

PowerVerter APS Inverter/Charger

with Auto-Transfer Switching



Model #: APS2012

- ▶ 12V DC or 120V AC input; 120V AC output (hardwired)
- ▶ 2000 watts continuous, 3000 watts OverPower™ and 4000 watts DoubleBoost™ inverter output (see specifications)
- ▶ 3 stage, 25/100 amp selectable wet/dry cell battery charger
- ▶ Auto Transfer Switching option for battery backup / UPS operation
- ▶ Reliability enhanced large-transformer design with protected DC and AC wiring terminals

DESCRIPTION

Tripp Lite's APS2012 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. Supplies up to 2000 watts of continuous 120V AC power from any 12V battery or automotive DC source. OverPower™ inverter output feature temporarily provides up to 150% of the continuous output for 1-60 minutes, and DoubleBoost™ 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, 25/100 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 separate). 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.

KEY BUYING POINTS

- APS2012 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
- Supports 120V AC output from a 120V AC 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
- 2000 watts continuous AC output in inverter mode, 2400 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 (see specification chart)
- 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 25/100 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 with secure mounting flanges and protected DC wiring terminals
- 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 dip switches 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 dip switches support 4 levels of charger limiting relative to output load size, a battery equalization program and battery charger low / high settings

- Resettable 25A charger AC input breaker and resettable 20A 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

TYPICAL 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.

OPTIONS & ACCESSORIES

- 98-121: 12 volt / 75 amp-hour battery
- BP260: Battery cabinet that holds two 98-121 batteries; order 98-121 batteries separately
- APSRM4: Wired Remote Switch controls the inverter/charger output power; 50 ft. cord; diagnostic LEDs; ignition interlock power control

PACKAGE INCLUDES

- APS2012 Inverter/Charger
- Instruction manual with warranty information

COMPLETE SPECIFICATIONS

SYSTEM OVERVIEW

System overview:	Inverter / charger system with automatic transfer switching between DC and AC modes
Voltage compatibility:	12V DC / 120V AC
Frequency compatibility:	60 Hz

OUTPUT

Output watt capacity (watts):	INVERTER MODE - 2000 watts continuous, Double Boost™ rated to 4000 watts peak (up to 10 seconds). Overpower™ rating supports overloads to 3000 watts for up to 15 seconds prior to inverter shutoff. AC / CHARGER MODE - 2400 watts continuous.
Output nominal voltage:	AC OUTPUT: 120V AC nominal, DC CHARGER OUTPUT (DC): 12V DC nominal (see manual for detailed information on adjustable charger settings for wet/gel battery types)
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)
Outlet quantity / type:	Hardwire AC output
Overload protection:	Includes 25A input breaker dedicated to the charging system and 20A output breaker for AC output loads

INPUT

Maximum input amps / watts:	DC INPUT: Full continuous load - 192A at 12V DC. AC INPUT: 38 amps at 120V AC with full inverter and charger load (21A max charger-only / combined input load to support charger and AC output is automatically controllable to 66%-33%-0% based on AC output loading using the charger limiting set points - see manual for setting instructions)
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Input connection type:	DC INPUT: Set of 2 DC bolt-down terminals. AC INPUT: Hardwire via built in junction box with cover plate
Input cord length:	DC INPUT: User supplies cabling. 4 gauge or larger (see manual). AC INPUT: user supplies hardwire input cabling
Recommended electrical service:	DC INPUT: Requires 12V DC input source capable of delivering 192A for the required duration (when used at full continuous capacity - DC requirements increase during OverPower™ and DoubleBoost™ operation). For automotive applications, professional hardwire installation with 400A minimum battery system fusing is recommended.

BATTERY

DC system voltage:	DC input operating range 10-15V DC.
Battery recharge rate:	3 stage, selectable 25/100 amp battery charger with adjustable settings for wet/gel battery types (see manual for more charger information)
Expandable battery runtime:	Runtime is expandable with any number of user supplied wet or gel type batteries

LEDS ALARMS & SWITCHES

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.
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 optional APSRM4 accessory when used in inverter mode. In AC uninterruptible power mode, "auto/remote" setting enables automatic transfer from line power to battery power - to maintain continuous AC power to connected loads.

SURGE / NOISE SUPPRESSION

AC surge suppression:	600 joules
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PHYSICAL

Shipping weight (lbs):	43.8
Shipping weight (kg):	19.9
Unit weight (lbs):	39.6
Unit weight (kg):	18.0
Unit Dimensions (HWD/in):	7.25 x 8.5 x 16.25
Unit Dimensions (HWD/cm):	18.4 x 21.6 x 41.3
Shipping Dimensions (HWD/in):	13.5 x 15 x 21.5
Shipping Dimensions (HWD/cm):	34.3 x 38.1 x 54.6
Material of construction:	Polycarbonate
Form factors supported:	Mounting slots enable permanent placement of inverter on any horizontal surface (see manual for additional mounting information)
Cooling method:	Multi-speed fan

ENVIRONMENTAL

Operating Temperature:	32-104 Fahrenheit / 0-40 Celcius
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, servers and networking equipment - 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)

WARRANTY

Product warranty: 1 year (Outside the U.S. and Canada, call for warranty information)

SPECIAL FEATURES

Appearance: All black housing

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.

BATTERY PACK ACCESSORY (optional)

Battery Pack Accessory (optional): 98-121 sealed lead acid battery (optional)

*The policy of Tripp Lite is one of continuous improvement.
Specifications are subject to change without notice.
Therefore, your product may vary slightly from what is currently listed.*



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