IEP Systems

STL
Series

Emergency Lighting Inverter
3kW to 160kW Central System

STL Series

Sine Wave

APPLICATIONS:

The STL Series Inverter will operate incandescent, fluorescent, HID and LED lamps.

*Depending on the LED driver inrush current it may be necessary to de-rate the inverter in certain situations.

- Airports
- Assisted Living Centers
- Casinos
- Grocery Stores
- Hotels
- Medical
- Movie Theaters
- Parking Garages
- Race Tracks
- Religious Facilities
- Department Stores
- Shopping malls
- Superstores
- Apartments/Condominium Complexes
- Banks, Financials
- City, County, State, Federal
- Hospitals
- Industrial
- Military Complexes
- Office Buildings
- Prisons
- Train, Subway, Bus Stations
- Restaurants
- Schools, Colleges
- Sport Facilities
- Tunnel and Toll Bridges

RATINGS TABLE

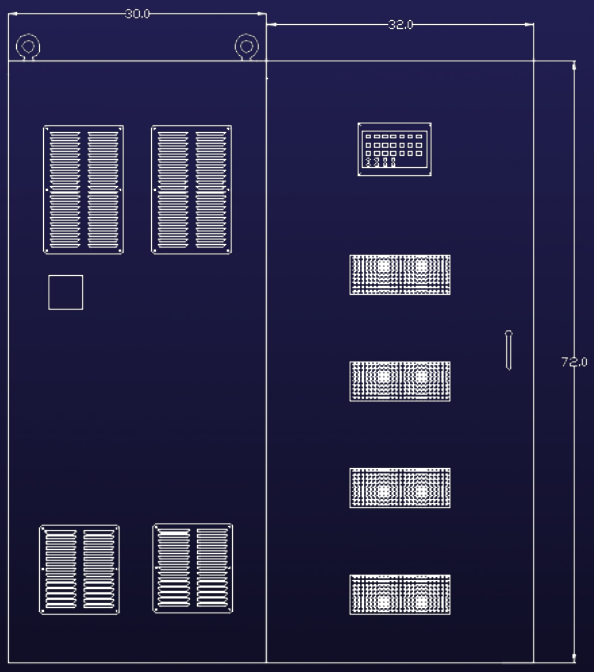
Size	Input Volts	Maximum Amps	Recommended Breaker	Battery Voltage	Strings	# of battery cabinets
3000	208Y120	10.4	15	384	1	1
3000	480Y277	4.5	15	384		1
5000	208Y120	17.3	25	384	1	1
5000	480Y277	7.5	15	384		1
6000	208Y120	20.8	30	384	1	1
6000	480Y277	9.0	15	384		1
8000	208Y120	27.8	35	384	1	1
8000	480Y277	12.0	15	384		1
10000	208Y120	34.7	45	384	1	1
10000	480Y277	15.0	20	384		1
15000	208Y120	52.0	70	384	2	2
15000	480Y277	22.6	30	384		2
20000	208Y120	69.4	90	384	2	2
20000	480Y277	30.1	40	384		2
24000	208Y120	83.3	125	384	2	2
24000	480Y277	36.1	50	384		2
30000	208Y120	104.1	150	384	2.0	2
30000	480Y277	45.1	60	384		2
35000	208Y120	121.4	150	384	2	2
35000	480Y277	52.6	70	384		2
40000	208Y120	138.8	175	384	2	2
40000	480Y277	60.1	80	384		2
50000	208Y120	173.5	225	384	2	2
50000	480Y277	75.2	100	384	3	3
Maximum amps calculated at high charge full load initially after power failure. Recommended circuit breaker is rated at 1.25 times the maximum amps rounded up.						
70000	208Y120	242.9	300	480	3	3
70000	480Y277	105.2	150	480	or 4	4
80000	208Y120	277.6	350	480	5	5
80000	480Y277	120.3	150	480	or 4	4
100000	208Y120	347.0	500	480	4	4
100000	480Y277	150.4	200	480	or 5	5
128000	208Y120	444.1	600	480	7	7
128000	480Y277	192.5	250	480	5	5
160000	208Y120	555.2	700	480	9	9
160000	480Y277	240.6	300	480	6	6

* Consult factory for other options.
** Input currents are shown at high charge with full load rating per UL.
Normal running currents are considerably less.

Dimensions for A:

7kW and under

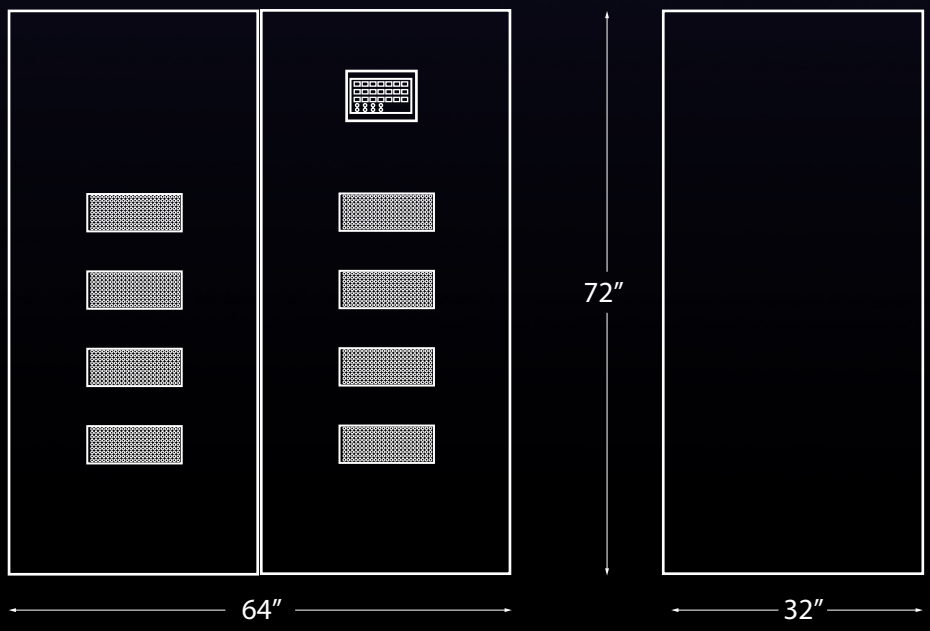
32”W x 72”H x 32”D



Dimensions for B:

Over 7kW

64”W x 72”H x 32”D



*Battery Cabinets 1-8 depending on unit size

*32” x 32” goes to 40/kW
64” is above 40kW

STL Series

Sine Wave

System Overview:

The STL Series Inverter provider efficient AC Emergency Power to operate all emergency lighting fixtures at “full-light” output providing superior dependability and security to commercial, industrial, Institutional environments.

The STL Series Emergency Lighting Inverter from IEP Systems is designed to provide power to emergency and other critical loads in the event of a power failure or brownout situation.

The line voltage output allows the remote fixtures to be located up to 2000 feet from the unit.
Power Factor: .9 leading to .9 lagging

STL series inverter is designed to occupy a minimum footprint and has a separate compartment for main electronics and for batteries.

The STL series is a rugged, modular emergency lighting inverter. Typical applications include all types of LED, fluorescent, incandescent, quartz re-strike, HID and low voltage lighting. The modular design and low MTTR (mean-time-to-repair) ensure easy maintenance. The STL is well suited for stairwell, hallway, and outdoor emergency egress lighting, large size office buildings and warehouses.

STL Series inverter employs premium Valve Regulated lead Acid (VRLA) batteries, designed with an expected service life of 10 years per battery manufacturer guidelines.

*VRLA do not need to have electrolyte added. Periodic checks, coupled with standard record keeping and maintenance of the inverter would ensure the longevity of the battery module.

Theory of Operation:

The STL is designed to power the emergency egress lighting at full brightness for 90 minutes. The system is installed between the switch gear and the emergency panel system will operate loads to .5 leading to .5 lagging . Upon failure of the normal power source to the connected lights, the STL will continue to power the emergency fixtures connected to it for a minimum of 90 minutes utilizing standard building lighting components. When the normal power is restored the STL will automatically switch the lighting fixtures back to the normal source and recharge the batteries so that they are ready for the next power outage.

Applications:

The STL Series Inverter will operate incandescent, fluorescent, HID, and LED lamps with power factor greater than .9.

*Self ballasted compact fluorescent and replacement LED screw in lamps may be used provided they have rated power factor of .9 or greater.
*we recommend that only Energy Star recognized compact fluorescent or LED lamps be used with this equipment.

Operating Parameters:

Run Time: minimum 90 minutes
Housing: Heavy duty steel construction finished in powder coat paint.

Environment:
Operating temperature: 32F (0C) – 104F (40C)
Altitude: 10,000 feet above sea level without derating
Storage temperature: -20 to 70 degrees C. Note – batteries will require frequent recharging if stored above 35 degrees C.

STL design will provide full rated VA output from .9 leading to .9 lagging power factor.
Loads outside of this power factor will reduce the total output of the unit depending on the VA at that power factor.

Order Information

STL	700	120	120		OPTIONS

STL	Capacity	AC Input Voltage	AC Output Voltage	RUNTIME	OPTIONS
STL Series Pure Sine Wave Lighting Inverter	3KW 5KW 6KW 8KW 10KW 15KW 20KW 24KW 30KW 35KW 40KW 50KW 70KW 80KW 100KW 128KW 160KW	120/208V 277/480V	208/120V 480/277V	(Other than 90 Minutes) R30 - 30 Minutes R120 - 120 Minutes	I - Inverter on Dry Form C Contact S - Summary Dry Form C Contacts P - Input Trip T - Output Trip (supervised) Alarm B - Battery Trip (Alarm) C - Circuit breakers (additional) Z - Seismic Mounting

Warranty

2YW - Factory Start-up & 2nd Year Electronics Warranty
5YW - 5-Year Electronics Warranty (Includes Start-up)
5YP - 5-Year Maintenance Plan, Start-up Included

*Consult factory for other configuration/options

*Battery Cabinets 1-8 depending on unit size

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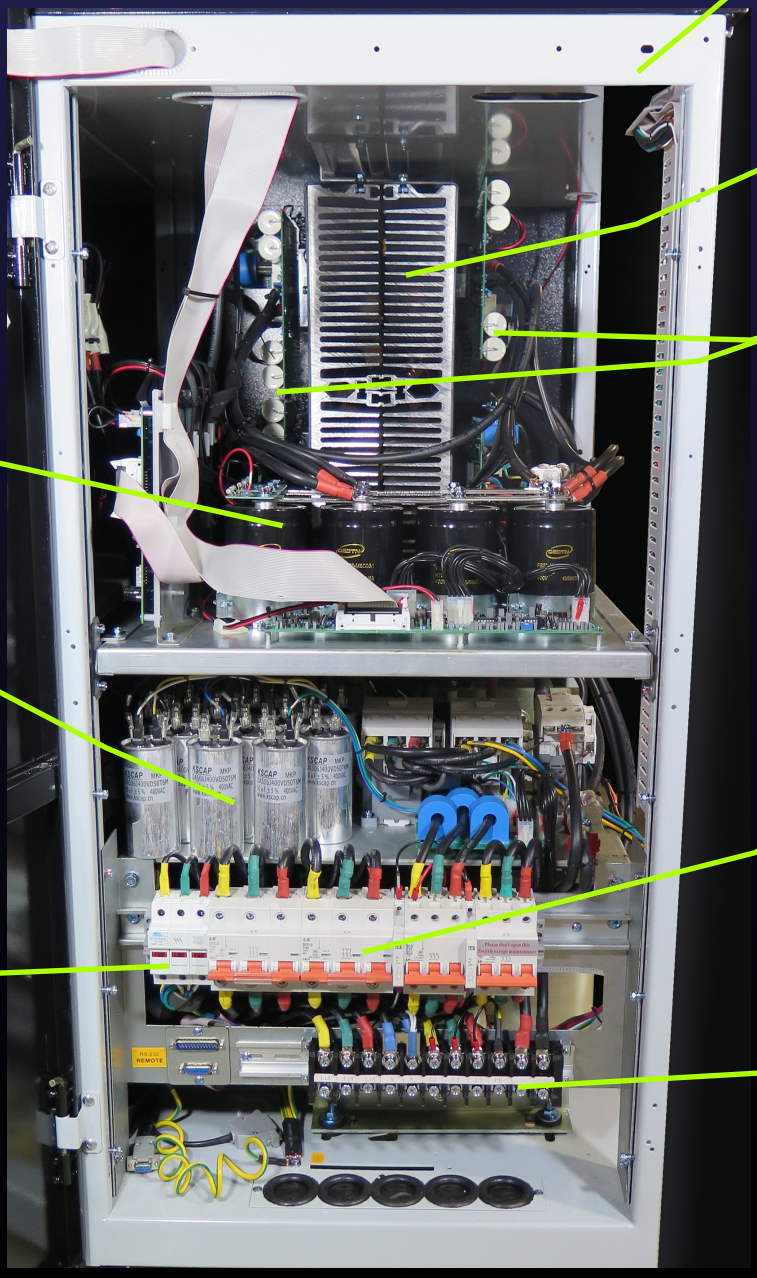
STL Series

Sine Wave

OVERVIEW:



Display Panel
Black powder coated paint

STL Series

Sine Wave

Operating Parameters:

Run Time: minimum 90 minutes
Housing: Heavy duty steel construction finished in powder coat paint.

Environment:
Operating temperature: 32F (0C) – 104F (40C)
Altitude: 10,000 feet above sea level without derating
Storage temperature: -20 to 70 degrees C. Note – batteries will require frequent recharging if stored above 35 degrees C. Battery life expectancy is based on an operating ambient temperature of 20-30 degrees C.

STL design will provide full rated VA output from .9 leading to .9 lagging power factor. Loads outside of this power factor will reduce the total output of the unit depending on the VA at that power factor. Additionally, universal, input voltage drivers operating at 277volts may require larger inverters because of inrush of driver parameters. r factor.

Options:

Suffix NOR - Normally off relay 1 required for every uprest of load Normally off relay required period put relay limited to 20Amp at 120v or 15Amps at 277V AC.
NOR - (coil voltage matches single phase input voltage of unit).
Suffix ITP – Input breaker trip alarm
Suffix OTP – Output breaker trip alarm, 1 per output breaker
Suffix BTP – Battery breaker trip alarm
Suffix OCB – Additional output circuit breakers (note 20 amp output breakers are standard unless otherwise specified.
Suffix R30 - Battery capacity of 30 minutes for when the system is used with a permanently installed emergency generator.
Suffix R120 – Battery capacity of 120 minutes (may require additional enclosures depending on the rating of the unit).
Suffix RS232 -

Standard features:

- All electronics are in 1 cabinet.
- Battery cabinets are modular.
- Heavy gauge cold-rolled steel construction finished in powder coat paint.
- IGBT technology, low THD with high reliability and high efficiency.
- MTTR of less than 30 minutes for any one component.
- ETL listed to UL 924, meets or exceeds the requirements of OSHA, NEC, NFPA and other codes
- Input breakers and output breakers standard features. Battery breakers in each battery cabinet.
- Two door access to electrical/electronic cabinet for ease of installation, wiring and maintenance.
- Front mounted meter panel for intuitive system status.
- Basic alarms for overload, overload shutdown, high temperature, near low battery and low battery shutdown.
- Bottom wiring channel.
- 97% efficiency on standby. Fan operation is dependent upon internal temperature and discharge condition to elongate fans' useful service life.

Specifications:

Input:
Voltage: 208Y/120 or 480Y/277 VAC 4 wire plus ground +/- 15%
Frequency: 60 Hz +/- 3 Hz
Protection: Circuit Breaker

Output:
Voltage: 208Y/120 or 480Y/277 VAC 4 wire plus ground
Frequency: 60 Hz +/- .5 Hz
THD: > 3% Linear load
Regulation: +/- 3% for 50% load change
Inverter overload: 110% for 5 minutes
Protection: Output Circuit Breaker

Battery:
Type: Premium 10 year design life Valve Regulated Lead Acid (VRLA)
Voltage: See chart for string voltage and number of strings
Protection: Battery circuit breaker

Power Rating:

Capacity: 3KW – 160KW Three phase output with latest PWM technology to provide the most advanced performance and reliability.
Input: 208V/120V or 480V/277*
Output: 208V/120V or 480V/277 VAC true on-line design
Efficiency:
>92% efficient at 100% linear load

Batteries:

Sealed, maintenance-free, lead calcium (AGM) batteries with10 year prorated warranty. The STL employs Smart Battery Monitoring System which is temperature compensated and maintains maximum run-time and battery life. Battery life is offset by combined temperature.

Electronics:

Microprocessor controlled; recharge and overcharge protection standard

Lamps and Loads:

Emergency power provides FULL LIGHT OUTPUT from all lamps and HID lighting for the entire run-time. STL Series Inverter operates fluorescent, CFL, incandescent, quartz, LED and other approved lamp types and loads.

Codes:

Listed to UL 924, NFPA 101, NFPA 70, NEC and OSHA

Cabinet:

Space saving small footprint Free Standing Indoor NEMA 1 enclosure with modular design enables flexible installation.

Protection:

Provides overload, surge and voltage protection. Surge protection against load surges as defined in ANSI/IEEE C62.45 category A and B.

Diagnostics and Maintenance:

STL Series On-board Monitoring System provides complete self checking capabilities and LED Indicator light Monitor. Informative advanced Metering Display and Alarms keep you in control of your emergency lighting environment 24/7. Automatically performs checking ensuring a safely lighted environment prior to an emergency Single point of testing instead of hundreds with battery packs.

Installation:

Modular design and small footprint allow easy installation in electrical closet or other convenient locations. Extended warranty available.

Warranty Options:

2YW - Factory Start-up & 2nd Year Electronics Warranty
5YW - 5-Year Electronics Warranty (Includes Start-up)
5YP - 5-Year Maintenance Plan, Start-up Included

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CONTACT US

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