

Emerg-Power Systems Compact Series

Uninterruptible emergency lighting, 1PH, inverter system 500VA – 2000VA



Features

- 98% efficient at full load
- PWM/MOSFET technology
- Self-testing/self-diagnostic
- User programmable with password protection
- Standard input circuit breaker
- Standard output circuit breaker
- Micro-processor controlled
- Floor or wall mountable
- Field upgradeable (500VA steps)
- 90 min. standard run time
- Electronic and magnetic ballast compatible
- Automatic event, test and alarm log
- LCD display
- Small footprint (stackable cabinets)
- Maintenance-free standard batteries
- Forced air cooling during emergency mode only

UL listed to UL 924. Meets NFPA101, NFPA70, NFPA 110, OSHA, UBC, SBCCI. N.Y City approved.



Electrical/mechanical characteristics⁴ (data provided for standard lead calcium batteries)^{1,4}

Power rating ¹ VA= W	Effic. at full load %	Max. input current (A)		Heat loss in normal mode (BTU/HR)	Batt. VDC	Batt. A	No. of Batt.	UPS cabinet dimensions			Battery cabinet dimensions ^{2,3}			No. of batt. cab.	Batt. cab. weight lbs	UPS cab. weight lbs	Batt weight lbs	Total system weight lbs
		120V	277V					W"	H"	D"	W"	H"	D"					
500	98	5.2	2.3	34	48	13.5	4	26	10	10	26	10	10	1	22 lbs	77 lbs	107 lbs	206 lbs
1000	98	10.5	4.5	68	48	26.5	8	26	10	10	26	10	10	2	22 lbs	77 lbs	214 lbs	335 lbs
1500	98	15.6	6.8	102	48	40	12	26	10	10	26	10	10	3	22 lbs	77 lbs	321 lbs	464 lbs
2000	98	20.8	9	136	48	52	16	26	10	10	26	10	10	4	22 lbs	77 lbs	428 lbs	592 lbs

¹System capacity can be upgraded in the field up to 2000VA by adding more battery cabinets. Re-programming required by factory service technician.

²Batteries are installed in separate modular cabinets

³Battery cabinets are stackable. Must be installed under the electronics cabinet

⁴Special voltages can change the size, weight or number of cabinets

How to order

Input voltage ¹	Battery type	VA/W	System type	Output voltage ²	Run time ³	Input breaker	Output breakers ⁴	Options ⁵
120	SG= Lead-calcium	500	-FTCM	-120	-90	-ICB	-OCBxxxx=	-NOFF= Normally OFF output
277		1000		-277			No trip alarm ⁴	-WB= Wall mount bracket
		1500		-OCAxxxx=			-DCS= Dry summary alarm contacts	
		2000		With trip alarm ⁴			-INVON= Inverter on dry contact	
							-VTD= Variable time delay	
							-BPR= Bypass relay	
							-RMP= Remote metering panel	
							-RSAP= Remote summary alarm panel	
							-RS232= Communication interface	
							-MOD= Modem	
							-FLR= Floor bracket	

Example: 120SG1500-FTCM-120-90-ICB-OCB0420-WB

¹Special voltages may change the size, weight or number of cabinets

²Special voltages may change the size, weight or number of cabinets

³Other run times available

⁴Max. 3 more additional output breakers for a total of 4. See page 159 for output breaker details

⁵See page 159 for options description

Specifications

General

Design

- Stand-by no break. PWM inverter type utilizing MOSFET technology with 2ms transfer time

Control

- Microprocessor controlled, 2 x 20-character display with touch pad controls & functions
- 5 LED indicators & alarm with ring-back feature

Metering

- Input and output voltage, battery voltage, battery and output current, output VA, temperature, inverter wattage

Communications Optional RS-232 port (DB9)

Electrical input

Voltage

120 or 277VAC, 1-phase 2-wire, +10%/ -15%
Contact factory for all other voltage.

Input power walk-in

Limiting inrush current to less than 125%,
10 times for 1 line cycle

Input frequency 60Hz, +/-3Hz

Protection Standard input circuit breaker

Harmonic distortion <10%

Power factor 0.5 lag/lead

Electrical output

Voltage 120 or 277VAC, 1-phase 2-wire
Contact factory for all other voltage

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

Output frequency 60Hz +/- 0.05Hz during emergency mode

Load power factor 0.5 lag to 0.5 lead

Inverter overload 115% for 5 minutes

Protection Standard output circuit breaker (normally on)

Crest factor 2.8

Environmental conditions

Storage/transport

- -4°F to 158°F (-20°C to 70°C) without batteries
- 0°F to 104°F (-18°C to 40°C) with batteries
(max. 3 months at 104° F (40° C))

Operating temperature

System operates safely from 32°F to 104°F (0°C to 40°C) but optimum operation is between 68° F and 86° F (20°C to 30°C). Battery performance can be affected by temperature

Altitude <10,000 feet (above sea level) without de-rating

Relative humidity 0 to 95% non-condensing

Audible noise 45 dBA @ 1m from surface in emergency mode

Cabinets

Modular design, freestanding or wall mount NEMA Type 1 steel cabinets powder coated for corrosion and scratch resistance. Front access design. Cabinets are stackable. Top and left side conduit entry with knockouts.

Inverter

Using MOSFET/PWM technology the inverter converts the DC voltage supplied by the batteries to AC voltage of a precise stabilized amplitude and frequency, suitable for most sophisticated electrical equipment. True sinusoidal output waveform with very low distortion (less than 3% for linear loads). Overload capability of up to 150% for 12 line cycles.

Charger

Fully automatic, temperature compensated, microprocessor controlled charger recharges fully discharged batteries in maximum 24 hours at nominal AC input voltage. AC input current limiting and over-voltage protection included.

Battery

System is provided with 10 year, maintenance free, sealed valve regulated lead calcium batteries. 90 min. standard discharge time at full load under normal operating temperature. Low voltage disconnect protection included. No special ventilation required.

Self-diagnostic

Automatic self-test consists of a 5-minute monthly and 90-minute annual function. The front-mounted control panel includes 5 LED indicators, a 2-line 20-character LCD display, a keypad to control and monitor the internal operation of the system. This allows the operator to easily "watch" system functions as they occur and check on virtually any aspect of the system's operation. Self-diagnostic function monitors, controls, generates alarms and memorizes events.

Alarms

High/low battery charger voltage, high/low AC input voltage, near low battery, low battery, load reduction fault, output overload, high ambient temperature, inverter fault, output fault, optional output circuit breaker trip

Optional features

Normally off output, output circuit breakers, output trip alarm, RS232 communication port, 12 Hours fast recharge, remote meter panel, remote summary alarm panel, summary alarm dry form C contact, inverter on dry contacts, variable time delay, modem, bypass relays, wall mount bracket

Factory start-up

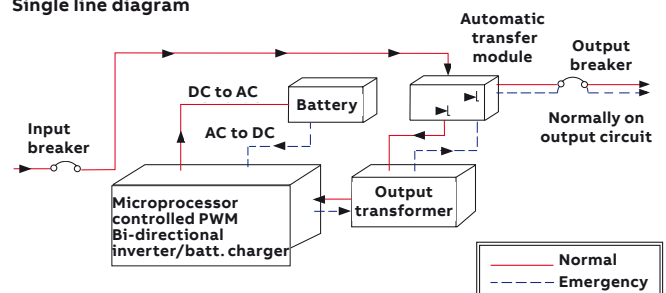
Includes one additional year of warranty. See warranty conditions

Warranty

 (full limited warranty conditions available upon request)

Limited manufacturer warranty is one-year, parts and labor, for system electronics or two-year with factory start-up program. Battery warranty is one year full plus 9 years pro-rata for a total of 10 years, under normal operating conditions. System must be put in service within 180 days from ship date in order to validate warranty.

Single line diagram



Characteristics, specifications or dimensions subject to change without notice.