Tripp Lite
1111 W. 35th Street
Chicago, IL 60609 USA
Telephone: 773.869.1234
www.tripplite.com

PowerVerter® 1250W Ambulance/EMS Inverter/Charger with 2 Outlets

MODEL NUMBER: **EMS1250UL**



Description

Tripp Lite's EMS1250UL inverter with integrated charging system provides automatic, uninterruptible DC-to-AC power for critical on-board equipment. Ideal for installation by ambulance/EMS vehicle manufacturers, dealer or EMS service for OEM, replacements and upgrades. Supplies up to 1250 watts of continuous 120V AC power to 2 AC outlets from any 12V battery or automotive DC source. When AC cable is connected to a shore power source, commercial power passes through to connected equipment and the battery set is recharged via 3 stage, 14/55 amp selectable charging system. This unit can also function as a UPS system, responding to blackouts and voltage fluctuations with a near instantaneous automatic transfer to battery-derived AC output. Convenient Anderson DC input quick connector on the unit with extra Anderson DC input connector included in the box (user supplies batteries and cabling). Reliable large transformer design with efficient PWM sine wave output and frequency control powers resistive electronic loads or large inductive motors, compressors and other items with high current needs on startup. Included APSRM4 wired remote power switch with full status LEDs provides remote power inverter on/off switching and continuous status information (APSRM4 included). Supports an unlimited amount of runtime with any number of user-supplied batteries connected. Highly adaptable to a variety of applications and site conditions with adjustable charger settings for wet/gel battery types and selectable line to battery power transfer voltages. Includes AC input surge suppression. Includes hospital grade plug and outlets with GFI (ground fault interrupter) protection. TUV tested to UL458 (mobile inverter) and CAN/CSA-C22.2 No. 107.1-01. Meets GSA ambulance specification KKK-A-1822.

NOTE: To protect against high current draw that may occur during inverter failure, a fuse link rated at 200a should be positioned no more than 18" from the EMS1250UL's battery in the positive line.

Features

- EMS1250UL serves as an automotive or stationary DC-to-AC inverter with automatic line-to-battery transfer and integrated battery charger
- Supports 120V AC output from a 120V AC line power source or 12V DC battery source

Highlights

- 12V DC or 120VAC input; 120V AC output; 2 NEMA 5-15R hospital-grade outlets
- 1250 watts continuous, 1875 watts OverPower™ and 2500 watts DoubleBoost™ inverter output
- 3 stage, 14/55 amp selectable wet/dry cell battery charger
- Auto Transfer Switching option for battery backup / UPS operation - includes wired APSRM4 remote control switch
- Tested to vehicular inverter standards UL458 (USA) and CSA-C22.2 No. 107.1-01 (Canada). Meets GSA Ambulance Specification KKK-A-1822
- Hospital-grade AC plug and GFCI outlets; Anderson quick connect DC wiring terminals
- Meets OSHA requirements

Applications

- Versatile inverter/charger system with auto-transfer switching serves as an automotive inverter for EMS applications (ambulance, emergency or police vehicles); a standalone alternative power source for backup power operation and as an uninterruptible power supply (UPS) for items compatible with a 16.6 millisecond transfer time.

Package Includes

- EMS1250UL Inverter/Charger
- Instruction manual with warranty information
- Wired Remote Switch with full LED status indicators (model

- 16.6 millisecond automatic transfer between line and battery power supports UPS protection during blackouts and voltage fluctuations for equipment compatible with a one cycle transfer time
- 1250 watts continuous AC output in inverter mode, 1440 watts continuous AC output in AC mode
- Double Boost™ inverter output supports momentary startup loads up to 200% of the continuous rating for up to 10 seconds
- OverPower™ inverter output supports longer duration overloads to 150% for 1-60 minutes under ideal battery and temperature conditions. (For best results, utilize OverPower usage for as short of a duration as possible, ensure battery bank and cabling is able to provide full nominal DC voltage under load and allow inverter/charger to fully cool before and after OverPower usage.)
- 3 stage, selectable 14/55 amp battery charger with adjustable settings for wet/gel battery types offers fast, reliable battery recharging
- Anderson quick connect DC wiring terminals safely accept input from attached battery bank
- Protected hardwire output passes 120V line power or inverter output through to connected equipment
- Reliability enhanced large-transformer design tested to UL (USA) and CSA (Canada) standards
- Moisture-resistant construction enables vehicular or marine operation in high humidity environments
- 3 position operating mode switch supports "AUTO" mode to enable automatic transfer between DC and AC modes, CHARGE-ONLY to maintain a full battery charge when AC is present without auto transfer and SYSTEM OFF settings
- Set of six front panel LEDs display AC/DC operational modes, overload status, DC voltage level, shutdown status and system fault status
- Set of 4 configuration dipswitches support wet/gel battery charging profiles, adjustable 135/145V high voltage auto transfer during overvoltages and selectable 75/85/95/105V AC low voltage auto transfer during brownouts
- Set of 4 additional configuration dipswitches support 4 levels of charger limiting relative to output load size, a battery equalization program and battery charger low/high/off settings
- Resettable 12A charger AC input breaker and resettable 12A AC output breaker and automatic 2 speed cooling fan protect the inverter from load and temperature related failures
- Grounding lug properly connects the inverter/charger system to earth ground or vehicle grounding system
- Automatic overload and thermal shutoff safely turns off inverter as excessive loads or overheating conditions develop
- Front panel remote control connector enables remote off/on switching (APSRM4 remote control switch with status LED display and 50 ft cable included). APSRM4 accessory also includes user configurable jacks to support inverter shutoff or startup as a vehicle ignition is engaged
- Load sensing control dial enables adjustable load threshold required to automatically turn the inverter on and off in DC mode as load conditions change

APSRM4)

- 2 Anderson DC connectors (1 on the unit and 1 included in the box)

Specifications

OVERVIEW	
Intended Application	EMS/Ambulance
OUTPUT	
Frequency compatibility	60 Hz
Output watts	1250
Continuous output capacity (watts)	1250
Peak output capacity (watts)	2500
Output nominal voltage	120V
Output voltage regulation	LINE POWER (AC): Maintains 120V nominal sine wave output from line power source. INVERTER POWER (AC): Maintains PWM sine wave output voltage of 120 V AC (+/-5%).

Output frequency regulation	60 Hz (+/- 0.3 Hz)
Overload protection	Includes 12A input breaker dedicated to the charging system and 12A output breaker for AC output loads
Outlet quantity / type	2 NEMA 5-15R
Outlet details	2 Hospital-Grade GFCI duplex outlets
INPUT	
Nominal Input Voltage(s) Supported	120V AC
Recommended Electrical Service	DC INPUT: Requires 12VDC input source capable of delivering 127A for the required duration (when used at full continuous capacity - DC requirements increase during Over-Power and Double-Boost operation). For automotive applications, professional hardwire
Maximum input amps / watts	DC INPUT: Full continuous load - 127A at 12VDC. AC INPUT: 32 amps at 120VAC with full inverter and charger load (11 A max charger-only / combined input load to support charger and AC output is automatically controllable to 66%-33%-0% based on AC output lo
Input connection type	DC INPUT: 175A Anderson DC connector. AC INPUT: NEMA 5-15P hospital-grade input plug
Voltage compatibility (VAC)	120
Voltage compatibility (VDC)	12
BATTERY	
Expandable battery runtime	Runtime is expandable with any number of user supplied wet or gel type batteries
DC system voltage (VDC)	12
Battery charge	14A/55A (selectable)
LEDS ALARMS & SWITCHES	
Switches	3 position on/off/remote switch enables simple on/off power control plus "auto/remote" setting that enables distant on/off control of the inverter system when used in conjunction with included External switch for wired remote control of APS unit APSRM4 ac
Front panel LEDs	Set of 6 LEDs offer continuous status information on load percentage (6 levels reported) and battery charge level (7 levels reported). See manual for sequences.
SURGE / NOISE SUPPRESSION	
AC suppression joule rating	760
PHYSICAL	
Shipping Dimensions (HWD/in)	12.5 x 11 x 10.75
Shipping Dimensions (HWD/cm)	21.75 x 27.94 x 27.31
Shipping weight (lbs)	24.8
Shipping weight (kg)	11.2
Unit Dimensions (HWD/in)	7 x 8.75 x 9
Unit Dimensions (HWD/cm)	17.78 x 22.23 x 22.86
Unit weight (lbs)	23.2

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Unit weight (kg)	10.5
Cooling method	Multi-speed fan
Material of construction	Polycarbonate
Style	Heavy-duty with built-in battery charger
Form factors supported	Mounting slots enable permanent placement of inverter on any horizontal surface (see manual for additional mounting information)
ENVIRONMENTAL	
Relative Humidity	0-95% non-condensing
LINE / BATTERY TRANSFER	
Transfer time from line power to battery mode	16.6 milliseconds (typical - compatible with many computers - verify transfer time compatibility of loads for UPS applications)
Low voltage transfer to battery power	In AC "auto" mode, inverter/charger switches to battery mode as line voltage drops to 75V (user adjustable to 85, 95, 105V - see manual)
High voltage transfer to battery power	In AC "auto" mode, inverter/charger switches to battery mode as line voltage increases to 145V
SPECIAL FEATURES	
Appearance	Attractive gray color scheme
Load Sensing	Optional load sense function enables automatic inverter shutoff and startup as connected equipment is powered off and on. Front panel load sense potentiometer can be set to shutoff or turn on inverter power in response to loads of any level, up to 150 watts.
Remote control capability	Yes
TVSS grounding	Yes, includes front panel grounding lug
CERTIFICATIONS	
Certifications	Tested to UL458 (USA) and CAN/CSA-C22.2 No. 107.1-01 (Canada) Also meets KKK-A-1822 (ambulance).
WARRANTY	
Product Warranty Period (U.S. & Canada)	30-month limited warranty
Product Warranty Period (International)	1-year limited warranty
Product Warranty Period (Mexico)	30-month limited warranty
Product Warranty Period (Puerto Rico)	30-month limited warranty

Related Items

Optional Products

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Model Number	Description	Qty.
APSRM4	Remote Control Module - for Tripp Lite Inverters and Inverter/Chargers	1
BP-260	Ideal battery housing for use with Tripp Lite PowerVerter APS inverter/charger systems with a 12 or 24V DC system voltage.	1
98-121	12V DC Sealed, Maintenance-Free Battery	1

More information, including related products, owner's manuals, and additional technical specifications, can be found online at:
http://www.tripplite.com/sku/EMS1250UL.

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