MAGNUM
E N E R G Y

The MS Series Pure Sine Wave Inverter / Charger

The MS Series Inverter/Charger from Magnum Energy – a pure sine wave inverter designed specifically for the most demanding mobile, back-up, and off-grid applications. The MS Series 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 – using 25-30% less AC current than standard chargers.

Safe and reliable: The MS2000, MS2012, MS2812, and MS4024 are ETL Listed to the stringent requirements of UL/cUL 458 for mobile use and the MS2012, MS2812, and MS4024 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.

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.

MODEL NUMBERS

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

AVAILABLE FOR

- Renewable
  Energy Systems
    Off-grid Power
    Back-up Power
- Marine Systems
- RV Systems

AVAILABLE ACCESSORIES

- AGS
- Battery Monitor Kit
- Conduit Box
- DC Load Disconnect
- Fuse Blocks
- MagWeb
- Remote - ME-ARC
- Remote - ME-RC
- Remote Switch Adapter
- Series Stacking Interface (MS4024 only)
- Smart Battery Combiner

Features:

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%.

Choices: The MS Series comes in 12 and 24 volt configurations, allowing you to choose the model that is right for you.

Versatile mounting: Mount the MS Series 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.

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 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.

Buy with ease: The MS Series is backed by a three-year (36-month) limited warranty, and a five-year limited warranty when installed on an MMP or MP system.

NEW WARRANTY!
Three-year warranty standard. Five-year warranty if installed on an MP or MMP panel.

The Powerful Difference

MAGNUM ENERGY

MS Series Specifications

	MS2000	MS2012	MS2024	MS2812	MS4024
Inverter Specifications					
Input battery voltage range	9 - 17 VDC	9 - 17 VDC	18 - 34 VDC	9 - 17 VDC	18 - 34 VDC
Nominal AC output voltage	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	50	75	70	120
100 msec surge current (amps AC)	33	33	37	40	72
5 sec surge power (real watts)	3300	3300	2850	3900	5800
30 sec surge power (real watts)	3100	3100	2750	3800	5400
5 min surge power (real watts)	2800	2800	2700	3200	4900
30 min surge power (real watts)	2200	2200	2200	3000	4500
Continuous power output at 25° C	2000 VA	2000 VA	2000 VA	2800 VA	4000 VA
Maximum continuous input current	266 ADC	266 ADC	133 ADC	373 ADC	266 ADC
Inverter efficiency (peak)	89%	89%	86%	88%	87%
Transfer time	16 msecs	16 msecs	16 msecs	16 msecs	16 msecs
Search mode (typical)	5 watts	7 watts	7 watts	7 watts	7 watts
No load (120 VAC output, typical)	25 watts	25 watts	25 watts	30 watts	25 watts
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	100 ADC	60 ADC	125 ADC	105 ADC
Charger efficiency	85%	85%	85%	85%	85%
Power factor	> .95	> .95	> .95	> .95	> .95
Input current at rated output (AC amps)	15	15	7.9	18	29

General Features and Capabilities

Transfer relay capability	MS2000: 30 A single input MS2012, MS2812, MS4024: 2 legs at 30 A for 120 V/30 A or 240 V/60 A service
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote), and Battery Saver™
Battery temperature compensation	Yes, 15 ft Battery Temp Sensor standard
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
Conformal coating on PCB's for corrosion protection	Yes
Powder coated chassis & top for corrosion protection	Yes
Stainless steel fasteners for corrosion protection	Yes
Dual AC branch rated output breakers	Optional on the MS2000 and MS2012 - AC breakers in 15 or 20 amp ratings
Listings	MS2000: ETL Listed to UL/cUL 458, CSA C22.2 #107.1-01, meets KKK-A-1822E standard / MS2012, MS2812, MS4024: ETL Listed to UL/cUL 458, UL 1741, CSA C22.2 #107.1-01, meets KKK-A-1822E standard / MS2024: NA
Warranty	Three years (five years when installed on MMP or MP system)

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)	MS2000: 13.75" x 12.65" x 7.0" (34.9 cm x 32.1 cm x 17.8 cm) MS2012 / 2812 / 4024: 13.75" x 12.65" x 8.0" (34.9 cm x 32.1 cm x 20.3 cm)
Mounting	Shelf (top or bottom up) or bulkhead (vents up)

	MS2000	MS2012	MS2024	MS2812	MS4024
Weight	40 lb (18.1 kg)	42 lb (19.1 kg)	41 lb (18.6 kg)	55 lb (24.9 kg)	55 lb (24.9 kg)
Shipping weight	50 lb (22.7 kg)	50 lb (22.7 kg)	49 lb (22.3 kg)	63 lb (28.6 kg)	63 lb (28.6 kg)
Max operating altitude	15,000' (4570 m)				