



MAGNUM ENERGY MOBILE PRODUCTS & PARTS CATALOG

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ABOUT SENSATA TECHNOLOGIES



The name Sensata comes from the Latin word *sensata*, meaning “those gifted with sense”. To complement our business and name, our logo is inspired by Braille, the writing system based on touch.

Our highly engineered devices satisfy the world’s growing need for safety, energy efficiency, and a clean environment. These are devices that improve safety, efficiency and comfort for millions of people every day and are used in automotive, appliance, aircraft, industrial, military, heavy vehicle, heating, air conditioning, data, telecommunications, recreational vehicle and marine applications.

Until 2006, we were called Texas Instruments Sensors & Controls. Today we are the world’s leading supplier of sensors and controls across a broad range of markets and applications.

From integrated manufacturing to state-of-the-art environmental practices and a full spectrum of technical and analytical services, Sensata Technologies remains committed to helping its customers find leading-edge technology solutions to meet today’s market needs.

SENSATA POWER CONVERSION BRANDS

Sensata Power Conversion brands began as two well-known inverter companies, Dimensions Inverters and Magnum Energy. Dimensions Inverters joined Sensata Technologies in 2007 and Magnum Energy in 2014. Under the Magnum Energy and Dimensions Power brands, Sensata Technologies continues to manufacture exceptional inverters, inverter/chargers, and accessories catering to mobile applications, including utilities, corporate fleets, RV, marine, and trucks; renewable energy applications, and the export market.

Manufactured in Everett, Washington, and St. Paul, Minnesota, and shipped worldwide, our products use the highest quality components to respond to the extreme conditions of variable climates. Our dedicated staff of engineering, manufacturing, and customer service professionals work closely with customers to design and build some of the industry’s most reliable, advanced, and cost effective inverters, inverter/chargers and accessories.

Offering both sine wave and modified sine wave models ranging from 300 to 12,000 watts – in single and three-phase topology – and the ability to accommodate input ranges from 12 to 300 VDC, the Magnum Energy product line has the inverter or inverter/charger to meet your needs.

For additional products, visit our web site at SensataPower.com. And ask your distributor/dealer for our Renewable Energy and Export catalogs.

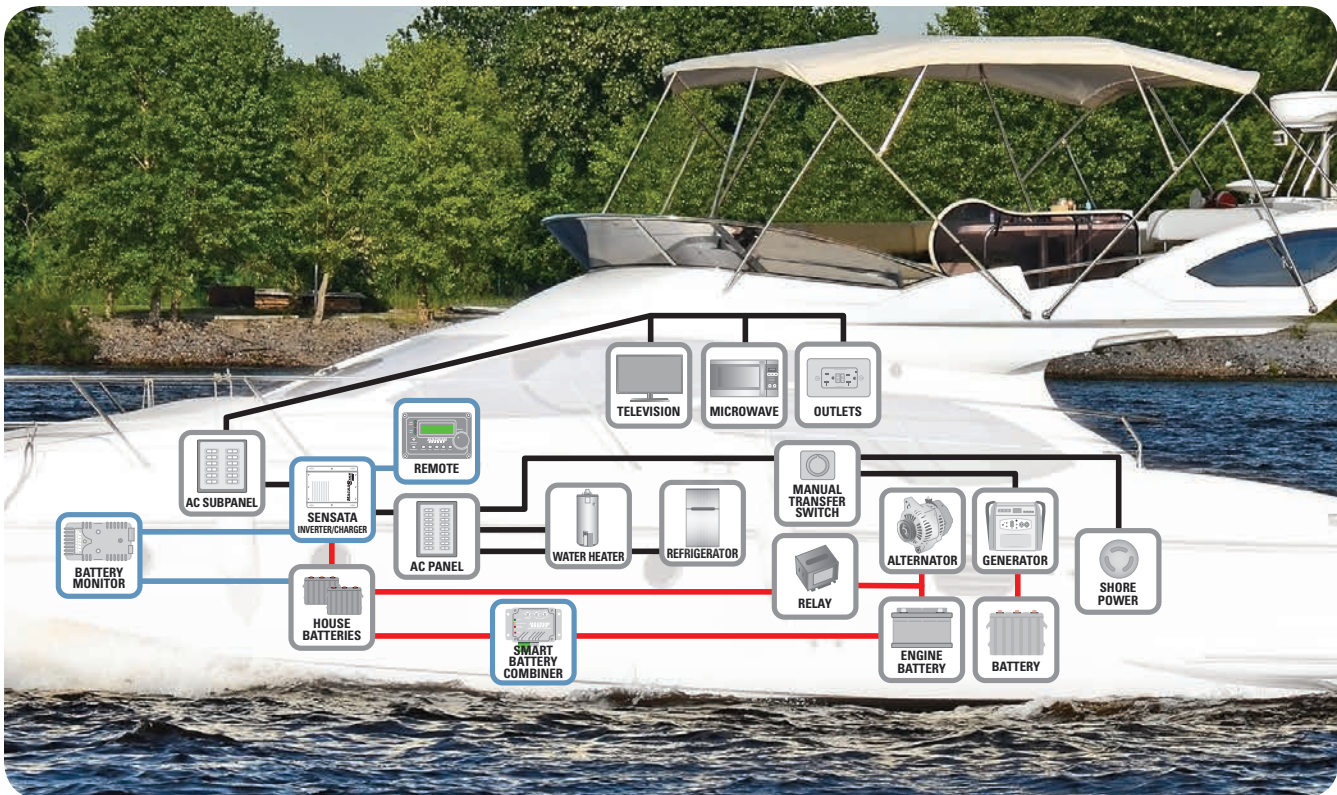
MARINE APPLICATIONS AND MAGNUM PRODUCTS

When out on the water, your system just needs to work. With a Magnum Energy brand 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 brand has you covered.

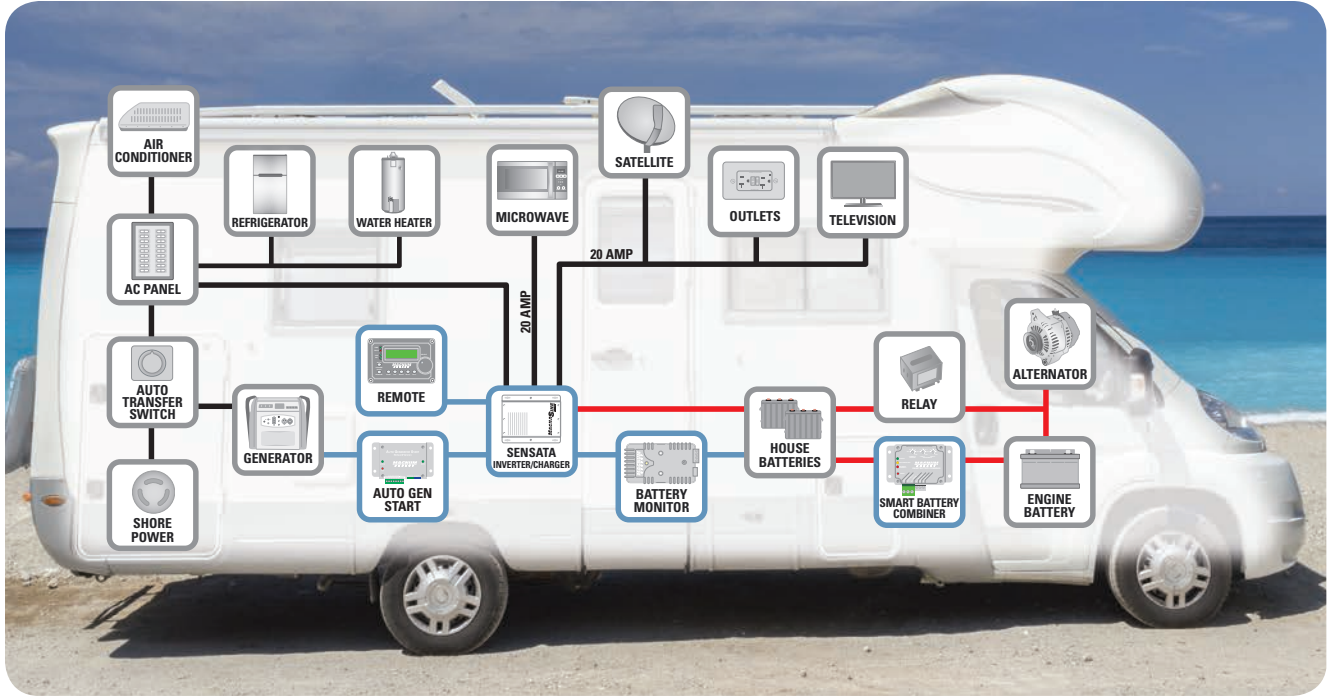
MARINE SYSTEM DIAGRAM



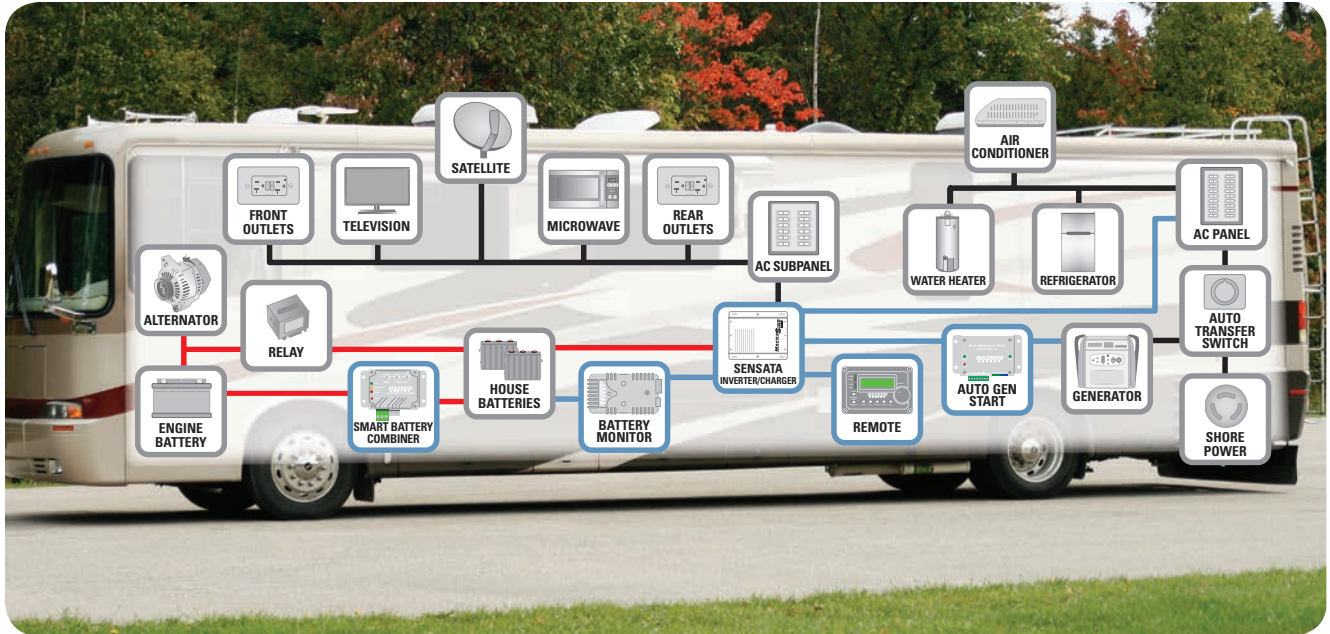
RECREATIONAL VEHICLES AND MAGNUM PRODUCTS

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

RV 30 AMP SYSTEM DIAGRAM



RV 50 AMP SYSTEM DIAGRAM



MAGNUM ENERGY BRAND INVERTER AND INVERTER/CHARGER FEATURES

SAFE AND RELIABLE

Our inverter/chargers are listed to stringent UL safety requirements.

MODIFIED SINE WAVE OR PURE SINE WAVE

Most Magnum Energy brand series inverters provide pure sine wave power. Run your TVs, stereos, tool battery chargers, computers, and other sensitive electronics without worry. Our 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 Energy brand 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 Energy brand inverters come in multiple power models and 12, 24, and 48 volt configurations, allowing you to choose the model that is right for you. And we provide inverters in multiple chassis configurations to fit in various space allotments.

LIGHTWEIGHT

Most Magnum Energy brand inverter/chargers are 20% lighter than comparable models. The lightweight aluminum base and cover provides 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

Sensata Technologies inverters and inverter/chargers are backed by a one, two, or three-year warranty, giving you peace of mind.

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 most Magnum Energy brand inverter/charger models.

FIELD REPAIRABLE

You probably won't have any problems with a Magnum Energy brand product. Our units can be field repaired, saving you time and money if your unit ever needs service.

INVERTER / CHARGER FEATURE COMPARISON

	KEY	✓ - Standard on all models	0 - 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		0		✓
60 Amp Transfer Relay (Dual 30 Amp input/outputs)				0
Lighter Weight (Up to 20% lighter)				✓
Line Sync Transfer (Faster transfer)				✓
Dual In / Dual Out				0
Branch Rated Output Breakers (Opt)		0		✓
Standard Platform (2k – 4.4k)		0		✓
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)		0		✓
Battery Connection Hardware (Stainless steel)		0		✓
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		COMPARABLE REMOTES		MAGNUM BRAND REMOTES
Two-line LCD Display		0		✓
“One Spin”™ User Friendly Remote				✓
Adjustable Charge Rate		0		✓
Adjustable Low Battery Cut Out		0		✓
Dedicated Inverter and Charger On/Off Buttons		M		✓
Lead Acid, AGM, AGM2, Gel, and Custom Battery Type		M		✓

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

MSH-M SERIES INVERTER/CHARGER

Model Numbers
MSH3012M • MSH4024M



Pure Sine Wave



12, 24 Battery Voltage Options



3000-4000 Continuous Output Options in Watts

Available For

- Marine Systems
- RV Systems

Available Accessories

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* New status displays require ME-RC v2.7 or ME-ARC v3.0 or higher.

The MSH-M Series Inverter / Charger from Sensata Technologies – a pure sine wave inverter designed with true hybrid technology allowing it to run larger loads from smaller generators.

Hybrid technology: Most inverters only use one source of energy to power loads, either from incoming AC power – shore or AC generator – or from the batteries. The MSH-M Series combines the energy from both sources to power loads. This allows the inverter to recharge the batteries when there is surplus power or deliver more power to the loads if they require more than the AC input can supply by itself.

Load support: Load support parallels the inverter output with incoming AC sources allowing it to run larger loads from smaller generators.

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%.

Easy to Install

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

Choices

The MSH-M Series comes in 12 and 24 volt configurations, allowing you to choose the model that is right for you.

Interchangeable

The MSH-M is interchangeable with the Magnum MS Series and uses the same accessories as the MS Series.

Lightweight

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

Multiple Ports

The MSH-M 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 MSH-M Series comes with an on /off inverter-mounted switch with an easy-to-read LED indicator.

Buy with Ease

The MSH-M Series is backed by a three-year (36-month) limited warranty.

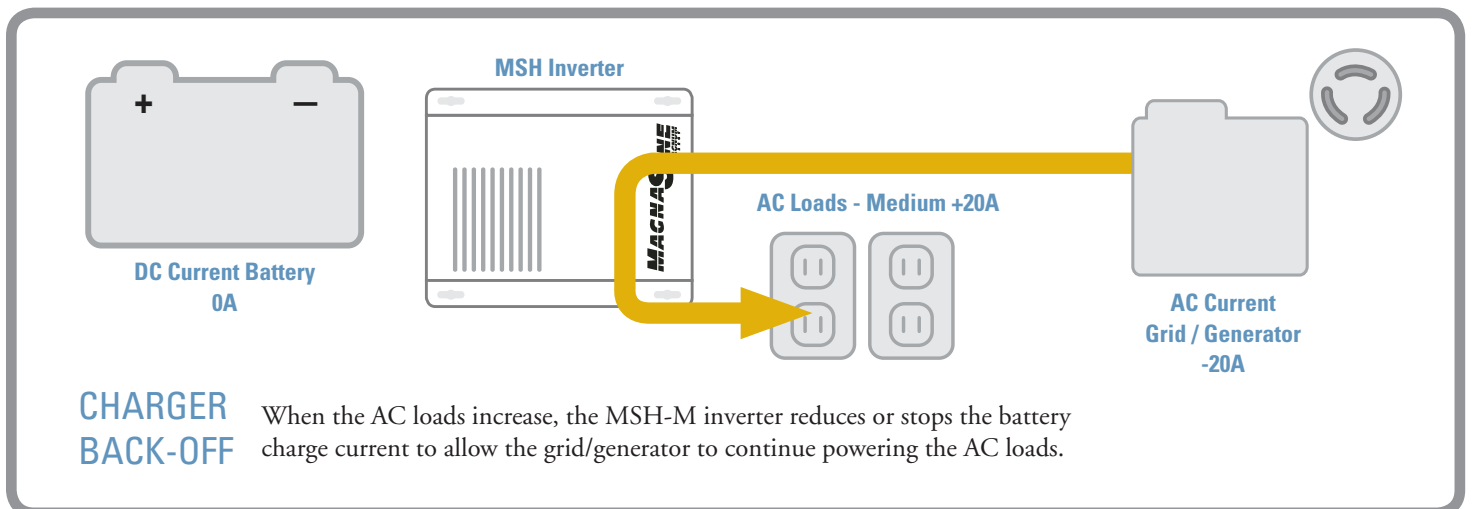
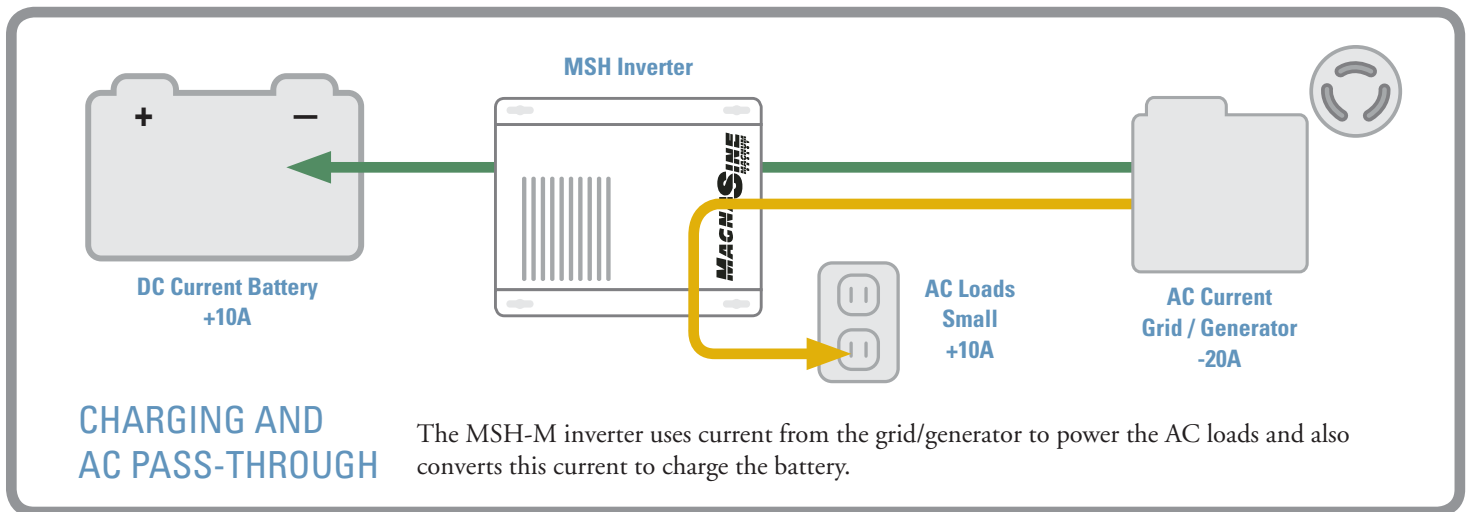
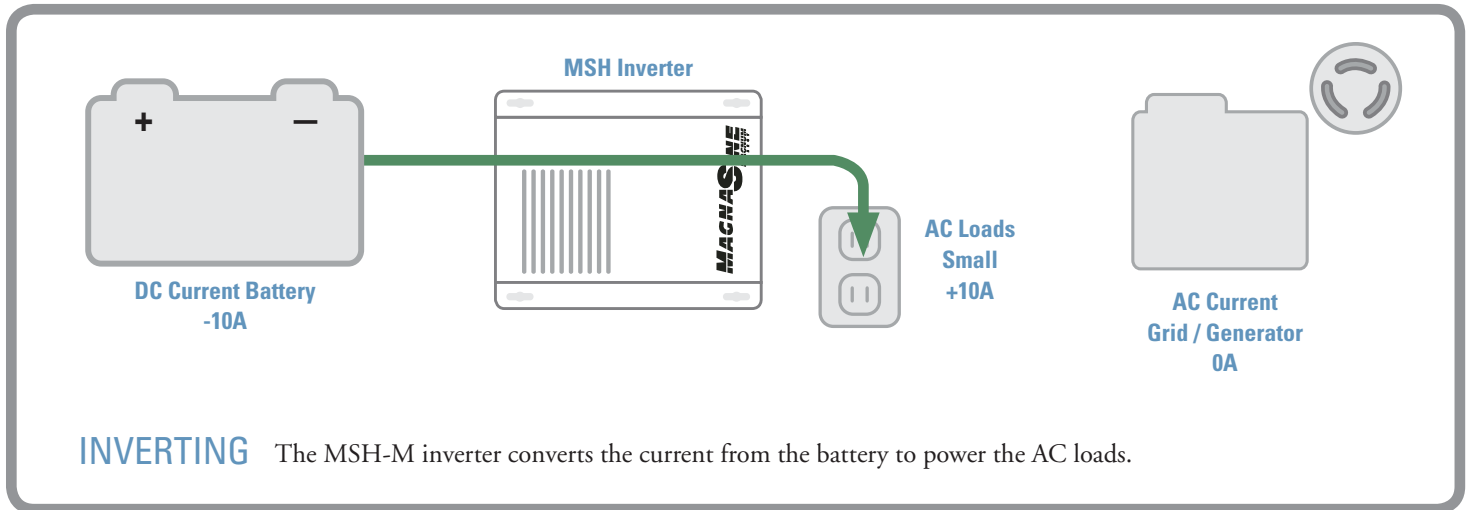
MSH-M SERIES SPECIFICATIONS

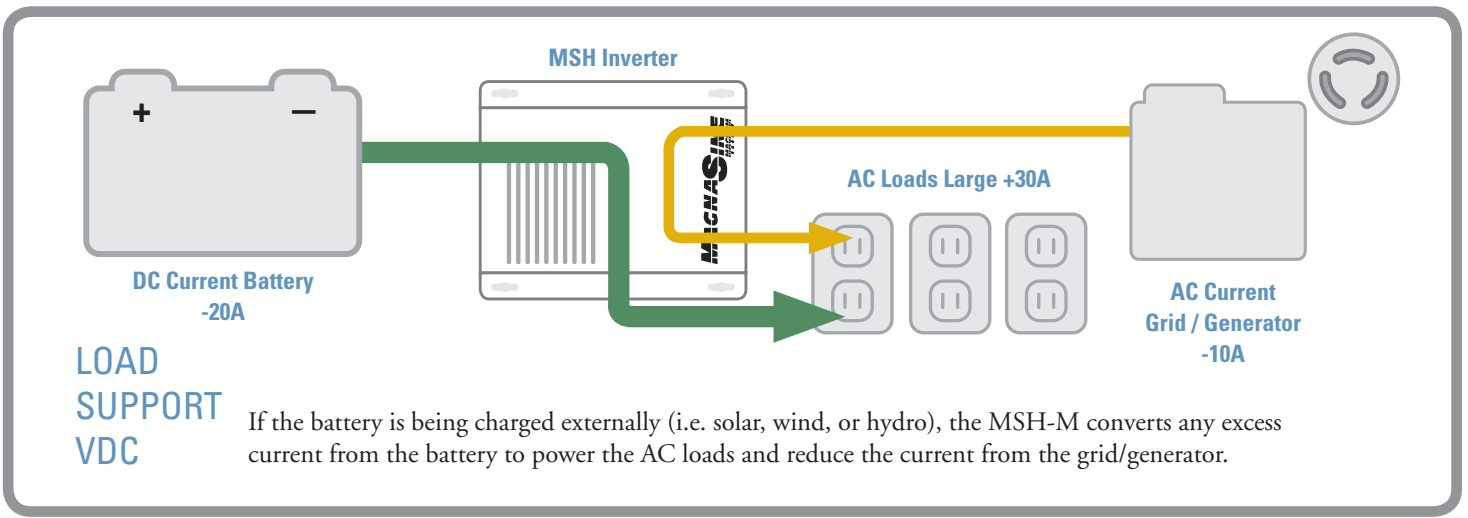
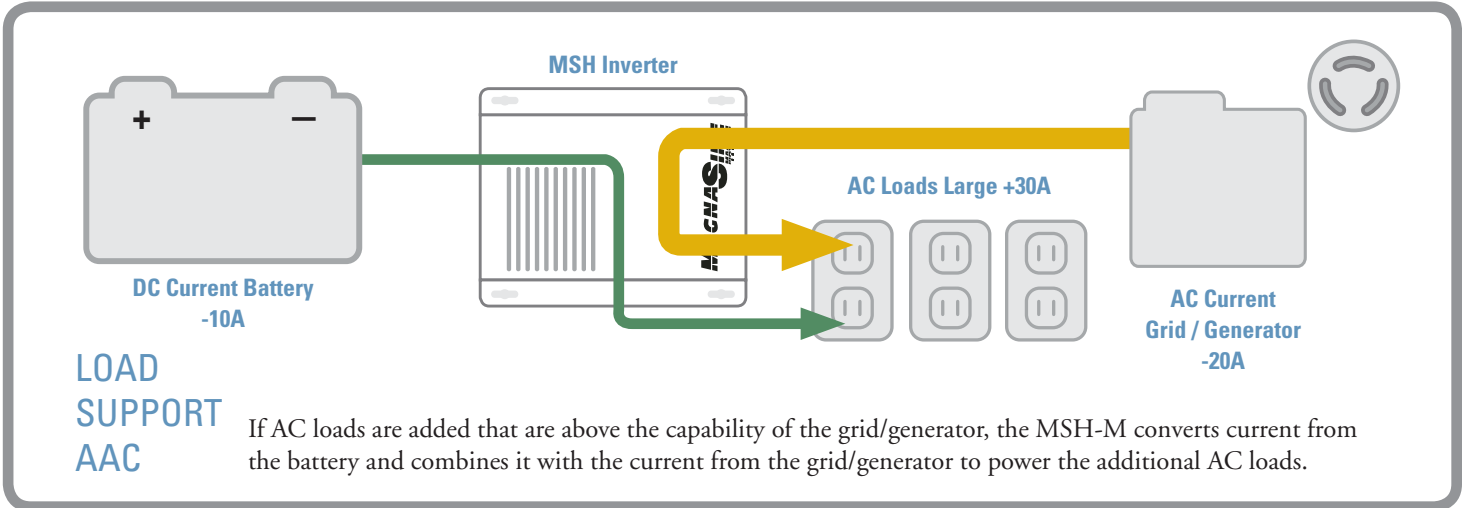
	MSH3012M	MSH4024M
INVERTER SPECIFICATIONS		
Input battery voltage range	9 to 17 VDC	18 to 34 VDC
Nominal AC output voltage	120 VAC \pm 5%	120 VAC \pm 5%
Output frequency and accuracy	60 Hz \pm 0.05 Hz	60 Hz \pm 0.1 Hz
Total Harmonic Distortion (THD)	< 5%	< 5%
1 msec surge current (amps AC)	70	120
100 msec surge current (amps AC)	40	82
5 sec surge power (real watts)	3900	5800
30 sec surge power (real watts)	3800	5400
5 min surge power (real watts)	3200	4900
30 min surge power (real watts)	3000	4500
Continuous power output at 25° C	3000 VA	4000 VA
Maximum continuous input current	400 ADC	267 ADC
Inverter efficiency (peak)	90.0%	93.7%
Transfer time	16 msecs	16 msecs
Search mode (typical)	< 8 watts	< 8 watts
No load (120 VAC output, typical)	30 watts	25 watts
Waveform	Pure Sine Wave	Pure Sine Wave
CHARGER SPECIFICATIONS		
Continuous output at 25° C	125 ADC	110 ADC
Charger efficiency	87%	87%
Power factor	> .95	> .95
Input current at rated output (AC amps)	18	28
GENERAL FEATURES AND CAPABILITIES		
Transfer relay capability	60 AAC	
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote), and Battery Saver™	
Battery temperature compensation	Standard with available temp sensor connected (battery temp 0 - 50 °C)	
Internal cooling	0 to 120 cfm variable speed drive using dual 92mm brushless DC fans	
Overcurrent protection	Yes, with two overlapping circuits	
Overtemperature protection	Yes on transformer, MOSFETS, and battery	
Corrosion protection	Yes, PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners	
Dual AC branch rated output breakers	No	
Listings	ETL listed to UL/cUL 458, CSA C22.2 No. 107.1-01	
Warranty	Three years parts and labor	
ENVIRONMENTAL SPECIFICATIONS		
Temperature (Operating/Non-operating)	-20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F)	
Operating humidity	0 to 95% RH non-condensing	
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)	
Shipping dimensions (l x w x h)	19" x 17" x 13" (48.3 cm x 43.2 cm x 33 cm)	
Mounting	Shelf or wall (vents not allowed to face downward unless ME-CB or MPX-CB is installed)	
Weight	55 lb (24.9 kg)	
Shipping weight	63 lb (28.6 kg)	
Max operating altitude	15,000' (4570 m)	

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

MSH-M SERIES INVERTER/CHARGER

MSH-M SERIES HYBRID TECHNOLOGY STEP-BY-STEP





MS SERIES INVERTER/CHARGER



Model Numbers

MS2000 • MS2000-15B • MS2000-20B • MS2012 • MS2012-15B MS2012-20B • MS2024 • MS2812 • MS4024* • MS4048* • MS4048-20B (*SERIES STACKABLE)



Pure Sine Wave



Battery Voltage Options



Continuous Output Options in Watts

Available For

- Marine Systems
- RV Systems
- Trucks

Available Accessories

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

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

Power Factor Corrected (PFC) Charger: Our PFC charger is built into all of our inverter/chargers. It uses less energy from a generator than a standard charger – using 25-30% less AC current than standard chargers.

Safe and reliable: The MS2000, MS2012, MS2812, MS4024, and MS4048 are ETL Listed to the stringent requirements of UL/cUL 458 and CSA C22.2 #107.1-01 for mobile use. 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 shore power cable to the inverter's easy-to-reach terminal block, connect the batteries, and switch on the power.

FEATURES

Pure Sine Wave

Power your TVs, 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%.

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.

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 Inverter/Charger on a shelf, bulkhead, or even upside down.

Lightweight

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

Multiple Ports

The MS Series provides multiple ports, including an RS485 communication port for network expansion, and a remote port.

Convenient Switches

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

Expanded Transfer Relay

60 Amp transfer service is available on all models except MS2000, which is 30 Amp only.

Buy with Ease

The MS Inverter/Charger is backed by a three-year (36-month) limited warranty.

MS SERIES INVERTER/CHARGER SPECIFICATIONS

	MS2000/12 (-15/-20B) MS2012 (-15/-20B)	MS2812	MS2024	MS4024	MS4048 MS4048-20B
INVERTER SPECIFICATIONS					
Input battery voltage range	9 - 16.8 VDC	9 - 16.8 VDC	18 - 33.6 VDC	9 - 33.6 VDC	36 - 67.6 VDC
AC output voltage accuracy	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%
Output frequency and accuracy	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz	60 Hz ± 0.1 Hz
Total Harmonic Distortion (THD)	< 5%	< 5%	< 5%	< 5%	< 5%
1 msec surge current (amps AC)	50	70	75	120	120
100 msec surge current (amps AC)	33	40	37	82	72
5 sec surge power (real watts)	3300	3900	2850	5800	8500
30 sec surge power (real watts)	3100	3800	2750	5400	5750
5 min surge power (real watts)	2800	3200	2700	4900	5250
30 min surge power (real watts)	2200	3000	2200	4500	47500
Maximum continuous input current	267 ADC	373 ADC	133 ADC	267 ADC	133 ADC
Inverter efficiency (peak)	90.6%	90%	86%	93.7%	94%
AC Relay Transfer time (minimum)	16 msec	16 msec	16 msec	16 msec	16 msec
Power Consumption - searching	<8 watts	<8 watts	<8 watts	<8 watts	<8 watts
Power Consumption - inverting (no load)	25 watts	30 watts	25 watts	25 watts	25 watts
Output Waveform	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave	Pure Sine Wave
CHARGER SPECIFICATIONS					
Continuous output at 25° C	100 ADC	125 ADC	60 ADC	105 ADC	60 ADC
Charger efficiency	85%	85%	85%	85%	85%
Power factor	> .95	> .95	> .95	> .95	> .95
Input current for continuous rated output	15 AAC	18 AAC	7.9 AAC	29 AAC	30 AAC
GENERAL FEATURES AND CAPABILITIES					
Transfer relay capability	30 ACC max. each input (30ACC total on MS2000 models, 60ACC total on all other models)*				
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote), and Battery Saver™				
Battery temperature compensation	Standard with available temp sensor connected (battery temp 0-50° C)				
Internal cooling	0 to 120 cfm variable speed drive using dual 92mm brushless DC fans				
Overcurrent protection	Yes, with two overlapping circuits				
Overtemperature protection	Yes on transformer, MOSFETS, and battery				
Corrosion protection	Yes, PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners				
Branch-rated output circuit breakers	Optional on the MS2000 (15 or 20 amp breakers) or MS2012 (15 or 20 amp breakers)				
Safety listings	ETL Listed to UL/cUL 458, CSA C22.2 #107.1-01, meets KKK-A-1822E standard				
Warranty	Three years parts and labor				
ENVIRONMENTAL SPECIFICATIONS					
Temperature (Operating/Non-operating)	-20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F)				
Operating humidity	0 to 95% RH non-condensing				
PHYSICAL SPECIFICATIONS					
Dimensions (l x w x h)	13.75" x 12.65" x 8.0" (34.9 cm x 32.1 cm x 20.3 cm) [Height on MS2000: 7.0"/17.8 cm]				
Mounting	Shelf or wall (vents not allowed to face downward unless ME-CB or MPX-CB is installed.)				
Unit weight	42 lb (19.1 kg)	55 lb (24.9 kg)	41 lb (18.6 kg)	55 lb (24.9 kg)	55 lb (24.9 kg)
Shipping weight	48 lb (21.8 kg)	62 lb (28.1 kg)	49 lb (22.2 kg)	62 lb (28.1 kg)	62 lb (28.1 kg)
Max operating altitude	15,000' (4570 m)				

*The pass-thru capability on each leg of the -15B and -20B models is limited by the output breaker size on each output. Testing for specifications at 25° C • Specifications subject to change without notice.

MMS SERIES INVERTER/CHARGER

Model Numbers
MMS1012 • MMS1012-G



Pure Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available For

- Emergency Vehicles
- Marine Systems
- RV Systems

Available Accessories

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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 auto-matically 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 range	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
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	> .95	> .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/AC input	Hardwire/Hardwire	GFCI Outlet/3 ft cord
Output circuit breaker/Input circuit breaker	15A/20AAC	15A/20AAC
Listings	ETL Listed to UL/cUL458, CSA C22.2 #107.1-01, meets KKK-A-1822E standard	
Warranty	Two years	
ENVIRONMENTAL SPECIFICATIONS		
Temperature (Operating/Non-operating)	-20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F)	
Operating humidity	0 to 95% RH non-condensing	
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.

ME SERIES INVERTER/CHARGER

Model Numbers

ME2012 • ME2012-20B • ME2512 • ME3112



Modified Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available for

- Marine Systems
- RV Systems

Available Accessories

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

The ME Series Inverter / Charger from Sensata Technologies is a modified sine wave inverter 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/ME2012-20B	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	22
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		
Corrosion protection	Yes, PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners		
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			
Temperature (Operating/Non-operating)	-20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F)		
Operating humidity	0 to 95% RH non-condensing		
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 (vents not allowed to face downward unless ME-CB or MPX-CB is installed.)		
Weight	37 lb (16.8 kg)	41 lb (18.6 kg)	46 lb (20.9 kg)
Shipping weight	46 lb (20.9 kg)	49 lb (22.2 kg)	56 lb (25.5 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



Modified Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available For

- Marine Systems
- RV Systems

Available Accessories

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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 shore 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	> .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/AC input	Hardwire	Hardwire
Output circuit breaker/Input circuit breaker	7A/8AAC	15A/20AAC
Listings	ETL Listed to UL/cUL458, CSA C22.2 #107.1-01	
Warranty	Two years	
ENVIRONMENTAL SPECIFICATIONS		
Temperature (Operating/Non-operating)	-20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F)	
Operating humidity	0 to 95% RH non-condensing	
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	18 lb (8.2 kg)	23 lb (10.5 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.

CSW SERIES INVERTER

Model Numbers

CSW412 • CSW1012 • CSW2012 • CSW2012-X



Pure Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available for

- Emergency Medical Services
- Marine Systems
- RV Systems
- Trucks
- Utility Vehicles

Available Accessories

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The Sensata CSW Series Inverter is a pure sine wave inverter designed to be powerful, yet simple to operate. The CSW will provide you with reliable AC power for troublefree use.

FEATURES

Compact and Lightweight

The CSW provides pure sine wave power from a small footprint designed to fit in tight vehicle and marine spaces. And it is lightweight, so won't weigh you down.

At-a-Glance Status

The inverter's status can be determined at a glance with the easy to read LED light.

Digital Display

The alphanumeric display shows the inverter's battery voltage, total AC output power, along with additional operation codes.

USB Port

Power and charge your USB-enabled device with the available USB port.

GFCI AC Outlet

Plug in two pieces of equipment directly to the CSW and know that the GFCI outlet will quickly stop the flow of electricity should a ground fault occur. The outlet also comes with an LED indicator and test/reset capability.

Automatic Transfer Switch Option

The CSW2012-X automatically switches between shore power and inverter/battery power.

CSW SERIES SPECIFICATIONS

	CSW412	CSW1012 CSW1012-H	CSW2012	CSW2012-X CSW2012-HX
INVERTER SPECIFICATIONS - OUTPUT				
Continuous power at nominal DC voltage	400 watts	1000 watts	2000 watts	2000 watts
Peak surge power	800 watts	2000 watts	4000 watts	4000 watts
10 sec surge power	400 - 550 watts	1000 - 1500 watts	2000-3000 watts	2000-3000 watts
1 sec surge power	550-800 watts	1500 - 2000 watts	3000-4000 watts	3000-4000 watts
200 msec surge power	> 800 watts	> 2000 watts	> 4000 watts	> 4000 watts
AC output voltage at 12.5 VDC	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%
AC output current	3.3 AAC	8.3 AAC	16.6 AAC	16.6 AAC
AC output voltage range	104 - 127 VAC	104 - 127 VAC	104 - 127 VAC	104 - 127 VAC
AC output frequency	60 Hz ± 0.5 Hz	60 Hz ± 0.5 Hz	60 Hz ± 0.5 Hz	60 Hz ± 0.5 Hz
AC output waveform	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave
Total harmonic distortion (THD)	< 3%	< 3%	< 3%	< 3%
Transfer Time	NA	NA	NA	< 30 ms
USB	5 V, 750 mA	5 V, 750 mA	5V, 2.1 A	5V, 2.1 A
INVERTER SPECIFICATIONS - INPUT				
Nominal DC input voltage	12.5 VDC	12.5 VDC	12.5 VDC	12.5 VDC
DC input voltage range	10.5 - 15.5 VDC	10.5 - 15.5 VDC	10.5 - 15.5 VDC	10.5 - 15.5 VDC
Input current	38 DCA	94 DCA	193 DCA	193 DCA
No load draw	< 0.8 ADC	< 1.2 ADC	< 1.2 ADC	< 1.5 ADC
Optimum efficiency	> 90%	> 90%	> 90%	> 90%
High voltage shutdown	15.5 VDC	15.5 VDC	15.5 VDC	15.5 VDC
Low voltage alarm	11.2 VDC, audible	11.2 VDC, audible	11.2 VDC, audible	11.2 VDC, audible
Low voltage shutdown	10.5 VDC	10.5 VDC, Recover at 11.8 VDC	10.5 VDC	10.5 VDC
GENERAL FEATURES AND CAPABILITIES				
Transfer relay capability	NA	NA	NA	30 AAC
Display status indicator	LED: Power, Fault	Green, amber, red	LED: Status	LED: Status, Display
Digital display	None	Input voltage/current, output power	Input voltage, output power, warning, and error code	Input voltage, output power, warning, and error code
AC receptacles	NEMA 5-15	NEMA 5-15 (GFCI)	NEMA 5-20 (GFCI)	NEMA 5-20 (GFCI)
Listings	Conforms to UL458, Certified to CSA C22.2 No. 107.1, meets FCC Class B			
Warranty	One year	One year	One year	One year
ENVIRONMENTAL SPECIFICATIONS				
Operating temperature	-0° C to +40° C (32° F to 104° F)			
Nonoperating temperature	-20° C to +60° C (-4° F to 140° F)			
Operating humidity	0 to 90% RH non condensing			
Max operating altitude	9843' (3000 m) above sea level			
PHYSICAL SPECIFICATIONS				
Dimensions (l x w x h)	6.9" x 7.9" x 2.3" (17.5 cm x 20.1 cm x 5.8 cm)	12.63" x 7.0" x 3.5" (32.1 cm x 17.8 cm x 8.9 cm)	16.3" x 9.1" x 4.3" (41.4 cm x 23.1 cm x 10.9 cm)	17" x 9" x 4.5" (43.2 cm x 22.9 cm x 11.4 cm)
Shipping dimensions (l x w x h)	7.9" x 6.9" x 3.5" (20.1 cm x 17.5 cm x 8.9 cm)	15.5" x 8.75" x 5.63" (39.2 cm x 22.3 cm x 14.3 cm)	19" x 11.3" x 6.7" (48.3 cm x 28.7 cm x 17 cm)	19" x 11.3" x 6.7" (48.3 cm x 28.7 cm x 17 cm)
Mounting	Shelf (top or bottom up) or bulkhead (DC terminals MUST be facing up)			
Weight	3.8 lb (1.7 kg)	6.6 lb (3.0 kg)	11.5 lb (5.2 kg)	13.0 lb (5.9 kg)
Shipping weight	4 lb (1.8 kg)	7.5 lb (3.4 kg)	13 lb (5.9 kg)	14.1 lb (31 kg)

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

CMW SERIES INVERTER

Model Numbers

CMW412 • CMW1012 • CMW1512 • CMW3012H (HARDWIRE)



Modified Sine Wave



12 Battery Voltage Options



400-3000 Continuous Output Options in Watts

Available for

- Marine Systems
- RV Systems

Available Accessories

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Transfer Switch (CSW-TS15)	31

The Sensata CMW Series Inverter is a cost effective modified sine wave inverter designed for clean, compact power on the go. The CMW will safely run many small appliances and provide reliable AC power.

FEATURES

Compact and Lightweight

The CMW provides pure sine wave power from a small footprint designed to fit in tight vehicle and marine spaces. And it is lightweight, so won't weigh you down.

At-a-Glance Status

The inverter's status can be determined at a glance with the easy to read LED light.

Digital Display

The alphanumeric display shows the inverter's battery voltage, total AC output power, along with additional operation codes.

USB Port

Power and charge your USB-enabled device with the available USB port.

GFCI AC Outlet

Plug in two pieces of equipment directly to the CMW and know that the GFCI outlet will quickly stop the flow of electricity should a ground fault occur. The outlet also comes with an LED indicator and test/reset capability.

AC Wiring Access Cover

The CMW3012H provides access to the AC wiring terminals to allow for hardwiring the AC output.

CMW SERIES SPECIFICATIONS

	CMW412	CMW1012	CSM1512	CMW3012H
INVERTER SPECIFICATIONS				
Continuous power at nominal DC voltage	400 watts	1000 watts	1500 watts	3000 watts
Peak surge power	800 watts	2000 watts	3000 watts	6000 watts
AC output voltage	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%	120 VAC ± 5%
AC output current	3.3 AAC	8.3 AAC	12.5 AAC	25.0 AAC
Peak AC output current	6.7 AAC	16.7 AAC	25.0 AAC	50 AAC
AC output frequency	60 Hz ± 0.5 Hz	60 Hz ± 0.5 Hz	60 Hz ± 0.5 Hz	60 Hz ± 0.5 Hz
AC output waveform	Modified sine wave	Modified sine wave	Modified sine wave	Modified sine wave
Nominal DC input voltage	12.5 VDC	12.5 VDC	12.5 VDC	12.5 VDC
Optimum efficiency	90%	90%	90%	90%
Phase	Single	Single	Single	Single
Topology	High Frequency	High Frequency	High Frequency	High Frequency
ENVIRONMENTAL SPECIFICATIONS				
Operating temperature	-0° C to +40° C (32° F to 104° F)			
PHYSICAL SPECIFICATIONS				
Dimensions (l x w x h)	7.3" x 4.1" x 2.1" (18.5 cm x 10.4 cm x 5.3 cm)	12.63" x 6.9" x 3.5" (32.1 cm x 17.5 cm x 8.9 cm)	15.0" x 6.9" x 3.5" (38.1 cm x 17.5 cm x 8.9 cm)	19.0" x 9.0" x 4.5" (48.3 cm x 23.0 cm x 11.5 cm)
Weight	1.6 lb (.7 kg)	5.3 lb (2.4 kg)	6.9 lb (3.1 kg)	13.0 lb (5.9 kg)
GENERAL FEATURES AND CAPABILITIES				
Warranty	One year			
Listings	ETL Listed to UL458, Certified to CSA STD C22.2 No. 107.1			

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



MAGNACHARGER™

Model Number
MC-40

Available For

- Marine Systems
- RV Systems
- Trucks



Easy-to-Read LCD Display

Front panel display and multiple LED indicators provides charger and fault status information and allow important system configuration.

DESIGNED AND MADE IN THE USA

AVAILABLE SOON!

True, Three-bank Battery Charger

The new MagnaCharger from Sensata Technologies provides reliable, trouble-free charging to the battery banks inside your boat or vehicle.

FEATURES

True, Three-bank Charger

Can charge three different battery banks and each can be independently programmed with its own specific battery type, charge rate, and charge voltage.

Multiple Battery Profiles

Select battery type profiles for flooded, AGM, and GEL batteries with an adjustable Constant Current/ Constant Voltage (CC/CV) profile for Lithium batteries and a custom battery type setting with full adjustability.

Universal AC Input

The MagnaCharger is designed to automatically recognize and operate from 100-240 VAC and at 60 or 50Hz, allowing charging around the world.

40 Amp Charger

Charge one, two, or three battery banks with a full 40 amps available to charge any bank.

Auto Battery Detection

No more programming. The MagnaCharger automatically detects one, two, or three battery banks and how to charge each bank – from maintaining a fully charged battery to detecting and efficiently charging a dead battery.

Certified

Listed to UL1236 Marine and UL1564 (US) and certified to CSA 22.2 107.2 (Canada); meets ABYC A-31 requirements and CEC Title 20 Section 1605.3(w)(2) compliant.

SPECIFICATIONS	MC-40
Charger current (at 25° C)	40 amps at 14.7 volts
Regulated charge voltage range	9 volts - 16.6 volts
Minimum chargeable battery voltage	>1 volt
Typical power factor	95% or better
Operating temperature	-4° F to 158° F (-20° C to +70° C)
AC input voltage	85 Vac - 270 Vac
Voltage accuracy	± 0.1 volt
DC current accuracy	± 5%
Input frequency	30 Hz - 80Hz
Peak efficiency	89%
Battery temperature compensation	Yes, with the included ME-BTS
Dimensions (L x W x D)	16.9" x 6.8" x 3.5" (42.9 cm x 17.3 cm x 8.9 cm)
Weight	7 lbs (3.2 kg)
Warranty	Three years – parts and labor

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

ACCESSORIES

BATTERY MONITOR KIT (ME-BMK)

Model Numbers
ME-BMK • ME-BMK-NS (NO SHUNT)



Works With

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Monitoring your battery bank is easy with the Battery Monitor Kit (ME-BMK)* from Sensata Technologies. 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-ARC or ME-RC 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 Energy brand Inverter/Charger and Magnum brand 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

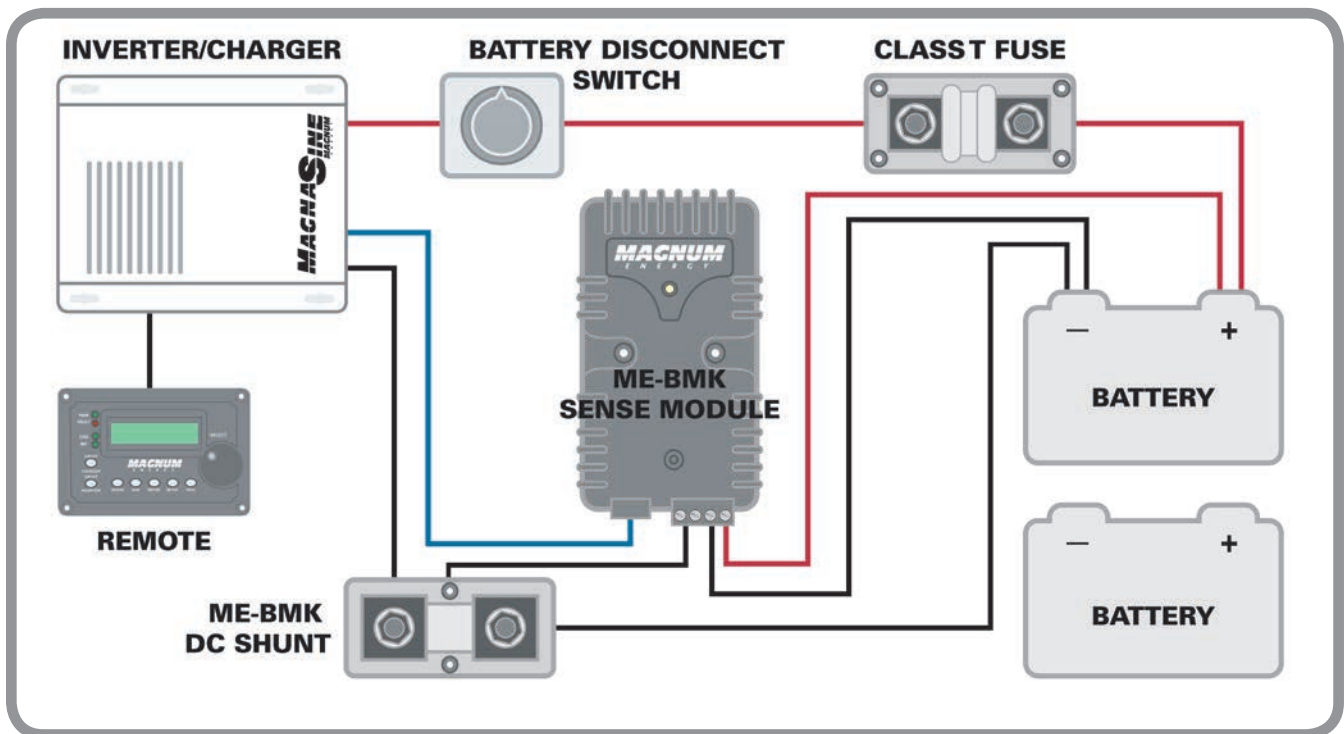
* Requires remote revision 2.0 or higher.

ME-BMK SPECIFICATIONS

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 65,535 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.

ME-BMK BASIC CONFIGURATION DIAGRAM



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.

Available Accessories

- ME-PT1
- ME-PT2

Please call and ask about our PT-1 and PT-2 pigtails for starting on demand applications.

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 Energy brand Auto Gen Start (AGS) from Sensata Technologies can make this happen.

The Magnum Energy brand 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 Sensata Technologies 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.

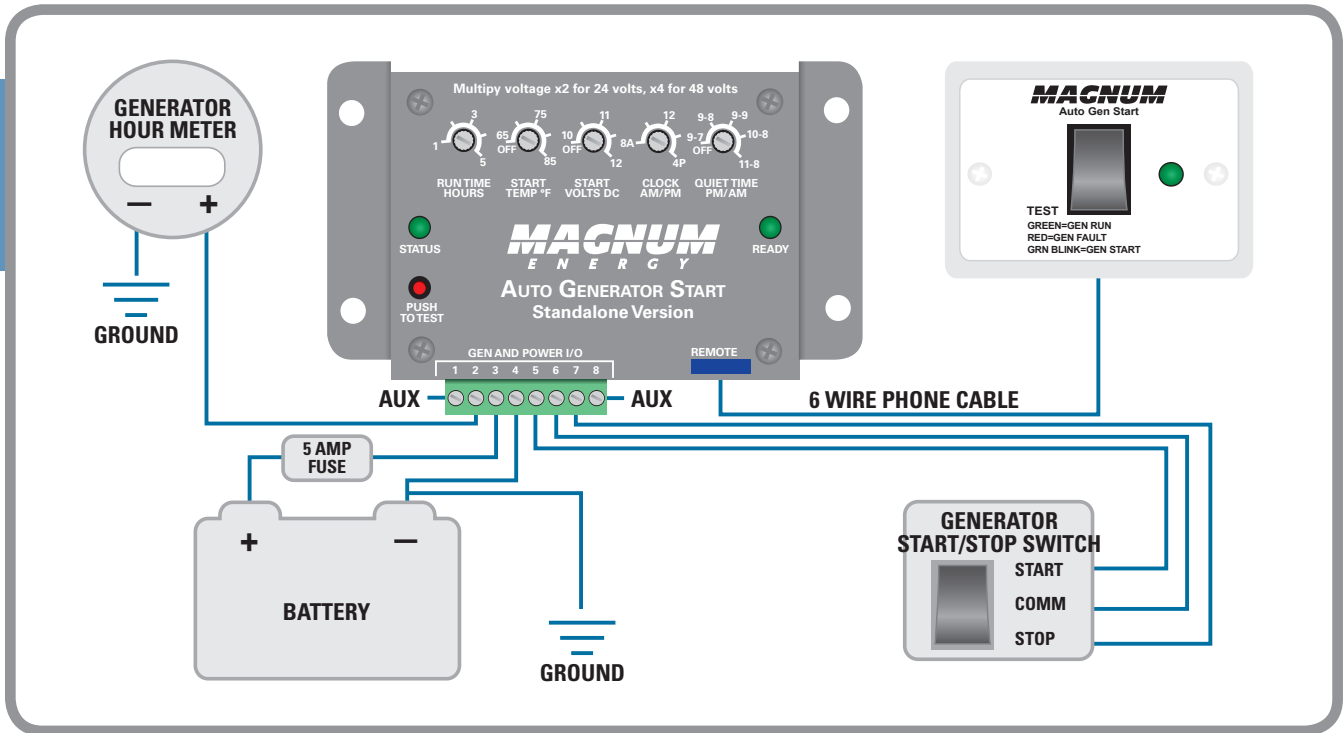
- **ME-AGS-N kit includes:**
AGS module (3 relay), 10' network cable, and a 60' remote temperature sensor cable.
- **ME-AGS-S kit includes:**
AGS module (3 relay), Remote on/off/test switch, switch bezel, a 25' 6-wire cable, and has basic adjustments starting on battery voltage or temperature.



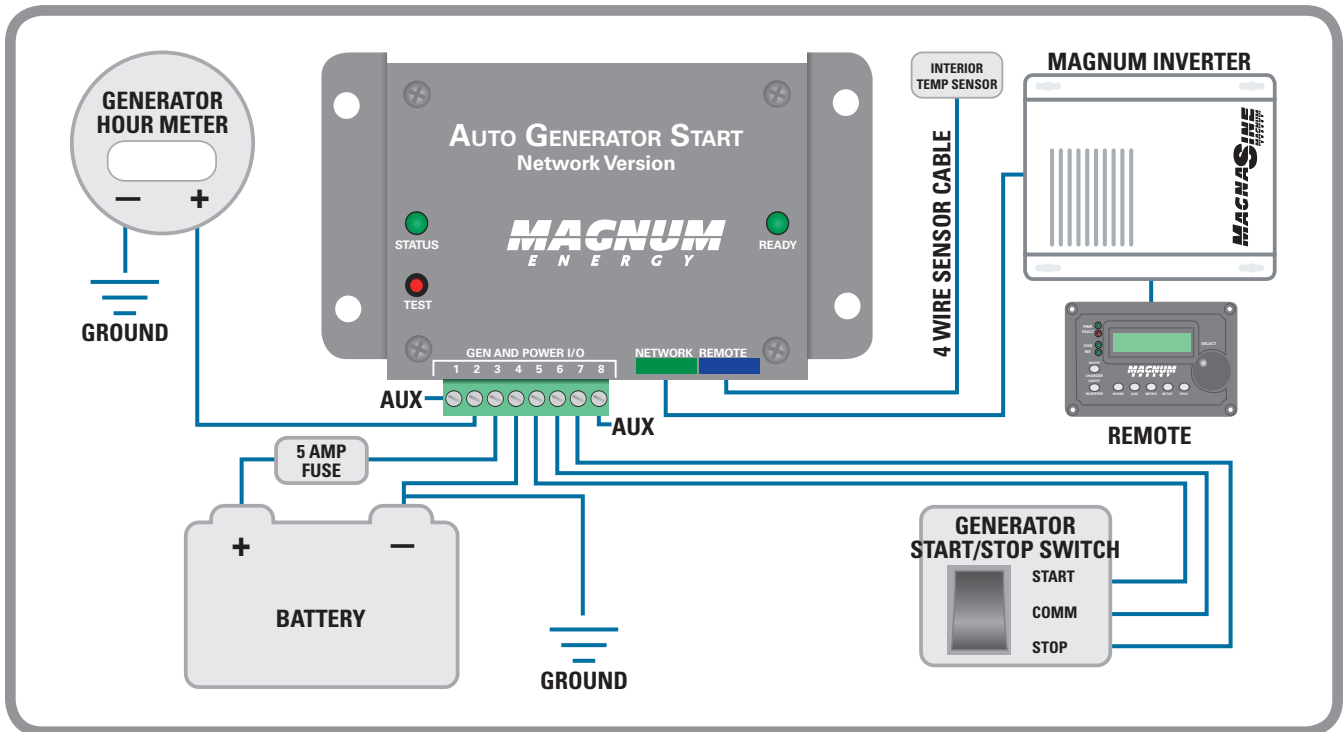
ME-AGS-N FEATURES*

- 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.

CONDUIT BOX

Model Numbers

- ME-CB

Works With

	PAGE
ME Series	14
MS Series	10
MSH-M Series	6

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 1/2", 3/4", 1", and 2" trade-size conduit. The ME-CB adds just over 5" (13 cm) to the length of the inverter.



DC LOAD DISCONNECT

Model Numbers

- ME-DCLD
- MM-DCLD

Works With

	PAGE
ME-DCLD	
ME Series	14
MS Series	10
MSH-M Series	6
MM-DCLD	
MM Series	16
MMS Series	12

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



REMOTE SWITCH ADAPTER

Model Numbers

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

Works With

	PAGE
ME Series	14
MS Series	10
MSH-M Series	6

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



FUSE BLOCKS

Model Numbers

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

Works With

	PAGE
ME-125F and ME-200F only	
MM Series.....	16
MMS Series.....	12
ME-300F and ME-400F only	
ME Series.....	14
MS Series.....	10
MSH-M Series.....	6

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

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 brand fuses include a Slow-Blow high current fuse, a mounting block, and protective cover.



IGNITION SWITCH LOCKOUT

Model Numbers

- ME-ISW
- ME-ISA - Ignition Switch Adapter allows the inverter to be turned on/off with a 12 volt signal
- ME-ISW

Works With

	PAGE
ME-ISW ME-ISA	
ME Series.....	14
MS Series.....	10
MSH-M Series.....	6
MM-ISA	
MM Series.....	16
MMS Series.....	12

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



THE MAGWEB: WEB MONITORING KIT



Model Numbers
 ME-MW-W (WIRELESS) • ME-MW-E (ETHERNET)

Works With

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ME Series.....	14
MS Series.....	10
MSH-M Series.....	6

Web-Based Monitoring

- Inverter/Charger
 - Status
 - Program Settings
 - Faults
 - DC volts, DC amps
 - Invert, Charge LEDs
- Tech menus
- Battery Monitor status
- Auto Gen Start (AGS) status

The MagWeb is a powerful and cost effective tool for remotely monitoring Sensata Technologies inverters and accessories. Installed on the Magnum network, the MagWeb provides live Internet monitoring of the inverter, battery monitor, and automatic generator start module. Using your always on Internet connection, the MagWeb makes live and historical conditions available to you through a web browser at data.magnumenergy.com.

DATA SAMPLES

The MagWeb constantly streams data to your personal web pages, providing details on Current Conditions, Current Settings, and Daily Summaries for historical records. The samples below provide snapshots of the standard web pages.

Current Settings

Settings Date:	2010-10-05 18:48:23
Inverter Settings	
Model:	IMS4024
Revision:	3.7
Stack Mode:	Standalone Unit
Remote Settings	
Revision:	2.1
AC Search Watts:	No Searching, Always On
AC Shore Amps:	60
Charger Amps:	20% of full value
Auto Generator Start:	Off
Battery Size:	1600 amp / hours
Low Battery Cut-Out:	21.0 VDC
Absorb Voltage / Time:	28.8 VDC (for 0.0 hours)
Float Voltage:	27.0 VDC
Equalize Voltage:	28.9 VDC
Battery Monitor	
Revision:	1.0

Daily System Summary

Magnum
 Daily System Summary

2010-09

2010-09-01 2010-09-02 2010-09-03 2010-09-04 2010-09-05 2010-09-06 2010-09-07 2010-09-08 2010-09-09 2010-09-10 2010-09-11 2010-09-12 2010-09-13 2010-09-14 2010-09-15 2010-09-16 2010-09-17 2010-09-18 2010-09-19 2010-09-20 2010-09-21 2010-09-22 2010-09-23 2010-09-24 2010-09-25 2010-09-26 2010-09-27 2010-09-28 2010-09-29 2010-09-30

Current Conditions

Date:	2010-10-05 18:50:25
Battery Monitor (DC)	
State of Charge:	100%
Volts / Amps:	26.88 VDC @ 17.2 amps (462 watts)
Amp Hours In / Out:	+89 amp hours
Volts Min / Volts Max:	23.33 VDC Min / 30.42 VDC Max
Inverter	
Status:	Absorb Mode Absorbing with AC
LEDs:	Inverting Charging
Temperatures:	Battery: 25°C / 77°F Transformer: 58°C / 136°F FETs: 41°C / 105°F
AC Out:	Active (0 amps)
AC In:	Active (0 amps)



MAGWEB SPECIFICATIONS

ME-MW-W / ME-MW-E

SAMPLE RATE

Fixed 30 second sample interval

2,800 measurements per day

COMMUNICATION – 802.15.4 XBEE WIRELESS

For use with our data.magnumenergy.com service

US version 2.4 GHz, 63 mW (+18 dBm) 300' indoor range, up to one mile line of sight outdoor range

International version 2.4 GHz, 10 mW (+10 dBm) 200' indoor range, up to 2,500' line of sight outdoor range; special order only

Low power version 2.4 GHz, 1 mW (+0 dBm) 100' indoor range, up to 300' line of sight outdoor range; special order only

Direct Sequence Spread Spectrum (DSSS)

RP-SMA connector and included rubber duck antenna

Requires 802.15.4 XBee to Ethernet wireless gateway

Wireless agency approvals
 United States (FCC Part 15.247)
 Industry Canada (IC)
 Europe
 Japan
 Australia

POWER DRAW

MagWeb < 0.1 watts average from Magnum bus

Wireless Gateway < 4 watts average from 120 VAC

MATERIALS

MagWeb case ABS plastic, flame retardant, UL94V-0

Wireless Gateway case Anodized aluminum

All parts are RoHS compliant, no lead used in manufacture

Physical Specifications

Shipping weight 3 lb (1.36 kg)

KIT INCLUDES

MagWeb 802.15.4
 Manual
 Communications cable (2-conductor, 10' twisted pair, telephone standard)
 Mounting screws
 Antenna

Wireless 802.15.4 Gateway
 Antenna
 Ethernet cable, 10'
 AC adapter (Energy Star, North American plug)

REMOTE REQUIREMENTS

ME-RC or ME-ARC required when monitoring device(s) other than inverter

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

REMOTE - ME-ARC

Model Numbers

- ME-ARC50
Includes ME-RC-BZ bezel

Works With

	PAGE
ME Series	14
MS Series	10
MSH-M Series	6

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 Energy brand Inverter/Charger models in the ME, MS, MS-PAE, RD, MM, and MMS lines.

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

REMOTE - ME-RC

Model Numbers

- ME-RC50

Works With

	PAGE
ME Series	14
MS Series	10
MSH-M Series	6

Available Accessories

	PAGE
Remote Bezel	30

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

Comes with a standard 50' 4-wire, twisted pair cable.



REMOTE BEZEL - ME-RC-BZ

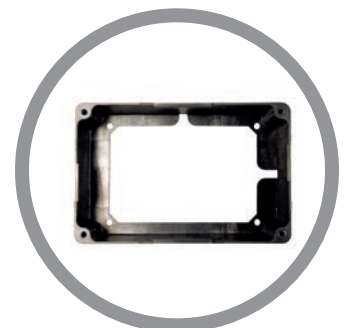
Model Numbers

- ME-RC-BZ

Works With

	PAGE
ME-RC	30

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



REMOTES - MM-R & MM-RC

Model Numbers

- MM-R25
- MM-RC25

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.



Works With

	PAGE
ME Series	14
MM Series.....	16
MMS Series.....	12

FEATURES	
LEDs	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
Mounting	Includes bezel for surface mount or flush mount
Included with the Remote	25' phone cable



REMOTE SWITCH - CSW-RS

Model Numbers

- CSW-RS

Use the CSW-RS remote switch for even easier on/off access away from the ME-CSW inverter. The CSW-RS comes with a 20' cable.



Works With

	PAGE
CSW Series.....	18
CMW Series.....	20

TRANSFER SWITCH

Model Numbers

- CSW-TS15

Use the optional 15 amp CSW-TS15 transfer switch to automatically switch AC load connections between utility/generator power and the AC output of the ME-CSW Inverter.



Works With

	PAGE
CSW Series.....	18
CMW Series.....	20

SMART BATTERY COMBINER (ME-SBC)

Model Number
ME-SBC



Works With

The ME-SBC is a stand-alone unit and works with all Magnum inverter/chargers.

The Magnum Energy Smart Battery Combiner (ME-SBC) from Sensata Technologies 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 SPECIFICATIONS

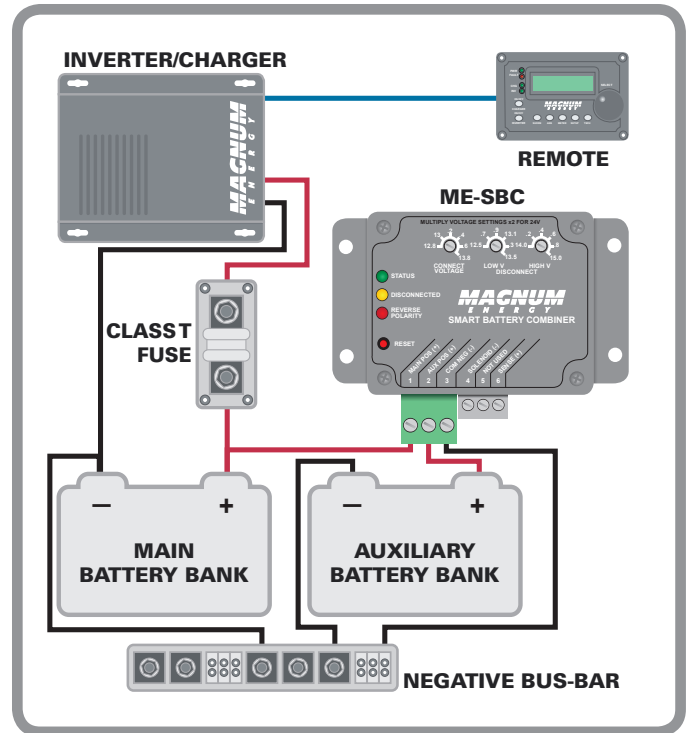
	ME-SBC
DC volts	12 or 24 VDC nominal
DC amps	25 amps continuous
Maximum VDC	40 volts peak
Average operating tare loss	~150 mW
Maximum operating tare loss	< 220 mW
Non-operating tare loss	< 50 mW
Operating range	0 - 32 VDC
Shipping weight	2 lbs (0.9 kg)
Shipping dimensions (l x w x h)	6" x 9" x 2.5" (15.2 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

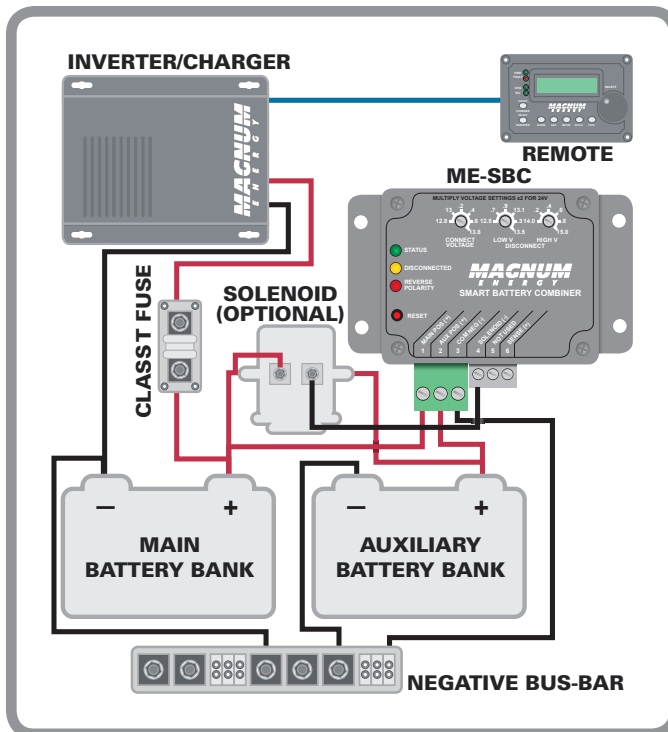
Specifications subject to change without notice.

ME-SBC BASIC CONFIGURATION DIAGRAMS

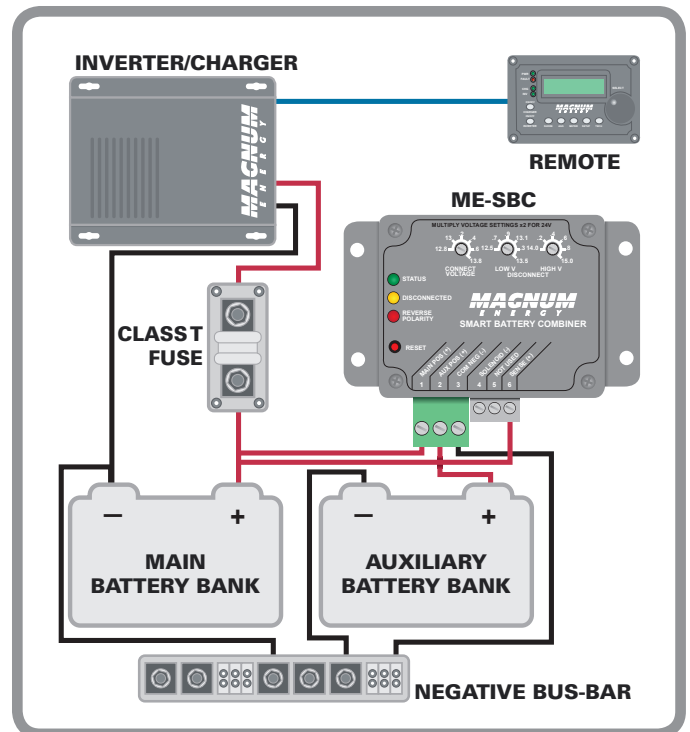
25 AMP COMBINER MODE



SOLENOID DRIVE



REMOTE VOLTAGE SENSE





OFFICES
2211 West Casino Road
Everett, Washington 98204 USA
425-353-8833

4467 White Bear Pkwy
St. Paul, MN 55110 USA
800-553-6418