Tripp Lite
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1000W PowerVerter RV Inverter/Charger with Hardwire Input/Output

MODEL NUMBER: **RV1012ULHW**

Highlights

- 12V DC or 120V AC input; 120V AC output (hardwired)
- 1000 watts continuous, 1500 watts OverPower™ and 2000 watts DoubleBoost™ inverter output
- 3 stage, 14/55 amp selectable wet/dry cell battery charger
- Built-in Isobar® premium AC surge protection and Auto Transfer Switching option for battery backup / UPS operation
- Tested to power inverter standards UL458 (USA) and CSA (Canada)
- High reliability large-transformer design with protected DC and AC wiring terminals

Applications

- Versatile inverter/charger system with auto-transfer switching serves as an automotive inverter for RVs, over-the-road trucking, conversion vans and fleet service vehicles; a standalone alternative power source for off-grid, alternative energy or export applications and as an uninterruptible power supply (UPS) for items compatible with a 16.6 millisecond transfer time.

Package Includes

- RV1012ULHW Inverter/Charger
- Instruction manual with warranty information

Description

Tripp Lite's RV1012ULHW Inverter/Charger is the quiet alternative to gas generators - with no fumes, fuel or noise to deal with! It provides equipment with utility- or generator-supplied AC electricity filtered through premium ISOBAR surge protection. This DC-to-AC inverter with automatic line-to-battery transfer and integrated charging system serves as an extended run UPS, a standalone power source or an automotive inverter suitable for rugged RV applications. Supplies up to 1000 watts of continuous 120V AC power from any 12V DC battery or automotive DC source. OverPower TM inverter output feature temporarily provides up to 150% of the continuous output for 1-60 minutes, and DoubleBoost TM inverter output feature delivers up to 200% of the continuous output for up to 10 seconds, providing the extra power needed to cold start heavy-duty tools and motorized equipment. When hardwire AC input is energized, commercial power passes through to connected equipment and the battery set is recharged via 3 stage, selectable 14/55 amp charging system. In UPS mode, the APS system responds to blackouts and voltage fluctuations with a near instantaneous automatic transfer to battery-derived AC output. Includes a set of high current DC input terminals for simple installation (user supplies batteries and cabling - see owner's manual for recommendations). Passes sine wave utility or generator power during battery charging and UPS line power operation, plus efficient PWM sine wave AC output in inverter and UPS backup modes. Reliable large transformer design, with frequency control powers resistive electronic loads or large inductive motors, compressors and other items with high current needs on startup. Optional APSRM4 wired remote power switch with full status LEDs provides remote power inverter on/off switching and continuous status information (APSRM4 sold separately). 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.

NOTE: To protect against high current draw that may occur during inverter failure, a fuse link rated at 175a should be positioned no more than 18" from the RV1012ULHW's battery in the positive line.

Features

- RV1012ULHW 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
- 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
- 1000 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
- Protected hardwire bolt-down input lugs safely accept heavy gauge input wiring 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 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 (requires APSRM4 switch accessory). Optional 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
- Includes battery temperature sensor with 20 foot cable to prolong battery life by adjusting the charge level based on battery temperature
- Automatic Generator Starter jack enables user configuration of automatic generator startup as inverter batteries drop to 11.5VDC and generator shutoff as inverter batteries are recharged to 14.1VDC

Specifications

OVERVIEW	
Style	Heavy-duty with built-in battery charger
OUTPUT	
Frequency Compatibility	60 Hz
Output Receptacles	Hardwire
Output (Watts)	1000
Continuous Output Capacity (Watts)	1000

Peak Output Capacity (Watts)	2000
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
INPUT	
Nominal Input Voltage(s) Supported	120V AC
Recommended Electrical Service	DC INPUT: Requires 12V DC input source capable of delivering 95A 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 - 95A at 12V DC. AC INPUT: 20 amps at 120V AC with full inverter and charger load (12A 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: Set of 2 DC bolt-down terminals. AC INPUT: hardwire
Input Cord Length Details	DC INPUT: User supplies cabling. 4 gauge or larger (see manual). AC INPUT: hardwire
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 Pack Accessory (Optional)	98-121 sealed lead acid battery (optional)
Battery Charge	14A / 55A (selectable)
LVC (Low Voltage Cut-Off)	10V DC +/-3%
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 APSRM4 accessory (sold separately) in inverter mode. In AC uninterruptible power mode, auto/remote setting enables automatic transfer from line power to battery power, maintaining continuous AC power to connected loads.
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	450
PHYSICAL	
Shipping Dimensions (hwd / in.)	13 x 14.75 x 21.5
Shipping Dimensions (hwd / cm)	33.02 x 37.47 x 54.61

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Shipping Weight (lbs.)	31.2
Shipping Weight (kg)	14.15
Unit Dimensions (hwd / in.)	7 x 10.5 x 16.25
Unit Dimensions (hwd / cm)	17.78 x 26.67 x 41.28
Unit Weight (lbs.)	27
Unit Weight (kg)	12.25
Cooling Method	Multi-speed fan
Material of Construction	Polycarbonate
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 (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 135V (user adjustable to 145 - see manual)
SPECIAL FEATURES	
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
CERTIFICATIONS	
Certifications	Tested to UL458 (USA) and CSA (Canada)
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

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Specifications are subject to change without notice. Photos may differ slightly from final products.

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