R - Remote Meter Panel
S - Summary Fault
Form C Contacts
T - Output Trip⁵
(Supervised) Alarm
V - VTD Series (IE Only)
Z - Seismic Zone 4

- 1) Only single phase voltages available.
- 2) KVA = KW
- 3) Standard battery run time is 90 minutes.
- 4) Normally off loads on Series E cannot exceed 20% of total KVA rating with any combination of H.I.D. Loads.
- 5) Maximum output breakers available: 12 unsupervised (1-pole), 8 supervised (1-pole) for 1.5 - 5 kVA, and 24 unsupervised (1-pole), 15 supervised (1-pole) for 6 - 16.7 kVA. Breakers provided are 20 Amps unless specified otherwise. A 2-pole breaker occupies 2 positions.
- 6) Maintenance bypass switch is a "make before break".
- 7) Contact factory for dimmer bypass applications.
- 8) One year warranty is standard.
- 9) Requires Factory Start-up and E-mail/Modem options. This program will provide monitoring of the lighting inverter system by our factory service department. All monthly and yearly system tests will be reviewed by our factory service department for early warning signs of any system malfunction. Any system alarms and monthly/yearly test results will automatically be E-mailed to our service department where corrective action can be taken and while under warranty, if necessary, a factory authorized service technician will be scheduled to complete any necessary repairs. This monitoring program will require a dedicated telephone line.

ACCESSORIES

MOD - Modem
EMBP^{A,6} - External Maintenance Bypass Switch

A) Cannot purchase External Maintenance Bypass Switch with Branch Circuit Breaker options.

SYSTEM SPECIFICATIONS



6.0 - 16.7kVA



1.5 - 5kVA

ELECTRONICS MODULE

Power Rating (kVA)		Power Rating (kW)		Efficiency (@ full load)		Audible Noise (dBA @ 1m)		Heat Loss (BTU)/HR		Cabinet Dimensions			
										Width in/cm	Height in/cm	Depth in/cm	Weight lbs/kg
1.5	1.5	98	45	102	30/77	47/119	25/64	215/98					
2.25	2.25	98	45	153	30/77	47/119	25/64	230/105					
3.0	3.0	98	45	204	30/77	47/119	25/64	235/107					
3.75	3.75	98	45	255	30/77	47/119	25/64	240/109					
5.0	5.0	98	45	340	30/77	47/119	25/64	280/128					
6.0	6.0	98	45	408	48/122	76/193	25/64	605/272					
8.0	8.0	98	45	544	48/122	76/193	25/64	640/288					
10.0	10.0	98	45	680	48/122	76/193	25/64	785/353					
12.5	12.5	98	45	850	48/122	76/193	25/64	805/362					
16.7	16.7	98	45	1135	48/122	76/193	25/64	885/398					

BATTERIES

(90 Minutes @ Full Load)

90 Minute Batteries lbs/kg	Number of Batteries			Total System Weight lbs/kg
	Voltage (VDC)	Current (Amperes)		
296/135	4	48	39	511/230
444/200	6	72	38	674/306
592/266	8	96	38	827/372
740/330	10	120	37	980/441
888/400	12	144	41	1168/525
1110/500	15	180	40	1715/772
1480/666	20	240	39	2120/954
1776/800	24	144	82	2561/1153
2220/999	30	180	82	3025/1361
2960/1332	40	240	80	3845/1730

SYSTEM SPECIFICATIONS

INPUT	Voltage	120 or 277VAC 1-phase 2-wire +10% -20% on Series E, and +10% -15% on Series IE. Contact factory for all other voltages.
	Input Power	Walk-in Limiting inrush current to less than 125% of full rated load.
	Input Frequency	60Hz, +/- 3%.
	Synchronizing Slew Rate	1Hz per second nominal.
	Protection	Input Circuit Breaker.
	Power Factor	0.5 lag/lead.
OUTPUT	Voltage	120 or 277VAC 1-phase 2-wire. Contact factory for all 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.
	Output Frequency	60Hz +/- 0.05Hz during emergency mode.
	Load Power Factor	0.5 lag to 0.5 lead.
	Inverter Overload	115% for 10 minutes.
	Protection	Optional Distribution Circuit Breakers.
BATTERY	Type	Valve-regulated sealed lead-calcium; Consult factory for additional battery types.
	Charger	Microprocessor controlled for various battery types and temperature compensating (recharge per UL924 spec).
	Protection Disconnect	Automatic low-battery disconnect; automatic restart upon utility return. Fuse
	Optional Runtimes	Extended runtimes available. Consult factory for additional information.
ENVIRONMENTAL	Operating Temperature	20° to 30°C (68° to 86°F) per UL 924.
	Storage Temperature	-20° to 70°C (-68° to 158°F) (electronics only).
	Relative Humidity	< 95% (non-condensing)
GENERAL	Design	PWM inverter type utilizing IGBT technology with 2mS transfer time on Series E and 50mS on Series IE.
	Generator Input	Compatible with generators.
	Control Panel	Microprocessor controlled 4 x 20-character vacuum fluorescent display with touchpad controls/functions scrolling system status.
	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, Test Failure, and Optional Circuit Breaker Trip.
	Communications	RS-232 port (DB9). E-mail/fax modem optional.
	Manual Maintenance Bypass	Optional internal or optional external without internal distribution breakers.
	Alarm Contacts	Optional Summary Alarm 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 5-Year Maintenance Plan	Purchase factory start-up & receive 1 additional year of electronics warranty. Purchase 5-year preventative maintenance plan & receive free factory start-up.
PHYSICAL	Cabinet	Freestanding NEMA Type 1.
	Cooling	Forced Air, during emergency mode.
	Cable Entry Access	Top or sides on 1.5 - 5kVA; Sides only on 6 - 16.7kVA. Front.

**ALSO AVAILABLE
FROM
MYERS POWER
PRODUCTS:**

ILLUMINATOR SERIES CIII
4.8 KVA TO 50 KVA THREE PHASE



ILLUMINATOR CM
500 VA TO 2000 VA SINGLE PHASE



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