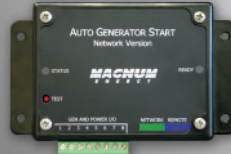




MAGNUM
ENERGY



2010 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, Marine, Off-grid, and Back-up 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 multiple climates.

We offer models from our entry-level 600 watt MM and MM-AE Series, to our robust 4400 watt MS-AE Series, to the new MS-PAE Series with up to a

17,600 watt output. Many of our inverter/chargers come in 12, 24, and 48-volt options. And we have added easy-to-install panel systems with our MMP (Mini-Magnum Panel) and MP (Magnum Panel) lines. 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.



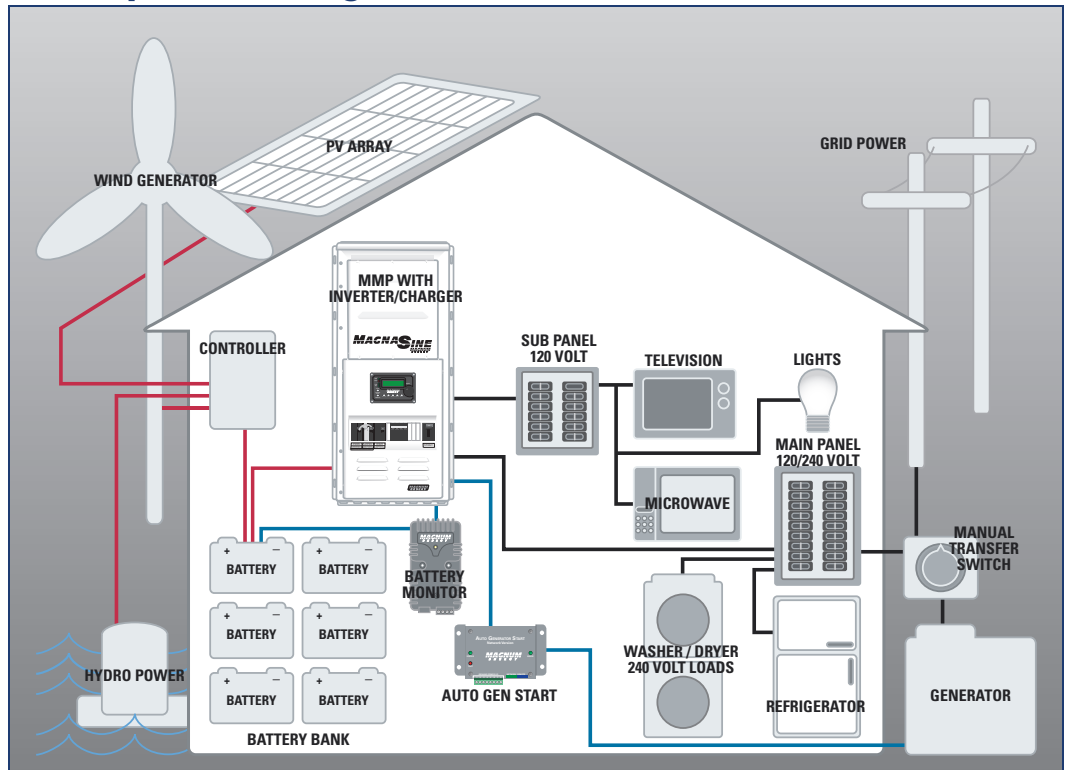
Renewable Energy and Magnum Products

For reliable power regardless of grid connectivity, Magnum inverter/chargers and accessories are a solid base to build a back-up or off-grid power system. With models available in 12, 24, and 48-volt configurations and power output from 600 to 4400 VA, and systems up to 17,600 VA you'll be sure to find the components right for your system.

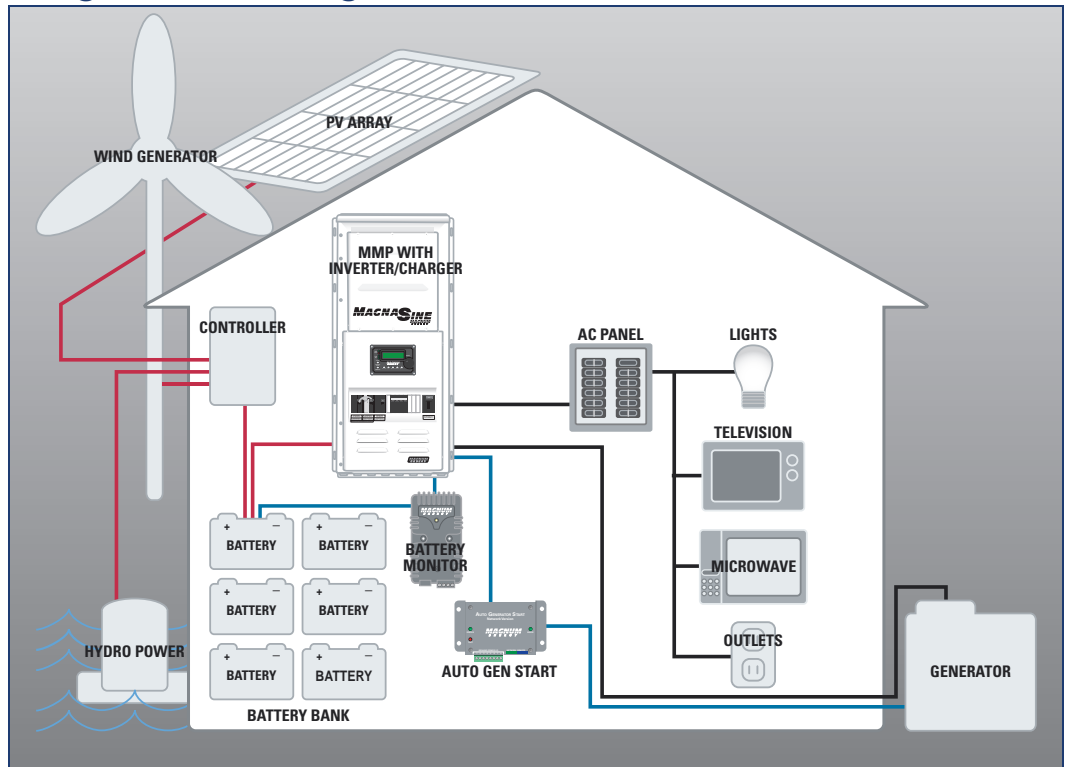
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Back-up Power Diagram



Off-grid Power Diagram



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.

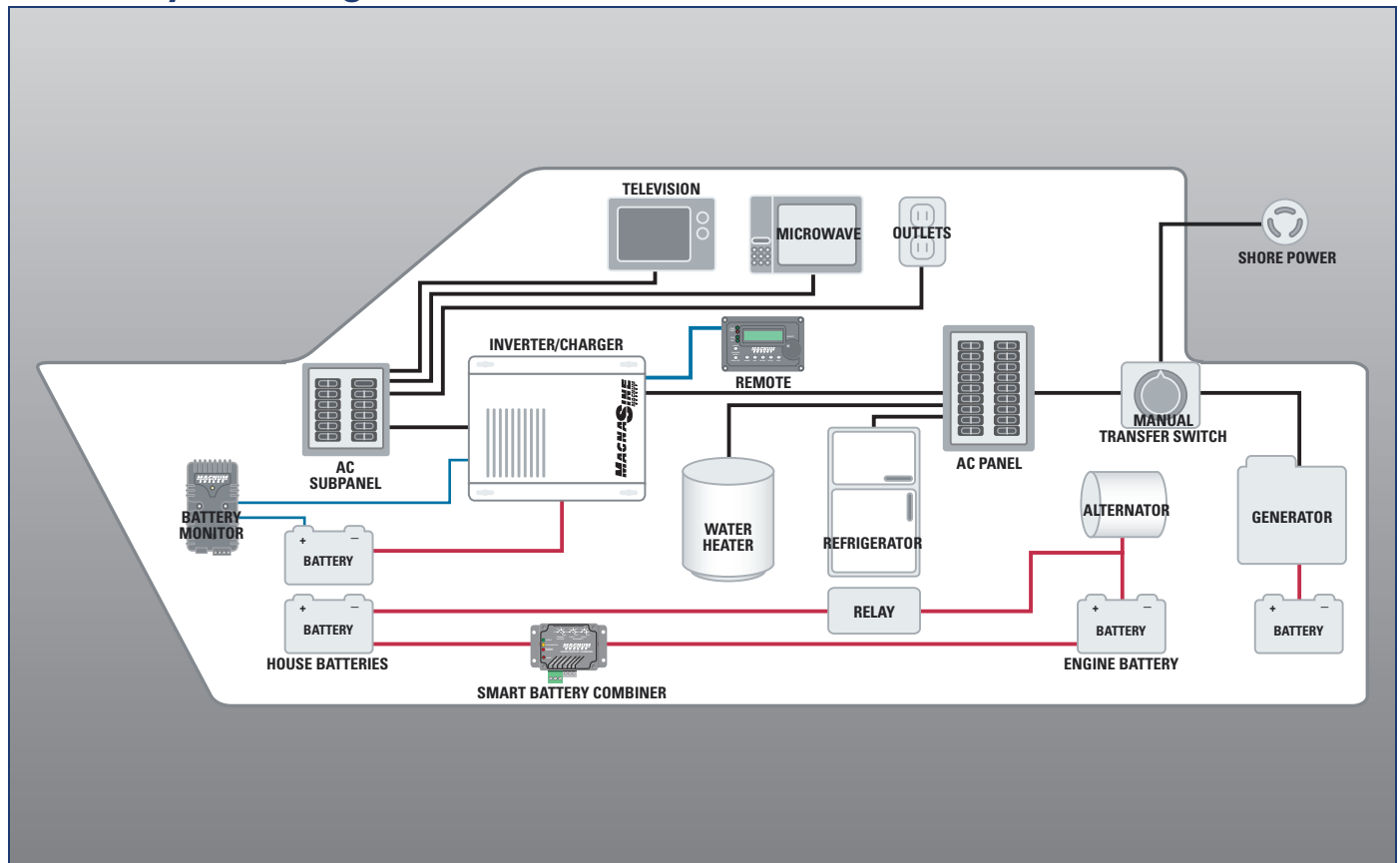
We offer both sine wave and modified sine wave models to choose from, so that you can choose what's right for you and not have to spend money on features you don't need.

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.

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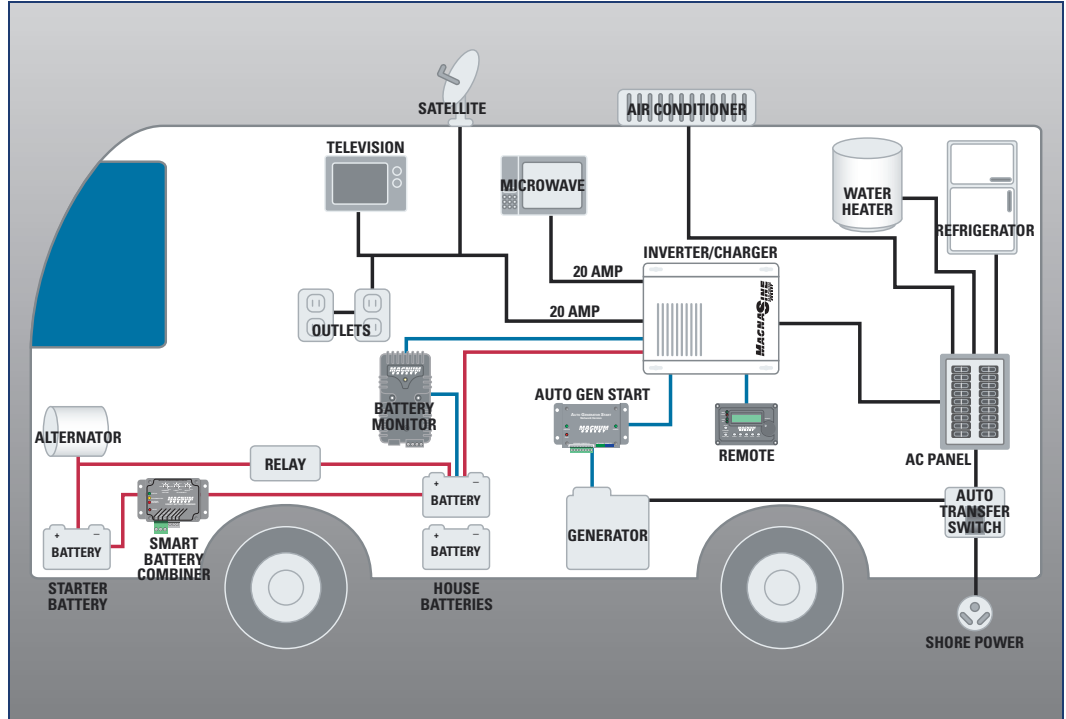
Marine System Diagram



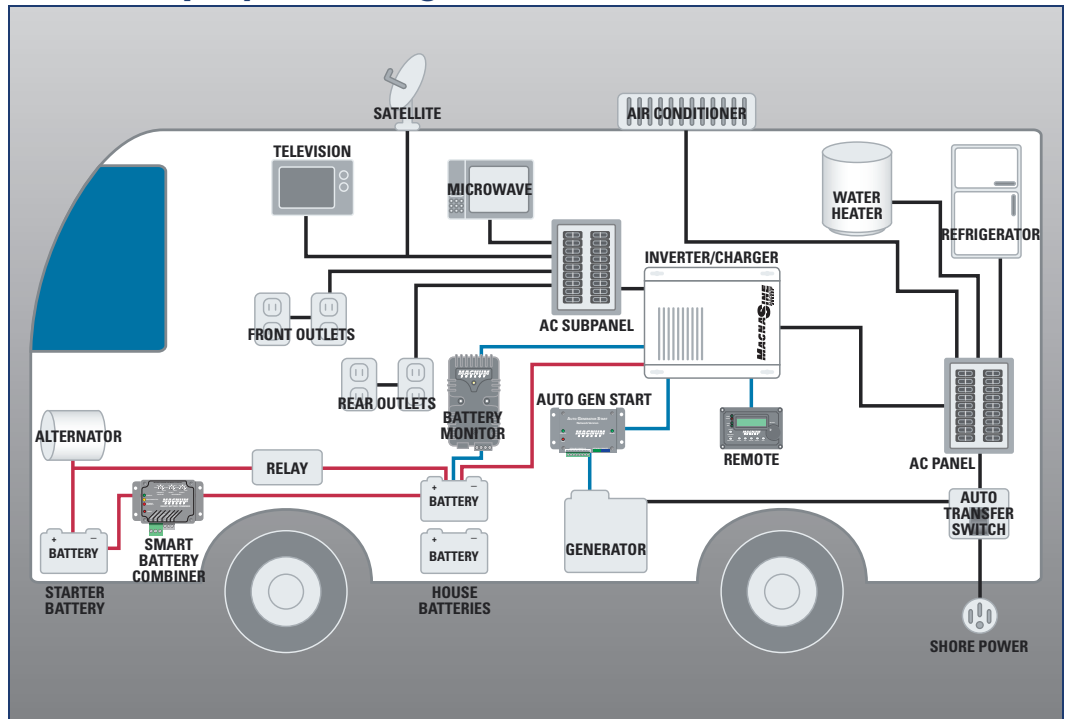
Recreational Vehicles and Magnum Products

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



MODELS AVAILABLE FOR RV APPLICATIONS

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Magnum Inverter/Charger Features



Safe and reliable:

Our inverter/chargers are ETL Listed to the stringent requirements of UL/cUL 458 for mobile use and/or UL 1741 and CSA for off-grid installations.

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, 24, and 48 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, and series stacking cable kits. And our accessories line utilizes a more consistent design from one product to another. Our easy-to-use remote for your home, 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.

The ME Series Inverter/Charger



MODEL NUMBERS:

- ME2012
- ME2012-15B
- ME2012-20B
- ME2512
- ME3112

AVAILABLE FOR:

- Marine Systems
- RV Systems
- Truck Systems

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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	120 VAC	120 VAC
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 msec	16 msec	16 msec
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 15 or 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.

The MM Series Inverter/Charger



MODEL NUMBERS:

- MM612 (inverter only)
- MM1212

AVAILABLE FOR:

- Marine Systems
- RV Systems

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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 msec	16 msec
Search mode (typical)	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.

The MM-AE Series Inverter/Charger



MODEL NUMBERS:

- MM612AE
- MM1512AE
- MM1524AE

AVAILABLE FOR:

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

AVAILABLE ACCESSORIES:

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Remote - MM-RC	31

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

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-AE Series on a shelf, wall, or even upside down.

Fan cooled: The MM-AE 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-AE Series will automatically shut down, saving your batteries.

High battery protection:

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

Current overload protection:

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

MM-AE Series Specifications

	MM612AE	MM1512AE	MM1524AE
Inverter Specifications			
Input battery voltage range	9 to 16 VDC	9 to 16 VDC	18 to 32 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)	27	42	45
100 msec surge current (amps AC)	11	23	24
5 sec surge power (real watts)	1100	2100	2650
10 sec surge power (real watts)	1050	1900	2575
30 sec surge power (real watts)	1000	1750	2500
5 min surge power (real watts)	950	1550	2350
30 min surge power (real watts)	675	1525	1900
Continuous power output at 25° C (with 1.0 PF)	600 VA	1500 VA	1500 VA
Continuous current output	5 AAC	10 AAC	13 AAC
Maximum input battery current	80 ADC	200 ADC	100 ADC
Inverter efficiency (peak)	95%	95%	91%
Transfer time	16 msec	16 msec	16 msec
Search mode (typical)	3 watts	6 watts	4 watts
No load (120 VAC output, typical)	10 watts	18 watts	9 watts
Waveform	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave

Charger Specifications

Continuous output at 25° C	30 ADC	70 ADC	35 ADC
Charger efficiency	85%	88%	88%
Power factor	> 0.95	> 0.95	> 0.95
Input current at rated output (AC amps)	4	9	9

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 or 20 VDC, adjustable on most models with the ME-RC remote		
AC output and input	Hardwire	Hardwire	Hardwire
Output circuit breaker	7 A switchable	12 A switchable	12 A switchable
Input circuit breaker	8 AAC	20 AAC	20 AAC
Listings	NA		
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 wall (vents up)		
Weight	16 lb (7.3 kg)	22 lb (10 kg)	22 lb (10 kg)
Shipping weight	18 lb (8.2 kg)	24 lb (10.9 kg)	24 lb (10.9 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.

The MMS Series Inverter/Charger



MMS1012-G – New model with GFCI outlet and 3 ft cord. Ideal for emergency vehicle applications.

MODEL NUMBERS

- MMS1012
- MMS1012-G

AVAILABLE FOR

- Emergency Vehicles
- Marine Systems
- RV Systems

AVAILABLE ACCESSORIES

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Remote - MM-RC	31

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 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 msec	16 msec
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.

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 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.

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.

MODEL NUMBERS:

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

AVAILABLE FOR:

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

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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	120 VAC	120 VAC	120 VAC
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 msec	16 msec	16 msec	16 msec
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.

The MS-AE & MS-PAE 120/240V Series Inverter/Charger



MODEL NUMBERS

- MS4024AE
- MS4448AE
- MS4024PAE
- MS4448PAE

AVAILABLE FOR

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

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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 or 240 volt output in one unit, eliminating the need to stack two units together to get 240 volts.

Parallel stacking is available on the MS-PAE 120/240V Series Inverter/Charger. You can parallel up to four inverterchargers for up to 17.6kw of power at 120/240V. The MP and ME-RTR are required for parallel stacking the MS-PAE Series.

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 C22.2 #107.1-01 for renewable energy installations.

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: Up to 60 Amp transfer service is available on all models.

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

MS-AE 120/240V Series Specifications

	MS4024AE / MS4024PAE	MS4448AE / MS4448PAE
Inverter Specifications		
Input battery voltage range	18.0 - 34 VDC	36.0 - 68 VDC
Nominal AC output voltage	120/240 VAC split phase	120/240 VAC split phase
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)	Line-Neutral: 120, Line-Line: 70	Line-Neutral: 120, Line-Line: 70
100 msec surge current (amps AC)	Line-Neutral: 72, Line-Line: 40	Line-Neutral: 75, Line-Line: 40
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	266 A	144 A
Inverter efficiency (peak)	93%	94%
Transfer time	16 msec	16 msec
Search mode (typical)	< 6 watts	< 6 watts
No load (120 VAC output, typical)	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 phase
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	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	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	55 lb (24.9 kg)	55 lb (24.9 kg)
Shipping Weight	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.

The RD Series Inverter/Charger



MODEL NUMBERS:

- RD2212
- RD1824
- RD2824
- RD3924

AVAILABLE FOR:

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

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The RD Series Inverter/Charger is a new generation inverter designed specifically for renewable energy use. The RD 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 RD Series is ETL Listed to the stringent requirements of UL 1741 (USA only), ensuring that the inverter is safe and reliable.

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

Features:

Choices: The RD Series comes in four power models and 12 and 24 volt models, allowing you to choose the model that is right for you.

Versatile mounting: Mount the RD Series on a shelf or wall.

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

Multiple ports: The RD 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 RD 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.

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

RD Series Specifications

	RD2212	RD1824	RD2824	RD3924
Inverter Specifications				
Input battery voltage range	9 - 16 VDC	18 - 32 VDC	18 - 32 VDC	18 - 32 VDC
Nominal AC output voltage	120 VAC	120 VAC	120 VAC	120 VAC
Output frequency and accuracy	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz
1 msec surge current (amps AC)	60	70	100	150
100 msec surge current (amps AC)	37	40	60	90
5 sec surge power (real watts)	3700	4000	6000	9000
30 sec surge power (real watts)	3450	3300	4800	6400
5 min surge power (real watts)	3100	2850	3950	5800
30 min surge power (real watts)	2400	2400	3500	4750
Continuous power output at 25° C	2200 VA	1800 VA	2800 VA	3900 VA
Maximum continuous input current	293 ADC	120 ADC	186 ADC	260 ADC
Inverter efficiency (peak)	95%	94%	93%	93%
Transfer time	16 msec	16 msec	16 msec	16 msec
Search mode (typical)	5 watts	5 watts	5 watts	5 watts
No load (120 VAC output, typical)	20 watts	12 watts	19 watts	25 watts
Waveform	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave
Charger Specifications				
Continuous output at 25° C	110 ADC	50 ADC	80 ADC	105 ADC
Charger efficiency	85%	85%	85%	92%
Power factor	> 0.95	> 0.95	> 0.95	> 0.95
Input current at rated output (AC amps)	15	15	21	29
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			
Listings	ETL listed to UL1741 (USA only)			
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 (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 or wall (vents up)			
Weight	37 lb (16.9 kg)	35 lb (15.9 kg)	42 lb (19 kg)	53 lb (24 kg)
Shipping weight	42 lb (19 kg)	40 lb (18 kg)	47 lb (21 kg)	58 lb (26 kg)
Max operating altitude	15,000' (4570 m)			

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



MODEL NUMBERS:

- MM1012E
- MM1324E

AVAILABLE FOR:

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

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Magnum Energy now offers the MM-E Series Inverter/Charger for 230 VAC / 50 Hz installations. The MM-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.

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

Convenient switches: All models come with an on/off inverter-mounted switch with an easy-to-read LED indicator.

Features

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

Fan cooled: The MM-E 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.

Versatile mounting: Mount the MM-E Series on a shelf, wall, or even upside down.

Battery and inverter protection: The MM-E Series protects your batteries and itself with low battery, high battery, current overload, and circuit breaker protection.

MM-E Series Inverter/Charger Specifications

	MM1012E	MM1324E
Inverter Specifications		
Input battery voltage range	9 - 16 VDC	18 - 32 VDC
Nominal AC output voltage	230 VAC \pm 5%	230 VAC \pm 5%
Output frequency and accuracy	50 Hz \pm 0.4 Hz	50 Hz \pm 0.4 Hz
1 msec surge current (amps AC)	21	42
100 msec surge current (amps AC)	11	14
5 sec surge power (real watts)	1750	2600
30 sec surge power (real watts)	1600	2100
5 min surge power (real watts)	1350	1850
30 min surge power (real watts)	1180	1650
Continuous power output at 25° C	1000 VA	1300 VA
Maximum continuous input current	133 ADC	87 ADC
Inverter efficiency (peak)	87%	87%
Transfer time	30 ms	30 ms
Search mode (typical)	< 6 watts	< 8 watts
No load (230 VAC output, typical)	16 watts	18 watts
Waveform	Modified Sine Wave	Modified Sine Wave
Charger Specifications		
Continuous output at 25° C	50 A	40 A
Charger efficiency (peak)	84%	83%
Power factor	> 0.95	> 0.95
Input current at rated output (AC amps)	3.5	5.5
General Features and Capabilities		
Transfer relay capability	20 AAC	
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 59 cfm variable speed	
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	
Output circuit breaker	7 AAC	
Input circuit breaker	8 AAC	
Listings	None	
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 (h x w x d)	15.0" x 6.5" x 5.0" (38.1 cm x 16.5 cm x 12.7 cm)	
Mounting	Shelf (top or bottom up) or wall	
Weight	23 lb (10.4 kg)	
Shipping weight	25 lb (11.3 kg)	
Max operating altitude	15,000' (4570 m)	

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

The 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 FOR:

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

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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
Inverter Specifications		
Input battery voltage range	9 - 17 VDC	18 - 34 VDC
Nominal AC output voltage	230 VAC \pm 5%	230 VAC \pm 5%
Output frequency and accuracy	50 Hz \pm 0.4 Hz	50 Hz \pm 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
Charger Specifications		
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
General Features and Capabilities		
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	
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 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.

The RD-E Series Inverter/Charger



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

MODEL NUMBERS:

- RD2624E
- RD4024E

AVAILABLE FOR:

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

AVAILABLE ACCESSORIES:

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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.

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

Convenient switches: All RD-E Series models come with an on/off inverter-mounted switch with an easy-to-read LED indicator.

Features

Easy-to-install: Install the RD-E Series in four easy steps. See your installation manual for specific instructions.

Versatile mounting: Mount the RD-E Series on a shelf or wall.

Multiple ports: The RD-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 easily accessible.

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

RD-E Series Inverter/Charger Specifications

	RD2624E	RD4024E
Inverter Specifications		
Input battery voltage range	18 - 32 VDC	18 - 32 VDC
Nominal AC output voltage	230 VAC \pm 5%	230 VAC \pm 5%
Output frequency and accuracy	50 Hz \pm 0.4 Hz	50 Hz \pm 0.4 Hz
1 msec surge current (amps AC)	85	100
100 msec surge current (amps AC)	22	40
5 sec surge power (real watts)	4700	7500
30 sec surge power (real watts)	4100	6750
5 min surge power (real watts)	3350	6000
30 min surge power (real watts)	2700	5500
Continuous power output at 25° C	2600 VA	4000 VA
Maximum continuous input current	172 ADC	267 ADC
Inverter efficiency (peak)	91%	89%
Transfer time	30 ms	20 ms
Search mode (typical)	< 7 watts	< 8 watts
No load (230 VAC output, typical)	22 watts	32 watts
Waveform	Modified Sine Wave	Modified Sine Wave
Charger Specifications		
Continuous output at 25° C	75 A	105 A
Charger efficiency (peak)	87%	85%
Power factor	> 0.95	> 0.95
Input current at rated output (AC amps)	11.5	16
General Features and Capabilities		
Transfer relay capability	30 AAC	
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	
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	
Output circuit breaker	NA	
Input circuit breaker	30 AAC	
Listings	None	
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 (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 wall	
Weight	42 lb (19 kg)	55 lb (25 kg)
Shipping weight	47 lb (21.3 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.

Accessories

Automatic Generator Start Module (AGS)



Imagine being able to enjoy a day away golfing, touring, or sight seeing, 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 or coach 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.

MODEL NUMBERS:

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

WORKS WITH:

	Page
ME Series.....	6
MS Series.....	14
MS-AE Series.....	16
MS-PAE Series.....	16
RD Series.....	18
MS-E Series.....	22
RD-E Series.....	24

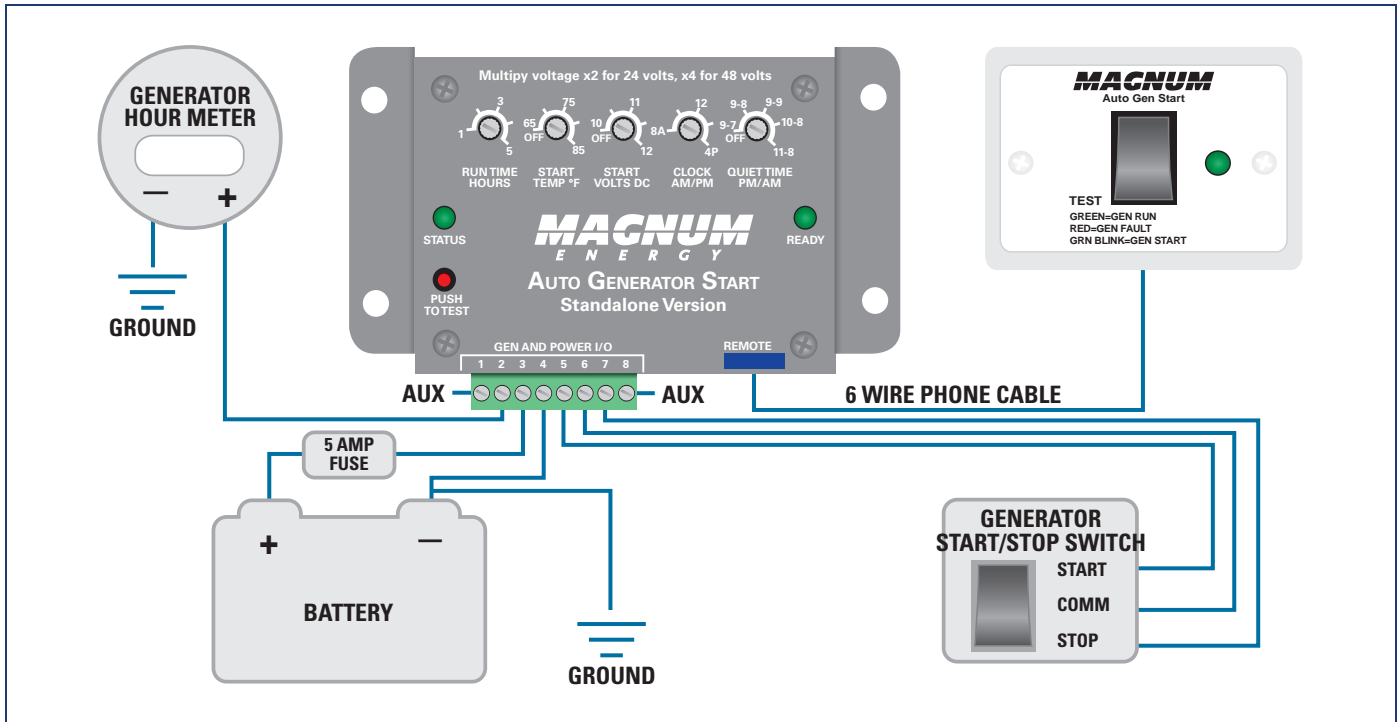
The ME-AGS-S does not require an inverter/charger.

ME-AGS-N FEATURES*

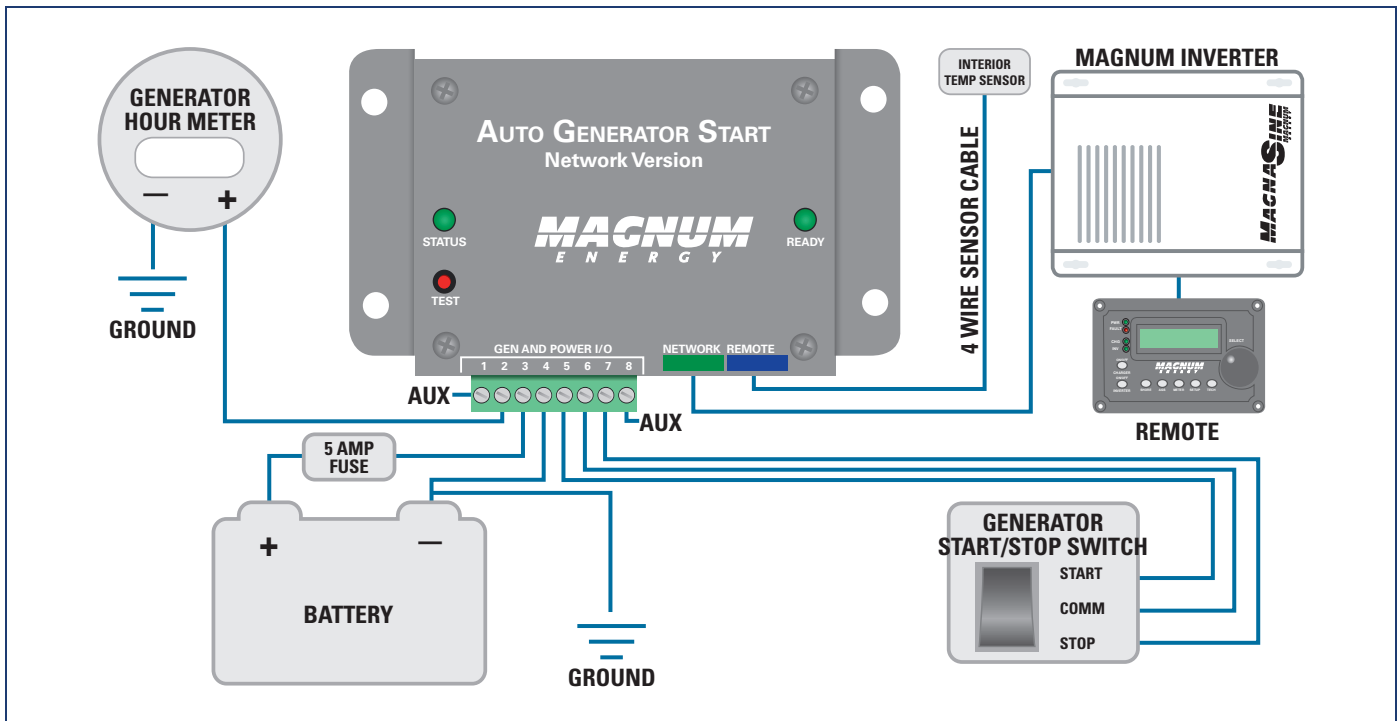
- All settings are adjustable from the ME-RC and ME-ARC remotes.
- Auto start is locked out when utility power is present.
- Portable generator mode.
- The AGS accommodates 48 volt settings.

Accessories

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



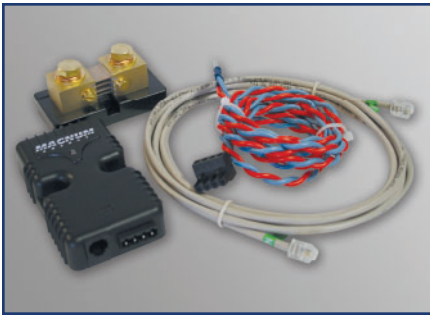
AGS Wiring Diagram for Networked Systems (ME-AGS-N)



* AGS-N features require Remote rev 1.6 and AGS rev 4.0 or higher.

Accessories

Battery Monitor Kit (ME-BMK)



MODEL NUMBERS:

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

WORKS WITH:

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ME Series.....	6
MS Series.....	14
MS-AE Series	16
MS-PAE Series	16
RD Series	18
MM-E Series	20
MS-E Series.....	22
RD-E Series.....	24

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

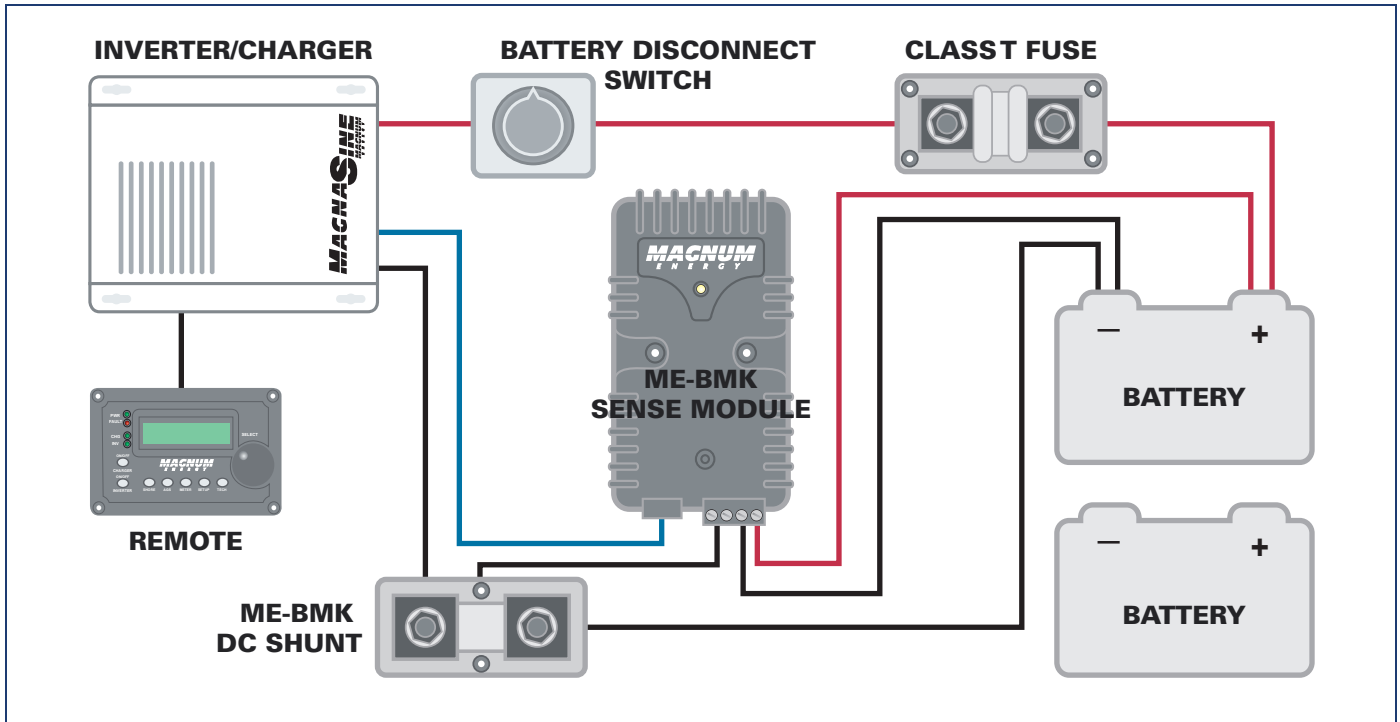
Kit includes

- 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, 2-conductor,
telephone standard

* Requires ME-RC remote revision 2.0 or higher.

Accessories

ME-BMK Basic Configuration Diagram



ME-BMK Specifications

ME-BMK	
DC volts	7 to 70 ($\pm 0.5\%$) auto voltage detection
DC amps	± 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	2-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.

Accessories

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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ME Series	6
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MS-PAE Series.....	16
RD Series.....	18
MS-E Series	22
RD-E Series.....	24

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:

	Page
ME-DCLD only	
ME Series	6
MS Series.....	14
MS-AE Series.....	16
MS-E Series	20
RD Series.....	18
MS-E Series	22
RD-E Series.....	24
MM-DCLD only	
MM Series	8
MM-AE Series	10
MMS Series	12

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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ME Series	6
MS Series.....	14
MS-AE Series.....	16
RD Series.....	18
MS-E Series	22
RD-E Series.....	24

Accessories

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:

	Page
ME-125F and ME-200 only	
MM Series	8
MM-AE Series	10
MMS Series	12
MM-E Series	20
ME-300F and ME-400F only	
ME Series	6
MS Series.....	14
MS-AE Series.....	16
MS-PAE Series.....	16
RD Series.....	18
MS-E Series	22
RD-E Series.....	24

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

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:

	Page
MM Series	8
MM-AE Series	10
MMS Series	12
MM-E Series	20

Features

LEDs	Three LEDs: Invert, AC In, and Fault Modes	Six LEDs: Invert, AC In, Fault Modes, Bulk, Absorb, and Float
Mounting	Includes bezel for surface mount or flush mount	
Included with the Remote	25' phone cable	

Accessories

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-AE, 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

WORKS WITH:

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ME Series	6
MM Series	8
MM-AE Series	10
MMS Series	12
MS Series.....	14
MS-AE Series.....	16
MS-PAE Series.....	16
RD Series.....	18
MM-E Series	20
MS-E Series	22
RD-E Series.....	24

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-AE, 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:

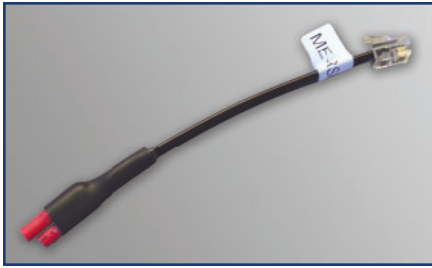
- ME-ARC50

WORKS WITH:

	Page
ME Series	6
MM Series	8
MM-AE Series	10
MMS Series	12
MS Series.....	14
MS-AE Series.....	16
MS-PAE Series.....	16
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MM-E Series	20
MS-E Series	22
RD-E Series.....	24

Accessories

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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ME Series	6
MS Series.....	14
MS-AE Series.....	16
RD Series.....	18
MS-E Series	22
RD-E Series.....	24

Router



The ME-RTR is a combination of the ME-ARC advanced feature remote and a communication hub for MS-PAE parallel units all in one easy-to-install and operate unit. The ME-RTR features full inverter/charger setup and control, four-line LCD display, four parallel stacking ports for the MS-PAE Series inverter/charger, communication ports for ME-AGS-N or ME-BMK accessories, and a two wire voltage controlled auxiliary relay.

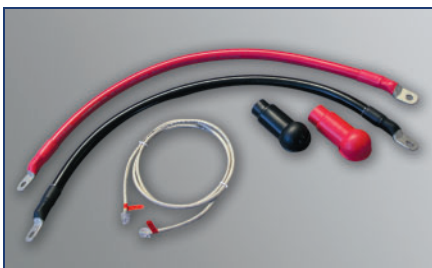
MODEL NUMBERS:

- ME-RTR

WORKS WITH:

	Page
MS-PAE	16

Series Stacking Cable Kit



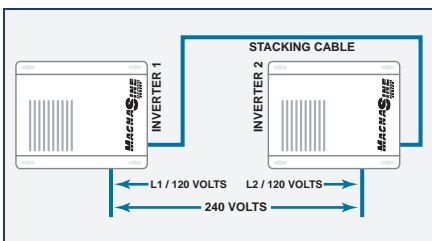
The Series Stacking Cable Kit allows two inverters to be stacked together to achieve 120/240 VAC output. Series stacking is commonly used for well pumps, tools, motors, and other 240 VAC appliances. The kit includes communication cable, two 2/0 battery cables, and battery lug covers.

MODEL NUMBERS:

- ME-SSI

WORKS WITH:

	Page
MS4024	14



Accessories

Smart Battery Combiner (ME-SBC)



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.

MODEL NUMBERS:

- ME-SBC

AVAILABLE FOR:

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

WORKS WITH:

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ME Series.....	6
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MS-AE Series	16
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MM-E Series	20
MS-E Series.....	22
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The Front Panel Includes:

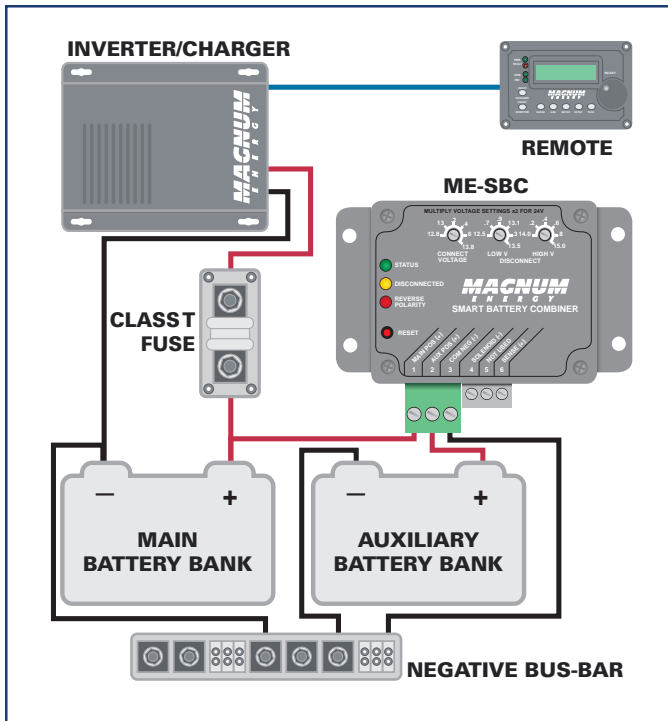
- LED indicators showing status and operation.
- Three adjustable voltage dials to set the “Connect Voltage”, “Low V Disconnect”, and “High V Disconnect.”
- An oversized power terminal block allowing for easy wire connections even if the wires are large.
- An accessories terminal block to add a solenoid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

Features:

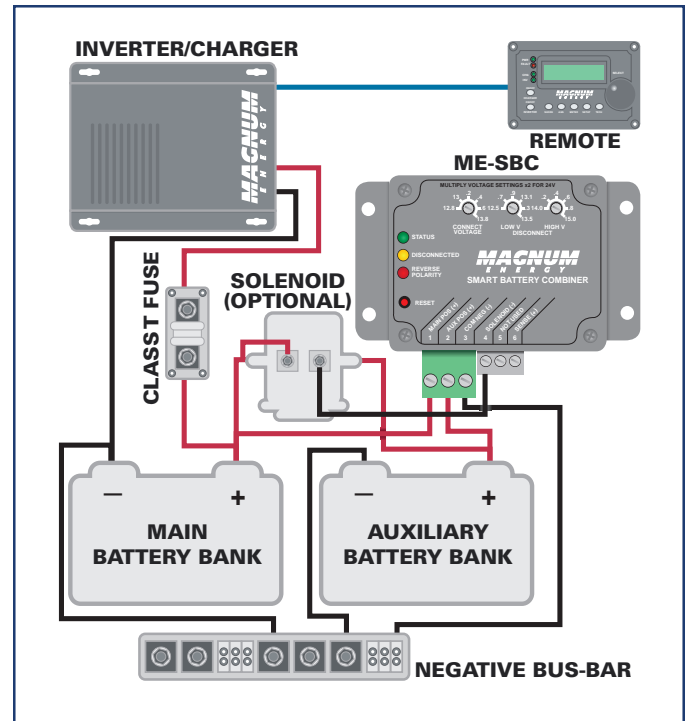
- Voltage auto-detect feature recognizing 12 or 24 VDC.
- Transfers up to 25 amps.
- Solenoid drive for requirements greater than 25 amps.
- Over-temperature and over-current shutdown.
- Adjustable voltage settings with a wide range allows for charging flexibility.
- Bi-directional charging.
- Reverse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

Accessories

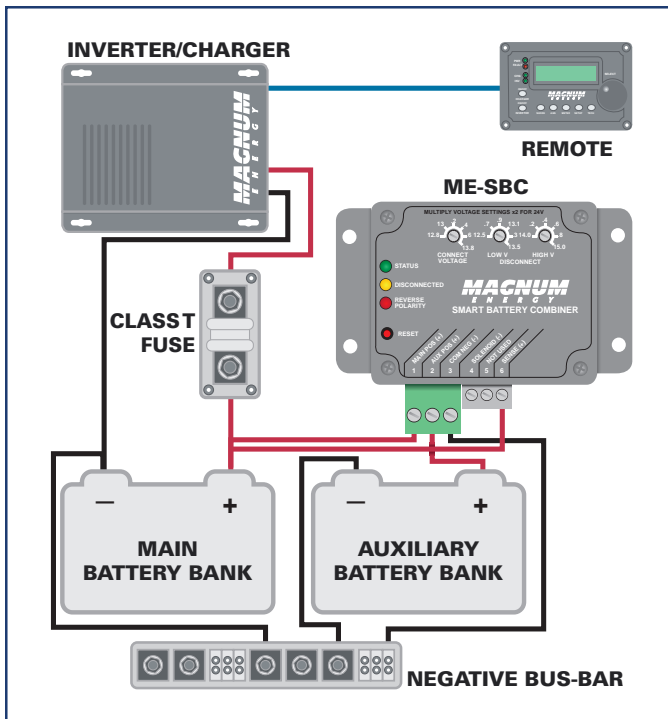
ME-SBC Basic Configuration Diagrams



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.

Magnum Panels

Making Installation easier one panel at a time.

Introducing the Mini-Magnum Panel (MMP) and Magnum Panel (MP).

Designed to make installations even easier, the new Magnum Panel systems integrate multiple components into a simple number system to make ordering your MP a breeze. All MMP and MP models are ETL listed to UL1741 and CSA C22.2 107-01.

For complete information on the MMP and MP lines and a handy selection guide, see the Magnum Panel brochure (#64-5000).

All models are shown here with optional accessories.

MMP - Mini Magnum Panel

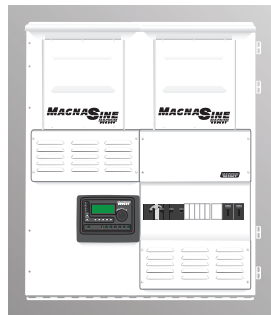


The MMP is an inclusive, easy-to-install panel designed to work with one Magnum MS-AE, MS-PAE, MS, RD or other non-Magnum inverter/charger.

MODEL NUMBERS:

- MMP250-30D
- MMP175-30D
- MMP250-60S
- MMP175-60S

MPSL - Magnum Panel, Single Enclosure, Low Capacity

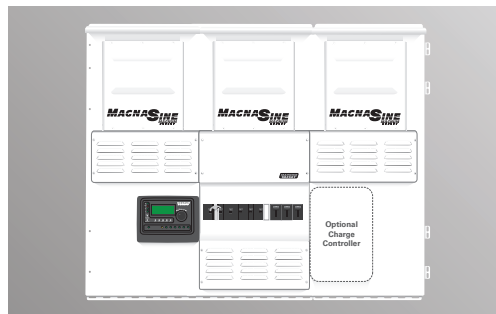


The MPSL is designed to accommodate one or two inverters.

MODEL NUMBERS:

- MPSL-30D
- MPSL-60S

MPSH - Magnum Panel, Single Enclosure, High Capacity

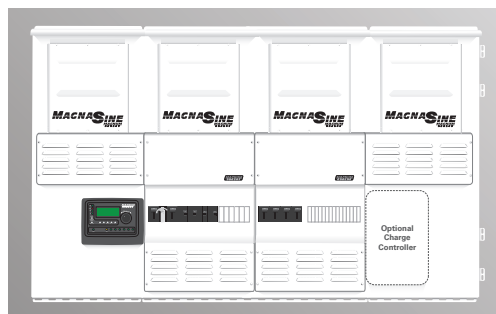


The MPSH is designed to accommodate one to three inverters.

MODEL NUMBERS:

- MPSH-30D

MPDH - Magnum Panel, Dual Enclosure, High Capacity



The MPDH is designed to accommodate two to four inverters with two enclosures – one for AC connections and one for DC connections.

MODEL NUMBERS:

- MPDH-30D

Inverter/Charger Feature Comparison

Key	✓ Standard on all models	○ Available on some models	M Maybe, ask your dealer
------------	--------------------------	----------------------------	--------------------------

Feature Comparison	Comparable Inverter/Chargers	Magnum's Inverter/Chargers
Power Factor Corrected (PFC) Charger		✓
Dead Battery Charging	M	✓
AGS Option with Temperature and Volts	M	✓
Network Compatible	○	✓
60 Amp Transfer Relay (Dual 30 Amp input/outputs)		○
Lighter Weight (Up to 20% lighter)		✓
Line Sync Transfer (Faster transfer)		✓
Dual In / Dual Out		○
Branch Rated Output Breakers (Opt)	○	✓
Standard Platform (2k – 4.4k)	○	✓
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	✓
Performance and Mechanical Comparison		
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)	○	✓
Battery Connection Hardware (Stainless steel)	○	✓
AC Wiring Connections (Most models)	Flying Leads	Terminals Block
AC Wiring Compartment Access	Good	Excellent
Features of the Optional ME-RC or ME-ARC Remote		
Two-line LCD Display	○	✓
"One Spin"™ User Friendly Remote		✓
Adjustable Charge Rate	○	✓
Adjustable Low Battery Cut Out	○	✓
Dedicated Inverter and Charger On/Off Buttons	M	✓
Lead Acid, AGM, AGM2, Gel, and Custom Battery Type	M	✓

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