

OVERALL CHARACTERISTICS

86% throughput efficiency

Operating temperature range 32°F (0°C) to 104°F (40°C)*

Internal maintenance by-pass is standard

Main load disconnect switch standard

Double conversion, no interruption

Standard backup time of 90 minutes, other run times optional

Output circuit breakers and normally-off loads optional

APPLICATION

Operates incandescent, magnetic and electronic ballast fluorescent, high power factor compact fluorescent, and high intensity discharge (HID) lamp types

Consult factory for compatibility and performance with non-lighting loads

HOUSING

Free standing, NEMA 1 enclosure

Acid resistant powder coat finish

Multiple conduit entries

Refer to chart on page two for dimensions

BATTERY

Maintenance free, sealed lead calcium battery with an expected life up to 10 years, and optimum operating range of 65°F (19°C) to 85°F (30°C)*

* Increases or decreases in temperature will affect battery performance. Optimum battery performance realized at 77°F (25°C). Batteries are rated at 100% capacity at 77°F (25°C).

Synthesis

3,000 VA, Single Phase

Uninterruptible Power Supplies (UPS) for Emergency Lighting Applications

ELECTRICAL

Sine wave output

Completely solid-state Pulse Width Modulation (PWM) inverter

16-bit microprocessor control

Input power factor correction maintains power factor at 0.99

Transient response ≤ 5%; Recovery time 10 mS (100% load step)

3:1 crest factor capability

Inverter output distortion ≤ 2.5% THD (at unity power factor)

Output voltage regulation ±6% of nominal at full load

Frequency within ±0.05% of nominal

Inverter efficiency ≥ 84%

Load power factor capability is 0.5 leading to 0.5 lagging

Automatic, battery protecting low voltage disconnect (LVD)

Advanced battery diagnostics and management system

Temperature compensated battery charger

24 hour recharge time

High frequency, very low ripple current charger

Input and output disconnect switch

Battery disconnect switch



SHOWN: C113.0S1D0A0X0

METERING/CONTROLS

Standard

Alpha-numeric front panel display with 14 metered measurements and 53 messages/alerts

Normal, caution and alarm indicating LEDs

Audible failure alarms with silence switch

Dry contact for remote failure alarm

"D" type 9-pin computer interface connector

Programmable battery monitor with alarm

Optional

Diagnostics software for remote computer (PC) monitoring and control

Stand-alone remote display mimics all measurements, indications and alarms shown on the front panel display

Additional RS232 input/output port for remote monitoring and system control

ORDERING INFORMATION

SERIES	INPUT VOLTAGE	SYSTEM TYPE	BASE SIZE	BATTERY TYPE	OUTPUT VOLTAGE	OUTPUT/CKT BRKRS	# ON 2ND VOLTAGE	NORMALLY OFF LOAD	# OF NOL	NOL VOLTAGE	SOFTWARE OPTIONS
C	1 = 120 V 2 = 208 V 3 = 240 V 4 = 277 V Z = Special Voltage (Consult Factory)	I = ETL Listed to UL 924 for Emergency Lighting Applications	3.0 = 3.0 kVA	S = Sealed Lead Calcium	1 = 120 V 2 = 208 V 3 = 240 V 4 = 277 V 6 = 120/240 V 7 = 120/277 V Z = Special Voltage (Consult Factory)	Y = Hardwire A = 1 OCB B = 2 OCB C = 3 OCB D = 4 OCB E = 5 OCB F = 6 OCB G = 7 OCB H = 8 OCB N = OCBA1 P = OCBA2 R = OCBA3 S = OCBA4 T = OCBA5 U = OCBA6 V = OCBA7 W = OCBA8	0 1 2 3 4 5 6 7	A = No B = Yes C = Yes w/ Time Delay Timer	0 = No NOL Y = Hardwire Terminal 1 = 1 2 = 2 3 = 3 4 = 4 5 = 5 6 = 6 7 = 7 8 = 8	X = None A = 1st B = 2nd C = Both	0 = None 1 = PC Format Diagnostics Software 4 = Remote Display + "5" 5 = Add'l RS232



Listed to UL 924

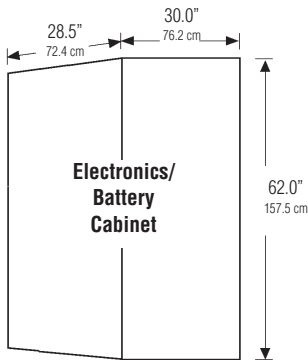
SYSTEM INPUT/OUTPUT

SYSTEM RATING	INPUT VOLTAGE	INPUT AMPS ¹	AVAILABLE OUTPUT VOLTAGES/ MAX. LOAD AMPS ²				OCB POLE SPACES AVAILABLE
			120 V	208 V	240 V	277 V	
3,000 VA	120/277	37.2/16.1	25 A	—	—	10.8 A	8
	208/240	21.5/18.3	25 A	14.4 A	12.5 A	—	

NOTES:

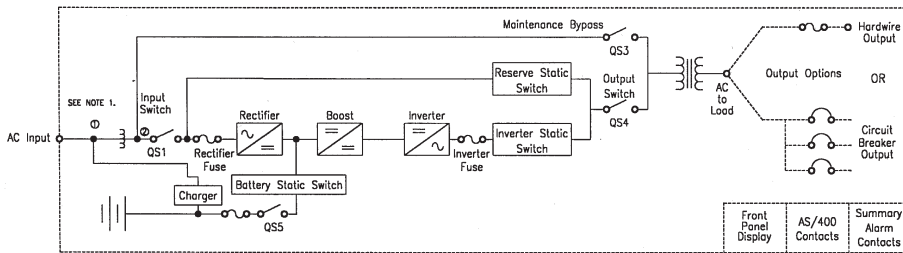
- 1) Input Circuit Breaker Not Available. Input Switch is Standard.
- 2) Total Load Not to Exceed System Rating

DIMENSIONS/WEIGHTS



Unit	3.0 kVA
Unit Less Batteries	500 lbs. (327 kg)
Batteries	564 lbs. (257 kg)
Total System Weight	1064 lbs. (484 kg)

SYSTEM ONE-LINE DIAGRAM



WARRANTY

Standard Warranty

Chloride Systems will provide parts and on-site labor for the first 90 days following shipment of product, and parts only for an additional 270 days.

Extended Warranty

(Available with purchase of Factory Start-Up Service) Chloride Systems will provide parts and on-site labor for the first 12 months following start-up of the product, and parts only for an additional 12 months.

COMPUTER INTERFACE

PIN CONFIGURATION (AS/400™)

Pin	Description	Function
8	Normal	System Functioning Normally
6	Load On Reserve	Double Conversion Inverter Not Operating
9	Power Failure	Load Supplied by Battery
7	End of Discharge Period	Unit Will Soon Stop Operating
5	Common	Common Connection to Above 4 Signals

ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

Synthesis UPS System for Emergency Lighting Applications, 3,000 VA

SUGGESTED SPECIFICATION

Furnish and install Chloride Systems' single phase Emergency Lighting System known as Synthesis with a VA rating of 3,000. The system shall be ETL listed to Underwriters' Laboratories standard 924.

Equipment and accessories furnished under the terms of this specification shall be the standard product of a single manufacturer and shall be equal in all respects to those supplied by Chloride Systems. Catalog numbers and model designations which appear herein indicate design, quality and the type of material as well as required operating characteristics. All equipment shall be in compliance with the applicable UL standards.

The connected load shall be continuously powered by the filtered power of the double conversion Synthesis and upon failure of the utility input, the load shall automatically continue to be powered via the Synthesis system's battery and inverter for a minimum of 1.5 hours. Upon restoration of utility power, the system will automatically resume supplying the load with double conversion, filtered power. The system input power factor shall be corrected to 0.97 or greater.

The Synthesis System shall be capable of powering any combination of fluorescent ballasted lamps, incandescent lamps, electronic and high power factor compact fluorescent ballasts, HID lamps or other approved loads up to the total rating of the system. The system shall automatically protect itself against damage from overloads and short circuits while powered from either utility AC or during emergency mode operation. It shall automatically recover from such overloads and clear short circuits by means of overcurrent protection devices.

The Synthesis System shall automatically revert to emergency mode operation should the average utility AC voltage fall below 75% of nominal line voltage. The system shall use no relays or other moving parts in the main inverter or battery charger circuitry.

Under emergency operations, the microprocessor shall regulate the output voltage within $\pm 6\%$ of nominal at full load for the specified discharge period; and the frequency shall be within $\pm 0.05\%$ of nominal.

During emergency mode operation, the systems' efficiency shall not be less than 84%. The system shall use variable speed fans in the cooling of the electronic compartment. The AC output to the load shall be isolated from the utility input during emergency mode operation.

The Chloride Systems battery charger shall be completely automatic with a programmed reference, and capable of restoring the battery to capacity within a maximum of 24 hours after restoration of utility power. The charger shall be all solid state and shall automatically maintain the battery in the fully charged condition whenever the utility power is available.

Under emergency mode conditions, the Synthesis shall be powered by maintenance free, sealed lead calcium batteries. The battery shall operate entirely unattended and require no addition of water for a period of 10 years or longer. Periodic inspection of batteries is recommended.

A low voltage disconnect circuit designed to reduce battery discharge during extended power outages, shall monitor the battery voltage and disconnect the inverter when battery voltage drops to approximately 85% of nominal voltage.

System metering and controls shall consist of an alpha-numeric front panel display, normal, caution and alarm indicating LEDs, battery disconnect switch, input and output disconnect switch, audible failure alarms with silence switch, dry contact for remote failure alarm, "D" type 9-pin AS/400 compatible computer interface connector, and battery monitor with alarm.

UNIT CHECK LIST

Catalog No. _____		VA Rating: 3,000	
Battery Type: Sealed Lead Calcium	Operating Time: 90 Min.		
Utility Input: _____ VAC; Single Phase	Options: 0 1 4 5		
Output Circuit Breakers:			
Qty: _____	AC Volts: _____	Amps: _____	Normally <input type="checkbox"/> ON <input type="checkbox"/> OFF
Qty: _____	AC Volts: _____	Amps: _____	Normally <input type="checkbox"/> ON <input type="checkbox"/> OFF
REMARKS: _____			

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