

MMSA SERIES | INVERTER/CHARGER

LIGHTWEIGHT, PURE SINE WAVE POWER

Introduction

The Magnum Energy MMSA Series Inverter/Charger from Sensata Technologies is a pure sine wave inverter providing a cost effective solution for those with smaller power needs in mobile applications. Ideal for Emergency Vehicles, the MMSA is versatile, easy-to-use, lightweight, and provides a reliable base for your energy system. Connect with Ease: The MMSA comes with DC cables with Anderson quick connectors, a GFCI outlet, and an AC input cord. Auxiliary DC Output Port: Add a small load, such as an interior lamp or backup camera, of less than 20 amps. MMSA must be connected to the battery for the AUX output to be available. Power Factor Corrected (PFC) Charger: Our PFC charger is built into all of our inverter/chargers. It uses less energy from a generator than a standard charger – using 25-30% less AC current than standard chargers.



Features

- **Waterproof Panel** – The MMSA boasts a waterproof switch and LED panel for use in the most rugged territory.
- **Battery Profile Presets** – Using the ME-RC, ME-ARC, or ME-MR Remote Controls, easily choose from and set standard battery profiles, including Lithium Iron Phosphate (LFP) – only available via the ME-RC and ME-MR, Gel, Flooded, AGM1, and AGM2.
- **Safe and Reliable** – The MMSA Series Inverter/Charger is ETL Listed to the stringent requirements of UL/cUL 458 and CSA C22.2 #107.1-01 for mobile use.
- **Versatile Mounting** – Mount the MMSA Series on a shelf, bulkhead (with DC terminals to the right), or even upside down.
- **Fan Cooled** – The MMSA Series is fan cooled, enabling the unit to work well in confined spaces. If the inverter does exceed its temperature limits, it will automatically shut down and then restart when it cools down.
- **Integrated Programming** – The MMSA Series comes with an on/off front-mounted switch with an easy-to-read LED indicator. And easily toggle through settings with the accessible DIP switch.
- **Battery Temp Sensor** – Automatically adjusts the voltage set-points based on temperature for better charging performance and longer battery life.
- **Buy with Ease** – The MMSA Inverter/Charger is backed by a two-year (24-month) parts and labor warranty.

Model Numbers

- MMSA1012-GL

Available For

- Emergency Vehicle Systems
- Marine Systems
- RV Systems
- Trucks

Available Accessories

- DC Load Disconnect
- Fuse Blocks
- MagWeb
- Remote Monitor - MM-C
- Remote - ME-ARC
- Remote - ME-RC
- Remote - MM-RC



Pure Sine Wave



12

Battery Voltage Options



1500
VA

Continuous Output Options



SPECIFICATIONS

MMSA1012-GL	
INVERTER SPECIFICATIONS	
Input battery voltage	9 to 17 VDC
Nominal AC output voltage	120 VAC $\pm$ 5%
Output frequency and accuracy	60 Hz $\pm$ 0.05%
Total Harmonic Distortion (THD)	< 5%
1 msec surge current (amps AC)	38
100 msec surge current (amps AC)	21
5 sec surge power (real watts)	1650
30 sec surge power (real watts)	1600
5 min surge power (real watts)	1250
30 min surge power (real watts)	1200
Continuous power output at 45° C	1000 VA
Maximum continuous input current	133 ADC
Inverter efficiency (peak)	87%
Transfer time (typical)	16 msec
Search mode (typical)	5 watts (with no remote)
No load (120 VAC output, typical)	22 watts (with no remote)
Waveform	Pure Sine Wave
CHARGER SPECIFICATIONS	
Continuous output at 45° C	50 ADC
Charger efficiency (peak)	84%
Power factor	> 0.95
Input current at rated output (AC amps)	7
GENERAL FEATURES AND CAPABILITIES	
Transfer relay capability	20 AAC (input current for charging and pass through)
Battery temperature compensation	Yes, with ME-BTS
Internal cooling	0 to 59 cfm variable speed
Overcurrent protection	Yes, with two overlapping circuits
Overtemperature protection	Yes, on transformer and MOSFETS
On/Off with status indicator	Yes, front mounted and easily accessible
Low battery cutout	10 VDC, adjustable with the ME-RC or ME-ARC remote
AC output	15 amp GFCI outlet
AC input	3 ft AC cord
Output circuit breaker	15 AAC
Input circuit breaker	15 AAC
Listings	ETL Listed to UL/cUL458, CSA C22.2 #107.1-01
Warranty	Two years

ENVIRONMENTAL SPECIFICATIONS	
Operating temperature	-20° C to +60° C (-4° F to 140° F)
Nonoperating temperature	-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)	16.6" x 8.4" x 6.75" (42 cm x 21 cm x 17 cm)
Mounting	Shelf (top or bottom up) or bulkhead (DC terminals to the right)
Weight	24 lb (10.9 kg)
Shipping weight	25 lb (11.3 kg)
Max operating altitude	15,000' (4570 m)



GENERAL NOTES

Testing for specifications at 45° C, unless otherwise noted.
Specifications subject to change without notice.



AGENCY APPROVALS & CERTIFICATIONS

- ETL Listed to UL/cUL458, CSA C22.2 #107.1-01

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