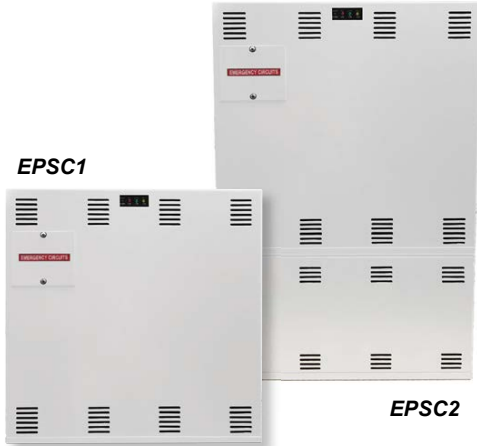


EPSC

Emergency Power System - Mid Size Inverter 375 - 600 Watts



EPSC1

EPSC2



PRODUCT SPECIFICATIONS

DESCRIPTION

The EPSC Mid Size Inverter provides sinusoidal emergency power of 375 - 600 Watts to any of our fixtures. Clean, sinusoidal AC power allows for the inverter to be remotely located up to 1,000 feet away from the controller fixtures. The EPSC Mid Size Inverter comes in recessed, surface, or ceiling mount variations, and are designed to install quick and easily. Our EPSC model supports Normally On, Normally Off, and switched operation, as well as the combination of any of these (see wiring diagram).

APPLICATIONS

The EPSC Mid Size inverter is the perfect for any application that requires emergency power, and requires full light output. Useful for hospitals, schools, prisons, restaurants, stores, warehouses, etc.

CONSTRUCTION

Constructed of heavy duty steel, and powder-coated white to provide scratch and corrosion resistance. Custom color finishes are available on request.

ELECTRICAL SPECIFICATIONS

120 - 277VAC input/output. 98% efficiency at full load. True Sinusoidal waveform emergency power, digitally controlled. Transfer time of power is under 1 second. Input/Output frequencies of 60Hz (±2%). Built in inverter fuse for output protection.

MOUNTING

The EPSC Mid Size Inverter is available in surface mounted, recessed, and T-Grid mounting options.

LISTINGS

UL and cUL Listed. Damp location rated.

WARRANTY

3-Year Limited Warranty. Complete warranty and terms located at www.aelnow.com/

ORDERING INFORMATION

Example: EPSC2-

Options Example: OCB2-SDT

Models:

MODEL NUMBER	INPUT/OUTPUT VOLTAGE	CAPACITY For 1 ¹ / ₂ Hrs. (Watts/VA)	SYSTEM WEIGHT		SYSTEM EFFICIENCY (Full Load)	NUMBER OF BATTERIES	BATTERY VOLTAGE (VDC)	BATTERY CURRENT (Amps)	AC INPUT CURRENT (MAX)		THERMAL OUTPUT (BTUs)	
			Lbs.	Kg.					120VAC	277VAC	On-Line	Emergency
EPSC1	120/277VAC	375/375	113	51.3	98%	5	60	7.3	3.43	1.49	11	205
EPSC2	120/277VAC	600/600	172	78.1	98%	8	96	7.1	5.50	2.38	15	275

* System weights shown include installed batteries

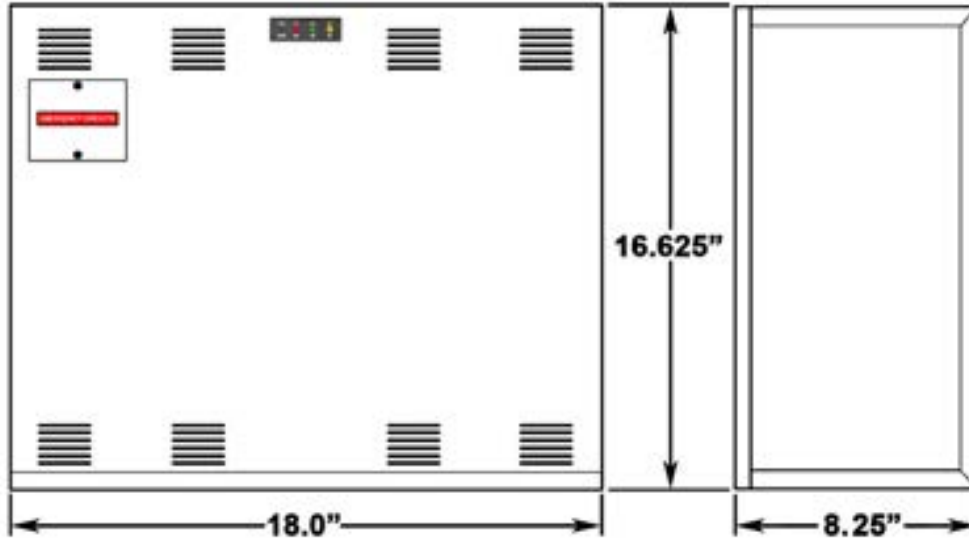
Options:

ADD SUFFIX	DESCRIPTION
-OCB1	One Output Breaker
-OCB2	Two Output Breakers
-ICB	Input Breaker
-SP	Special Housing Color (specify)
-4AO	Adjustable Output/Dimmer Bypass (3)
-4C	Four Output Circuit Switching (3)
-SDT	Self-Testing / Self-Diagnostics (3)

Some options may impact product UL listing. Consult factory.

DIMENSIONS

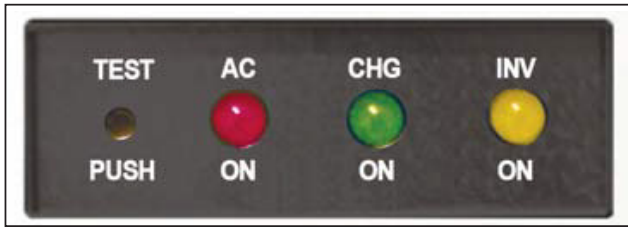
EPSC1



EPSC2



SYSTEM STATUS MONITORING PANEL



All of our Emergency Power Inverter systems provide a monitoring panel on the front of the unit to show operating status at all times. The panel provides a test switch for user initiated system tests and a 3-LED array that provides an intuitive visual indication of unit readiness.

OPERATION

Upon failure of the normal utility power the EPSC unit is automatically turned on by a solid-state switching circuit and provides a minimum of 90-minutes of emergency power to the connected load. Lumen output will be maintained at 100% of the lamp's rating throughout the entire duration.

A solid-state low voltage disconnect circuit is used to protect the battery from being severely damaged by a deep discharge. When normal utility power is restored, the unit switches the load back to normal utility operation and the fully automatic, temperature compensated, dual mode charger begins to restore the battery; bringing it to full charge within UL924 specified parameters. A brownout sensing circuit insures proper operation during "low line" conditions.

THE ADVANTAGES

Compared to traditional discrete emergency lighting units, the EPSC Series provides emergency illumination from a single power source resulting in lower maintenance overhead and routine testing expenses.

EPSC units lower installation costs by powering existing lighting fixtures during emergencies. And because connected fixtures are driven at full brilliancy, they provide far superior egress lighting and deliver improved occupant safety.

BATTERIES AND CHARGER

Battery

Battery: Sealed Lead Calcium (10 year life)

Battery Voltage: 60VDC for the EPSC1 model, and 96VDC for EPSC2

Runtime: 90-minutes standard - based on battery performance at (25°C). Other runtimes available, consult factory.

Battery Protection: Low Voltage Battery Disconnect protects the battery from being severely damaged by deep discharge during prolonged power failures.

DC Overload and Short Circuit Protection provided by a DC input breaker and fuse.

Charger

Charger Type: Fully automatic, temperature compensated, dual-mode charger

Power Consumption (Charger Only):
37W maximum (2.5W in standby) for EPSC1 models

56W maximum (5W in standby) for EPSC2 models

Recharge Duty Cycle: Meets UL924 requirements

Battery Circuit Breaker: Also used as battery isolator

Controls: Momentary test switch, AC-ON, Charge-ON and Inverter-ON LED indicator lights

Safety Circuitry: AC Lockout prevents battery discharge prior to initial unit power-up.

Brownout Protection automatically switches the unit to emergency mode when utility voltage is significantly reduced.

Environmental

Altitude: < 10,000 feet (3,000m) above sea level without derating.

Operating Temperature Range: 20°C to 30°C

NOTE: Optimum system performance between 20°C and 30°C; temperatures outside of this range will affect battery performance and life.

Relative Humidity: 95% non-condensing

SUGGESTED SPECIFICATIONS

An inverter system with sinusoidal output shall be supplied capable of powering any combination of lighting fixtures, including incandescent, fluorescent, induction and/or LED light sources without compatibility problems.

The system shall transfer in less than 1.0 second to reliably back up lighting fixtures without loss of illumination and operate any and all connected lighting fixtures at full lumen output during the complete 90-minute discharge cycle.

The input voltage shall be the same as the output voltage and shall be single phase 120/277 volts, 60 Hz. Output capacity will be (375W/375VA) / (600W/600VA) for a minimum duration of 90-minutes.

The design shall be a standby, off-line inverter with on-line efficiency of 98%; on-line double conversion UPS systems shall not be considered acceptable alternatives. EPSC System output shall be a PWM generated sine wave with less than 3% total harmonic distortion with

“Soft-Start” design reducing fixture inrush current. The system shall also provide short circuit and overload protection as standard.

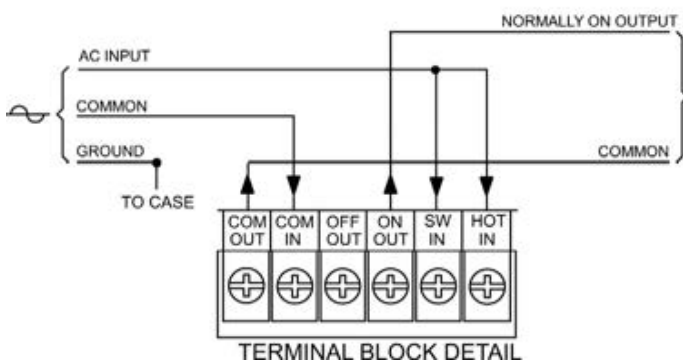
An intuitive three LED display shall provide system operational information at a glance and alert user to any malfunction in system performance. Authorized maintenance personnel shall have access to the system’s controls while being protected from any live exposed connections.

Protective devices shall include AC Line fuses, DC input breaker and a DC input fuse. The entire EPSC system, including batteries, shall be incorporated into compact cabinetry which shall have provisions for (surface, recessed or T-Grid) mounting.

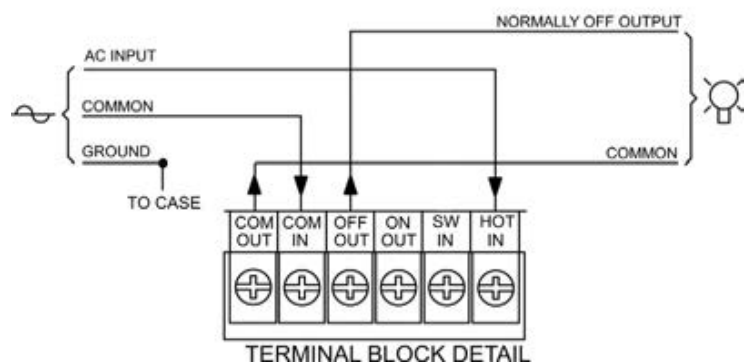
System shall be capable of providing up to 4 switch bypass circuits, adjustable output or 0 to10 volt dimmer bypass, remote test switch, and self-test/self-diagnostics, were necessary

System shall utilize a sealed lead calcium battery with a 10 year design life. The charger shall be temperature compensated, dual mode type, and recharge the batteries as per UL924 guidelines. Entire system shall be tested, approved, and labeled to UL924 Emergency Lighting and Power Systems standards. T-Grid models will be plenum rated.

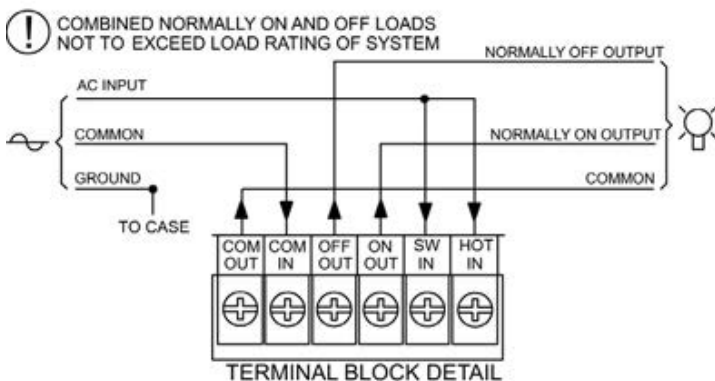
NORMALLY ON LOADS



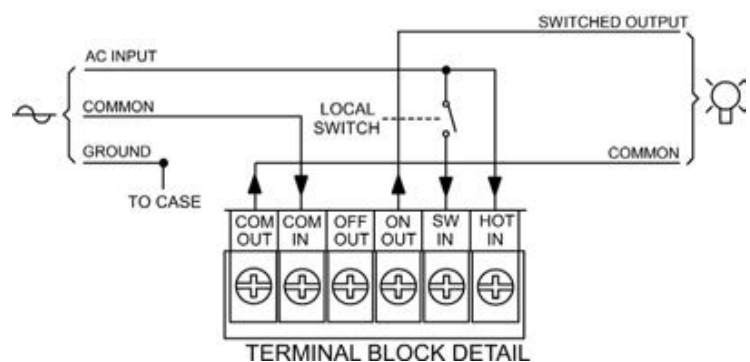
NORMALLY OFF LOADS



NORMALLY ON & OFF LOADS



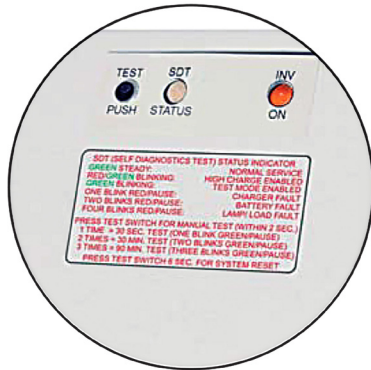
SWITCHED LOADS



Option: SDT

Self-Testing/Self-Diagnostic

DESCRIPTION



Advantage Environmental Lighting offers the self-testing and self-diagnostic (SDT) options in our EPSC series of inverters. This feature is becoming increasingly more important to architects, engineers and building owners as they become more aware of its tremendous value-added functions and safety-assuring technology. UL Listed to meet NFPA 101 for self-testing and self-diagnostic requirements.

The self-diagnostic function is factory preset and performs the following:

- Monitoring of battery, battery charger and connected loads.
- Self-testing and a 30-second battery discharge once every 30 days after normal utility power has been supplied for a minimum of 48 hours.
- Self-testing and a 30-minute battery discharge once every 180 days after normal utility power has been supplied for a minimum of 48 hours.
- Self-testing and a 90-minute battery discharge once every 365 days after normal utility power has been supplied for a minimum of 48 hours.

SERVICE INDICATION

LED INDICATOR	STATUS
GREEN Steady	Normal Service
RED/GREEN Blinking	High Charge Enabled
GREEN Blinking	Test mode Enabled
One Blink RED / Pause	Battery Charger Fault
Two Blinks RED / Pause	Battery Fault
Four Blinks RED / Pause	Lamp / Load Fault

MANUAL TESTING

ACTION	REACTION & LED INDICATION
Push test switch once (within 2 seconds)	30 Second test: One blink GREEN / Pause
Push test switch twice (within 2 seconds)	30 Minute test: Two blinks GREEN / Pause
Push test switch thrice (within 2 seconds)	90 Minute test: Three blinks GREEN / Pause
Push test switch and hold for 3 seconds	Cancels test
Push test switch and hold for 6 seconds	System reset

Option: 4AO

Adjustable Output Options



CONNECTIVITY

The 4AO option's emergency output circuits may be used to power dimmable LED lighting loads up to the maximum output capacity of the EPSC system. Additionally, the override circuits allow the user to select the power level the connected load will be operated at in emergency mode. Each override circuit is controlled by DIP switches which determine the emergency output power level. Emergency output can be set for 25%, 50%, 75% or 100% of maximum fixture illumination, independent of the local dimmer switch position. This level of flexibility provides a highly efficient use of the system output.

The outstanding features of the EPSC Series systems provide additional connectivity and flexibility features to the 4AO option. The system's universal output allows for the power-ing of 120VAC and/or 277VAC loads and because the system's output is a clean, sinusoidal waveform, load compatibility issues are never a problem.

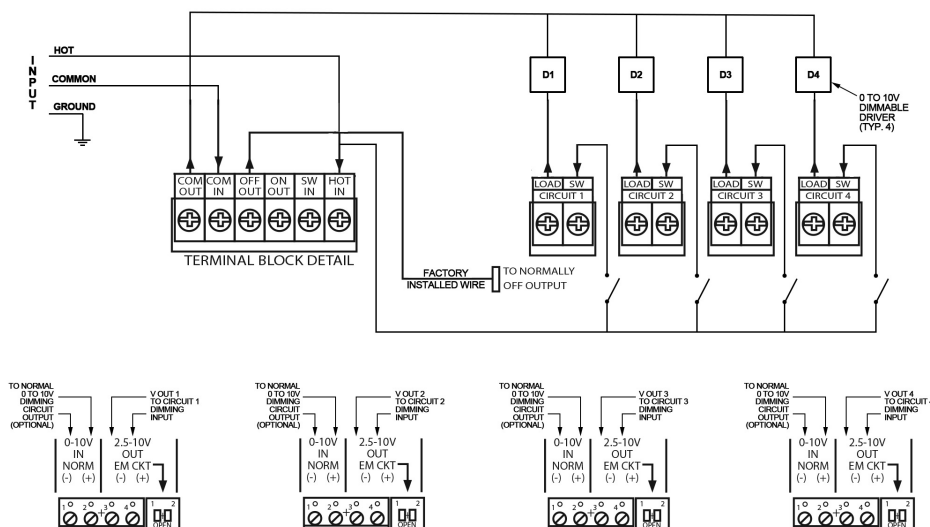
Additionally, provisions are provided so that emergency loads can be configured for normally-on, normally-off, combination and switched operation.

DESCRIPTION

- For use with 0 to 10 volt dimmable LED lighting fixture
- 4AO Option for use with EPSC model inverters provides four user-adjustable emergency output circuits
- Delivers 25%, 50%, 75% or 100% of full illumination levels to selected LED fixtures during emergency mode operation regardless of local dimmer control switch position
- Works with all standard 0 to 10 volt dimmer control
- Reduced emergency illumination levels means fewer total emergency inverter units required on jobs
- The 4AO Option for EPSC Series inverters eliminates the need for up to four bypass devices on 0 to 10 volt dimmer controlled fixtures
- All wiring is done within the EPSC inverter housing, no need for additional j-boxes
- Allows normally-on, normally-off, combination and switched wiring of connected loads
- System may be remotely mounted up to 1,000 feet
- The 4AO Option is available on EPSC inverter models with 375 to 600 watt capacity ratings

OPERATION

The 4AO Option is designed for use with the EPSC Series of inverter power systems. The option can bypass up to four 0 to 10 volt local dimmer switches as well as allow user-programmable setting of emergency output lighting levels. Four load terminals as well as four dip-switch sets for independent output settings are provided to allow 25%, 50%, 75% or 100% of nominal illumination output during power outages. This outstanding level of control allows for fewer EPSC power systems to be required in typical applications.



Option: 4C

Four Circuit, Local Switching Device Override Option



DESCRIPTION

- Provides capacity for four override control circuit
- Provides full power emergency output to connected loads regardless of local control switch position or operating status
- Works with most standard local control devices including wall switches, dimmers, timers, occupancy sensors and ambient light sensors.
- Ideal for use with incandescent, fluorescent or LED lighting! fixtures
- Eliminates the need for bypass devices or separate inverter for each switched load providing cost efficiency
- All wiring is done within the EPSC inverter housing, no need for additional j-boxes
- Allows normally-on, normally-off, combination and switched wiring of connected loads
- System may be remotely mounted up to 1,000 feet
- Models available from 55 to 600 watt capacity

OPERATION

The inverter power system's 4C option allows lighting fixtures or other load types on circuits controlled by local switching devices to be easily connected to and powered by the EPSC system during utility power outages. The 4C option provides four local switching device override circuits which, under emergency mode operating conditions, automatically disconnect the load side of the local control device(s) and connect the selected loads to the inverter output assuring normal operation of connected loads regardless of local control device switch operating status.

CONNECTIVITY

Any or all of the 4C option override circuits may be used to power lighting fixtures or other loads, up to the maximum output capacity of the system. The outstanding features of the EPSC systems provide additional connectivity and flexibility features to the 4C option. The system's universal output allows for the powering of 120VAC and/or 277VAC loads and because the system's output is a clean, sinusoidal waveform, load compatibility issues are never a problem. Additionally, provisions are provided so that emergency loads can be configured for normally-on, normally-off, combination along with switched operation.

