MS SERIES | INVERTER/CHARGER

PURE SINE WAVE DESIGNED FOR DEMANDING APPLICATIONS

Introduction

The MS Series Inverter/Charger is a pure sine wave inverter designed specifically for the most demanding mobile, backup, and off-grid applications. The MS Series Inverter/Charger is powerful, easy-to-use, and best of all, cost effective.

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 – 25-30% less AC current than standard chargers.

Easy-to-install: Install the MS Series in four easy steps: simply connect the inverter's output to your distribution circuits or electrical panel, connect your utility power cable to the inverter's easy-to-reach terminal block, connect the batteries, and switch on the power.



Features

- Pure Sine Wave – Power your TVs, computers, and other sensitive electronics without worry. The MS Series provides clean, reliable inverter power with low total harmonic distortion (THD) of less than 5%.
- Accessible Design – The extra large AC access cover with terminal screw block and 360° DC connection terminals with covers make this inverter accessible.
- Choices – The MS Series comes in 12, 24, and 48 volt configurations, allowing you to choose the model that is right for you.
- Versatile Mounting – Mount the MS Inverter/Charger on a shelf, bulkhead, or even upside down.
- Lightweight – The lightweight aluminum base and cover also provides noise reduction and corrosion resistance.
- Multiple Ports – The MS Series provides multiple ports, including an RS485 communication port for network expansion, and a remote port.
- Convenient Switches – The MS Series comes with an on/off inverter-mounted switch with an easy-to-read LED indicator.
- Expanded Transfer Relay – 60 Amp transfer service is available on all models except MS2000, which is 30 Amp only.

Model Numbers

- MS2000
- MS2000-15B
- MS2000-20B
- MS2012
- MS2012-15B
- MS2012-20B
- MS2024
- MS2812
- MS4024 (series stackable)
- MS4048
- MS4048-20B

Available For

- Backup Systems
- Marine Systems
- Off-Grid Systems
- RV Systems
- Trucks

Available Accessories

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

New features available using the ME-ARC (with v5.4 or higher firmware).

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Pure Sine Wave | 12, 24, 48 Battery Voltage Options | 2000-4000 W Continuous Output Options

SPECIFICATIONS

	MS2000/12 MS2012 (-15/-20B)	MS2812	MS2024	MS4024	MS4048 MS4048-20B
INVERTER SPECIFICATIONS					
Input battery voltage range	9 - 16.8 VDC	9 - 16.8 VDC	18 - 33.6 VDC	18 - 33.6 VDC	36 - 67.6 VDC
AC output voltage accuracy	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%
Output frequency and accuracy	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz
Total Harmonic Distortion (THD)	< 5%	< 5%	< 5%	< 5%	< 5%
1 msec surge current (amps AC)	50	70	75	120	120
100 msec surge current (amps AC)	33	40	37	82	72
5 sec surge power (real watts)	3300	3900	2850	5800	8500
30 sec surge power (real watts)	3100	3800	2750	5400	5750
5 min surge power (real watts)	2800	3200	2700	4900	5250
30 min surge power (real watts)	2200	3000	2200	4500	4750
Maximum continuous input current	267 ADC	373 ADC	133 ADC	267 ADC	133 ADC
Inverter efficiency (peak)	90.6%	90%	86%	93.7%	94%
AC Relay Transfer time (minimum)	16 msecs	16 msecs	16 msecs	16 msecs	16 msecs
Power Consumption - searching	<8 watts	<8 watts	<8 watts	<8 watts	<8 watts
Power Consumption - inverting (no load)	25 watts	30 watts	25 watts	25 watts	25 watts
Output Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
CHARGER SPECIFICATIONS					
Continuous output at 25° C	100 ADC	125 ADC	60 ADC	105 ADC	60 ADC
Charger efficiency	85%	85%	85%	85%	85%
Power factor	> .95	> .95	> .95	> .95	> .95
Input current for continuous rated output	15 AAC	18 AAC	7.9 AAC	29 AAC	30 AAC

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GENERAL FEATURES AND CAPABILITIES					
Transfer relay capability	30 ACC max. each input (30AC total on MS2000 models, 60ACC total on all other models)*				
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				
Branch-rated output circuit breakers	Optional on the MS2000 (15 or 20 amp breakers), MS2012 (15 or 20 amp breakers) or MS4048 (20amp breakers)				
Warranty	Three years parts and labor				
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) [Height on MS2000: 7.0"/17.8 cm]				
Mounting	Shelf or wall (vents not allowed to face downward unless ME-CB or MMP/MP is installed				
Unit weight	42 lb (19.1 kg)	55 lb (24.9 kg)	41 lb (18.6 kg)	55 lb (24.9 kg)	55 lb (24.9 kg)
Shipping weight	48 lb (21.8 kg)	62 lb (28.1 kg)	49 lb (22.2 kg)	62 lb (28.1 kg)	62 lb (28.1 kg)
Max operating altitude	15,000' (4570 m)	15,000' (4570 m)	15,000' (4570 m)	15,000' (4570 m)	15,000' (4570 m)
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				

GENERAL NOTES

*The pass-thru capability on each leg of the -15B and -20B models is limited by the output breaker size on each output.
**MS2000: ETL Listed to UL/cUL 458, CSA C22.2 #107.1-01, meets KKK-A-1822E standard
Testing for specifications at 25° C.
Specifications subject to change without notice.

AGENCY APPROVALS & CERTIFICATIONS

- ETL Listed to UL/cUL 458, UL 1741, CSA C22.2 #107.1-01, meets KKK-A-1822E standard**
- The MS2000, MS2012, MS2812, MS4024 and MS4048 are ETL Listed to the stringent requirements of UL/cUL 458 for mobile use.
- The MS2012, MS2812, MS4024 and MS4048 are ETL Listed UL 1741 and CSA C22.2 #107.1-01 for renewable energy installations.
- All models also meet KKK-A-1822E standards for emergency vehicle use.**

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