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**Sensata**  
Technologies

**QUIET POWER WHEN YOU NEED IT;  
WHEREVER YOU ARE**

Versatile Magnum Energy inverter/chargers, purpose built  
for RVs, Campers, and Sport Utility Trailers/Toy Haulers

# VERSATILE AND RELIABLE POWER

**Purpose-built:** Responds to the needs of all part time or full-time RVers.

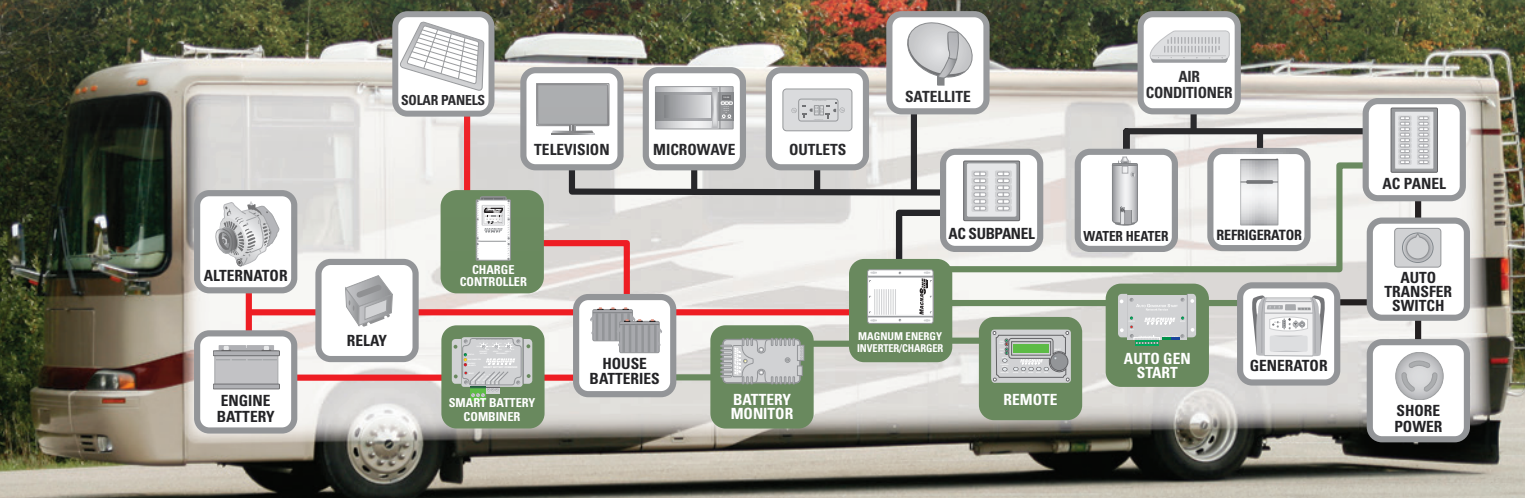
**Compact:** Rugged, compact cases perfect for the smaller footprints of RV spaces.

**Programmable:** With the ME-ARC remote control, have full control over when the inverter/charger operates allowing for part-time RV use or site-specific quiet time.

**Battery Options:** Easily choose and set standard battery profiles, including Lithium Iron Phosphate (LFP), Gel, Flooded, AGM1, and AGM2.

**Quiet:** Just add solar to charge the batteries for an even quieter experience.

## How Magnum Energy Inverter/Chargers Work



## POWER ELECTRICAL APPLIANCES WHEN NOT PLUGGED IN AND CHARGE BATTERIES

**Inverter Mode:** When no plug-in power is available, the inverter/charger pulls power from the batteries on the system, produces modified or sine wave AC power, the same type of power provided by the utility, and powers electrical appliances (also called AC loads) connected to the inverter's output.

**Standby Mode:** In Standby mode, the unit operates as a battery charger to convert the incoming AC power into DC power to recharge the batteries; and at the same time, with power available, automatically closes an internal AC transfer relay to pass the incoming AC power directly to the inverter's output to continue powering the connected electrical appliances.

# RV POWER DESIGN CONSIDERATIONS

## Hybrid Power Advantages when Used in RVs, Sport Utility Trailers, and Toy Haulers



### MULTIPLE SOURCES OF ENERGY

Most inverters use only one source of energy to power loads, either AC power – shore or generator – or from the batteries. The MSH-RV Series Inverter/Charger combines the energy from both sources to power loads.

### LEVELS LESS POWERFUL SHORE POWER

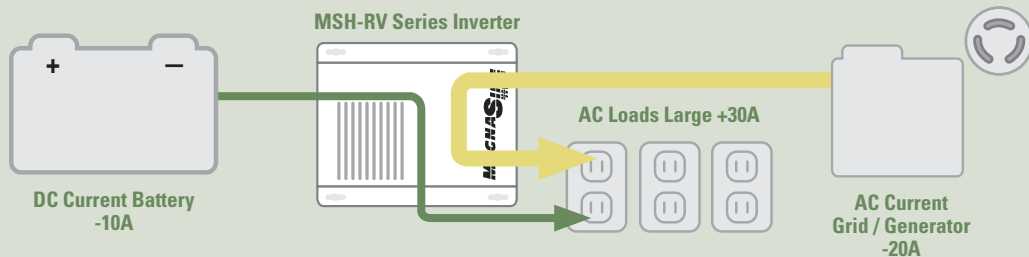
The MSH-RV Series recharges batteries when there is surplus power or delivers more power to the loads if more power is needed than the AC input can supply by itself.

### LOAD SUPPORT

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

### LOAD SUPPORT AAC

If AC loads are added that are above the capability of the grid/generator, the MSH-RV converts current from the battery and combines it with the current from the grid/generator to power the additional AC loads.

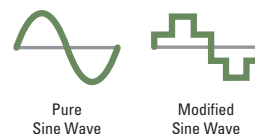


## Consider Loads to Determine Inverter Sizing

Inverter/Charger Continuous Output	600W	1000W	1500W	2800W
Cell Charger				
CPAP Machine				
LED Lights				
Laptop or Tablet				
TV				
Play Station 4® or Xbox Series X®				
Halogen Lights				
Toaster				
Keurig® Coffee Maker				
Hair Dryer				
Microwave				

The pure sine wave MS2812 Inverter/Charger is ideal when a microwave will be used.

### Do You Need Pure Sine Wave or Modified Sine Wave Power?



Pure sine wave power is like utility power and will run any device. Modified sine wave power is less expensive, but won't run sensitive digital power electronics. While Magnum Energy offers both pure sine wave and modified sine wave options, we recommend pure sine inverter/chargers to ensure your power electronics run as they should.

## Should You Use High Frequency or Low Frequency Inverters?

Choosing a high or low frequency inverter is entirely dependent on what types of loads the inverter needs to power.

### HIGH FREQUENCY

Inverters & Inverter/Chargers

#### PROS

Smaller footprint  
Less expensive

#### CONS

Shorter lifecycle due to high component counts  
Runs hotter than low frequency

### LOW FREQUENCY

Inverters & Inverter/Chargers

#### PROS

Longer lifecycle due to fewer components  
Operates cooler

#### CONS

More expensive  
Heavier

## SELECT AN INVERTER/CHARGER



### MSH-RV SERIES INVERTER/CHARGER

- Built-in RV-C connector, allowing the MSH-RV to multiplex directly with the RV's network bus/backbone.
- Hybrid technology combines energy from AC sources and batteries to power loads.
- Load support allows larger loads to be run from smaller generators.
- UL/cUL 458 listed.
- 50 amp bypass standard.
- Charges multiple battery chemistries, including lithium iron phosphate (LFP) and lead acid.



### MS SERIES INVERTER/CHARGER

- Utility-grade, pure sine wave inverter.
- Five models from 2000 - 4000 W.
- 12, 24, and 48 V options.
- 30 and 60 amp transfer service, depending on model.
- UL/cUL 458 listed.
- Charges multiple battery chemistries, including lithium iron phosphate (LFP) and lead acid.



### NP SERIES INVERTER/CHARGER | 12 VOLT

- Pure sine wave with 1800 - 3000 watt output options.
- Charges multiple battery chemistries, including lithium iron phosphate (LFP) and lead acid.
- Customizable with a remote panel, battery temperature sensor, and GFCI outlet.
- Thermally-controlled cooling fan.
- Also available in 24 and 48 V configurations.
- UL/cUL 458 listed.



### LPC SERIES INVERTER/CHARGER

- Pure sine wave output power.
- Built-in RV-C communication protocol.
- Charges multiple battery chemistries, including lithium iron phosphate (LFP) and lead acid.
- Integrated 20A bypass.
- Thermally-controlled cooling fan.
- Available GFCI outlet.
- Also available in 24 and 48 V configurations.
- UL/cUL 458 listed.

#### OVERVIEW

Input Voltage Range	9 - 17 VDC
Output Voltage Range	120 VAC ± 5%
Total Harmonic Distortion	< 5%
5 Sec Surge Output	3500 W
Continuous Power Output	3000 W
Continuous Charger Output	125 ADC
Power Factor	> .95
Output Frequency	60 Hz ± 0.1 Hz
Weight   Dimensions	55 lb   13.75" x 12.65" x 8.0"
Warranty	Three years

#### OVERVIEW

Input Voltage Range	9-16.8 VDC, 18-33.6 VDC, 36-67.6 VDC
Output Voltage & Frequency	120 VAC, 60 Hz
5 Sec Surge Output	3300 W, 3900 W, 2850 W, 5800 W, 8500 W
Continuous Power Output	2000 W, 2800 W, 4000 W
Continuous Charger Output	100 ADC, 125 ADC, 60 ADC, 105 ADC
Power Factor	> .95
Waveform	Pure Sine Wave
Weight	42 lb, 55lb, 41 lb
Dimensions	13.75" x 12.65" x 8"
Warranty	Three years

#### OVERVIEW

Input Voltage Range	10.5 - 17 VDC
Output Voltage Range	120 VAC ± 3%
Total Harmonic Distortion	< 5%
5 Sec Surge Output	3000 W, 4500 W, 5500 W, 8000 W
Continuous Power Output	1800 W, 2000 W, 2400 W, 3000 W
Continuous Charger Output	95 ADC, 115 ADC, 130 ADC, 150 ADC
Power Factor	> .95
Output Frequency	60 Hz ± 0.05%
Weight	40 lb, 68 lb
Dimensions	12.2" x 14.6" x 5.8", 13.5" x 14.6" x 5.8", 14.8" x 17.1" x 8"
Warranty	Five years

#### OVERVIEW

Input Voltage Range	10.5 - 15 VDC
Output Voltage Range	120 VAC ± 5%
Total Harmonic Distortion	< 5%
5 Sec Surge Output	3000 W
Continuous Power Output	1500 W
Continuous Charger Output	65 ADC
Power Factor	> .95
Output Frequency	60 Hz ± 0.05%
Weight	28 lb
Dimensions	19.0" x 9.75" x 4.8"
Warranty	5 years



## MMS SERIES INVERTER/CHARGER

- Hardwire and three-foot prewired cord options available on the MMS.
- UL/cUL 458 listed.
- Versatile mounting options available.
- Fan cooled, enabling the MMS to work well in confined spaces.
- Charges multiple battery chemistries, including lithium iron phosphate (LFP) and lead acid.

OVERVIEW	
Input Voltage Range	9-17 VDC
Output Voltage Range	120 VAC ± 5%
Total Harmonic Distortion	< 5%
5 Sec Surge Output	1750 W
Continuous Power Output	1050 W
Continuous Charger Output	50 ADC
Power Factor	> .95
Output Frequency	60 Hz ± 0.1 Hz
Weight   Dimensions	23 lb   16.6" x 8.4" x 4.7"
Warranty	Two years



## ME SERIES INVERTER/CHARGER

- Modified sine wave output power.
- 60 amp transfer service – can be wired single in / single out, single in / dual out, or dual in / dual out.
- Can be mounted on a shelf, bulkhead, or upside down.
- Listed to UL/cUL 458 and CSA C22.2 #107.1-01.

OVERVIEW	
Input Voltage Range	9 - 16 VDC
Output Voltage Range	120 VAC ± 5%
Total Harmonic Distortion	< 5%
5 Sec Surge Output	3700 W, 5000 W, 6000 W
Continuous Power Output	2000 W, 2500 W, 3100 W
Power Factor	> .95
Output Frequency	60 Hz ± 0.1 Hz
Weight	37 lb, 41 lb, 46 lb
Dimensions	13.75" x 12.65" x 8.0"
Warranty	Three years



## CSW SERIES INVERTER

- Pure sine wave inverter designed for smaller spaces.
- Easy-to-read LED status, with an LCD screen for alphanumeric readings.
- USB port to charge USB enabled devices.
- Dual GFCI outlets directly on the inverter.
- The CSW2012-X automatically switches between shore power and inverter/battery power.
- UL/cUL 458 listed.

OVERVIEW	
Input Voltage Range	10.5 - 15.5 VDC
Output Voltage Range	120 VAC ± 5%
Total Harmonic Distortion	< 3%
5 Sec Surge Output	800 W, 2000 W and 4000 W
Continuous Power Output	400 W, 1000 W, and 2000 W
Output Frequency	60 Hz ± 0.5 Hz
Weight	3.8 lb, 6.6 lb, 11.5 lb and 13.0 lb
Dimensions	6.9" x 7.9" x 2.3", 12.63" x 7.0" x 3.5", 16.3" x 9.1" x 4.3", 17" x 9" x 4.5"
Warranty	One year

# SELECT YOUR ACCESSORIES



### ME-RVC BRIDGE MODULE

- Converts proprietary MagNet data to the commonly used RV-C communications protocol, allowing Magnum Energy brand inverters and accessories to communicate with RV-C compliant devices.
- Connect up to two Magnum Energy brand inverter/chargers to one module.



### ME-BMK BATTERY MONITOR KIT

- Acts as a "fuel gauge" for your batteries.
- Monitors state-of-charge (SOC) readings to avoid unnecessary battery recharging, saving maintenance costs.



### ME-AGS AUTOMATIC GENERATOR START

- Automatically starts a generator based on low battery condition or the room temperature.
- Compatible with most major generator brands.
- Network and stand-alone versions are available.



### ME-SBC SMART BATTERY COMBINER

- Easy-to-use stand alone battery combiner and isolator.
- Use with 12 and 24 V systems.
- Use a single charging source to charge a second battery bank.
- Prevents over or under-charging, helping to save battery life.



### ME-RC REMOTE CONTROL

- Large LCD screen.
- Quick access menus via a dial.
- Favs button for storing frequently accessed menus.
- Non-volatile memory.



### ME-ARC REMOTE CONTROL

- Large LCD screen.
- Quick access menus via a dial.
- Favs button for storing frequently accessed menus.
- Non-volatile memory.



### LCD REMOTE CONTROL

- Works with NP Series inverter/chargers.
- Easy-to-read display.
- Turn inverter on/off or set in standby mode.
- Adjust inverter settings.



### ME-MR REMOTE CONTROL

- LCD screen.
- Easy-to-read LED indicators.
- Non-volatile memory.
- Basic control of Magnum Energy brand inverter/chargers.

NOTE: All systems require a remote control. Visit [www.magnum-dimensions.com](http://www.magnum-dimensions.com) for our full line of inverter/chargers, remote controls, and accessories.

# 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 AND THE MAGNUM ENERGY BRAND

Sensata’s Power Conversion business unit 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, inverterchargers, and accessories catering to mobile applications, including utilities, corporate fleets, RV, marine, and trucks; renewable energy applications, and the export market.

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, inverterchargers and accessories.

Offering both sine wave and modified sine wave models ranging from 500 to 17,600 watts and the ability to accommodate input ranges from 12 to 48 VDC, the Magnum Energy product line has the inverter or invertercharger to meet your needs.



### CONTACT US

651-653-7000

800-553-6418

[InverterInfo@sensata.com](mailto:InverterInfo@sensata.com)

[www.magnum-dimensions.com](http://www.magnum-dimensions.com)

PN# 64-5030 vA