

# MAGNUM ENERGY

## The MS-AE 120/240V Series Inverter/Charger

### Pure Sine Wave for Renewable Energy Applications



**The MS-AE Inverter/Charger is powerful, easy-to-use, and cost effective.**

#### MODEL NUMBERS

MS4024AE  
MS4448AE

#### AVAILABLE FOR

Renewable Energy Systems  
Off-grid Power  
Back-up Power

#### AVAILABLE ACCESSORIES

AGS  
Battery Monitor Kit  
Conduit Box  
DC Load Disconnect  
Remote



### The Powerful Difference

The MS-AE 120/240V Series Inverter/Charger from Magnum Energy is a pure sine wave inverter designed specifically for the most demanding renewable energy applications. The MS-AE Series is powerful, easy-to-use, and best of all, cost effective.

**No stacking required:** The unique design of the MS-AE Series can provide 120/240 volt output in one unit, eliminating the need to stack two units together to get 240 volts.

**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 MS-AE Series is ETL Listed to the stringent requirements of UL 1741 and CSA STD C22.2 No.107.1-01 for renewable energy installations.

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

### Features

**You asked and Magnum listened.** The MS-AE Series Inverter/Charger is loaded with 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-AE Series comes in 24 and 48 volt configurations, allowing you to choose the model that is right for you.

**Versatile mounting:** Mount the MS-AE Series on a shelf or wall.

**Lightweight:** The lightweight aluminum base and cover also provides noise reduction and corrosion resistance.

**Multiple ports:** The MS-AE 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-AE Series comes with an on/off inverter-mounted switch with an easy-to-read LED indicator.

**Expanded transfer relay:** Two legs at 30A per leg transfer service is standard on all models.

**Buy with ease:** The MS-AE Series is backed by a two-year (24-month) limited warranty.

### Accessories and Options\*

**Remote control:** For convenient finger-tip operation, including the new one-knob™ programming.

**AGS module:** Automatically starts your generator based on temperature or battery voltage.

\* For more detailed information and specifications on these accessories, please see the accessories data sheet.



## The MS-AE 120/240V Series Inverter/Charger

### Specifications

	MS4024AE	MS4448AE
<b>Inverter Specifications</b>		
Input battery voltage range	18.0 - 33.8 VDC	36.0 - 67.6 VDC
Nominal AC output voltage	120/240 VAC split phase	120/240 VAC split phase
Output frequency and accuracy	60 Hz $\pm$ 0.04%	60 Hz $\pm$ 0.04%
Total Harmonic Distortion (THD)	< 5%	< 5%
1 msec surge current (amps AC)	Line-Neutral: 120, Line-Line: 195	Line-Neutral: 120, Line-Line: 160
100 msec surge current (amps AC)	Line-Neutral: 72, Line-Line: 92	Line-Neutral: 75, Line-Line: 90
5 sec surge power (real watts)	5800	8500
30 sec surge power (real watts)	5200	6000
5 min surge power (real watts)	4800	5400
30 min surge power (real watts)	4500	4800
Continuous power output at 25° C	4000 VA	4400 VA
Maximum continuous input current	222 A	122 A
Inverter efficiency (peak)	93%	94%
Transfer time	16 msec	16 msec
Search Mode	< 6 watts	< 6 watts
No Load (120 VAC output)	27 watts	25 watts
Waveform	Pure Sine Wave	Pure Sine Wave

### Charger Specifications

Continuous output at 25° C	105 ADC	60 ADC
Charger efficiency	85%	85%
Power factor	> 0.95	> 0.95
Input current at rated output (AC amps)	15 AAC per leg at 120/240 VAC split phase	17.5 AAC per leg at 120/240 VAC split

### General Features and Capabilities

Transfer relay capability	2 legs at 30A per leg transfer standard on all models
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote), and Battery Saver™
Battery temperature compensation	With available temp sensor (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
Conformal coating on PCB's for corrosion protection	Yes
Powder coated chassis & top for corrosion protection	Yes
Stainless steel fasteners for corrosion protection	Yes
Listings	ETL Listed to ANSI / UL1741 and CSA STD C22.2 No.107.1-01
Warranty	Two years parts and labor

### 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)	13.75" x 12.65" x 8.0" (34.9 cm x 32.1 cm x 20.3 cm)
Mounting	Shelf or wall (no vents on bottom)
Unit Weight	54.5 lb (24.7 kg)
Shipping Weight	58 lb (26.3 kg)
Max operating altitude	15,000' (4570 m)

## Magnum Energy, Inc.

### The Powerful Difference

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