

OVERALL CHARACTERISTICS

208 VAC or 480 VAC 3 phase, 3 wire plus ground, input standard, optional voltages available
 480Y/277 or 208Y/120 VAC, 3 phase, 4 wire output standard, optional voltages available
 87% efficiency minimum
 Operating temperature range 18°F (-8°C) to 104°F (40°C)*
 Internal maintenance by-pass is standard
 Main input breaker standard
 Main load disconnect breaker standard
 Double conversion, no interruption
 Standard backup time of 90 minutes
 Output circuit breakers optional
 Normally-off loads optional (non-HID applications only)
 Some modules are field upgradeable

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 and normally off, quartz lighting loads

HOUSING

Free standing, NEMA 1 enclosure
 Dead front panel
 Acid resistant powder coat finish
 Bottom access for conduit entries
 Refer to chart on back 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).

CEPEM

50,000 VA, Three Phase Uninterruptible Power Supplies (UPS) for Emergency Lighting Applications

ELECTRONICS

Inverter
 Transient response $\leq 5\%$; Recovery time, 20 ms (100% load step)
 3:1 crest factor capability
 Completely solid-state IGBT PWM inverter
 Inverter output distortion $\leq 5\%$ THD (100% non-linear)
 Inverter output distortion $\leq 3\%$ THD (linear loads)
 Output voltage regulation $\pm 1\%$ of nominal at full load
 Frequency: 60 Hz
 Inverter efficiency $\geq 90\%$
 Load power factor capability is 0.5 lagging to 0.9 leading
 K30 rated output power transformer
 Automatic low battery voltage disconnect (LVD)
 Rectifier
 Input voltage range $\pm 15\%$ of nominal
 Full load walk-in from 25% to 100% of rated load in 10 seconds
 Voltage regulation $\pm 1\%$ maximum for input voltage and DC variations
 Ripple voltage $< 2\%$ rms voltage with inverter fully loaded and battery disconnected
 SCR controlled
 Rectifier efficiency $\geq 97.7\%$
 Static Transfer Switch
 Overload rating 150% for 1 minute
 Transfer time from inverter to utility < 0.5 ms



Listed to
UL 924



SHOWN: CEPEM504X4

METERING/CONTROLS

A multilingual, alphanumeric display of two lines and 40 characters provides the following information:

- Inverter voltage/frequency/current
- DC volts/current
- Reserve voltage/frequency/current
- Battery volts/current
- Load voltage/frequency/current
- Load percentage/crest factor

Computer interface using volt-free relay contacts configured for IBM AS/400, DEC, DG, PRIME, HP and similar computers

Two RS232 ports for direct two-way communication between the computer and UPS including the UPS Monitoring and Shutdown option

Relay contacts to drive an optional remote alarm monitor

Self-diagnostics/battery discharge test with user selectable battery test intervals

ORDERING INFORMATION



SERIES

CEPEM = Three
Phase UPS System



VA
RATING

50 = 50,000



INPUT/OUTPUT

2X2 = 208 Input, 208Y/120 Output
 4X2 = 480 Input, 208Y/120 Output
 4X4 = 480 Input, 480Y/277 Output



OPTIONS

F = 10% Harmonic Distortion Filter
 OCB () = Output Circuit Breakers (qty)
 NOL = Normally Off Load*
 RAU = Remote Alarm Unit
 MSP = MopUPS Pro Monitoring Software Package
 FSU = Factory Start-up

SAMPLE CATALOG NUMBER: CEPEM504X4

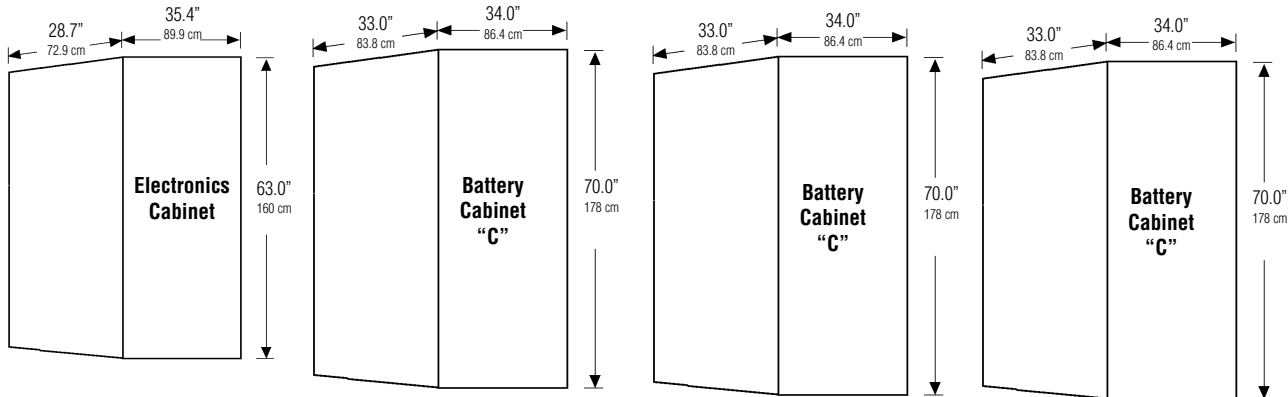
* Consult factory for quartz lamp normally off loads

SYSTEM INPUT/OUTPUT

SYSTEM RATING	INPUT VOLTAGE	INPUT AMPS ¹	OUTPUT MAX. LOAD AMPS PER PHASE		MAXIMUM HEAT REJECTION
			120 V	277 V	
50,000 VA	208	156.0	139 A	60 A	15,200 Btu/hr
	480	70.9			14,300 Btu/hr

NOTE: 1) Continuous Duty

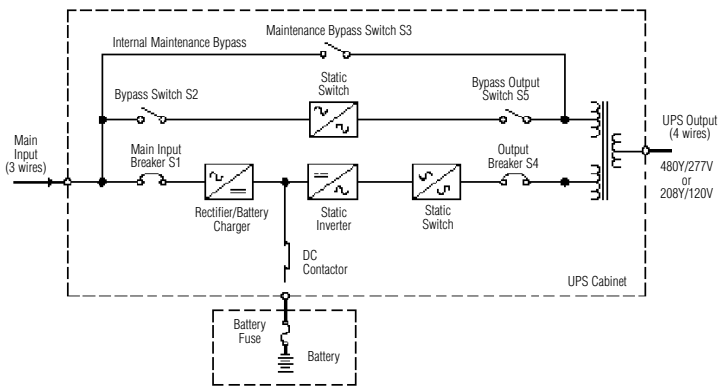
DIMENSIONS/WEIGHTS



50 kVA	4x4	4x2	2x2
Electronics Cabinet	1,350 lbs. (612 kg)	1,350 lbs. (612 kg)	1,750 lbs. (795 kg)
Battery Cabinets*	1,650 lbs. (748 kg)	1,650 lbs. (748 kg)	1,650 lbs. (748 kg)
Battery	8,640 lbs. (3,918 kg)	8,640 lbs. (3,918 kg)	8,640 lbs. (3,918 kg)
Total System	11,640 lbs. (5,279 kg)	11,640 lbs. (5,279 kg)	12,040 lbs. (5,473 kg)

* Total weight of three cabinets.

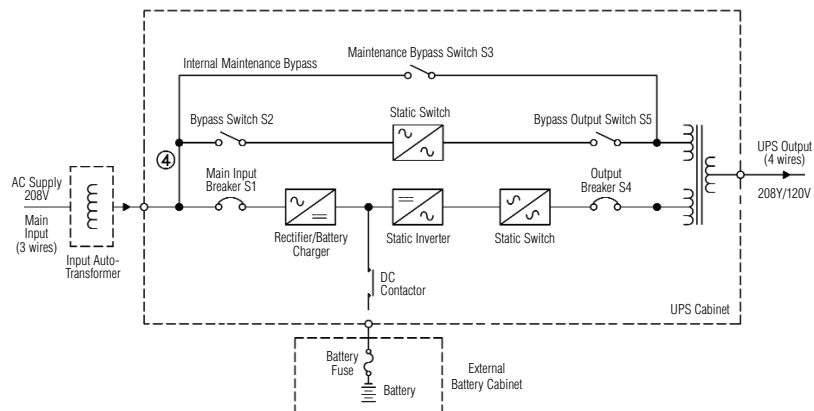
SYSTEM ONE-LINE DIAGRAM 4x4, 4x2



WARRANTY

When Factory Start-up is performed in accordance with published requirements, warranty period extends one year from date of start-up. See Chloride Limited Warranty for details.

SYSTEM ONE-LINE DIAGRAM 2x2



ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



CHLORIDE
SYSTEMS

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CEPEM UPS System for Emergency Lighting Applications, 50,000 VA

SUGGESTED SPECIFICATION

Furnish and install Chloride's three phase UPS system known as CEPEM with a VA rating of 50,000 VA. 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. 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 powered normally by the CEPEM rectifier and inverter and upon failure of the utility input, the load shall automatically continue to be powered via the CEPEM system's battery and inverter for a minimum of 1.5 hours. Upon restoration of utility power, the rectifier will automatically walk-in the inverter and recharge the batteries even if the batteries are completely discharged.

The CEPEM 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.

Under emergency operations, the output voltage shall be within $\pm 1\%$ of nominal at full load for the specified discharge period; and the frequency shall be 60 Hz $\pm 0.05\%$.

During emergency operation, the systems' efficiency shall not be less than 90%. The system shall use fans in the electronic compartments for forced air ventilation. The AC output to the load shall be isolated from the utility input during emergency operation.

The Chloride rectifier shall be SCR controlled. The rectifier efficiency shall not be less than 97.7%. The rectifier shall have a ripple voltage less than 2% rms voltage with inverter fully loaded and battery disconnected. Charge voltage applied to the batteries shall be temperature compensated.

The static transfer switch shall have an overload rating of 150% for 1 minute. Transfer time from inverter to utility shall be less than 0.5 milliseconds.

Under emergency mode conditions, the CEPEM shall be powered by sealed, recombination 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 computer interface, RS232 port for direct two-way communication, relay contacts to drive an optional remote alarm monitor, a multilingual alphanumeric display of voltage/frequency/current, load percentage, crest factor and options as noted.

UNIT CHECK LIST

Catalog No. _____	VA Rating: 50,000
Battery Type: PRC	Operating Time: 90 Min.
Input: _____ VAC; Three Phase	# of Wires: <u>3</u> plus Ground
Output: _____ VAC; Three Phase	# of Wires: _____ plus Ground
Options: F OCB(#)	NOL RAU MSP FSU
REMARKS: _____	

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