

# VESTA PRO MAX (VSTPM)



Job: \_\_\_\_\_  
 Model: \_\_\_\_\_

Type: \_\_\_\_\_  
 Date: \_\_\_\_\_

## description

**VESTA PRO MAX** is a mid-size electrical inverter system for powering 750 to 1150W of LED, incandescent, fluorescent and induction lighting loads. Pulse width modulated output design provides clean, 60Hz sinusoidal emergency power to input side of the fixtures, thus eliminating any chance of incompatibility. All models are designed for fast and easy wall mounting.

## features

- For powering incandescent, fluorescent, induction and LED fixtures\*
- Sinusoidal output eliminates compatibility problems
- Universal 120/277VAC, 60Hz input and output
- Unit capacities from 750 to 1150W
- "Soft Start" design reduces inrush current to the fixture
- Unit may be installed up to 1000 ft from the controlled fixture(s)
- Lumen output from fixture is 100% of nominal
- Unique design eliminates compatibility problems with fixture power supplies (drivers, dimming and non-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 with other lamp types

## electrical input

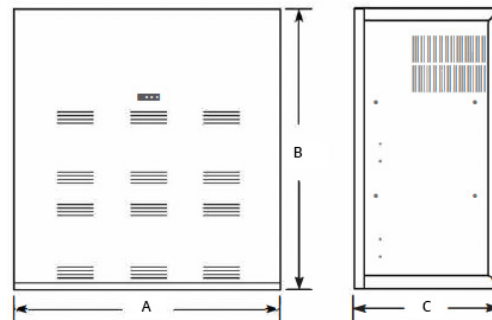
- Input Voltages: Dual 120 or 277VAC  $\pm$  10% (field selectable jumper wires)
- Input Frequencies: 60 Hz  $\mp$  2%
- Input Surge Protection: Meets UL924
- Input Protection: Provided by service panel rated at 20A max

## electrical output

- Output Voltages: 120 or 277VAC, 60 Hz
- Efficiency Rating: 98% at full rated load (line)
- Waveform: Sinusoidal (digitally controlled)
- Static Voltage:  $\pm$  5% during battery discharge, 0-100% linear load
- Output Frequencies: 60 Hz  $\pm$  0.3 Hz during emergency cycles
- Output Distortion: Less than 3% THD (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 & overload shut down protection



## dimensions



Series	A	B	C
VSTPM	22.4"	25.1"	9.2"

## housing

- Heavy duty steel cabinet is finished in white baked-on powder paint providing scratch and corrosion resistance
- Custom colors (CC) are optional

## ordering information

Model	Description	Options	
VSTPM750U	Inverter, 750W, 120/120V or 277/277V input/output	4CK <sup>1</sup> (4 output circuit switching)	CC (custom color)
VSTPM950U	Inverter, 950W, 120/120V or 277/277V input/output	AO <sup>1</sup> (adjustable output/dimmer bypass)	ICB <sup>2</sup> (input breaker)
VSTPM1150U	Inverter, 1150W, 120/120V or 277/277V input/output	AT (autotest)	OCB <sub>x</sub> (output breaker, x = 1-6 breakers)

NOTE 1: AO and 4C not available together

NOTE 2: Total number of circuit breakers not to exceed six

NOTE: Some product options may impact UL listing, consult factory

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## ■ mounting

VESTA PRO MAX models are designed for mounting to walls by means of keyhole slots provided in the back of the unit housing.

## ■ load compatibility

VESTA PRO MAX delivers clean, sinusoidal AC output that will operate incandescent lamps as well as all common fluorescent, induction and LED lamp types. Consult factory for compatibility with all other lamp types.

Lighting loads are driven at 100% output for the entire 90 minutes (minimum) emergency power cycle. This outstanding feature translates into greater occupant egress vision and safety.

## ■ wiring

Connection to an unswitched AC circuit is required by the NEC. Wiring access is provided through conduit knockouts in the unit housing.

## ■ warranty/ listings

- Unit: Full coverage against defects in materials and workmanship for 3 years from the 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 (68°F to 86°F / 20°C -30°C)
- CEC Title 20 certified
- FCC Part 15 Class A compliant

## ■ general specifications

Model	Input/Output Voltage	Capacity for 1-1/2 hrs W/ VA	System Weight		System Efficiency (Full Load)	No of Batteries	No of Battery Strings	Battery Voltage (VDC)	Battery Current (ADC)	AC Input Current (Max AMPS)		Thermal Output (BTUs)		Housing Dimensions		
			LBS	KG						120 VAC	277 VAC	Online	EM	L	H	D
VSTPM750U	120/277 VAC	750/750	190	86.2	98%	8	2	48	18.2	7.53	3.26	14	416	22.4"	25.1"	9.2"
VSTPM950U	120/277 VAC	950/950	222	100.7	98%	10	2	60	18.2	8.45	3.66	18	484	22.4"	25.1"	9.2"
VSTPM1150U	120/277 VAC	1150/1150	254	115.2	98%	12	2	72	18.2	10.2	4.42	22	535	22.4"	25.1"	9.2"

## ■ battery

**BATTERY:** Sealed lead calcium (10 year design life)

**BATTERY VOLTAGE:** 48VDC for 750W, 60VDC for 950W and 72VDC for 1150W models

**RUNTIME:** 90-minute standard (based on battery performance at 25°C)

**BATTERY PROTECTION:** Low voltage battery disconnect protects the battery from being severely damaged by deep discharge during prolonged power failures. Reverse polarity, 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):

- 53W maximum (4.3W in standby) for VSTPM750U model
- 63W maximum (5.4W in standby) for VSTPM950U model
- 73W maximum (6.7W in standby) for VSTPM1150U model

**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 ft (3,000 m) above sea level without de-rating

**OPERATING TEMPERATURE RANGE:** 68 to 86°F (20 to 30°C)

**NOTE:** Temperature outside of this range will affect battery performance and life

**RELATIVE HUMIDITY:** 95% non-condensing

## ■ operation

Upon failure of the normal utility power, the VESTA PRO MAX 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 the UL924 specified parameters.

## ■ system advantages

Compared to traditional discrete emergency lighting units, the VESTA PRO MAX provides emergency illumination from a single power source resulting in lower maintenance overhead and routine testing expenses. VESTA PRO MAX inverters lower installation costs by powering existing lighting fixtures during emergencies. And because connected fixtures are driven at full output, they provide far superior egress lighting and deliver improved occupant safety.

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## ■ system status monitoring panel



All **VESTA PRO MAX** 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.

## ■ improved aesthetics

The **VESTA PRO MAX** system's sinusoidal AC output design eliminates voltage drop and proximity concerns. This allows added flexibility in installation location as **VESTA PRO MAX** units can be installed hundreds of feet from the units they power. This means that the **VESTA PRO MAX** can be located conveniently out of sight in closets or utility rooms without interrupting architectural aesthetics.

In lighting applications, no special or additional emergency fixtures are necessary. Simply designate and connect existing lighting fixtures, either interior or exterior, to the **VESTA PRO MAX** for emergency operation, eliminating the need for exposed, stand-alone emergency luminaires.

## ■ suggested specifications

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

The system shall transfer power 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 120/277V, 60Hz. Output capacity will be (750W/750VA) or (950W/950VA) or (1150W/1150VA) 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. The **VESTA PRO MAX** 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.

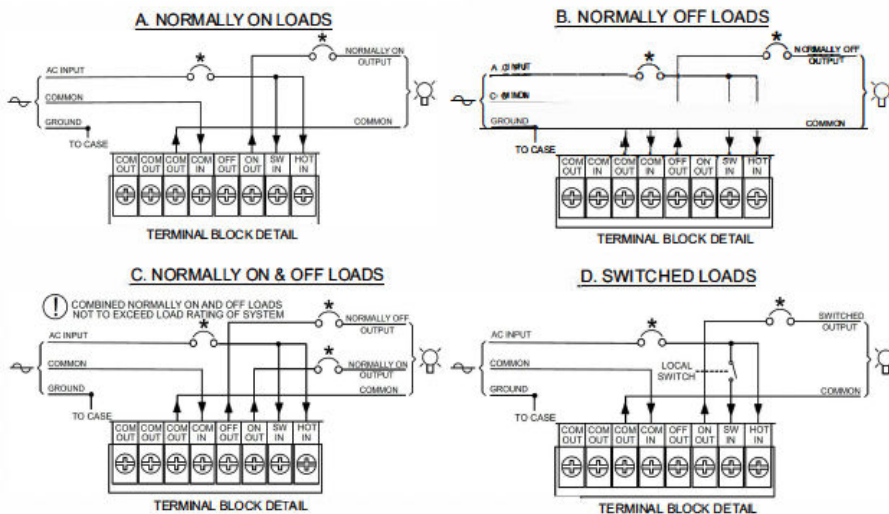
An intuitive three LED display shall provide system operational information at a glance and alert user to any malfunction in system performance. Authorized maintenance personnel shall have access to the system's controls while being protected from any live exposed connections.

Protective devices shall include AC line fuses, DC input breaker and a DC input fuse. The entire **VESTA PRO MAX** system, including batteries, shall be incorporated into compact cabinetry which shall have provisions for surface mounting.

System shall be capable of providing up to 4 switch bypass circuits, adjustable output with 2.5 to 10V dimmer bypass and autotest, when necessary.

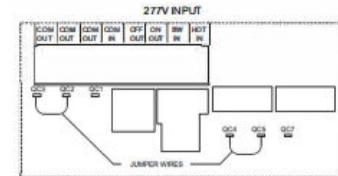
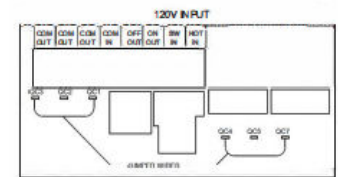
System shall utilize a sealed lead calcium battery with a 10 year design life. The charger shall be temperature compensated, dual mode type, and recharge the batteries per UL924 guidelines. Entire system shall be tested, approved, and labeled to UL924 Emergency Lighting and Power Systems standards.

## ■ standard wiring diagrams (details in install instructions)



**NOTES:**  
 INPUT SUPPLY FROM UNSWITCHED UTILITY RATED 20 AMPS MAXIMUM.  
 OUTPUT(S) TO LIGHTING LOADS  
 \* AVAILABLE WITHIN UNIT AS OPTION

## VOLTAGE SELECTION DETAIL



Note: Factory terminated jumper wires are provided to make user-selected input/output voltage connections