

Light Support Power Systems Compact Series

Fast transfer 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
- Very small footprint (stackable cabinets)
- Maintenance free standard batteries
- Forced air cooling during emergency mode only

Approvals

UL listed to UL924, 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. No. of A batt. | UPS cabinet | | | Battery cabinet dimensions ^{2,3} | | | No. of batt. cab | Batt. cab. weight lbs (empty) | 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 | 77 | 107 | 206 |
| 1000 | 98 | 10.5 | 4.5 | 68 | 48 | 26.5 | 8 | 26 | 10 | 10 | 26 | 10 | 10 | 2 | 22 | 77 | 214 | 335 |
| 1500 | 98 | 15.6 | 6.8 | 102 | 48 | 40 | 12 | 26 | 10 | 10 | 26 | 10 | 10 | 3 | 22 | 77 | 231 | 465 |
| 2000 | 98 | 20.8 | 9 | 136 | 48 | 52 | 16 | 26 | 10 | 10 | 26 | 10 | 10 | 4 | 22 | 77 | 428 | 592 |

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

² Batteries are installed in separate modular cabinets

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

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

Ordering format

| System type | Battery type | Input voltage ³ | VA/W rating | Output voltage ³ | Run time ² | Input breaker | Output breakers ⁴ | Options ¹ | |
|-------------|---------------------------------|--|---|-----------------------------|-----------------------|---------------|---|--|---|
| FTCM | -SC= Sealed Lead-Calcium | 120= 120VAC 277= 277VAC | C- 500 E- 1000 G- 1500 J- 2000 | 120 277 | 90 | ICB | OCBxxxx- No trip alarm OCAxxxx- With trip alarmz | FB- Floor mount bracket NOFF- Normally OFF output WB- Wall mount bracket DCS- Dry summary alarm contacts INVON- Inverter on dry contact | VTD- None variable BPR- Bypass relay RMP- Remote metering panel RSAP- Remote summary alarm panel RS232- Communicate interface MOD- Modem |

Example: FTCM-SC120G120-90-ICB-OCB0320-WB

¹ See page 169 for options description

² Other run times available

³ Special voltages may change the size, weight or number of cabinets

⁴ Max. 3 more additional output breakers for a total of 4. See page 169 for output breakers details

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

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 voltages.

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 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
- 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.

Supervision - 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

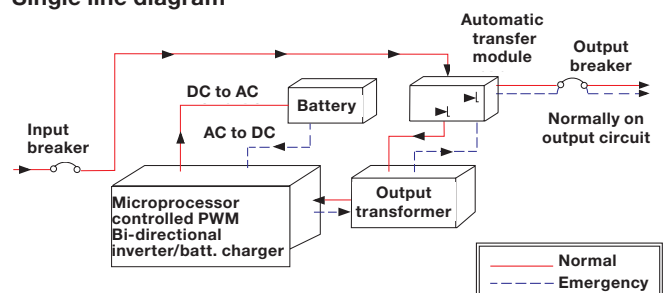
Optional features - Normally OFF output, Output Circuit Breakers, Output Trip Alarm, RS232 communication port, 12 Hours Fast Recharge, Remote Meter Panel, Remote Summary Alarm Panel, Summary Alarm Dry Form C Contact, Inverter on Dry Contacts, Variable Time Delay, Modem, Bypass Relays, Wall mount bracket

Factory start-up - Includes one additional year of warranty. See warranty conditions.

Warranty - 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.

Detailed warranty terms located on page 182 or online at: www.lightalarms.com

Single line diagram



Characteristics, specifications or dimensions subject to change without notice.