TRYSTAR®

UltraLITE MODEL ELC

Featuring one of the smallest cabinet footprints in the industry.

Compact, Centralized Emergency Lighting Inverters

True no-break system, with reg lated 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

15765 Acorn Trail / Faribault, MN 55021 / 507.333.3990

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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 0º to 40º C.
- 4-stage, temperature-compensated battery charger for increased ba tery 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, ± 2.5%
- Input Current Harmonic Distortion: < 5% THD
- Input Power Factor Correction: > .97 pF at full load
- Output Regulation: Typically better than ± 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 25º 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

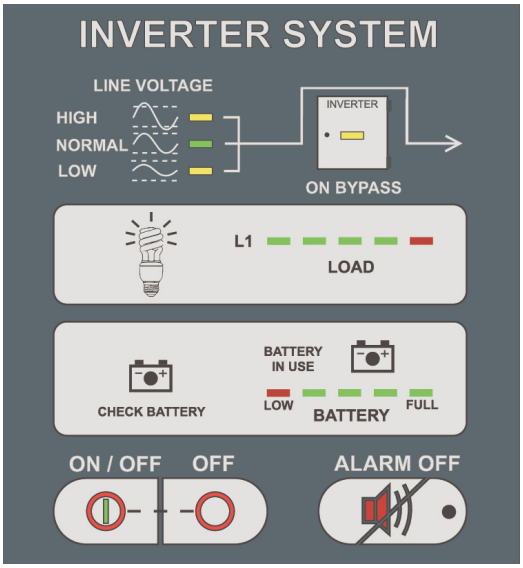
Display Monitor & Diagnostics

The **Model ELC's** 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:

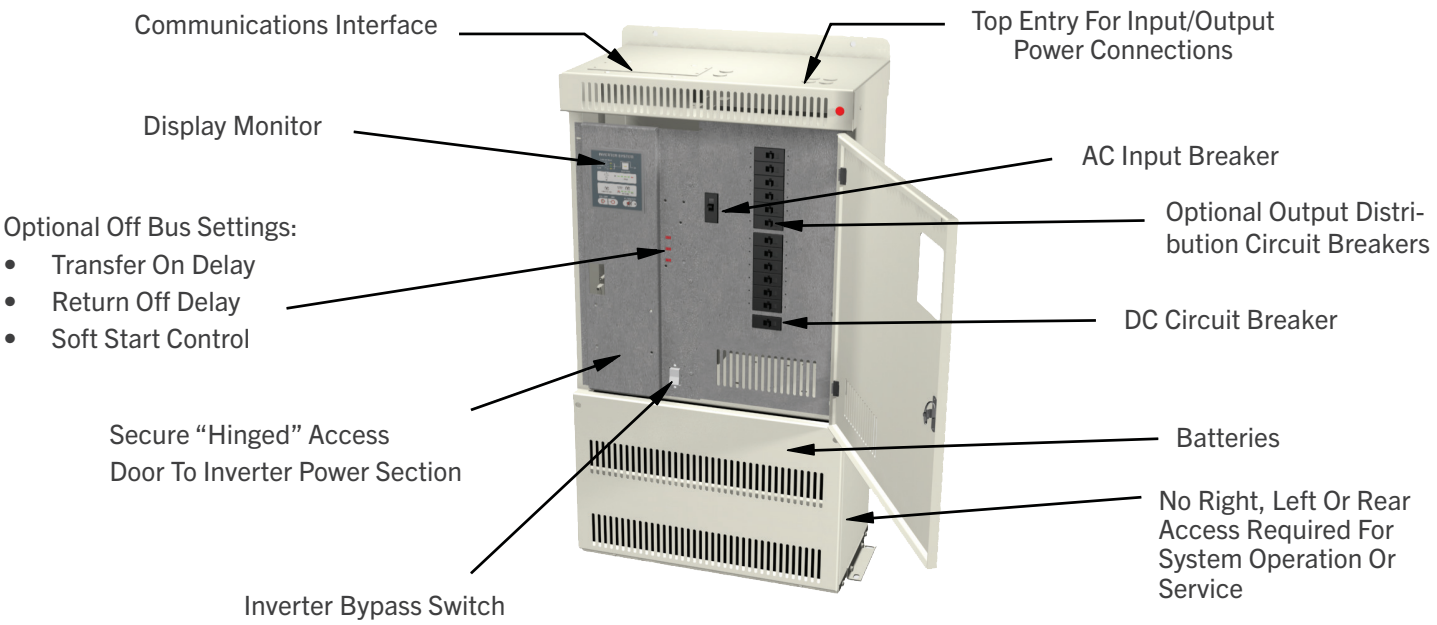
- Percent Load
- High / Low / Normal Input Voltage
- On Battery
- Percent Of Battery
- Check Battery
- Bypass Status
- Alarm Status



For illustration purposes, all LED's are illuminated.

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 multifloor 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

PRODUCT	—	INPUT	OUTPUT	FREQ	—	kVA / kW	—	MONITOR	BATTERY	DISTRIBUTION	OFF BUS
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)[1] INPUT - OUTPUT VAC 60 Hz 120-120**	**WEIGHTS (LBS)[1] INPUT - OUTPUT VAC 60 Hz 120-277 AND 277-120**	**WEIGHTS (LBS)[1] INPUT - OUTPUT VAC 60 Hz 277-277**	**FULL LOAD BTU’S / HOUR[2]**
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 AJ = 120 - 277 JA = 277 - 120 JJ = 277 - 277	600 W - 2 kW

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.

[1] 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.

[2] 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.

600 W
90 min. runtime

1 kW to 2 kW
90 min. runtime

1 kW to 2 kW
Up to 4 hrs. runtime

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.

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Document Number: 0014BR1225 / December 2025 /

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