

The Canyon Series is a single phase, standby, solid-state inverter system designed to provide "soft-start" power to designated emergency lighting fixtures. Each system consists of a self-contained inverter section with a fully automatic, temperature-compensating, variable-rate battery charger. The Canyon Series is designed to work with existing building electrical systems to provide Pulse Width Modulated (PWM), sinusoidal, high-quality power conditioning, backup power protection and distribution for lighting loads and other critical loads. Upon failure of the normal utility power, the Canyon Series automatically transfers to inverter mode and provides a minimum of 90 minutes of emergency power to the connected load.

Model: \_\_\_\_\_ Date: \_\_\_\_\_  
 Accessories: \_\_\_\_\_  
 Job Name: \_\_\_\_\_ Type: \_\_\_\_\_



**SPECIFICATIONS**

- Standard Power Level:** 750, 950 or 1150 Watts
- Power Factor Range:** 0.88 leading to 0.88 lagging
- Input Voltage:** User-selectable 120 or 277VAC
- Input Frequencies:** 60Hz +/- 2%
- Output Voltage:** 120 or 277VAC single phase (must match input)
- Output Frequencies:** 60 Hz, ±.3% during emergency cycle
- Efficiency:** ≥98% at 100% linear load
- Waveform:** Sinusoidal (digitally controlled)
- Output Distortion:** <3% THD @ 100% linear load
- Transfer Time:** <1.0 second
- Input Protection:** Service panel rated at 20 amps maximum
- Output Protection:** Output Main Circuit Breaker
- Surge Protection:** Conforms to UL924 standards
- Battery:** Sealed Lead Calcium (10 year life)
- Battery Voltage:** 48/60/72 VDC for 750/950/1150W respectively
- Battery Protection:** Low Voltage Disconnect and AC Lockout
- Other Protection:** Brownout protection; Reverse polarity, DC overload and short circuit protection by DC input breaker and fuse
- Charger Type:** Fully automatic, temperature compensated, dual mode charger
- Recharge Cycle:** Conforms to UL924 Standards
- Control:** Momentary test switch, AC-on, Charge-on and Inverter-on LED indicator lights
- Operating Temperature:** 20° to 30°C (68° to 86°F)
- Warranty:** Any component that fails due to a manufacturing defect is guaranteed for five years with a separate 10 year prorated warranty on the battery. The warranty does not cover physical damage, abuse or instances of uncontrollable natural forces. See the full Exitronix warranty document for detailed information. (Terms and Conditions Apply)



**ORDERING INFORMATION** Example: CNYN-750-CB3

Series	Power Capacity	Options
CNYN	750 = 750W	CBx = (Must Specify: 1 to 6) 10A Output Circuit Breakers <sup>1</sup>
	950 = 950W	G2 = Self-testing/Self-diagnostics
	1150 = 1150W	4AO = Adjustable Output (4 levels) With 4 Output Circuits

**Notes**

<sup>1</sup> 15A Branch circuit max

Series	Power Rating (Watts)	Voltage (VAC)		Cabinet Dimensions			Weight (LBS)	BTUs	Battery Type	Output Protection
		Input	Output	Width	Height	Depth				
Canyon Single Phase Standby Inverter	750	120, 277	120, 277	22.4"	25.1"	9.2"	190	416	Sealed, Maintenance Free Lead Calcium	1 to 6 Circuit Breakers
	950						222	484		
	1150						254	535		

### Output Loading (Option 4AO)

Output of all (4) dimming circuits (Volts)	Maximum Load (Watts)							
	2.5		5.0		7.5		10.0	
	Normal Mode	Em. Mode	Normal Mode	Em. Mode	Normal Mode	Em. Mode	Normal Mode	Em. Mode
Model	2,700	750	1,350	750	900	750	900	750
CNYN-750	2,700	750	1,350	750	900	750	900	750
CNYN-950	3,420	950	1,710	950	1,140	950	1,140	950
CNYN-1150	4,140	1,150	2,070	1,150	1,380	1,150	1,380	1,150

### Input / Output Connections (Option 4AO)

	# of Inputs	# of Outputs
Line Voltage Switch	2,700	750
0-10V Dimming	3,420	950

### POWER RATING

750, 950 or 1150 Watt single phase output unit uses the latest technology to provide the most advanced performance and reliability features.

### INPUT/OUTPUT

120/120VAC or 277/277VAC input/output

#### AC Input Characteristics

- Input Frequency: 60 Hz +/- 2%
- Soft start power walk-in design reduces fixture inrush current eliminating compatibility problems with LED drivers as well as fluorescent and induction ballasts: 0-100% over a 10-second period
- Accommodates up to 12AWG wire
- Surge Protection: Conforms to UL 924 Standards

#### AC Output Characteristics

- Voltage Regulation: +/- 5% during battery discharge. 0-100% linear load
- Stand-by design is ≥98% efficient at 100% linear load
- Frequency: 60 Hz (+/- 0.3Hz during emergency cycle)
- Voltage Distortion: <3% THD @ 100% linear loads
- Load Power Factor Range: 0.88 Lead to 0.88 Lag
- Output Protection: Circuit Breaker, short circuit and overload protection
- Transfer to inverter mode within one (1) second

### BATTERIES

The Canyon Series inverter employs a sealed, lead-calcium, heavy duty, industrial battery system with 48VDC for the CNYN-750 model, a 60VDC for the CNYN-950 model, or a 72VDC for the CNYN-1150 model designed for auxiliary power service.

- The Canyon Series inverter is equipped with a low voltage battery disconnect circuit to protect the battery from being severely damaged by deep discharges during prolonged power failures
- The Canyon Series inverter is equipped with a DC input breaker to protect against DC overload and short circuit
- Reverse polarity battery protection is included
- Three (3) years full with seven (7) additional prorated year warranty
- Runtime: 90 minutes standard based on battery performance at 25°C (77°F)
- Charger consists of a fully automatic, temperature compensated, dual-mode charger
- Recharge duty cycle conforms to UL924 standards
- AC lockout prevents battery discharge prior to initial unit power up

### LAMPS AND LOADS

- Pure sine wave output for all types of lamps
- Emergency power provides FULL LIGHT OUTPUT from all lamps and fixtures for the entire runtime
- Standard or LED Exits and other safety equipment
- Standard or electronic ballasts, dimming devices or panels, sensors and most control equipment
- Operates fluorescent, incandescent, quartz, LED and other lamp types

### PROTECTION

- A solid state low voltage disconnect circuit is used to protect the battery from being severely damaged by a deep discharge
- A brownout sensing circuit insures proper operation during 'low-line' conditions. Unit will automatically transfer to emergency power when utility power drops to a point that would cause fluorescent lamps to extinguish
- Overload and short circuit protection provided
- Transfer in less than one (1) second

### SYSTEM STATUS

The Canyon Series Inverter design provides a monitoring panel on the front of the unit to show operating status at all times. The panel provides a manual test switch for users to initiate system tests and a 3-LED array indicating system status. Lights show status for AC-ON (red), Charge-ON (green), and Inverter-ON (amber).



### OPTIONAL ADJUSTABLE OUTPUT (Option: 4AO)

Allows dimmable LED fixtures with 0-10V drivers to be connected to and powered by the Canyon inverter.

- In emergency mode, four (4) independent output circuits disconnect the load side of the local dimmer control, and connect the selected loads to the Canyon output(s)
- All four emergency circuits are user-programmable to operate the connected fixtures at approximately 25%, 50%, 75%, or 100% of the nominal output during power outages
- Each override circuit is controlled by DIP switches which determine the emergency output level (see AO wiring diagram)

### OPTIONAL SELF-DIAGNOSTICS (Option: G2)

Provides visual indication for battery, charger and load faults. Conducts automatic 30-second battery discharge test every 30 days, a 30-minute test every 6 months, and a 90-minute test once a year. Test switch allows for manual initiation of a 30-second, a 30-minute or a 90-minute system test. For Self-test/Self-diagnostics models the lights show status for Normal Mode (steady green), Test-mode (blinking green), High Charge (blinking red/green), Inverter-ON (amber).

### OPTIONAL OUTPUT CIRCUIT BREAKER (Option: CBx)

Standard models are not supplied with output circuit breakers. This option supplies from one (1) to six (6) 20A circuit breakers to protect output loads.

## INSTALLATION

- Install the inverter system in a clean, cool, dry place with normal ventilation for human habitation and in such a location to hamper vandalism but allow easy access for testing and maintenance.
- UL Listed for 20°C to 30°C (68°F to 86°F) operation.
- Battery performance and service life is maximized if the operating temperature is maintained at 25°C (77° F).
- Temperature Effect On Lead Calcium Battery Performance:  
Lead Calcium batteries will be less efficient at temperatures below 20°C (68°F), and high temperatures will reduce battery life. Typically, at 35°C (95°F), battery life will be half of what it would be at normal temperature of 25°C (77°F). At 45°C (113°F), battery life will be one-fourth of normal.
- The air around the unit must be clean, dust-free, and free of corrosive chemicals or other contaminants. Do not place the inverter system or batteries in a sealed room or container.
- **CAUTION:** Never install batteries in a sealed room or enclosure
- The maximum operating temperature drops 1° Celsius per 300 meters 2°F per 1000 feet) above sea level. Maximum elevation is 3000 meters (10,000 feet).

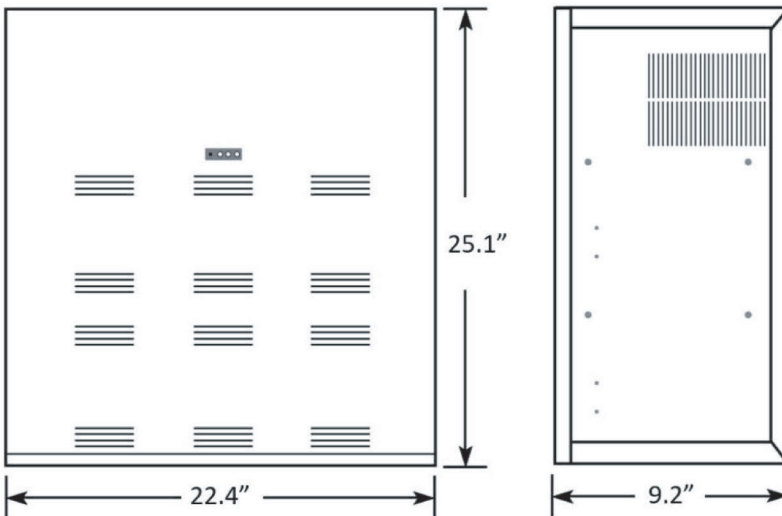
## DELIVERY, STORAGE, AND HANDLING

- Inverter system batteries are shipped separately. Carefully inspect all cartons upon receipt for evidence of shipping damage.
- Notify carrier immediately of leaking or damaged cartons for possible concealed damage.
- For temporary storage of inverter systems and batteries prior to installation, select a clean, cool, dry location with normal ventilation for human habitation and level floors.
- Store all batteries at 0°C to 40°C (32°F to 104°F). Batteries will have a longer shelf life if stored at 15°C (59°F). The inverter system electronics and battery cabinets may be stored at -20°C to 60°C (-4°F to 140°F).

## CODES

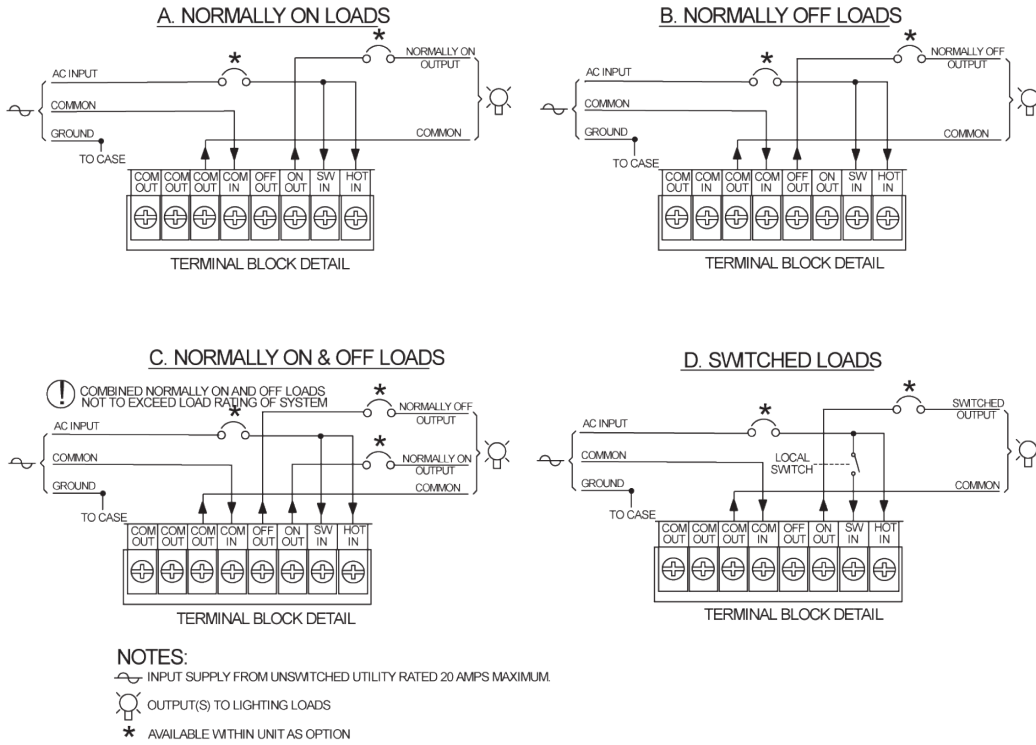
- Complies with the Buy American Act (Level 3)
- The Canyon Series shall meet the requirements of the following standards:
  - IEEE 587-1980/ANSI C62.41 1980 Standards for Surge Withstand Ability
  - FCC rules and regulations of Part 15, Subpart J, Class A
  - Meets UL 1778, UL 924 Damp Location, Standards for Lighting Inverter Equipment
  - NFPA 101 Life Safety Code
  - NFPA 70 National Electrical Code
  - OSHA - Occupational Safety & Health Administration
  - Certified to CEC under Title 20 Regulations

## DIMENSIONS

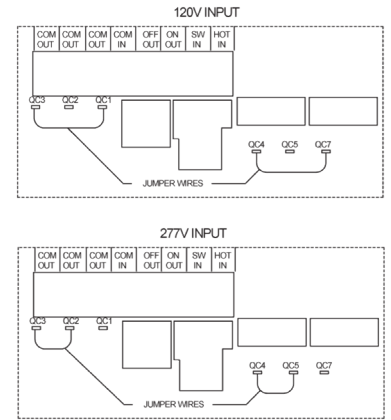


SEE PAGE 4 FOR WIRING DIAGRAMS

## WIRING DIAGRAMS

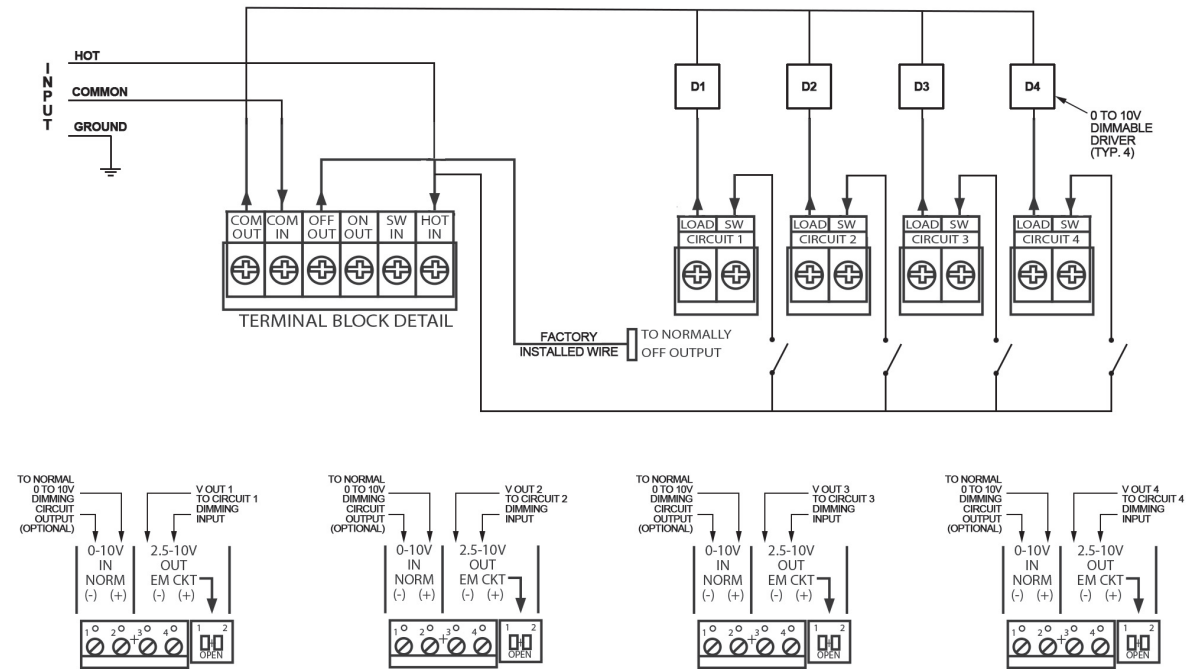


## VOLTAGE SELECTION DETAIL



Factory terminated jumper wires are provided with the CNYN systems for making user selected input/output voltage connections.

## WIRING DIAGRAMS FOR ADJUSTABLE OUTPUT (OPTION: 4AO)



## DIMMING OPTION PROGRAMMING TABLE

POSITION-1	POSITION-2	VOUT 1
OPEN (OFF)	OPEN (OFF)	10.0V
OPEN (OFF)	CLOSED (ON)	7.50V
CLOSED (ON)	OPEN (OFF)	5.00V
CLOSED (ON)	CLOSED (ON)	2.50V