

MSH-M SERIES | INVERTER / CHARGER

Introduction

The MSH-M Series inverter/charger from Sensata Technologies – a pure sine wave inverter designed with true hybrid technology allowing it to run larger loads from smaller generators. 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-M 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.



Features

- Load Support – Load support parallels the inverter output with incoming AC sources allowing it to run larger loads from smaller generators.
- Battery Profile Presets – Using the ME-RC or ME-ARC Remote Controls, easily choose from and set standard battery profiles, including Lithium Iron Phosphate (LFP) – only available via the ME-RC, Gel, Flooded, AGM1, and AGM2.
- Pure Sine Wave – Power your sensitive electronics without worry. The MSH-M Series provides reliable utility-grade power.
- Interchangeable – The MSH-M is interchangeable with the Magnum MS Series and uses the same accessories as the MS Series.
- Multiple Ports – The MSH-M Series provides multiple ports, including an RS485 communication port for network expansion, and a remote port.
- Convenient Wiring Access – An extra large AC access cover with terminal screw block and 360° DC connection terminals with covers make wiring easier.
- Convenient Switches – The MSH-M Series comes with an on /off inverter-mounted switch with an easy-to-read LED indicator.
- Buy with Ease – The MSH-M Series is backed by a three-year (36-month) limited warranty.

Model Numbers

- MSH3012M
- MSH4024M

Available Accessories

- Auto Generator Start - ME-AGS-N
- Battery Monitor Kit
- Conduit Box
- DC Load Disconnect
- Fuse Blocks
- MagWeb
- Remote - ME-ARC
- Remote - ME-RC
- Remote Switch Adapter
- Smart Battery Combiner

Available For

- Marine Systems
- RV Systems

Options

- 12 and 24-volt and 3000 or 4000 watt output configurations available



Pure Sine Wave



12, 24 Battery Voltage Options



3000-4000 VA Continuous Output Options



SPECIFICATIONS

	MSH3012M	MSH4024M
INVERTER SPECIFICATIONS		
Input battery voltage range	9 to 17 VDC	18 to 34 VDC
Nominal AC output voltage	120 VAC \pm 5%	120 VAC \pm 5%
Output frequency and accuracy	60 Hz \pm 0.05 Hz	60 Hz \pm 0.1 Hz
Total Harmonic Distortion (THD)	< 5%	< 5%
1 msec surge current (amps AC)	70	120
100 msec surge current (amps AC)	40	82
5 sec surge power (real watts)	3900	5800
30 sec surge power (real watts)	3800	5400
5 min surge power (real watts)	3200	4900
30 min surge power (real watts)	3000	4500
Continuous power output at 25° C	3000 VA	4000 VA
Maximum continuous input current	400 ADC	267 ADC
Inverter efficiency (peak)	90.0%	93.7%
Transfer time	16 msecs	16 msecs
Search mode (typical)	< 8 watts	< 8 watts
No load (120 VAC output, typical)	30 watts	25 watts
Waveform	Pure Sine Wave	Pure Sine Wave
CHARGER SPECIFICATIONS		
Continuous output at 25° C	125 ADC	110 ADC
Charger efficiency	87%	87%
Power factor	> .95	> .95
Input current at rated output (AC amps)	18	28
GENERAL FEATURES AND CAPABILITIES		
Transfer relay capability	60 AAC	
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	
Overcurrent protection	Yes, with two overlapping circuits	
Overtemperature protection	Yes on transformer, MOSFETS, and battery	
Corrosion protection	Yes, PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners	
Dual AC branch rated output breakers	No	
Listings	ETL listed to UL/cUL 458, CSA C22.2 No. 107.1-01	
Warranty	Three years parts and labor	

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	55 lb (24.9 kg)
Shipping weight	63 lb (28.6 kg)
Max operating altitude	15,000' (4570 m)



GENERAL NOTES

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



AGENCY APPROVALS & CERTIFICATIONS

- ETL listed to UL/cUL 458, CSA C22.2 No. 107.1-01

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