

# 700 VA to 2.1 kVA SINGLE PHASE

## Models LTN & LTN-3R

### Uninterruptible Power Systems for Harsh Indoor / Outdoor Environments

***Shouldn't the UPS technology be as "rugged" as the enclosure in which it's provided?*** Many of today's indoor / outdoor UPS systems are a commercial grade standby power supply in a NEMA 2 / NEMA 3R enclosure. These designs offer no real power line conditioning, isolation, or meaningful voltage regulation. Many offer only  $\pm 10\%$  voltage regulation and have a 5 millisecond break in power when transferring to or from battery backup. ***Why settle for this performance when our Models LTN and LTN-3R offer so much more!***



#### Model LTN (Indoor NEMA 2)

- NEMA 2 drip-proof enclosure design.
- Input and output main circuit breakers.
- Flush-mounted status and alarm panel.
- Key-lockable front door.
- Optional output circuit breakers — up to six (6) single pole positions total.
- Optional 8.5 amp accelerated, temperature-compensated battery charger.
- Optional wall mounting kit.



#### Model LTN-3R (Outdoor NEMA 3R)

- NEMA 3R raintight enclosure design.
- Input and output main circuit breakers.
- Make-before-break maintenance bypass switch.
- Standard 8.5 amp accelerated, temperature-compensated battery charger.
- Elastomeric insulation prevents condensation and internal moisture.
- Internal status and alarm panel, with optional viewing window.
- Conformal coated circuit boards.
- Keyed door latches.
- Optional heater and related thermostat.

Product images are for illustration purposes only, and are not to scale.

### Features Common To Both Models LTN & LTN-3R

- **No break, regulated, continuous sinewave output.**
- **Integral constant voltage transformer isolates and regulates output voltage.**
- Local status and alarm panel, with optional remote status panel.
- Internal battery options providing **extended runtimes from 30 minutes to 9.5 hours at full load**, model dependent.
- Front-access design.
- Generator compatible.
- Remote communications via alarm signals or RS232.
- Optional NetMinder™ remote monitoring via Ethernet TCP/IP, MODBUS TCP, or MODBUS RS485.

#### Applications:

- Security Systems / Surveillance Cameras
- Parking Garage Kiosks / Gate Arms
- Motor Drives For Barrier Control
- Highway Tollgates
- Vehicle / Cargo Scanning
- Traffic Signal Controls
- Industrial / Automated Process Controls
- Supervisory Control and Data Acquisition (SCADA)
- Emergency Exhaust Fans
- Pumps / Controls / Telemetry
- Irrigation Systems
- Transmission Repeaters / Cell Towers
- Radio / TV Transmitter Sites
- Solar Array Controls

#### Key Industries:

- Wastewater Treatment
- Mining
- Transportation



UL / C-UL 1778

C-UL Listed to CSA Standard C22.2 No. 107.1-01



TRYSTAR®

## Status & Alarm Panel

### Bright, 3-Digit LED Provides System Parameters:

- Input voltage
- Output voltage
- Percent of load
- Percent of battery capacity
- Percent of battery charged

### LED Indicators Provide System Status:

- System ON (Green)
- System ON BATTERY (Yellow)
- LOW BATTERY Warning (Red)
- ALARM (Red)

## Powder-Coated Finish

Both the indoor harsh environment (**Model LTN**) and outdoor-rated (**Model LTN-3R**) cabinets are constructed of 14 gauge steel with a standard, environmentally-friendly, powder-coat paint finish for superior durability. At 1 - 2 mils thick, powder-coating is virtually impenetrable ... corrosion-proof, salt-spray resistant, and won't crack / peel / blister ... ideal for both indoor and outdoor conditions.

The **Model LTN-3R** (NEMA 3R) cabinet is constructed of powder-coated galvanized steel. This cabinet is also available in optional Grade 304 or Grade 316 stainless steel, which offers superior corrosion-resistance. Consult factory for details.

## Product Specifications

- Input Operating Voltage Range: +10%, -40% typical, load-dependent, without battery usage
- Input Frequency: 60 Hz,  $\pm 2.5$  Hz
- Output Sinewave Voltage: Maximum 3% harmonic distortion, any single harmonic
- Voltage Regulation:  $\pm 3\%$  typical
- Isolation: Galvanic
- **Model LTN** Operating Temperature: 0° C to +40° C
- **Model LTN-3R** Operating Temperature: -35° C to +55° C
- Total System MTBF: 100,000 hours
- Noise Attenuation: Common Mode: 120 dB  
Transverse Mode: 70 dB
- Efficiency: 89% typical

## Agency Approvals / Standards

- UL / C-UL 1778 Listed Uninterruptible Power Supply Equipment. **Model LTN-3R** is UL Listed as raintight, suitable for outdoor use.
- C-UL Listed to CSA Standard C22.2 No. 107.1-01
- NFPA 70 National Electric Code
- ANSI / IEEE C62.41 Category B3 Surge Capability
- FCC Class A Limits, 47 C.F.R. Part 15, Subparts A, B

### LTN MODELS

VA	WATTS	INPUT VAC 60 HZ	OUTPUT VAC 60 HZ	BATTERY RUNTIMES (FULL / HALF LOAD)		BTU's / HOUR
				MINIMUM	MAXIMUM	
700	500	120, 208, 240	120, 120/208, 120/240	22.5m / 1h	7h / 14h	256
850	600	120, 208, 240	120, 120/208, 120/240	18m / 48m	5h 30m / 10h 30m	307
1000	700	120, 208, 240	120, 120/208, 120/240	13m / 30m	3h 48m / 7h 55m	359
1200	850	120, 208, 240	120, 120/208, 120/240	12m / 27m	3h 36m / 7h	435
1400	1000	120, 208, 240	120, 120/208, 120/240	8m / 23m	2h 49m / 5h 50m	512
1600	1200	120, 208, 240	120, 120/208, 120/240	7m / 17.5m	2h 26m / 5h 7m	614
1800	1300	120, 208, 240	120, 120/208, 120/240	9.5m / 26m	2h 18m / 4h	665
2100	1500	120, 208, 240	120, 120/208, 120/240	7.5m / 21.5m	2h 5m / 3h 47m	767

### LTN-3R MODELS

VA <sup>1</sup>	WATTS	INPUT VAC 60 HZ	OUTPUT VAC 60 HZ	CABINET	BATTERY RUNTIMES (FULL / HALF LOAD)		BTU's / HOUR
					MINIMUM	MAXIMUM	
550	550	120	120	Short	10m / 25m	4.5h / 8h	281
				Tall	5h / 9h	9.5h / 15h	281
1000	1000	120	120	Short	5m / 12m	2.5h / 4.75h	512
				Tall	2.5h / 5.5h	5.5h / 10h	512
1300	1300	120	120	Short	5.5m / 25m	1.75h / 3.5h	665
				Tall	2h / 4h	4.5h / 8h	665

**Notes:** Consult factory for unit weights. Battery weights vary according to desired runtimes. Battery runtimes: m = minutes; h = hours. Battery runtimes stated above reflect standard minimum and maximum options; consult factory for other runtimes. **Optional input and output voltages available, consult factory.** <sup>1</sup> **Model LTN-3R** VA at 1.0 power factor (unity), VA = WATTS.

**Cabinets:** **Model LTN** product dimensions: 39" H x 31" W x 16.6" D.

**Model LTN-3R** product dimensions: **Short:** 60.75" H x 21.25" W x 17.6" D **Tall:** 85.73" H x 21.25" W x 17.6" D

**Warranty:** One (1) year warranty period following shipment from the factory. An additional 3-year pro-rated battery warranty provided when enrolled in a service plan. Optional extended warranties and maintenance contracts are available – consult factory.



TRYSTAR®

1955 Stephenson Hwy., Troy MI 48083  
Phone: (800) 521-4792 • Fax: (248) 528-0411