UNIVERSAL CENTRAL INVERTER

HPS - POWER INVERTER

375 - 600W, Universal Load Profile

Series HPS
REV #: HPS.05.23.01

PROJECT:

TYPE:

CATALOG #:

OVERVIEW

Mid-size electrical inverter systems for powering up to 375 to 600 watts of incandescent, fluorescent, induction or LED lighting loads. Pulse width modulated (PWM) output design provides clean, 60 Hz sinusoidal emergency power to fixtures up to 1000 feet away.

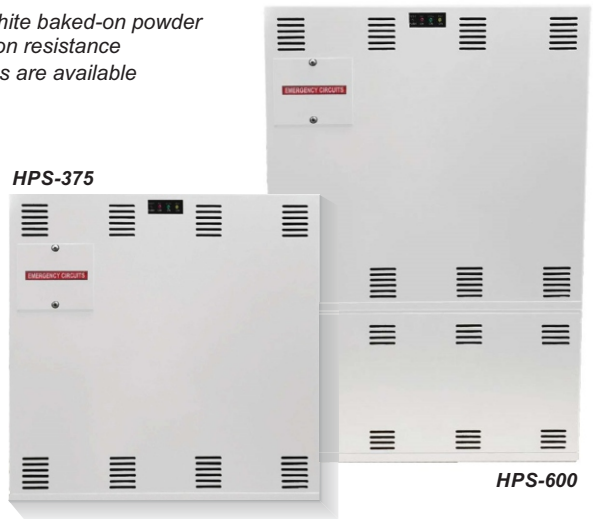
STANDARD

UL LISTED · DAMP · CALIFORNIA ENERGY COMMISSION COMPLIANT

OPTIONAL

SELF DIAGNOSTICS

- *Heavy-duty steel cabinet is finished in white baked-on powder coat paint, providing scratch and corrosion resistance*
- *Optional special color paint (-SP) finishes are available upon request*
- *All models are designed for fast, easy wall mounting*



HPS-375

HPS-600

FEATURES

- For powering incandescent, fluorescent, induction and LED fixtures*
- True sinusoidal output for maximum compatibility
- Universal 120/277VAC, 60Hz. Input/ Output
- Unit capacities up to 600 watts
- Soft-start design reduces fixture in-rush current
- Unit may be installed up to 1,000 feet from controlled fixture(s)
- Lumen output from fixture is 100% of nominal
- Unique design eliminates compatibility problems with LED drivers as well as fluorescent and induction ballasts
- Compatible with dimming ballasts
- Normally-ON and/or Normally-OFF load output
- Provisions for local switching capability - Always on during emergency conditions regardless of local switch position
- Emergency fixtures can be ON, OFF or SWITCHED
- Solid-state, line latched low voltage disconnect provides protection against battery deep discharge
- Long life, maintenance-free lead-calcium battery
- Momentary test switch
- AC-ON, Charge-ON and Inverter-ON LED indicators

** Consult factory for compatibility for other lamp types*

ELECTRICAL SPECIFICATIONS

Input

- Input Voltages: Dual 120 or 277VAC ±10% (User selectable with two jumper wires provided)
- Input Frequencies: 60Hz ±2%
- Input Surge Protection: Meets UL924
- Input Protection: Provided by Service Panel rated at 20 amps maximum

Output

- Output Voltages: 120 or 277VAC, 60Hz
- Efficiency: 98% at full rated load (line)
- Waveform: Digitally controlled sinusoidal
- Static Voltage: ±5% during battery discharge. 0-100% linear load
- Output Frequencies: 60Hz. ±0.3Hz during emergency cycle
- Output Distortion: Less than 3% THO (linear load)
- Transfer Time: Less than 1.0 second
- Load Power Factor Range: 0.88 Lead to 0.88 Lag
- Minimum Loading: 0% of rated system capacity
- Output Protection: Circuit breaker and overload shut down protection

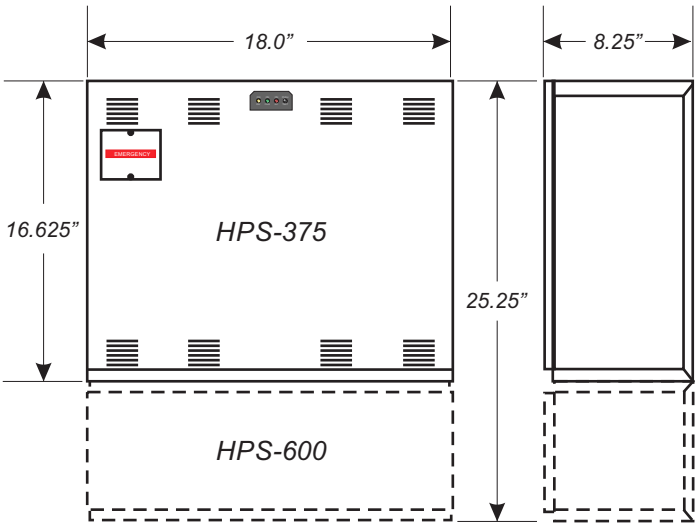
ORDERING INFORMATION *EXAMPLE:* HPS375-ICB-SDT

MODEL SERIES	POWER
HPS	375 WATTS
	600 WATTS

OPTIONS[1, 2]	
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 Diagnostics

[1] *Other options available. Consult factory.*
[2] *Some options may impact product UL listing.*
[3] *Not available together.*

UL LISTED



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GENERAL SPECIFICATIONS

MODEL	INPUT/ OUTPUT VOLTAGE	90 MIN CAPACITY WATTS/VA	TOTAL WEIGHT		EFFICIENCY (FULL LOAD)	TOTAL BATTERIES	BATT VOLTS (VDC)	BATT CURRENT	AC INPUT CURRENT (MAX)		THERMAL OUTPUT (BTU)		DIMENSIONS (IN.)		
			LBS.	KG					120V	277V	ONLINE	EMERGENCY	W	H	D
HPS375	120/277 VAC	375	113	51.3	98%	5	60	7.3	3.43	1.49	11	205	18	16.625	8.25
HPS600	120/277 VAC	600	172	78.1	98%	8	96	7.1	5.50	2.38	15	275	18	25.25	8.25

WARRANTY & LISTINGS

- Unit: (excluding lamps) Full coverage against defects in materials and workmanship for 3 years from date of shipment
- Battery: 3 years full warranty, plus an additional 7 years of pro-rata coverage
- All models are UL924 Listed and meet NFPA 101 Life Safety Code, NEC, OSHA, Local and State Codes
- UL Listed for damp locations (20 ° - 30 °C)
- Certified to CEC Under Title 20 regulations

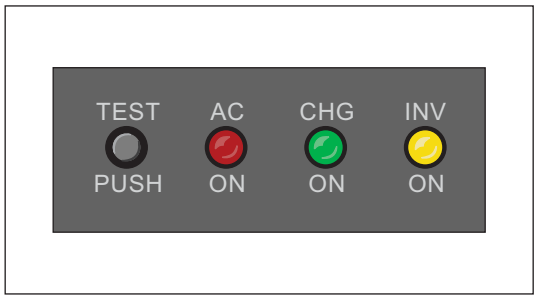
BATTERIES & CHARGER

BATTERIES

- **Battery:** Sealed Lead Calcium (10 year life)
- **Battery Voltages:** (HPS375) 60VDC, (HPS600) 96VDC
- **Runtime:** 90-minutes standard - based on battery performance at 25°C. *Consult factory for other runtime options*
- **Battery Protection:** Standard low-voltage disconnect protects the battery from damage during prolonged power failures. Reverse polarity, DC overload, and short circuit protection via DC input breaker and fuse.

CHARGER

- **Charger Type:** Fully automatic, temperature compensated, dual-mode charger
- **Power Consumption (charger only):** (HPS375) 2.5W Standby, 37W Max; (HPS600) 5W standby, 56W Max
- **Recharge duty cycle:** Meets UL924 standard
- **Battery Circuit Breaker:** Battery isolator
- **Controls:** Momentary test switch, AC-ON, Charge-ON and Inverter-ON LEDs
- **Safety:** AC lockout prevents battery discharge prior to initial power up. Brownout protection automatically activates emergency mode upon utility voltage reduction



All HPS systems provide a monitoring panel on the front of the unit to show operating status. This panel provides a test switch for user initiated system tests, and a three-LED array that provides an intuitive visual indication of unit readiness.

ENVIRONMENTAL

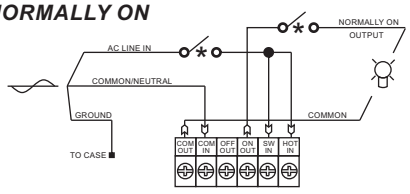
- **Altitude:** <10,000ft (3,000m) above sea level without derating
- **Operating Temp:** 20°C to 30°C **(Note:** temperatures outside this range will affect battery performance and life)
- **Relative Humidity:** 95% non-condensing

HPS ADVANTAGE

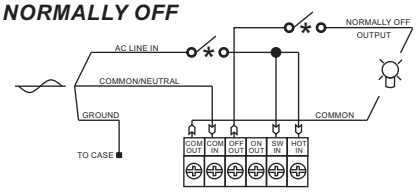
Compared to traditional, discrete emergency lighting units, the HPS Series provides emergency illumination from a single power source - resulting in less maintenance overhead and routine testing expenses. HPS units lower installation costs by powering existing light fixtures during an emergency. Connected fixtures are powered at full brilliancy for maximum egress lighting and occupant safety.

STANDARD WIRING DIAGRAMS

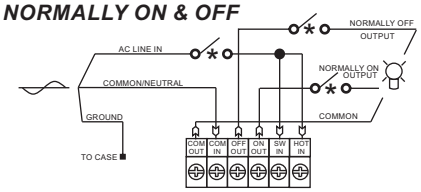
NORMALLY ON



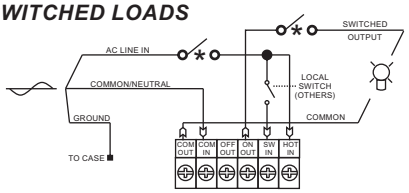
NORMALLY OFF



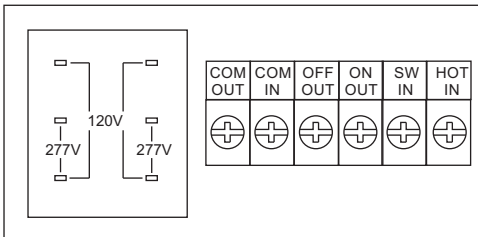
NORMALLY ON & OFF



SWITCHED LOADS



AC INPUT SELECTION



Note: Factory provided jumper wires are used for selecting the input/output voltage.

UNSWITCHED UTILITY INPUT (20A MAXIMUM)

LIGHTING LOAD

OPTIONAL DISCONNECT

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OPTIONAL ACCESSORIES

ADJUSTABLE OUTPUT — *OPTION -4AO*

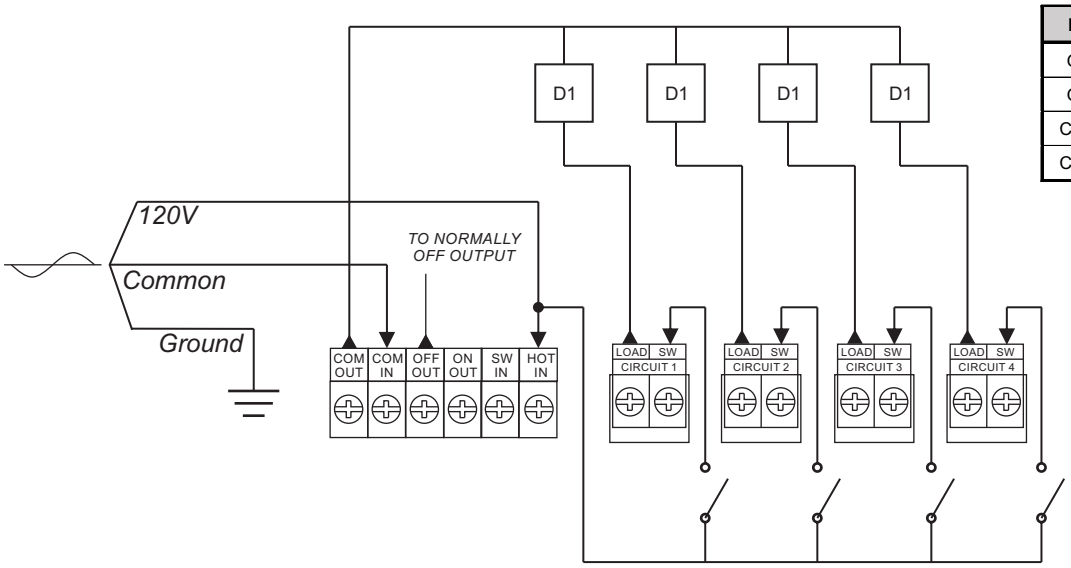
FEATURES

- For use with 0 to 10 volt dimmable LED Lighting circuits
- Provides four user-adjustable emergency output circuits to deliver 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 controls
- Reduced emergency illumination levels means fewer total emergency inverter units required on jobs
- Eliminates the need for up to four bypass devices on 0 to 10 volt dimmer controlled fixtures
- All wiring is done within the 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 all HPS inverter models - *not compatible with 4C option*

OPERATION

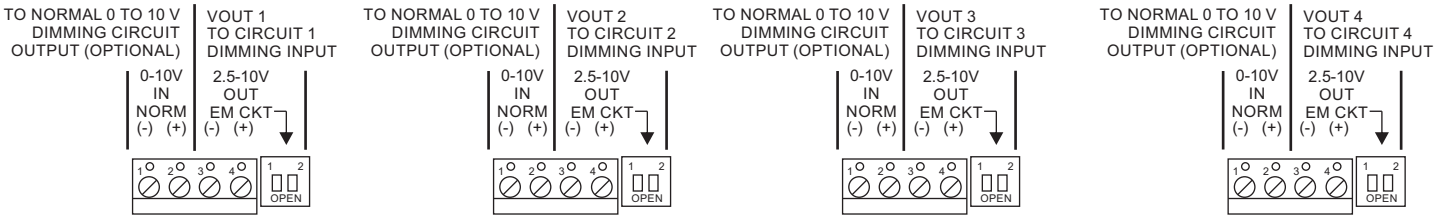
The 4AO Option is designed for use with the HPS Series of inverter power systems. The option will bypass four 0 to 10 volt local dimmer switches as well as allow user-programmable setting of emergency output lighting levels. Four load terminals as well as four dip-switch sets for independent output settings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

DIMMING OPTION WIRING - 120V OPERATION



DIMMING OPTION PROGRAMMING TABLE

POSITION 1	POSITION 2	VOUT
OPEN (OFF)	OPEN (OFF)	10.0 V
OPEN (OFF)	CLOSED (ON)	7.5 V
CLOSED (ON)	OPEN (OFF)	5.0 V
CLOSED (ON)	CLOSED (ON)	2.5 V



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Contact Signtex for layout assistance.
Code compliant emergency lighting layouts provided!
Specifications and dimensions subject to change without notice.

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OPTIONAL ACCESSORIES

FOUR-CIRCUIT LOCAL SWITCH OVERRIDE — *OPTION -4C*

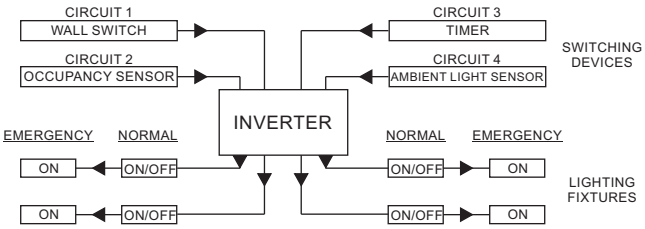
FEATURES

- Provides capacity for four override control circuits
- 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 inverters for each switched load providing cost efficiency
- All wiring is done within the LPS 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
- Available on all HPS models - *not compatible with 4AO option*

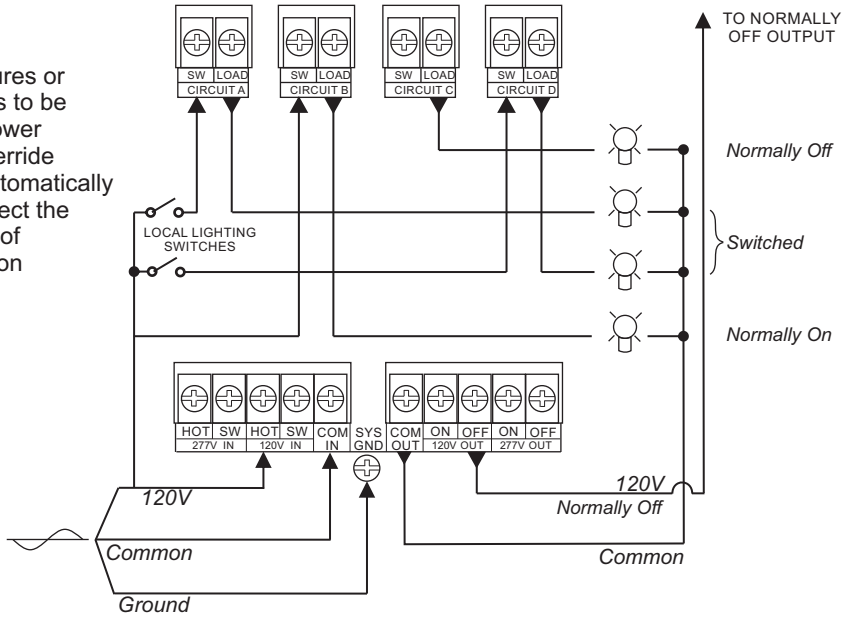
OPERATION

The HPS 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 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 position operating status.

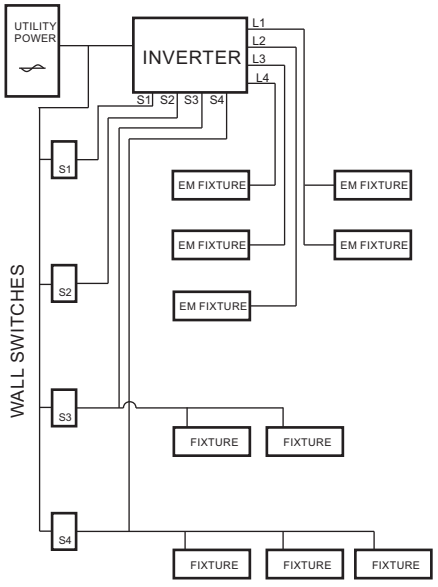
TYPICAL APPLICATIONS FOR 4C OPTION



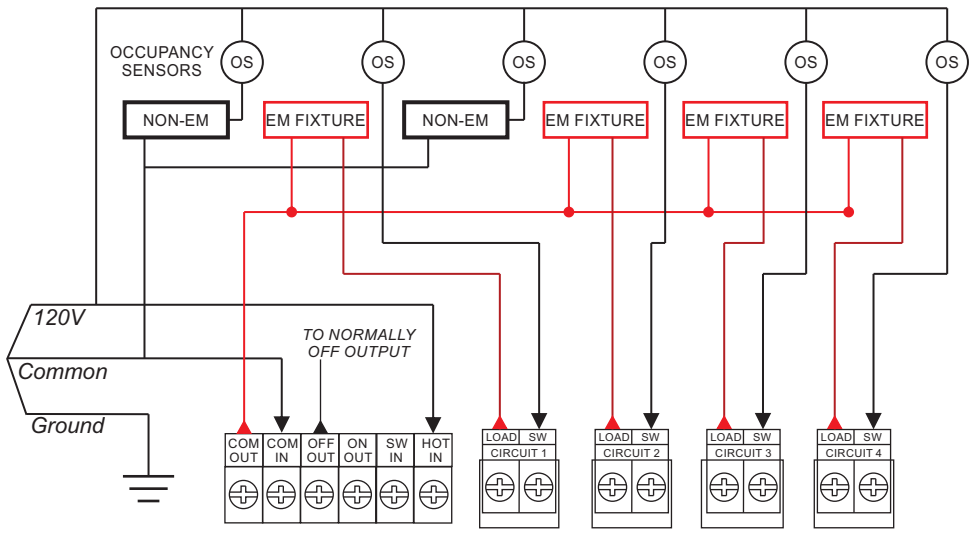
4C OPTION WIRING - 120V OPERATION



4C OPTION SCHEMATIC



4C OPTION LINE VOLTAGE SWITCHING



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OPTIONAL ACCESSORIES

SELF TESTING & SELF DIAGNOSTICS — *OPTION -SDT*

FUNCTIONS

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
Steady GREEN	Normal Service
Blinking RED/GREEN	High Charge Mode
Blinking GREEN	Test Mode
One RED blink	Battery Charger Fault
Two RED blinks	Battery Fault
Four RED blinks	Load Fault

MANUAL TESTING

ACTION	FUNCTION
Push test switch once	30 second Test – One GREEN blink
Double push test switch	30-minute Test – Two GREEN blinks
Triple push test switch	90-minute Test – Three GREEN blinks
Push and hold for 3 sec.	Cancel Test
Push and hold for 6 sec.	System Reset