



**MAGNUM**  
E N E R G Y

# 2011 Mobile Product & Parts Catalog



**The Powerful Difference**



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## About Magnum



**Designed, built, and assembled in the USA.**

Magnum Energy is a leading manufacturer of premium inverter / chargers for Mobile, RV, and Marine applications. With over 150 years of combined inverter design and manufacturing experience, Magnum Energy has incorporated new design and manufacturing techniques to build some of the industry's most reliable, advanced, and cost effective inverter / chargers and accessories.

All of our products are manufactured in our 25,000 square foot headquarters in Everett, Washington. Shipped worldwide, our products use the highest quality components to respond to the extreme conditions of variable climates.

We offer models ranging from our entry-level 600 watt MM Series to the powerful 4000 watt MS Series pure sine wave inverter / charger.

Many of our inverter / chargers come in 12 and 24-volt options. Look for our state-of-the-art battery charger design, using power factor correction techniques, an innovative first in both our sine wave and modified sine wave platforms.

**See our Renewable Energy and Export Catalogs for more Magnum products.**



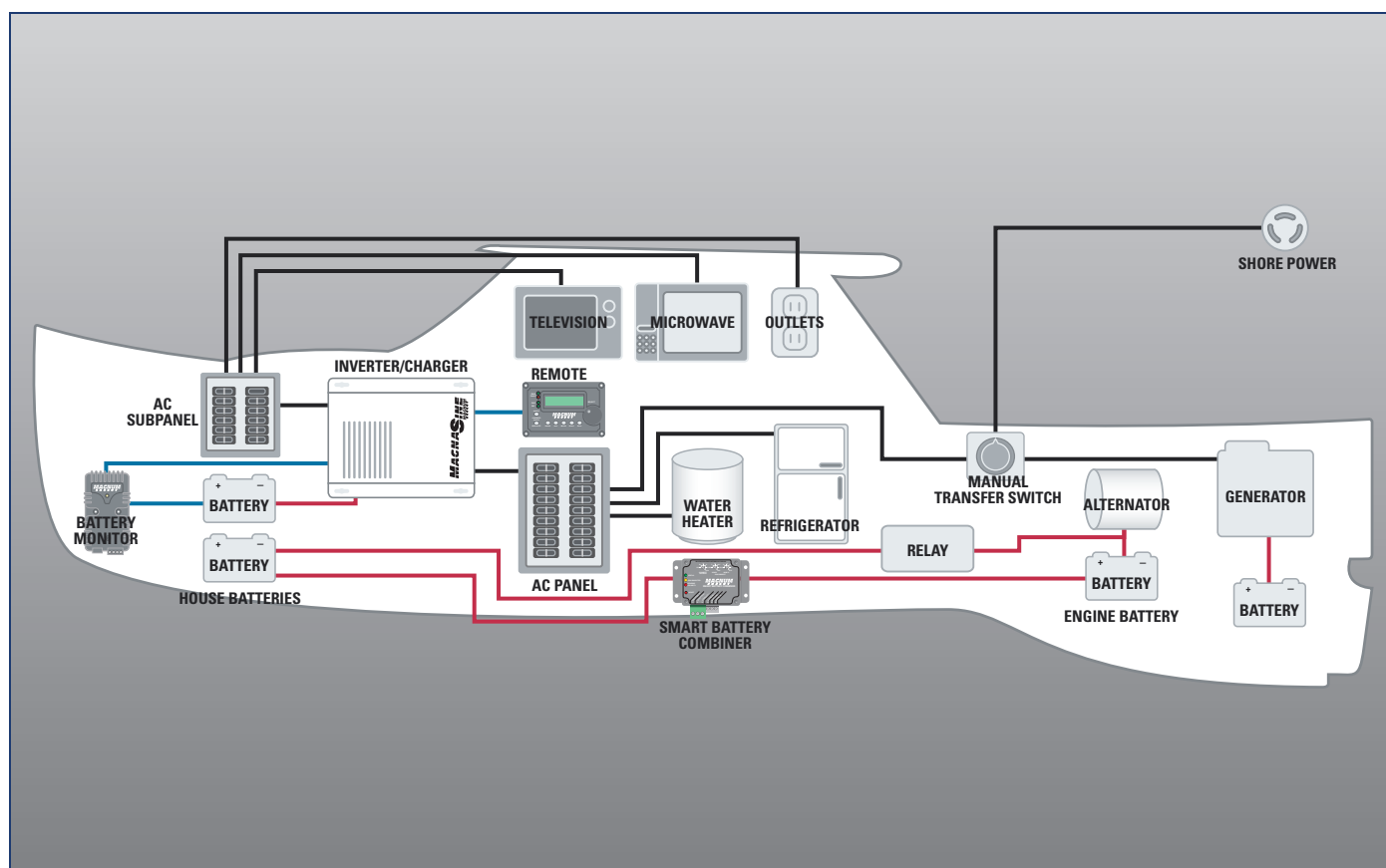
## Marine Applications and Magnum Products

When out on the water, your system just needs to work. With a Magnum inverter / charger, not only can you rest easy knowing everything will function as specified, but our inverter / chargers are extremely easy to install.

We offer both sine wave and modified sine wave models to choose from, so that you can choose what's right for you and not have to spend money on features you don't need.

From the MS Series that will power your plasma TV to the MM Series that provides a cost effective solution to smaller energy needs, Magnum Energy has you covered.

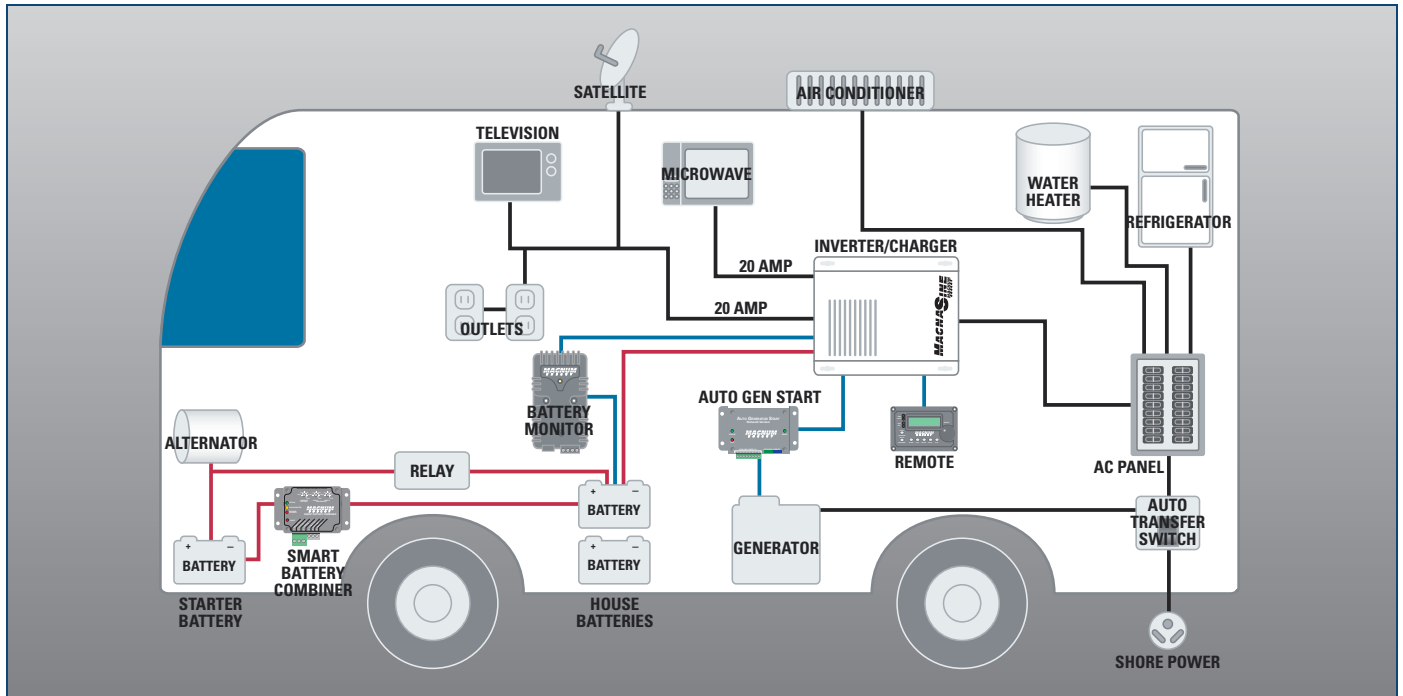
### Marine System Diagram



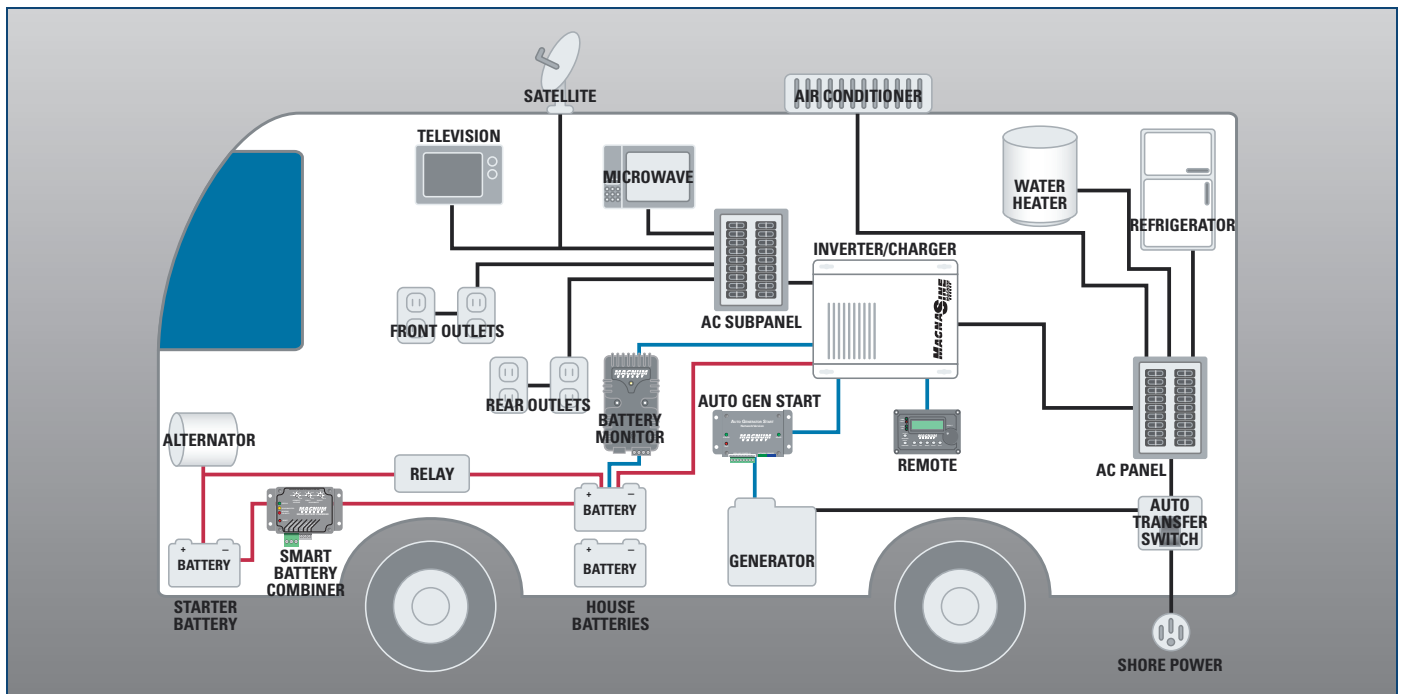
# Recreational Vehicles and Magnum Products

Travel with the comfort of knowing that a Magnum Energy inverter / charger is at the center of your RV power system. With efficient chargers and lightweight structures, Magnum inverter / chargers are designed with an RV system in mind. You'll stay on the road and moving with a Magnum inverter / charger.

## RV 30 Amp System Diagram



## RV 50 Amp System Diagram





# Magnum Inverter / Charger Features



## Safe and reliable:

Our inverter/chargers are ETL Listed to the stringent requirements of UL/cUL 458 for mobile use.

## Modified sine wave or pure sine wave:

Most Magnum inverters provide pure sine wave power. Run your T.V.s, stereos, plasma screens, and other sensitive electronics without worry. The cost effective pure sine wave inverter chargers provide clean, reliable power with low total harmonic distortion (THD) of less than 5%.

For an even more cost effective choice, Magnum also provides modified sine wave inverters. These units will provide power that will efficiently run 90% of the electronics on the market.

## 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.

## Choices:

Magnum inverters come in multiple power models and 12 and 24 volt configurations, allowing you to choose the model that is right for you.

## Lightweight:

20% lighter than comparable models, Magnum inverters use an aluminum base and cover that provide noise reduction and corrosion resistance. These lighter weight models are also designed to be overnight shippable if necessary.

## Accessible design:

Extra large AC access cover with terminal screw block and 360° DC connection terminals with covers make inverters more accessible when needed.

## Dual inputs:

With 60 Amp transfer service available on most models, our inverters allow you to take advantage of the more balanced power of a 120/240 volt generator.

## Buy with ease:

All inverter / chargers are backed by a three-year (36-month) or two-year (24-month) limited warranty.

## Accessories to customize systems:

Available accessories include remote controls, AGS modules, a battery monitor kit, DC fuses, series stacking cable kits, and the Smart Battery Combiner (SBC). And our accessories line utilizes a more consistent design from one product to another. Our easy-to-use remote for your boat, truck, or RV is compatible with all Magnum inverter / charger models.

## Field repairable:

You probably won't have any problems with a Magnum product, but if you do, our units are field repairable, saving you time and money if your unit ever needs service.

# Inverter / Charger Feature Comparison

Key	✓ Standard on all models	O Available on some models	M Maybe, ask your dealer
<b>Feature Comparison</b>			
Power Factor Corrected (PFC) Charger			✓
Dead Battery Charging	M		✓
AGS Option with Temperature and Volts	M		✓
Network Compatible	O		✓
60 Amp Transfer Relay (Dual 30 Amp input/outputs)			O
Lighter Weight (Up to 20% lighter)			✓
Line Sync Transfer (Faster transfer)			✓
Dual In / Dual Out			O
Branch Rated Output Breakers (Opt)	O		✓
Standard Platform (2k – 4.4k)	O		✓
H Bridge Technology	M		✓
Service Friendly Modular Design			✓
Die Cast Aluminum Base (Better cooling)			✓
Bulkhead Mount	M		✓
Shelf and Under Shelf Mount			✓
Five Stage Charger (Bulk, Absorb, Float, EQ, Battery Saver™)	Three stage		✓
Battery Temperature Sensor Included	M		✓
<b>Performance and Mechanical Comparison</b>			
Automatic Reset from Low Battery Fault	✓		✓
Output Voltage Regulation at Rated Load 12 VDC			120 ± 6 VAC
Input Amps AC at Rated Charge Rate (100 Amp charger)	23 AAC		15 AAC
Dedicated Diagnostic Tools	✓ (LED indicators only)		✓ (LCD display)
Temperature Sensor Mounting Method Provided	✓ (Ring terminal)		✓ (Ring Terminal)
Charger Temperature Rating to Full Charge Rate	25 °C		40 °C (ME Series)
Inverter Temperature Rating to Full Power	25 °C		45 °C (ME Series)
Chassis Construction	.060 Steel		Diecast / Sheet Aluminum
Chassis Coating (Powder coated)	M		✓
Clean Internal Construction (Minimum hardware)	M		✓
Clean Point-to-Point Wiring	M		✓
Modular Design for Easy Service	M		✓
Gold-plated Low Voltage Connectors for Low Corrosion	M		✓
Internal / External Hardware Used (Stainless steel)	O		✓
Battery Connection Hardware (Stainless steel)	O		✓
AC Wiring Connections (Most models)	Flying Leads		Terminals Block
AC Wiring Compartment Access	Good		Excellent
<b>Features of the Optional ME-RC or ME-ARC Remote</b>			
Two-line LCD Display	O		✓
"One Spin"™ User Friendly Remote			✓
Adjustable Charge Rate	O		✓
Adjustable Low Battery Cut Out	O		✓
Dedicated Inverter and Charger On/Off Buttons	M		✓
Lead Acid, AGM, AGM2, Gel, and Custom Battery Type	M		✓

## ME Series Inverter / Charger



### MODEL NUMBERS:

- ME2012
- ME2012-20B
- ME2512
- ME3112

### AVAILABLE ACCESSORIES:

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AGS .....	16
Battery Monitor Kit.....	18
Conduit Box .....	20
DC Load Disconnect .....	20
Fuse Blocks .....	21
Ignition Switch Lockout ....	21
Remote Switch Adapter ....	20
Remote - ME-ARC .....	22
Remote - ME-RC .....	22
Remote - MM-RC.....	23
Remote - ME-MR.....	23
Smart Battery Combiner ...	24

The ME Series Inverter / Charger from Magnum Energy is designed specifically for rugged mobile applications. The ME Series is powerful, easy-to-use, and best of all, cost effective.

**Safe and reliable:** The ME Series is ETL Listed to the stringent requirements of UL/cUL 458 and CSA C22.2 #107.1-01, ensuring that the inverter is safe and reliable.

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

### Features:

**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.

**Choices:** The ME Series comes in three power models and optional built-in branch rated AC output breakers, allowing you to choose the model that is right for you.

**Versatile mounting:** Mount the ME 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 ME 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 ME 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, and can be wired in three ways, including single in / single out, single in / dual out, or dual in / dual out.

**Buy with ease:** The ME Series is backed by a three-year (36-month) limited warranty.



## ME Series Specifications

	ME2012	ME2512	ME3112
Inverter Specifications			
Input battery voltage range	9 - 16 VDC	9 - 16 VDC	9 - 16 VDC
Nominal AC output voltage	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
1 msec surge current (amps AC)	60	100	120
100 msec surge current (amps AC)	37	45	50
5 sec surge power (real watts)	3700	5000	6000
30 sec surge power (real watts)	3450	4500	4800
5 min surge power (real watts)	3100	3500	3950
30 min surge power (real watts)	2400	2900	3500
Continuous power output at 45° C	2000 VA	2500 VA	3100 VA
Maximum continuous input current	266 ADC	333 ADC	413 ADC
Inverter efficiency (peak)	95%	91%	90%
Transfer time	16 msecs	16 msecs	16 msecs
Search mode (typical)	5 watts	5 watts	5 watts
No load (120 VAC output, typical)	20 watts	23 watts	25 watts
Waveform	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave
Charger Specifications			
Continuous output at 45° C	100 ADC	120 ADC	160 ADC
Charger efficiency	85%	85%	85%
Power factor	> .95	> .95	> .95
Input current at rated output (AC amps)	15	18	21
General Features and Capabilities			
Transfer relay capability	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 ME2012 - AC breakers in 20 amp ratings		
Listings	ETL Listed to UL/cUL 458, CSA C22.2 #107.1-01		
Warranty	Three 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 (h x w x d)	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)		
Weight	37 lb (16.8 kg)	41 lb (18.6 kg)	46 lb (20.9 kg)
Shipping Weight	42 lb (19 kg)	46 lb (20.9 kg)	51 lb (23 kg)
Max operating altitude	15,000' (4570 m)		

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

## MM Series Inverter / Charger



### MODEL NUMBERS:

- MM612 (inverter only)
- MM1212

### AVAILABLE ACCESSORIES:

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DC Load Disconnect .....	20
Fuse Blocks .....	21
Remote - ME-ARC .....	22
Remote - ME-RC .....	22
Remotes -	
MM-R & MM-RC .....	23
Remote - ME-MR .....	23

The MM Series Inverter / Charger is a modified sine wave inverter providing a cost effective solution for those with smaller power needs in mobile applications. Versatile, easy-to-use, and lightweight, the MM Series provides a reliable base for your energy system.

**Safe and reliable:** The MM Series is ETL Listed to the stringent requirements of UL/cUL 458 and CSA C22.2 #107.1-01 for mobile use.

**Attractive styling:** The modern, hourglass case, paired with the die cast aluminum base combines form with function, creating an attractive unit that uses its base as a heat sink for superior high temperature operation.

### Features:

#### Standard transfer relay:

The standard 20 amp transfer relay will pass AC power through the inverter when using grid or generator power.

#### Versatile mounting:

Mount the MM Series on a shelf, wall, or even upside down.

**Fan cooled:** The MM 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.

#### Low battery protection:

If your battery voltage goes below the cut-out setting the MM Series will automatically shut down, saving your batteries.

#### High battery protection:

If your battery voltage reaches over the cut-out setting the MM Series will shut down.

#### Current overload protection:

The MM Series will automatically shut down if its output wattage is exceeded or it detects a short in the wiring, saving the unit from costly damage.

#### Convenient switches:

The MM Series comes with an on/off front-mounted switch with an easy-to-read LED indicator.

#### Circuit breaker protection:

Every model comes with built in input and output circuit breakers for ease of installation.

#### Battery temp sensor:

The standard battery temp sensor monitors temperatures from 0 - 50° C.

#### Buy with ease:

The MM Series is backed by a two-year (24-month) parts and labor warranty.

### MM Series Specifications

	MM612 (inverter only)	MM1212
Inverter Specifications		
Input battery voltage range	9 to 16 VDC	9 to 16 VDC
Nominal AC output voltage	120 VAC ± 5%	120 VAC ± 5%
Output frequency and accuracy	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz
1 msec surge current (amps AC)	27	42
100 msec surge current (amps AC)	11	23
5 sec surge power (real watts)	1100	2100
10 sec surge power (real watts)	1050	1900
30 sec surge power (real watts)	1000	1750
5 min surge power (real watts)	950	1450
30 min surge power (real watts)	675	1375
Continuous power output at 25° C (with 1.0 PF)	600 VA	1200 VA
Continuous current output	5 AAC	10 AAC
Maximum continuous input current	80 ADC	160 ADC
Inverter efficiency (peak)	95%	95%
Transfer time	16 msecs	16 msecs
Search mode (ypical)	3 watts	5 watts
No load (120 VAC output, typical)	10 watts	18 watts
Waveform	Modified Sine Wave	Modified Sine Wave
Charger Specifications		
Continuous output at 25° C	NA	70 ADC
Charger efficiency	NA	88%
Power factor	NA	> 0.95
Input current at rated output (AC amps)	NA	9
General Features and Capabilities		
Transfer relay capability	20 AAC (input current for charging and pass through)	
Battery temperature compensation	Yes, on models with chargers: 15 ft Battery Temp Sensor standard	
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 on most models with the ME-RC remote	
AC output and input	Hardwire	Hardwire
Output circuit breaker	7 A switchable	12 A switchable
Input circuit breaker	8 AAC	20 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 4.7" (42 cm x 21 cm x 12 cm)	
Mounting	Shelf (top or bottom up) or bulkhead (vents up)	
Weight	14 lb (6.4 kg)	20 lb (9 kg)
Shipping weight	16 lb (7.3 kg)	22 lb (10 kg)
Max operating altitude	15,000' (4570 m)	
Construction	ABS plastic top and cast aluminum bottom	

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

## MMS Series Inverter / Charger



**MMS1012-G – With GFCI outlet and 3 ft cord. Ideal for emergency vehicle applications.**



### MODEL NUMBERS

- MMS1012
- MMS1012-G

### AVAILABLE ACCESSORIES

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DC Load Disconnect .....	20
Fuse Blocks .....	21
Remote - ME-ARC .....	22
Remote - ME-RC .....	22
Remote - MM-RC .....	23
Remote - ME-MR .....	23

The MMS Series Inverter / Charger is a pure sine wave inverter providing a cost effective solution for those with smaller power needs in mobile applications. Versatile, easy-to-use, and lightweight, the MMS Series provides a reliable base for your energy system.

**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 MMS Series is ETL Listed to the stringent requirements of UL/cUL 458 and CSA C22.2 #107.1-01 for mobile use.

**Attractive styling:** The modern, hourglass case, paired with the die cast aluminum base combines form with function, creating an attractive unit that uses its base as a heat sink for superior high temperature operation.

### Features

#### Standard transfer relay:

The standard 20 amp transfer relay will pass AC power through the inverter when using shore or generator power.

#### Low/high battery protection:

If your battery voltage reaches below 10 VDC or above 17 VDC, the MMS Series will automatically shut down.

#### Versatile mounting:

Mount the MMS Series on a shelf, bulkhead, or even upside down.

#### Fan cooled:

The MMS 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.

#### Current overload protection:

The MMS Series will automatically shut down if its output wattage is exceeded or it detects a short in the wiring, saving the unit from costly damage.

#### Convenient switches:

The MMS Series comes with an on/off front-mounted switch with an easy-to-read LED indicator.

#### Circuit breaker protection:

This model comes with built in input and output circuit breakers for ease of installation.

#### Battery temp sensor:

The standard battery temp sensor monitors temperatures from 0 - 50° C.

#### Buy with ease:

The MMS Series is backed by a two-year (24-month) parts and labor warranty.

## MMS Series Specifications

	MMS1012	MMS1012-G
Inverter Specifications		
Input battery voltage	9 to 17 VDC	9 to 17 VDC
Nominal AC output voltage	120 VAC ± 5%	120 VAC ± 5%
Output frequency and accuracy	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz
Total Harmonic Distortion (THD)	< 5%	< 5%
1 msec surge current (amps AC)	38	38
100 msec surge current (amps AC)	21	21
5 sec surge power (real watts)	1750	1750
30 sec surge power (real watts)	1600	1600
5 min surge power (real watts)	1200	1200
30 min surge power (real watts)	1050	1050
Continuous power output at 25° C	1000 VA	1000 VA
Maximum continuous input current	133 ADC	133 ADC
Inverter efficiency (peak)	87%	87%
Transfer time	16 msecs	16 msecs
Search mode (typical)	5 watts	5 watts
No load (120 VAC output, typical)	19 watts	19 watts
Waveform	Pure Sine Wave	Pure Sine Wave
Charger Specifications		
Continuous output at 25° C	50 ADC	50 ADC
Charger efficiency	84%	84%
Power factor	> 0.95	> 0.95
Input current at rated output (AC amps)	7	7
General Features and Capabilities		
Transfer relay capability	20 AAC (input current for charging and pass through)	
Battery temperature compensation	Yes, 15 ft Battery Temp Sensor standard	
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 remote	
AC output	Hardwire	GFCI outlet
AC input	Hardwire	3 ft cord
Output circuit breaker	15 A switchable	NA
Input circuit breaker	20 AAC	20 AAC
Listings	ETL Listed to UL/cUL458, CSA C22.2 #107.1-01, meets KKK-A-1822E standard	
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 4.7" (42 cm x 21 cm x 12 cm)	
Mounting	Shelf (top or bottom up) or bulkhead (vents up)	
Weight	23 lb (10.4 kg)	
Shipping weight	25 lb (11.3 kg)	
Max operating altitude	15,000' (4570 m)	
Construction	ABS plastic top and cast aluminum bottom	

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



## MS Series Inverter / Charger



### MODEL NUMBERS:

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

### AVAILABLE ACCESSORIES:

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AGS .....	16
Battery Monitor Kit.....	18
Conduit Box .....	20
DC Load Disconnect .....	20
Remote Switch Adapter ....	20
Fuse Blocks .....	21
Remote - ME-ARC .....	22
Remote - ME-RC .....	22
Remote - ME-MR .....	23
Smart Battery Combiner ...	24

The MS Series Inverter / Charger from Magnum Energy – a pure sine wave inverter designed specifically for the most demanding mobile 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.

### 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.

## MS Series Specifications

	MS2000	MS2012	MS2812	MS4024
Inverter Specifications				
Input battery voltage range	9 - 17 VDC	9 - 17 VDC	9 - 17 VDC	18 - 34 VDC
Nominal AC output voltage	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
Total Harmonic Distortion (THD)	< 5%	< 5%	< 5%	< 5%
1 msec surge current (amps AC)	50	50	70	120
100 msec surge current (amps AC)	33	33	40	72
5 sec surge power (real watts)	3300	3300	3900	5800
30 sec surge power (real watts)	3100	3100	3800	5400
5 min surge power (real watts)	2800	2800	3200	4900
30 min surge power (real watts)	2200	2200	3000	4500
Continuous power output at 25° C	2000 VA	2000 VA	2800 VA	4000 VA
Maximum continuous input current	266 ADC	266 ADC	373 ADC	266 ADC
Inverter efficiency (peak)	89%	89%	88%	87%
Transfer time	16 msecs	16 msecs	16 msecs	16 msecs
Search mode (typical)	5 watts	7 watts	7 watts	7 watts
No load (120 VAC output, typical)	25 watts	25 watts	30 watts	25 watts
Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
Charger Specifications				
Continuous output at 25° C	100 ADC	100 ADC	125 ADC	105 ADC
Charger efficiency	85%	85%	85%	85%
Power factor	> .95	> .95	> .95	> .95
Input current at rated output (AC amps)	15	15	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	ETL Listed to UL/cUL 458, UL 1741, CSA C22.2 #107.1-01, meets KKK-A-1822E standard			
Warranty	Three 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)	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)			
Weight	40 lb (18.1 kg)	42 lb (19.1 kg)	55 lb (24.9 kg)	55 lb (24.9 kg)
Shipping weight	45 lb (20.4 kg)	47 lb (21.3 kg)	60 lb (27.2 kg)	60 lb (27.2 kg)
Max operating altitude	15,000' (4570 m)			

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

## MS-E Series Inverter / Charger



**The MS Export Series Pure Sine Wave Inverter / Charger is powerful, easy-to-use, and cost effective.**

### MODEL NUMBERS:

- MS2712E
- MS4124E

### AVAILABLE ACCESSORIES:

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Remote - ME-ARC .....	22
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Magnum Energy now offers the MS-E Series Inverter / Charger for 230 VAC / 50 Hz installations. The MS-E Series comes with all of the features you've come to expect from a Magnum product, including:

**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-E Series is listed to the stringent CE requirements, ensuring the inverter / charger is safe and reliable.

**Easy-to-install:** Install the MS-E 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 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-E Series comes in 12 and 24 volt configurations, allowing you to choose the model that is right for you.

**Versatile mounting:** Mount the MS-E 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-E 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-E Series comes with an on/off inverter-mounted switch with an easy-to-read LED indicator.

### Buy with ease:

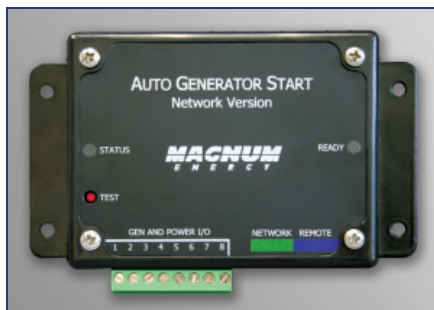
The MS-E Series is backed by a two-year (24-month) limited warranty.

## MS-E Series Specifications

	MS2712E	MS4124E
<b>Inverter Specifications</b>		
Input battery voltage range	9 - 17 VDC	18 - 34 VDC
Nominal AC output voltage	230 VAC ±5%	230 VAC ±5%
Output frequency and accuracy	50 Hz ± 0.4 Hz	50 Hz ± 0.4 Hz
Total Harmonic Distortion (THD)	< 5%	< 5%
1 msec surge current (amps AC)	45	65
100 msec surge current (amps AC)	21	30
5 sec surge power (real watts)	4100	6300
30 sec surge power (real watts)	3750	5300
5 min surge power (real watts)	3600	4750
30 min surge power (real watts)	3500	4600
Continuous power output at 25° C	2700 VA	4100 VA
Maximum continuous input current	360 ADC	273 ADC
Inverter efficiency (peak)	86%	90%
Transfer time	16 mSec	16 mSec
Search mode (typical)	9 watts	9 watts
No load (230 VAC output, typical)	34 watts	30 watts
Waveform	Pure Sine Wave	Pure Sine Wave
<b>Charger Specifications</b>		
Continuous output at 25° C	125 ADC	105 ADC
Charger efficiency (peak)	83%	88%
Power factor	> .95	> .95
Input current at rated output (AC amps)	8.5	14
<b>General Features and Capabilities</b>		
Transfer relay capability	30 amps AC	
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	
Listings	CE	
Warranty	Two years	
<b>Environmental Specifications</b>		
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	
<b>Physical Specifications</b>		
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 (top or bottom up) or wall	
Weight	53 lb (24.0 kg)	
Shipping weight	58 lb (26.3 kg)	
Max operating altitude	15,000' (4570 m)	

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

## Automatic Generator Start Module (AGS)



### MODEL NUMBERS:

- ME-AGS-S
- ME-AGS-N

### WORKS WITH:

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The ME-AGS-S does not require an inverter / charger.

Imagine being able to enjoy a day away all-the-while knowing your living space will stay cool and comfortable and your batteries will stay charged and ready for all of the activities that make up daily life. There's nothing better than returning to a nice, cool, comfortable home with charged batteries after a day away. The Magnum Auto Gen Start (AGS) can make this happen.

The Magnum AGS is compatible with most major generators, including Onan, Powertech, Generac, Westerbeke, Kohler, EPS, Northern Lights, and most portable generators with electric start. Please check with your Magnum dealer for specific model compatibility.

**Automatically start your generator:** The AGS is designed to automatically start your generator based on low battery condition or the inside room temperature.

**Adjust the AGS to meet your needs:** With the ME-AGS-N you can set multiple parameters for starting and stopping the generator. Using the ME-RC, the ME-AGS-N has basic adjustments starting on battery voltage or temperature. When using the ME-ARC, the ME-AGS-N has advanced start and stop features, including battery voltage, time of day, AC amps, exercise time, and SOC.

**Manual start and stop:** Auto Gen Start settings do not interfere with the manual start / stop operation of the generator. Just use any existing start / stop switch for your generator.

### Two models are available:

The stand alone version of the AGS (ME-AGS-S) works well for installation and operation without an inverter. The network version of the AGS (ME-AGS-N) allows operation of the AGS via the ME-RC50 remote panel.

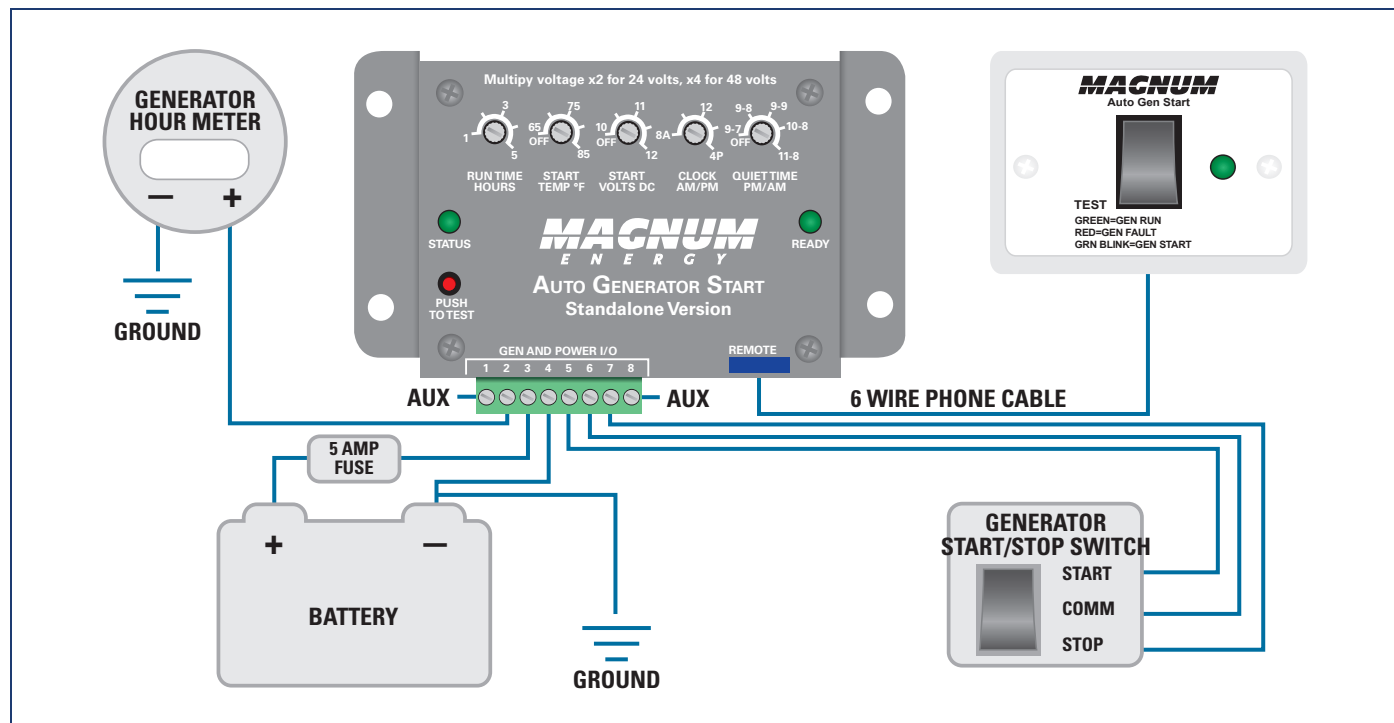
- **ME-AGS-N kit includes:** AGS module (3 relay), 10' network cable, and a 60' remote temperature sensor cable.
- **ME-AGS-S kit includes:** AGS module (3 relay), Remote on/off/test switch, switch bezel, a 25' 6-wire cable, and has basic adjustments starting on battery voltage or temperature.

### ME-AGS-N FEATURES\*

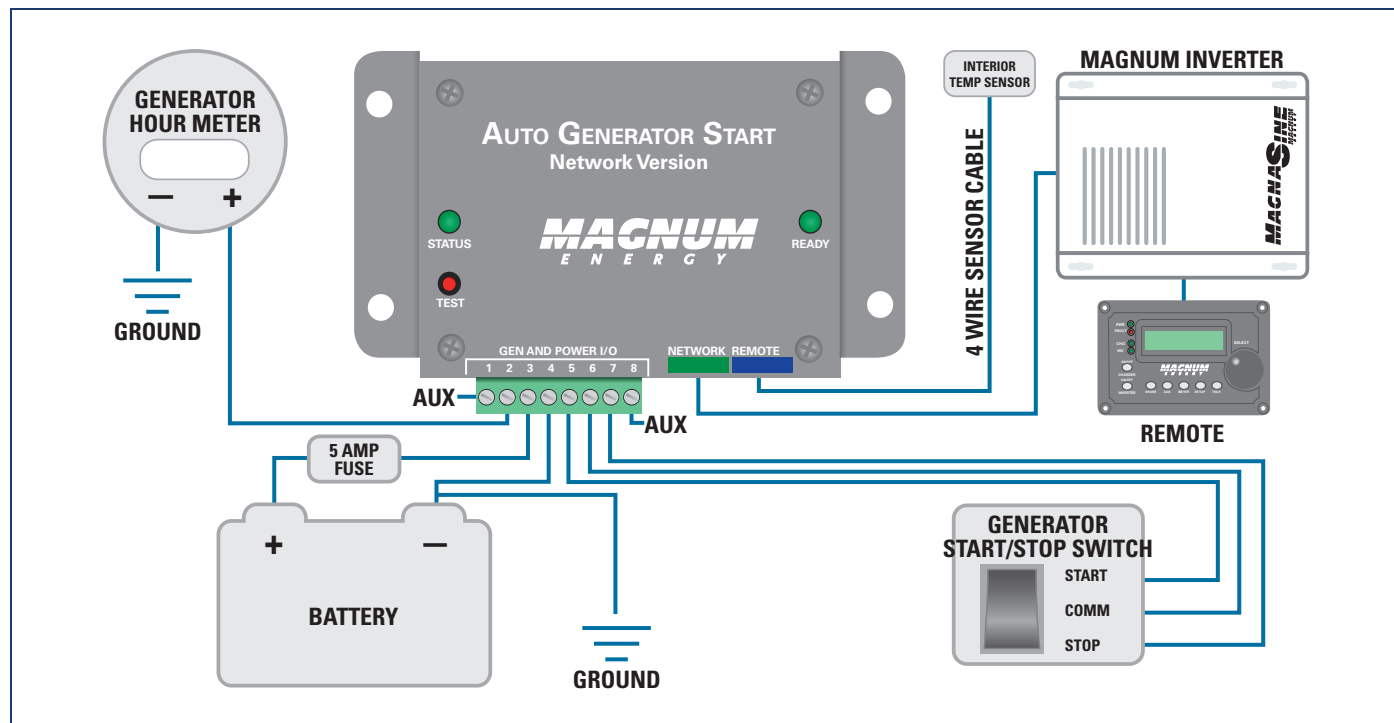
- All settings are adjustable from the ME-RC and ME-ARC remotes.
- Auto start is locked out when utility power is present.
- Portable generator mode.



## AGS Wiring Diagram for Stand Alone Systems (ME-AGS-S)



## AGS Wiring Diagram for Networked Systems (ME-AGS-N)



\* AGS-N features require Remote rev 1.6 and AGS rev 5.0 or higher.

## Battery Monitor Kit (ME-BMK)



### MODEL NUMBERS:

- ME-BMK
- ME-BMK-NS (no shunt)

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Monitoring your battery bank is easy with the Battery Monitor Kit (ME-BMK)\* from Magnum Energy. Acting as a “fuel gauge” for your batteries, the ME-BMK monitors their state of charge (SOC) and then provides this information in an easy-to-understand display via the ME-RC or ME-ARC remotes. With accurate SOC readings, you can avoid unnecessary battery recharging, saving on fuel and long-term maintenance costs.

If you already have a Magnum Inverter / charger and Magnum Remote\*, the ME-BMK is an easy retrofit. Simply install the kit according to the installation manual and begin monitoring your battery bank via the “Meter” button on your ME-RC.

### Available readings from the ME-BMK / ME-BMK-NS

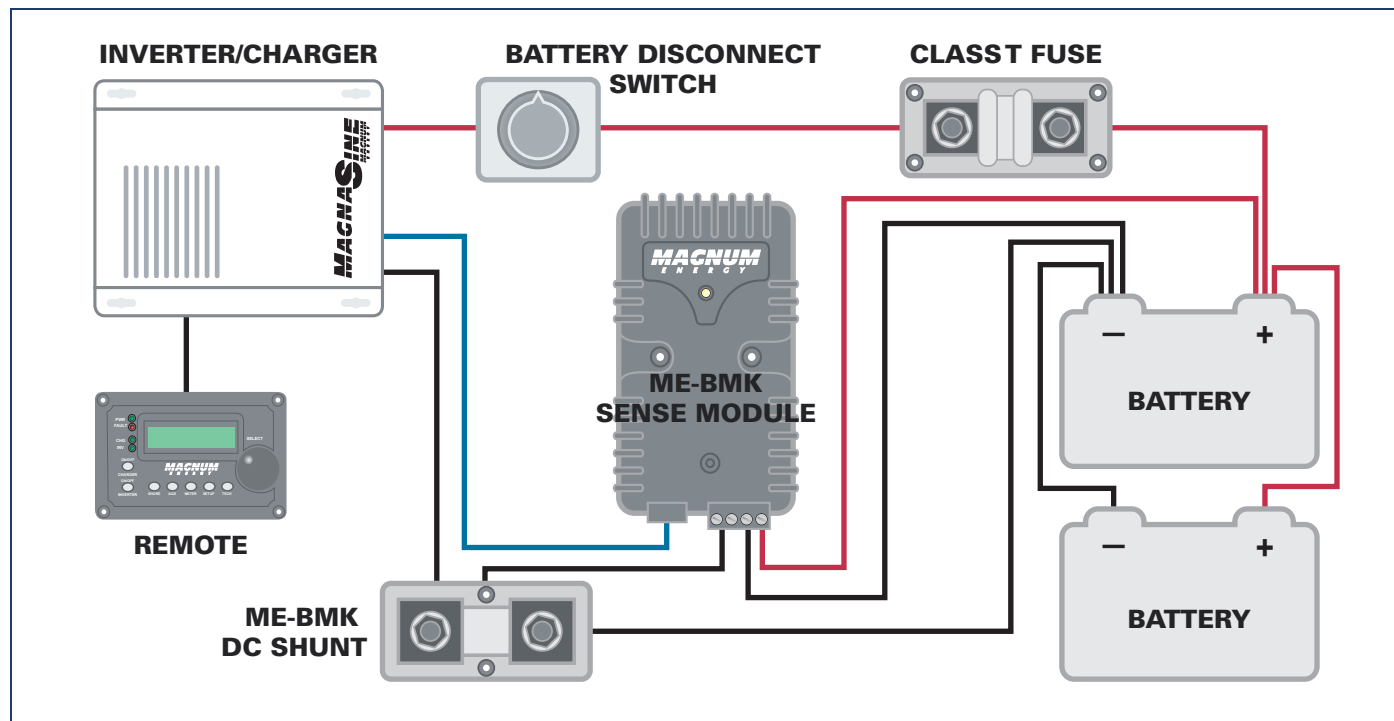
- State of Charge (SOC)  
0 - 100%
- DC volts
- DC amps
- Amp hours in/out
- Resettable amp hours out
- Total amp hours out
- Minimum volts DC
- Maximum volts DC
- Temperature compensated
- Auto detects input voltage

### Kit includes

- Sense module
- DC shunt  
50mv/500 amp shunt  
(not included in the ME-BMK-NS kit)
- Twisted pair wire  
5' length, 18 AWG wire
- Communication cable  
10' length, 4-conductor,  
telephone standard

\* Requires ME-RC remote revision 2.0 or higher.

## ME-BMK Basic Configuration Diagram



## ME-BMK Specifications

<b>ME-BMK</b>	
DC volts	7 to 70 ( $\pm 0.5\%$ ) auto voltage detection
DC amps	$\pm 0.1$ to 999 ( $\pm 1.0\%$ )
Battery SOC %	0 to 100% (1% increments)
Power draw	< .6 watts
Amp hours in/out	$\pm 32,768$ amp hours (1 AH increments)
rAH out (resettable amp hours removed)	0 to 65,353 amp hours, resettable (0.1 AH increments)
tAH out (total amp hours removed)	0 to 65,535,000 amp hours (0.1 k or 100 AH increments)
Minimum/maximim DC	7 to 70 VDC, resettable
Shipping weight	2 lb (.9 kg)
Kit includes	Manual, sense module, DC shunt, twisted pair wire, and communication cable
Sense wire	Twisted pair –blue & orange, 5' length, 18 AWG wire
Communication cable	4-conductor, 10' twisted pair, telephone standard
Remote requirements	Use with an ME-RC with firmware revision of 2.0 or higher or an ME-ARC (all revisions)

### DC Shunt (not included with the ME-BMK-NS kit)

Resistance	0.1 milliohm (500A at 50mV)
Continuous current	410 amperes maximum
Overload current	Overloads to 500 amps for less than 5 minutes if normally operated at less than 300 amps

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

## Conduit Box



The ME-CB conduit box is designed to work with Magnum ME, MS, MS-AE, MS-PAE, and RD Series Inverter / chargers. It provides an enclosure for AC and/or DC wiring and has knockouts for ½", ¾", 1", and 2" trade-size conduit. The ME-CB adds just over 5" (13 cm) to the length of the inverter.

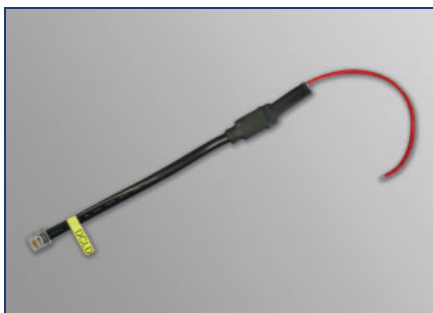
### MODEL NUMBERS:

- ME-CB

### WORKS WITH:

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## DC Load Disconnect



The DC Load Disconnect is a pigtail adapter designed to automatically turn off the inverter via a 12 volt DC disconnect switch.

### MODEL NUMBERS:

- ME-DCLD
- MM-DCLD

### WORKS WITH:

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<b>ME-DCLD only</b>	
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<b>MM-DCLD only</b>	
MM Series .....	8
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## Remote Switch Adapter



The Remote Switch Adapter is a pigtail adapter designed to provide a simple on/off remote switch.

### MODEL NUMBERS:

- ME-RSA (*use SPST switch*)
- ME-RSA-M (*use momentary switch*)

### WORKS WITH:

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Fuse Blocks



**Protection against costly damage:** The ME-125F, ME-200F, ME-300F, and ME-400F protect the battery bank, inverter, and cables from damage caused by short circuits and overloads.

**Complete kit in one package:** Magnum Energy fuses include a Slow-Blow high current fuse, a mounting block, and protective cover.

MODEL NUMBERS:

- ME-125F
- ME-200F
- ME-300F
- ME-400F

WORKS WITH:

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<b>ME-125F and ME-200 only</b>	
MM Series .....	8
MMS Series .....	10
<b>ME-300F and ME-400F only</b>	
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Fuse Selection

Conductor Gauge	Current Capacity	Recommended Fuse Rating
4 AWG	125	125
1/0 AWG	200	200
2/0 AWG	290	300
3/0 AWG	310	300
4/0 AWG	360	400

Ignition Switch Lockout

The Ignition Switch Lockout is a pigtail adapter designed to automatically turn off the inverter via a vehicle ignition switch.

MODEL NUMBERS:

- ME-ISW

WORKS WITH:

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## Remote - ME-ARC



This advanced feature remote offers the same simple push button operation of the ME-RC with advanced features and setup menus. The ME-ARC features a **Favs** button for storing up to five of your favorite setup menus, a **Control** button for fast easy control of the inverter, charger, and generator, meter button with AC and DC meters, advanced setup menus, and advanced tech menus.

**Easy-to-read:** The large LCD screen and at-a-glance LEDs display the inverter / charger status in a straight-forward way. Soft keys give simple access to menus and a rotary encoder knob makes it easy to quickly scroll through menus and select settings.

**Non-volatile memory:** Critical settings are saved even if the power is disconnected.

**No cross platform confusion:** The ME-ARC remote is the same remote used on all Magnum inverter / charger models in the ME, MS, MS-PAE, RD, MM, and the MMS Series lines.

A standard 50' 4-wire, twisted pair cable allows for plenty of room to display the Remote with ease.

### MODEL NUMBERS:

- ME-ARC50

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## Remote - ME-RC



The ME-RC is designed to be simple to use while offering multiple functions in one place.

**Easy-to-read:** The large LCD screen and at-a-glance LEDs display the inverter / charger status in a straight-forward way. Soft keys give simple access to menus and a rotary encoder knob makes it easy to quickly scroll through menus and select settings.

**Non-volatile memory:** Critical settings are saved even if the power is disconnected.

**No cross platform confusion:** The ME-RC remote is the same remote used on all Magnum inverter / charger models in the ME, MS, MS-PAE, RD, MM, and the MMS Series lines.

**Multiple functional settings:** The ME-RC offers multiple functions in one place, including: inverter on/off, charger on/off, shore power breaker settings, AGS control, meter button, simple setup, and technical menus.

A standard 50' 4-wire, twisted pair cable allows for plenty of room to display the Remote with ease.

### MODEL NUMBERS:

- ME-RC50

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## Remotes - MM-R & MM-RC

The low-cost, easy-to-read MM-R and MM-RC Remotes are designed to work with the MM and MMS Series Inverters and Inverter/Chargers.



**MM-R Inverter only models**



**MM-RC Inverter/Charger models**

### MODEL NUMBERS:

- MM-R25
- MM-RC25

### WORKS WITH:

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ME Series .....	6
MM Series .....	8
MMS Series .....	10

#### Features

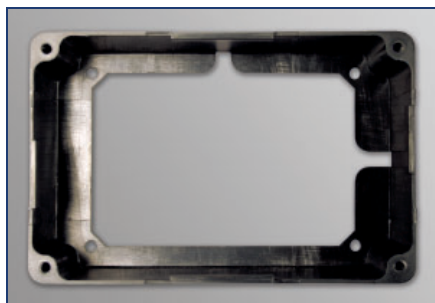
<b>LEDs</b>	Three LEDs: Invert, AC In, and Fault Modes      Six LEDs: Invert, AC In, Fault Modes, Bulk, Absorb, and Float On/Off: Turns inverter or charger on or off and defeats "search" mode
-------------	--

<b>Mounting</b>	Includes bezel for surface mount or flush mount
-----------------	---

<b>Included with the Remote</b>	25' phone cable
---------------------------------	-----------------

## Remote Bezel - ME-RC-BZ

Mounting bezel for the ME-RC remote, allowing the ME-RC to be surface mounted.



**ME-RC shown mounted in bezel.  
Remote and bezel sold separately.**

### MODEL NUMBERS:

- ME-RC-BZ

### WORKS WITH:

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Smart Battery Combiner (ME-SBC)



MODEL NUMBERS:

- ME-SBC

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The ME-SBC also works as a stand-alone unit.

The Magnum Energy Smart Battery Combiner (ME-SBC) is an easy-to-use stand alone battery combiner and isolator for 12 and 24 VDC systems. Apply a single charging source to the main battery bank and the ME-SBC charges a second battery bank using a portion of the current. With adjustable voltage ranges, including automatic on/off setpoints, the ME-SBC prevents under- or over-charging.

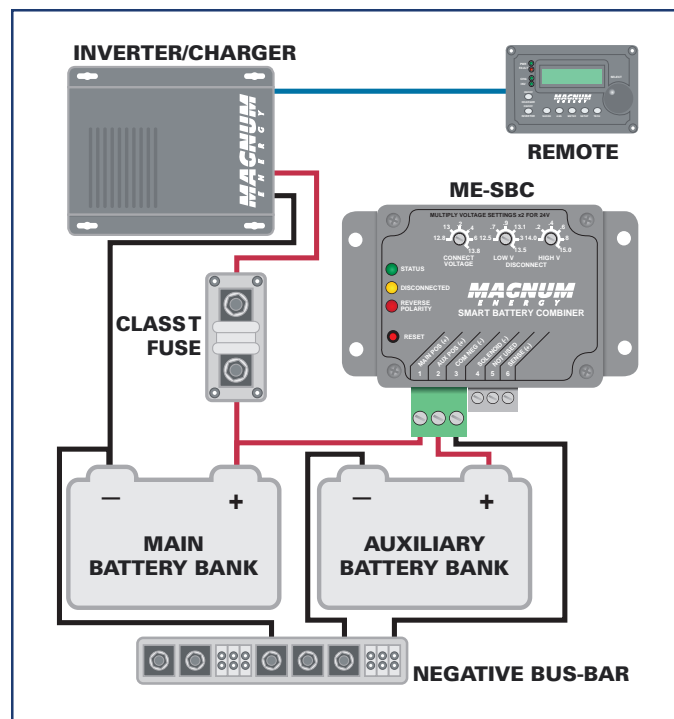
The Front Panel Includes:

- LED indicators showing status and operation.
- Three adjustable voltage dials to set the “Connect Voltage”, “Low V Disconnect”, and “High V Disconnect.”
- An oversized power terminal block allowing for easy wire connections even if the wires are large.
- An accessories terminal block to add a solenoid or a separate voltage sense line.
- A reset switch.

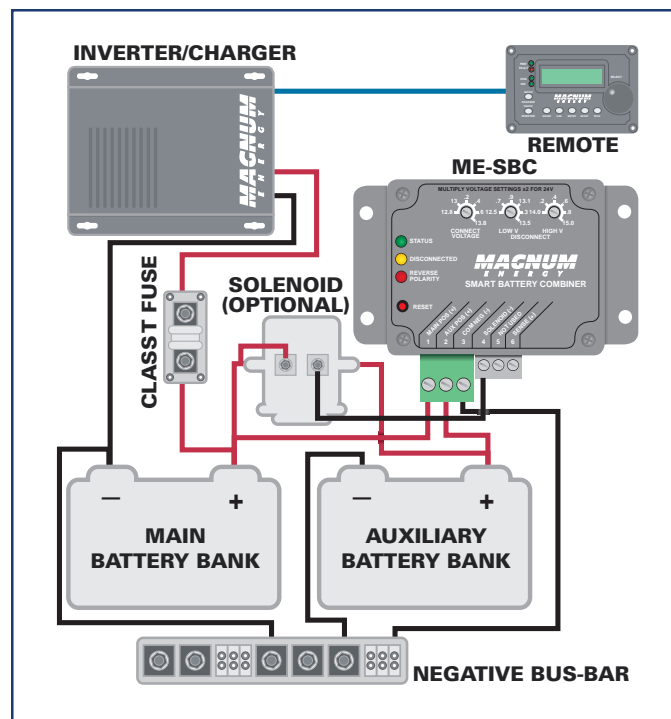
Features:

- Voltage auto-detect feature recognizing 12 or 24 VDC.
- Transfers up to 25 amps.
- Solenoid drive for requirements greater than 25 amps.
- Over-temperature and over-current shutdown.
- Adjustable voltage settings with a wide range allows for charging flexibility.
- Bi-directional charging.
- Reverse polarity protection.
- Sense lead for long-run applications.

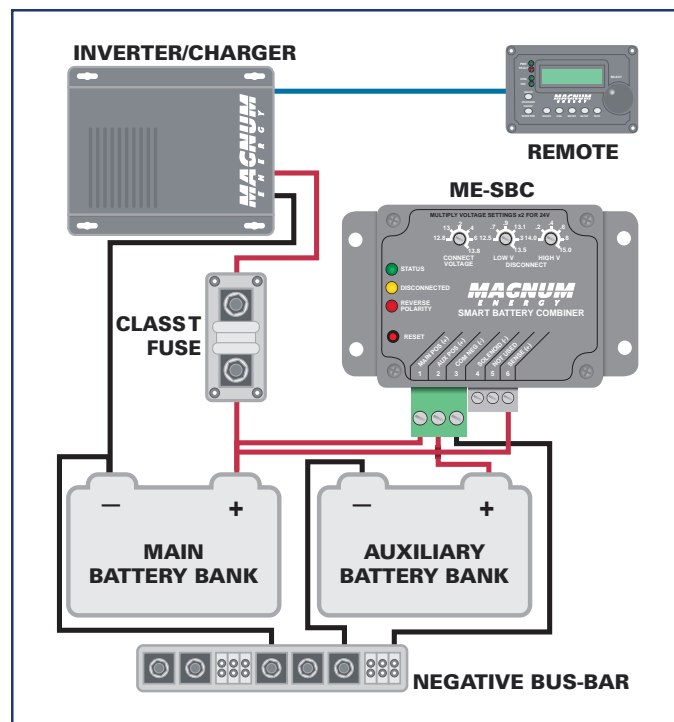
## ME-SBC Basic Configuration Diagrams



25 amp Combiner Mode



Solenoid Drive



Remote Voltage Sense

## ME-SBC Specifications

ME-SBC	
DC volts	12 or 24 VDC nominal
DC amps	25 amps continuous
Maximum VDC	40 volts peak
Average operating tare loss	~150 mW
Maximum operating tare loss	< 220 mW
Non-operating tare loss	< 50 mW
Operating range	0 - 32 VDC
Shipping weight	2 lbs (0.9 kg)
Shipping dimensions (l x w x h)	6" x 9" x 2.5" (15.2 x 22.9 x 6.4 cm)
Unit dimensions (l x w x h)	4.2" x 5.4" x 1.4" (10.7 x 13.7 x 3.6 cm)
Maximum operating temperature	-40° F to +185° F (-40° C to + 85° C)
Maximum storage temperature	-40° F to +194° F (-40° C to + 90° C)

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

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