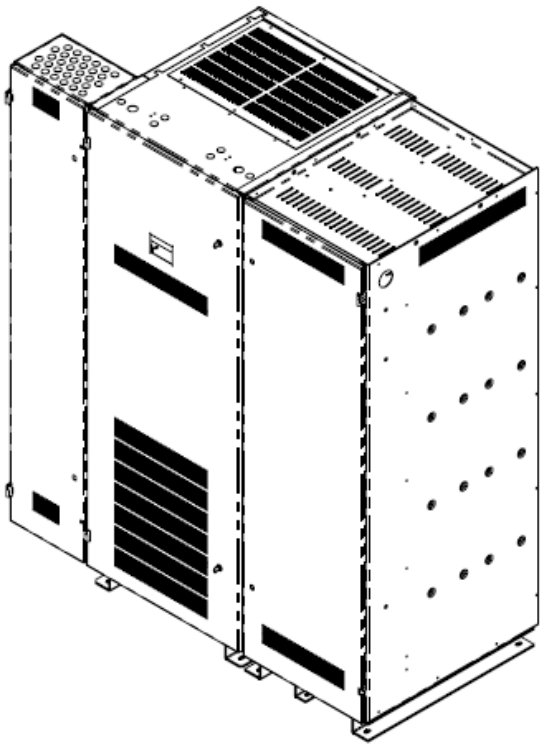
TRYSTAR

EON MODEL EL3

DATA SHEET

10 - 33 KW
40 - 55 KW
THREE PHASE EMERGENCY LIGHTING INVERTER



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INTRODUCTION

Emergency Lighting Inverter

The EON Model EL3 is a three-phase, centralized emergency lighting inverter that supplies regulated, uninterrupted power to egress lighting and life safety loads during utility outages, brownouts, and power quality events. It meets NFPA 101 requirements for computer-based, self-testing, self-diagnostic emergency lighting systems with data-logging. Trystar engineers and manufactures the EON Model EL3 to provide a high-reliability, centralized solution for emergency lighting and life safety circuits. The system maintains 100% egress illumination for the full 90-minute UL 924 duration, while conditioning normal power and extending the life of lighting equipment. The system is UL 924 listed and fully compliant with NFPA life safety standards, supporting all lighting types including LED, HID, and fluorescent.

Key Features

Wide Output Range
Output ratings from 10 kW to 33 kW and 40 to 55 kW at unity power factor provide flexible sizing for small to mid-scale facilities, including multi-level buildings and campuses.

True Online Double-Conversion
Maintains a clean, regulated sinewave output with tight voltage control and low THD, protecting LED drivers, ballasts, HID, and other sensitive lighting loads in all operating modes.

Intellistat TS™ Touchscreen Monitoring
Integrated Intellistat TS monitor provides full system visibility, alarm annunciation, event logging (up to 75 events), NFPA-compliant test scheduling, and password-protected parameter access via a color touchscreen.

NFPA-Compliant Automatic Testing & Logging
Supports automatic periodic (30/90-day) and annual tests with date/time stamping and pass/fail indication, and can generate NFPA-compliant reports for life safety documentation.

Generator Compatible
Operates reliably with generator sources, maintaining a clean sinewave output (<3% THD typical) even under distorted input conditions, without unnecessary battery discharge.

LED Inrush Compatible
Peak overload capability up to 1700% accommodates high inrush current from LED fixtures/drivers, both on utility and in battery mode, reducing nuisance trips and design constraints.

Compact, Front-Access Cabinets
10–33 kW models use front-access cabinets with a reduced footprint compared to many competitive systems, simplifying installation and service, and easing space planning in electrical rooms.

Flexible “Normally On” / “Normally Off” Support
Supports both normally on and normally off emergency lighting circuits, including optional “Normally Off Bus” and output distribution configurations to segment and control egress circuits.

Network & Building Integration Options
Optional network communications (BACnet/IP, BACnet MS/TP, MODBUS TCP, MODBUS RS-485, Ethernet TCP/IP) enable integration with building management systems for remote monitoring and alarm reporting.

SPECIFICATIONS

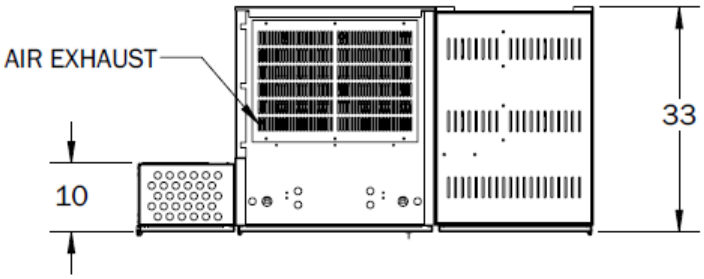
Electrical	
Ratings	10, 13, 14, 15, 16, 17, 20, 22, 24, 26, 28, 30, 32, 33, -40, 45, 50, 55 kVA/kW at 1.0 power factor (unity)
Topology	True online, double-conversion, uninterruptible power system
Overload Capability	Up to 110% for 2 min, 125% for 30 sec, 150% for 10 sec, 400% for 4 cycles (without static bypass)
LED Inrush Rating	Peak overload capability of 1700% to accommodate LED inrush (without static bypass)
Input	
Voltage Options	208/120V, 480/277V, or 600/347V Wye
Voltage Range	+10%, –15% at full load
Current Distortion	<10% THD typical
Output	
Voltage Options	208/120V, 480/277V, or 600/347V Wye, 60 Hz (matching or transforming input as configured)
Voltage Regulation	±3% typical, ±0.5% in battery mode
Frequency	60 Hz nominal, ±5% (consult for 50 Hz)
Power factor	>0.98 typical
Efficiency	90% typical
Environmental	
Operating Temperature	20°C to 35°C (Storage -20°C to 50°C inverter)
Humidity	0–95% non-condensing
Noise Level	<60 dBA @ 1m
Altitude	Up to 6600 ft (2000 m)
Battery	
Type	Valve-regulated, sealed lead-calcium, maintenance-free; front-access terminals. Hot-swappable.
Runtime	Standard 90 minutes at full kW output (UL 924); optional 15, 30, 60, 120, or 240 minute runtimes available as Auxiliary Lighting and Power Equipment.
Testing	Manual and automatic (periodic and annual), results logged with date/time and pass/fail indication
Replacement	Hot-swappable batteries; replacement without interrupting power to load
Codes / Standards	
Safety Listings	UL 924 Emergency Lighting Equipment, C-UL Listed to CSA C22.2 No. 141-15
Codes	NFPA 101, NFPA 111, NFPA 70 (NEC), and local codes
EMI / Quality	FCC Class A, 47 C.F.R. Part 15, Subparts A & B; ISO 9001:2015 quality system

DIMENSIONAL DRAWINGS

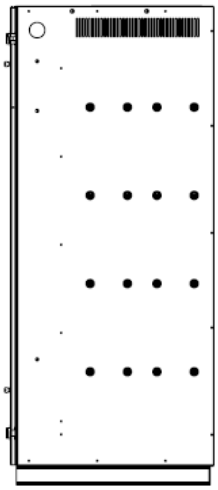
10-33kW

	W-bat	W	D	H	Voltages
Size Code A	23	52	33	77	10kW - 14kW LLX Voltages
Size Code C	34	63	33	77	10kW - 14kW Excluding LLX Voltages 15kW - 17kW All Voltages 24kW All Voltages 26kW LNX and NNX Voltages
Size Code C	41	70	33	77	20kW - 22kW All Voltages 26kW LLX and NLX Voltages 28kW - 33kW All Voltages

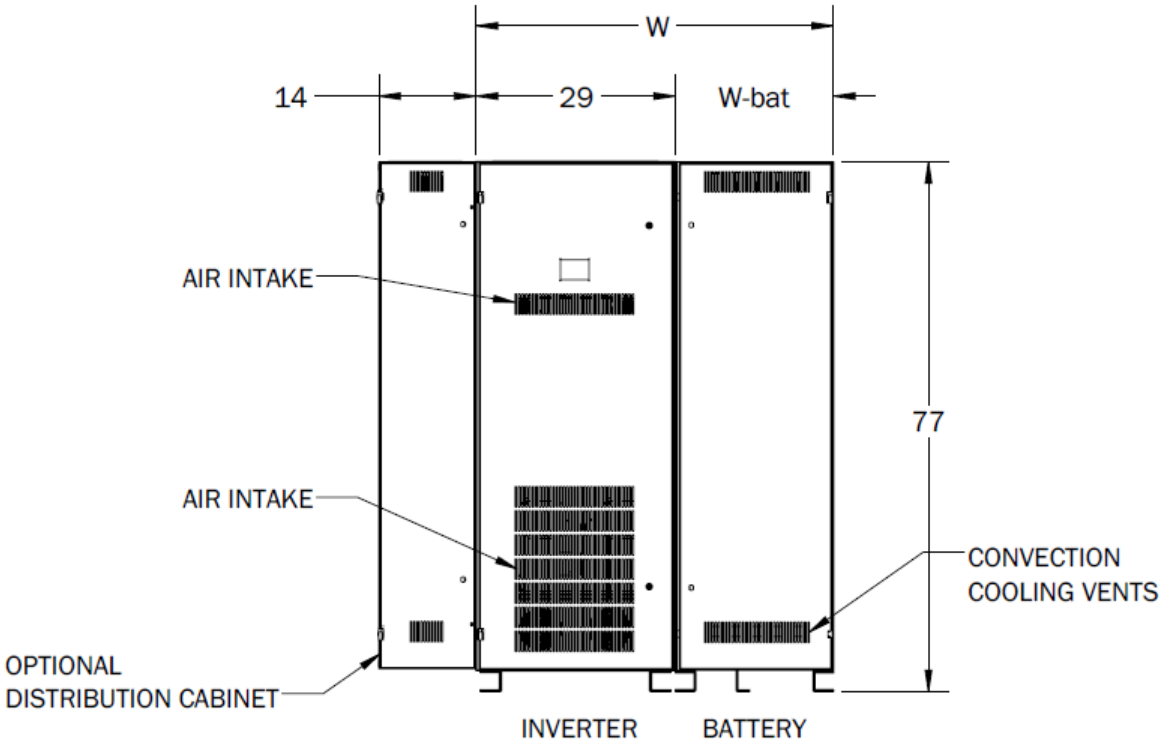
Top View



Side View



Front View

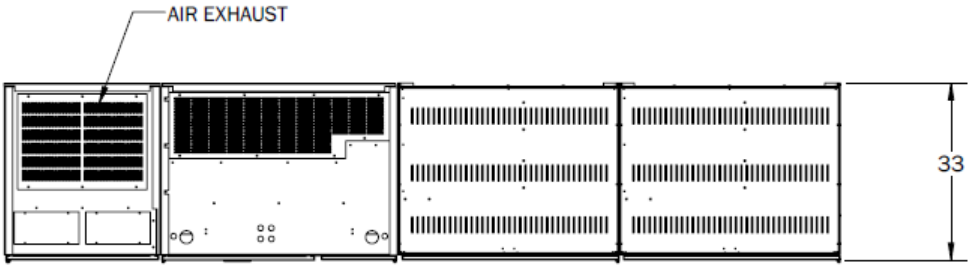


DIMENSIONAL DRAWINGS

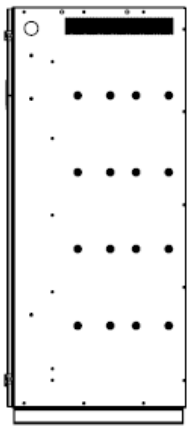
10-33kW

	W-bat	W	D	H	Voltages
Size Code D	82	126	33	77	40kW - 55kW NNX Voltages
Size Code E	82	155	33	77	40kW - 55kW LLX and NLX Voltages
Size Code F	41	85	33	77	Options Unit
Size Code G	41	114	33	77	40kW - 55kW Canadian Units

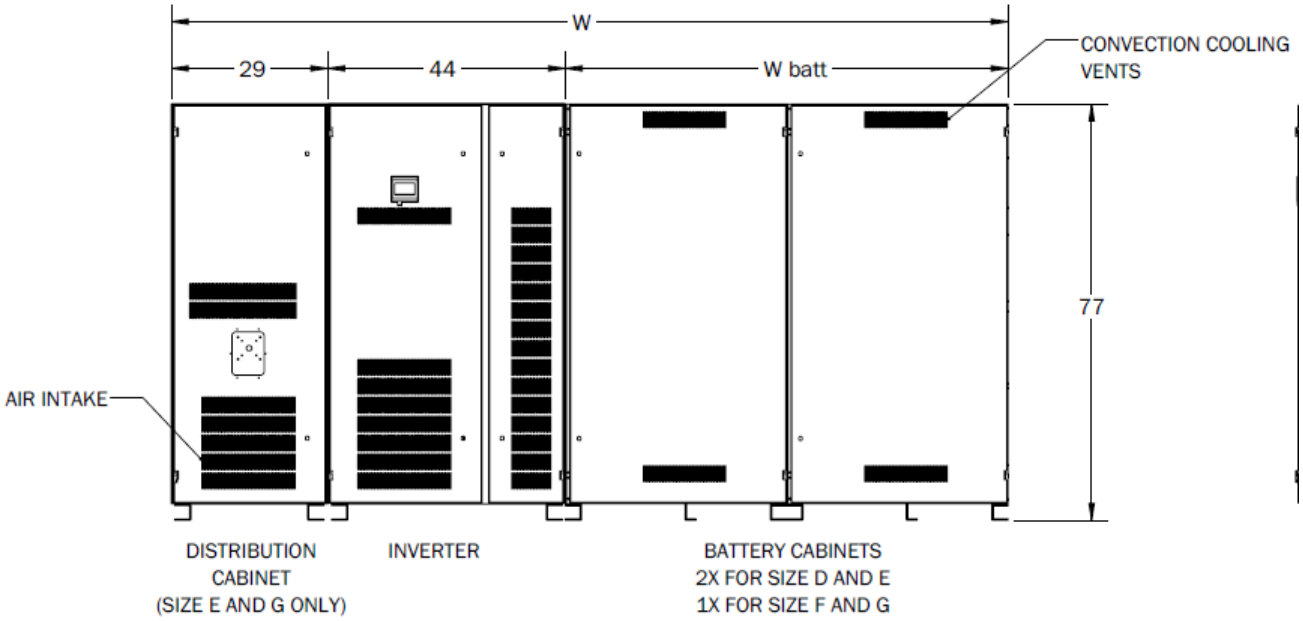
Top View



Side View



Front View



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