MAGNUM ENERGY

THE MSH-RV SERIES INVERTER / CHARGER

Pure Sine Wave

12
Battery Voltage Options

3000 VA
Continuous Output Options

Model Numbers
- MSH3012RV

Available For
- RV Systems

Available Accessories
- Auto Generator Start - ME-AGS-N
- Battery Monitor Kit
- MagWeb
- Remote - ME-ARC*
- Remote - ME-RC*
- Smart Battery Combiner

* New status displays require ME-RC v2.7 or ME-ARC v3.0 or higher.

Designed specifically for use in RVs, the MSH-RV Series Inverter / Charger from Sensata Technologies is a pure sine wave inverter designed with true hybrid technology allowing it to run larger loads from smaller generators.

Hybrid technology: Most inverters only use one source of energy to power loads, either from incoming AC power – shore or AC generator – or from the batteries. The MSH-RV Series combines the energy from both sources to power loads. This allows the inverter to recharge the batteries when there is surplus power or deliver more power to the loads if they require more than the AC input can supply by itself.

Built-in RV-C connector: The built in RV-C connector and protocol allows the MSH-RV Series to multiplex directly with the RV's network bus/backbone. Program your inverter/charger settings using the RV's system monitoring display.

FEATURES

Load support:
Load support parallels the inverter output with incoming AC sources allowing it to run larger loads from smaller generators.

Power factor corrected charging:
Use more power that you produce with the automatic PFC multi-stage battery charger.

Pure sine wave:
Power your T.V.s, stereos, plasma screens, and other sensitive electronics without worry. The pure sine wave inverter and power factor corrected charger provide clean, reliable inverter power with low total harmonic distortion (THD) of less than 5%.

Pass through capabilities:
Larger 50 amp AC capability

Lightweight, small footprint:
The lightweight aluminum base and cover also provides noise reduction and corrosion resistance, while the compact design of the MSH-RV is perfect for RV spaces.

Multiple ports:
The MSH-RV Series provides multiple ports, including an RS485 communication port for network expansion, an RV-C connector, and a remote port.

Accessible design:
The extra large AC access cover with terminal screw block and 360° DC connection terminals with covers make this inverter more accessible when it needs to be.

Convenient switches:
The MSH-RV Series comes with an on /off inverter-mounted switch with an easy-to-read LED indicator.

Buy with ease:
The MSH-RV Series is backed by a three-year (36-month) limited warranty.

MSH-RV SERIES SPECIFICATIONS

	MSH3012RV
INVERTER SPECIFICATIONS	
Input battery voltage operating range	9 to 17 VDC
Input battery voltage range for full output power	10.4 to 17.0 VDC
AC output voltage accuracy (at 12.6 VDC)	120 VAC ±3% (≤ continuous power)
Output frequency and accuracy	60 Hz ± 0.05 Hz
Total Harmonic Distortion (THD)	< 5%
Continuous power output (at 25°C)	3000 VA
Continuous AC output current	25 A
1 msec surge current (amps AC)	85
100 msec surge current (amps AC)	45
5 sec surge power (real watts)	3500
30 sec surge power (real watts)	3500
5 min surge power (real watts)	3400
30 min surge power (real watts)	3100
Maximum continuous input current	400 ADC
Inverter efficiency (peak)	88%
HBCO/HBCI (High Battery Cut Out/In)	16.8 VDC /16.5 VDC
LBCO/LBCI (Low Battery Cut Out/In)	9.0 VDC (adj) / 12.5 VDC
Inverter stacking (series or parallel)	No
AC relay transfer time (minimum)	<16 msec
Power consumption – searching	10 watts
Power consumption – inverting (no load)	36 watts
Output waveform	Pure Sine Wave
CHARGER SPECIFICATIONS	
Continuous output at 25° C	125 ADC
Input current for continuous rated output	18 AAC
Maximum current during load support	224 ADC from battery
Charger efficiency	86%
AC input frequency range	50 to 70 Hz
AC input voltage range	60 to 140 VAC (120 VAC nominal)
Power factor	> 0.95
GENERAL FEATURES AND CAPABILITIES	
Transfer relay capability	50 AAC maximum each input (2 inputs)
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote), and Battery Saver™
Battery temperature compensation	Standard with available temp sensor connected (battery temp 0 – 50 °C)
Internal cooling	0 to 120 cfm variable speed drive using dual 92mm brushless DC fans
Internal protection	Over-current protection and multipoint over-temperature protection
RVIA "RV-C" (CAN) compliant	Yes, with electrically isolated CAN port - supports up to 2 inverters per network
Corrosion protection	PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners
Safety listings	ETL listed to UL/cUL 458, CSA C22.2 No. 107.1-01
Warranty	Three years parts and labor
Branch-rated output circuit breakers	No
ENVIRONMENTAL SPECIFICATIONS	
Temperature (Operating/Non-operating)	-20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F)
Operating humidity	0 to 95% RH non-condensing
PHYSICAL SPECIFICATIONS	
Dimensions (l x w x h)	13.75" x 12.65" x 8.0" (34.9 cm x 32.1 cm x 20.3 cm)
Shipping dimensions (l x w x h)	19" x 17" x 13" (48.3 cm x 43.2 cm x 33 cm)
Mounting	Shelf or wall (vents not allowed to face downward unless ME-CB or MPX-CB is installed)
Weight	Unit: 55 lb (24.9 kg) / Shipping: 63 lb (28.6 kg)
Max operating altitude	15,000 ft (4570 m)

Sensata Technologies

The World Depends on Sensors and Controls

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Testing for specifications at 25° C. Specifications subject to change without notice.

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