

# 600 W — 2 kW SINGLE PHASE

## UltraLITE MODEL ELC

### Compact, Centralized Emergency Lighting Inverters

Featuring one of the smallest cabinet  
footprints in the industry.

True no-break system, with regulated output and transient voltage protection for LED lighting, electronic ballasts, as well as all other existing and future lighting applications.

Peak overload capability of 1200% to accommodate inrush current from LED fixtures / drivers!

Meets NFPA 101, 111, NEC, IBC and local codes.

#### Applications:

- Schools / Universities / Dormitories
- Arenas / Stadiums
- Parking Structures / Garages
- Hospitals / Clinics
- Office Buildings
- Shopping Malls
- Hotels / Motels
- Apartment Buildings
- Correctional Facilities
- Worship Facilities



UL 924 Listed  
C-UL Listed to CSA Standards



TRYSTAR®

# FEATURES & SPECIFICATIONS

Trystar engineers and manufactures the industry's highest quality **centralized emergency lighting inverters**, capitalizing on many years of expertise. We have an enviable reputation for quality, which is reflected in the design, workmanship, and performance of our products.

The inverter technology in our **UltraLITE, Model ELC** effectively maintains critical equipment with extended brownout protection, tight voltage regulation, and power conditioning. Tight voltage regulation assures that facility egress lumens are maintained 100% at emergency lighting fixtures, in all modes of operation, and also extends ballast and lamp life.

## Features & Benefits

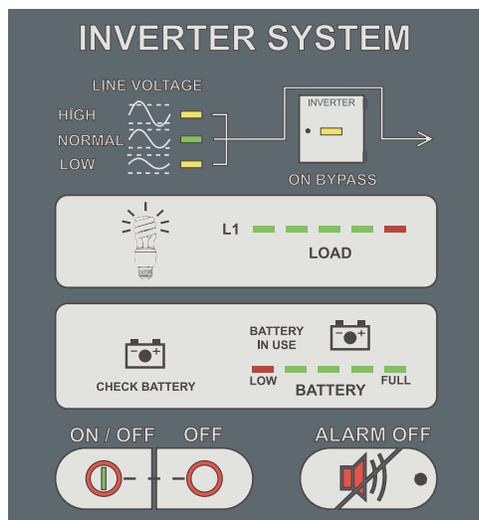
- Uninterrupted, regulated, continuous sinewave output for use with "normally on" lighting fixtures and exit lamps, LED and HID compatible.
- Standby output for use with "normally off" emergency lighting fixtures.
- **Timed Normally Off Bus "PLUS"** option includes an adjustable soft start to accommodate the high inrush current of "normally off" emergency lights, regardless of type or manufacturer.
- True, online double-conversion topology provides conditioned, regulated power and 100% reliability to emergency lighting loads.
- High-speed automatic static bypass.
- Manual bypass switch.
- Advanced DSP control used for enhanced performance, accuracy, and system reliability.
- Compact, front access design, featuring **one of the smallest cabinet footprints in the industry.**
- Standard NEMA 2 drip-proof enclosure.
- Generator-compatible.
- Inverter electronics designed for use at 0° to 40° C.
- 4-stage, temperature-compensated battery charger for increased battery life.
- An industry-leading battery recharge time of 24 hours or better.

## Product Specifications

- Input Operating Voltage Range: +12%, -30% typical, load-dependent, without battery usage; +12%, -15% at full load
- Input Frequency: 60 Hz,  $\pm 2.5\%$
- Input Current Harmonic Distortion: < 5% THD
- Input Power Factor Correction: > .97 pF at full load
- Output Regulation: Typically better than  $\pm 2\%$
- Overload Rating: Up to 125% for 30 cycles, 150% for 4 cycles when fed from the AC power source, or on battery (without use of static bypass).
- LED Inrush Rating: Peak overload capability of 1200% to accommodate inrush current from LED fixtures/drivers (without use of static bypass).
- Operating Temperature: UL 924 with 90 minutes runtime (20° to 35° C); UL 924 with other runtimes (0° to 40° C); C-UL Listed with 30 minutes runtime (10° to 40° C). Optimum battery performance and life at 25° C.
- Battery Time: UL 924 Listed 90 minutes at full-rated kW output, or with optional run times from 15 minutes to 4 hours, C-UL Listed with 30 minutes run time.

## Safety

- UL 924 Emergency Lighting Equipment
- UL 924 Auxiliary Lighting and Power Equipment
- C-UL Listed to CSA Standard C22.2 No. 141-02 Equipment for Emergency Lighting
- NFPA 101, NFPA 111, NEC, and local codes



For illustration purposes, all LEDs are illuminated.

## Display Monitor & Diagnostics

The **Model ELCs** full-featured monitoring system includes:

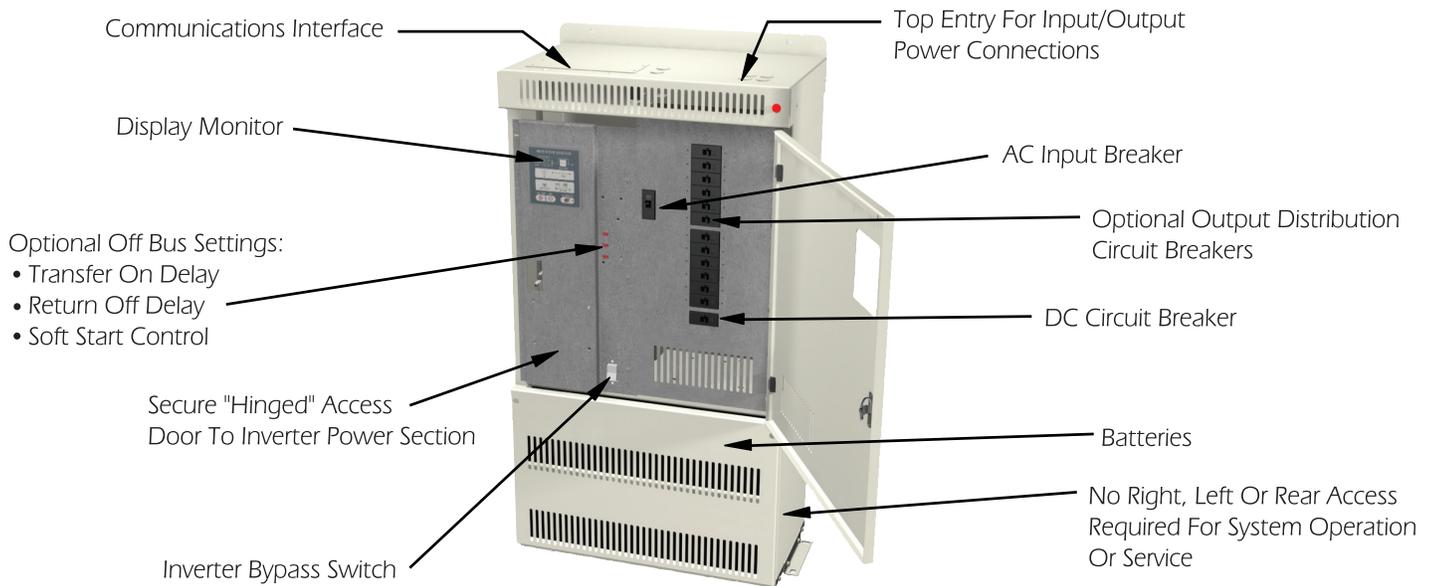
- Self-Test Diagnostics
- Automatic Battery Test
- Audible Alarms
- Protected ON / OFF Switch
- Push-To-Test

The **ELC** also has a full complement of status indicators:

- Percent Load
- High / Low / Normal Input Voltage
- On Battery
- Percent Of Battery
- Check Battery
- Bypass Status
- Alarm Status

# ELC ADVANTAGES, COMMUNICATIONS & OPTIONS

## Advantages of the "UltraLITE, Model ELC"



## NFPA-Compliant Automatic Battery Testing / Logging

The **Model ELC** automatically performs a user-defined (date and time) 30-second or 5-minute system test every 30 or 90 days. It also performs user-defined (date and time) 5-, 30-, or 90-minute, or 2- or 4-hour annual system tests. For all of these tests, the **ELC** logs the test results with date and time, as well as a "pass" or "fail" indication. User defined parameters are easily programmed via the RS232 connection (DB9 or USB port).

## ELC Communications

The **ELC** provides user access to system status, alarm conditions, electrical measurements, system logs, and battery test pass/fail results, via RS232 from a DB9 connector or a USB port. Optionally, this information is available via an Ethernet TCP/IP, MODBUS TCP or MODBUS RS485 network connection. (See "**NetMinder™ Communications**" description below.) Remote communication of inverter on battery, low battery, and a general alarm are available via normally open contacts rated at 120 VAC and .5 amps.

## Optional NetMinder Communications

The **NetMinder** series of adapters integrate the **Model ELC** into an Ethernet TCP/IP, MODBUS TCP, or MODBUS RS485 network with a specific IP address. The **NetMinder** provides remote monitoring of the inverter status, battery test pass/fail results, alarm conditions, and electrical measurements via a web browser, without the need for any external software. Remote notification of alarms and status are available via SNMP, e-mail, and network broadcast messaging. Temperature and humidity sensing interface are also available.

## Inverter Options

### Timed Normally Off Bus "PLUS"

Provides standby power to "normally off" emergency lights. When utility power is lost or inadequate, emergency power is applied to "normally off" lights, providing a safe means of egress. This option includes:

#### User-Programmable Settings

- Transfer On Delay (0 – 10 seconds)
- Return Off Delay (0 – 15 minutes)
- Soft Start Control (0 – 192 cycles)

#### Remote Input Command

Allows a remote contact signal to energize the "Normally Off" bus, thus illuminating the "normally off" emergency lights.

### ZoneSaver-2™

Offers design flexibilities not provided with competing lighting inverters. **ZoneSaver-2** can be configured for use in (2) distinct applications.

#### Local Control Device Override

Allows for user control of emergency egress lighting via occupancy sensors, wall switches, and dimmer switches. Local control devices are automatically bypassed in the event of a power outage. This **ZoneSaver-2** option saves money by reducing costly "always on" circuits.

#### Zone Sensing

Allows for independent activation of "normally off" fixtures in multi-floor or multi-use facilities. The **ELC** uses **ZoneSaver-2** to monitor normal lighting circuit panels for each floor / zone.

### Output Distribution Circuit Breakers

A total of (12) circuit breakers or (6) monitored circuit breakers are available (120V or 277V), and can be factory-wired to the "Normally On" bus and / or optional "Normally Off" bus, in any combination specified.

# PRODUCT SELECTION GUIDE

## MODEL NUMBER GUIDE

<b>PRODUCT</b>	<b>INPUT</b>	<b>OUTPUT</b>	<b>FREQ</b>	<b>kVA / kW</b>	<b>MONITOR</b>	<b>BATTERY</b>	<b>DISTRIBUTION</b>	<b>OFF BUS</b>
ELC - Lighting Inverter	A = 120V J = 277V	A = 120V J = 277V	X = 60 Hz	600W 1 kW 1.5 kW 2 kW	0 = Standard	S=90m C=30m N=Other Battery Option	0=Standard Output Breaker 1=Optional Output Breakers	0=None T=Timed Off Bus "PLUS"

NOTES: 30 minute battery option available on C-UL Listed models.  
Consult factory for output distribution options.

ELC MODEL NUMBERS					
UL 924 MODELS	kVA / kW	WEIGHTS (LBS) <sup>1</sup> INPUT - OUTPUT VAC 60 Hz 120-120	WEIGHTS (LBS) <sup>1</sup> INPUT - OUTPUT VAC 60 Hz 120-277 AND 277-120	WEIGHTS (LBS) <sup>1</sup> INPUT - OUTPUT VAC 60 Hz 277-277	FULL LOAD BTU'S / HOUR <sup>2</sup>
ELC-**X-.6kW-0S **	600 W	269	286	303	546
ELC-**X-1kW-0S **	1 kW	352	369	386	648
ELC-**X-1.5kW-0S **	1.5 kW	372	402	432	750
ELC-**X-2kW-0S **	2 kW	534	564	594	955

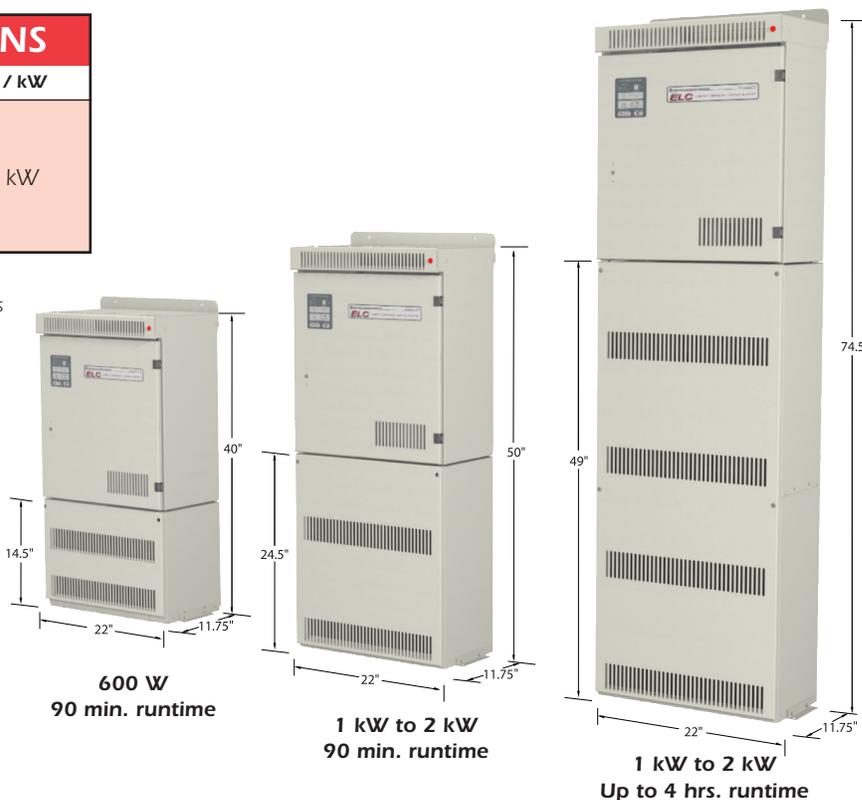
VOLTAGE CONFIGURATIONS	
**X = Input - Output VAC, 60 Hz	Output kVA / kW
AA = 120 - 120	600 W - 2 kW
AJ = 120 - 277	
JA = 277 - 120	
JJ = 277 - 277	

NOTES: Each model includes 90 minutes of back-up time, per UL 924 Emergency Lighting Equipment. Battery run times are available under UL 924 (Auxiliary Lighting and Power Equipment) and C-UL Listed (for Canada) — consult factory.

<sup>1</sup> Cabinet weights include the weight of batteries for standard 90 minutes of runtime. Battery weights vary according to desired runtimes — consult factory for runtimes other than 90 minutes. Packaging and shipping materials will add approximately 50 lbs. to the product weights stated above.

<sup>2</sup> BTU's at rated load, 120V models.

**WARRANTY:** Trystar guarantees the inverter to be free from defects in material and workmanship for a period of (2) years following shipment from the factory. Batteries are covered under a 1-year full, 14-year pro-rated warranty. Consult factory for details.



NOTE: All 3 cabinet sizes have a split-cabinet design, and are floor-mounted and wall-secured. Consult factory for cabinet configurations and dimensions for battery run times other than 90 minutes.

Represented by:



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All information and data within this brochure is subject to change without notice.

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