PowerVerter 2000W 120V 12VDC RV Inverter/Charger with Auto-Transfer Switching, Hardwired, UL458

MODEL NUMBER: **MRV2012UL**



The MRV2012UL is a heavy-duty, DC-to-AC inverter with automatic line-to-battery transfer and integrated charging system that serves as an extended-run UPS, a standalone power source or an automotive inverter suitable for recreational applications.

Features

Inverter
- MRV2012UL serves as an automotive or stationary DC-to-AC inverter with automatic line-to-battery transfer and integrated battery charger
- Supplies a 120V AC output from a 120V AC line power source or 12V DC battery source
- 2000 watts continuous AC output in inverter mode, 3600 watts continuous AC output in AC line power mode

Automatic Transfer
- 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

Battery Charger
- 3-stage battery charger with user-selectable 25/100 amp operation and adjustable settings for wet/gel battery types with charger on/off capability; offers fast, reliable battery recharging
- Protected hardwire DC terminal posts safely accept heavy-gauge input wiring from attached battery bank
- Protected hardwire output passes 120V line power or inverter output through to connected equipment
- Extremely reliable large-transformer design tested to UL (USA & Canada) standards

Overload / Overtemperature Protection
- DoubleBoost 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 up to 60 minutes under ideal battery and temperature conditions. (For best results, utilize OverPower usage 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.)

Highlights

- Heavy-duty DC-to-AC, PWM sine wave inverter with automatic line-to-battery transfer and integrated charging system
- Functions as an extended-run UPS, a standalone power source or an automotive inverter
- 2000 watts continuous, 3000 watts OverPower™ and 4000 watts DoubleBoost™ inverter output
- 12V DC or 120V AC input; 120V, 60 Hz output (hardwired)
- 3-stage battery charger with user-selectable 25/100 amp, wet/dry cell operation
- Built-in Isobar® premium AC surge protection
- Unlimited back up time with user supplied batteries

Package Includes

- MRV2012UL Inverter/Charger
- Instruction manual with warranty information
- Battery Temperature Sensor cable
- Conduit hanger

- Resettable 25A charger AC input breaker and variable-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

Operating Modes / Display LEDs
- 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
- Six front panel LEDs display AC/DC operational modes, overload status, DC voltage level, shutdown status and system fault status
- 4 configuration dip-switches support wet/gel battery charging profiles, charger enable/disable capability, selectable 75/85/95/105V AC low voltage auto transfer points during brownout conditions
- 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

Optional Features
- Front panel connector enables remote off/on switching (requires optional APSRM4 remote control module, sold separately)
- Load-sensing control dial enables adjustable load threshold required to automatically turn the inverter on and off in DC mode as load conditions change
- Battery temperature sensor with 20-ft. (6.09 m) cable to prolong battery life by adjusting the charge level based on battery temperature
- Ignition Switch Control Jack can be used to connect the Inverter to your vehicle's ignition switch in order to automatically
control the Inverter.
- Automatic Generator Starter jack enables user configuration of automatic generator startup as inverter batteries drop to 11.5V DC and generator shutoff as inverter batteries are recharged to 14.1V DC

Construction
- Moisture-resistant construction enables vehicular operation in high-humidity environments

Specifications

OVERVIEW	
UPC Code	037332149121
INPUT	
Nominal Input Voltage(s) Supported	120V AC
Maximum Input Amps / Watts	DC INPUT: Full continuous load - 190A at 12V DC. AC INPUT: 38 amps at 120V AC with full inverter and charger load (20A max charger-only / combined input load to support charger and AC output is automatically controllable to 66%-33%-0% based on AC output l
Recommended Electrical Service	DC INPUT: Requires 12V DC input source capable of delivering 190A 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
Input Connection Type	DC INPUT: Set of 2 DC terminal posts. AC INPUT: hardwire. User supplies cabling. 0 gauge or larger (see manual). AC INPUT: hardwire
Voltage Compatibility (VAC)	120

Voltage Compatibility (VDC)	12
OUTPUT	
Frequency Compatibility	60 Hz
Pure Sine Wave Output	No
Nominal Output Voltage(s) Supported	120V
Output Receptacles	Hardwire
Continuous Output Capacity (Watts)	2000
Peak Output Capacity (Watts)	4000
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 120V AC (+/-5%).
Output Frequency Regulation	60 Hz (+/- 0.3 Hz)
Overload Protection	Includes 25A input breaker dedicated to the charging system
BATTERY	
Expandable Runtime	Yes
Expandable Battery Runtime	Runtime is expandable with any number of user supplied wet or gel type batteries
Expandable Runtime Description	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	25A / 100A (user-selectable)
LVC (Low Voltage Cut-Off)	10VDC +/-3%
USER INTERFACE, ALERTS & CONTROLS	
Front Panel LEDs	6 LEDs offer continuous status information on load (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 APSRM4 accessory (sold separately) in inverter mode. In AC uninterruptibl
PHYSICAL	
Material of Construction	Polycarbonate, Aluminum
Cooling Method	Multi-speed fan
Included Accessories	Battery temperature sensor cable; conduit hanger
Form Factors Supported	Mounting slots enable secure placement of inverter on any horizontal surface (see manual for additional mounting information)
Shipping Dimensions (hwd / in.)	12.10 x 21.20 x 13.50
Shipping Dimensions (hwd / cm)	30.73 x 53.85 x 34.29
Shipping Weight (lbs.)	46.30

Shipping Weight (kg)	21.00
Unit Dimensions (hwd / in.)	8.000 x 10.500 x 17.500
Unit Dimensions (hwd / cm)	20.32 x 26.67 x 44.45
Unit Weight (lbs.)	43.2
Unit Weight (kg)	19.60
ENVIRONMENTAL	
Relative Humidity	0%-95% Non-Condensing
LINE / BATTERY TRANSFER	
Transfer Time (Line Power to Battery Mode)	16.6 ms (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
FEATURES & SPECIFICATIONS	
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.
STANDARDS & COMPLIANCE	
Product Certifications	UL 458
Product Compliance	RoHS
WARRANTY & SUPPORT	
Product Warranty Period (Worldwide)	30-month limited warranty

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