

MAGNUM
ENERGY



INTERNATIONAL PRODUCT CATALOG


Sensata
Technologies

The World Depends on Sensors and Controls

CONTENTS



About Sensata Technologies	1
Renewable Energy and Magnum Energy Brand Products	2
Caravans, Boats, and Magnum Energy Brand Products	3

CHARGE CONTROLLERS FOR BETTER BATTERY BACKUP

PT-100 Charge Controller	4
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INVERTER/CHARGERS

MM-E Series Inverter/Charger	6
MMS-E Series Inverter/Charger	8
MS-E Series Inverter/Charger	10
MS-AEJ Series Inverter/Charger	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

INTERCONNECTION SYSTEM EQUIPMENT

MMP***-E - Mini Magnum Panel	18
MPSL-PE - Magnum Panel	19
MPSL***-PE Configurations	20
MPDH-PE - Magnum Panel	21
MPDH***-PE Configurations	22

INTERCONNECTION SYSTEM ACCESSORIES

Backplate for MMP-E (BP-MMP)	23
Backplate Single (BP-S)	23
Backplate Dual (BP-D)	23
Breaker - DC, back mount	24
Breaker - DC, high capacity	24
MPX-PE Series	25

ACCESSORIES

ACLD-40	26
Automatic Generator Start Module (AGS)	28
Battery Monitor Kit (ME-BMK)	30
The MagWeb: Web Monitoring Kit	32
Remote - ME-ARC	34
Remote - ME-RC	34
Remote - MM-RC	34
Remote Bezel - ME-RC-BZ	35
Router	35
Smart Battery Combiner (ME-SBC)	36



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 brand, 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 international market.

Manufactured in 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.

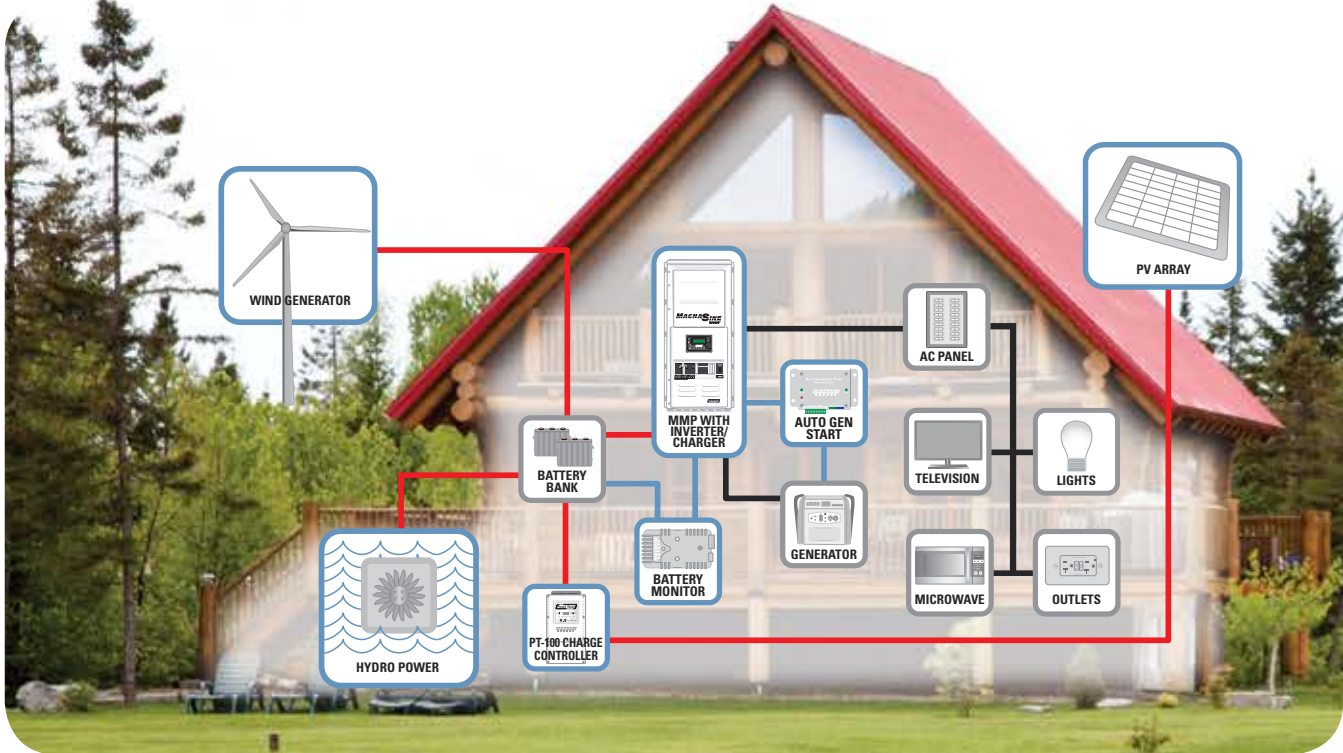
Offering both sine wave and modified sine wave models ranging from 300 to 12,000 watts – in single and three-phase topology – and the ability to accommodate input ranges from 12 to 300 VDC, the Magnum Energy brand product line has the inverter or inverter/charger to meet your needs.

For additional products, visit our web site at www.SensataPower.com. And ask your distributor/dealer for our Renewable and Mobile catalogs for more information on products for use in the U.S. and Canada.

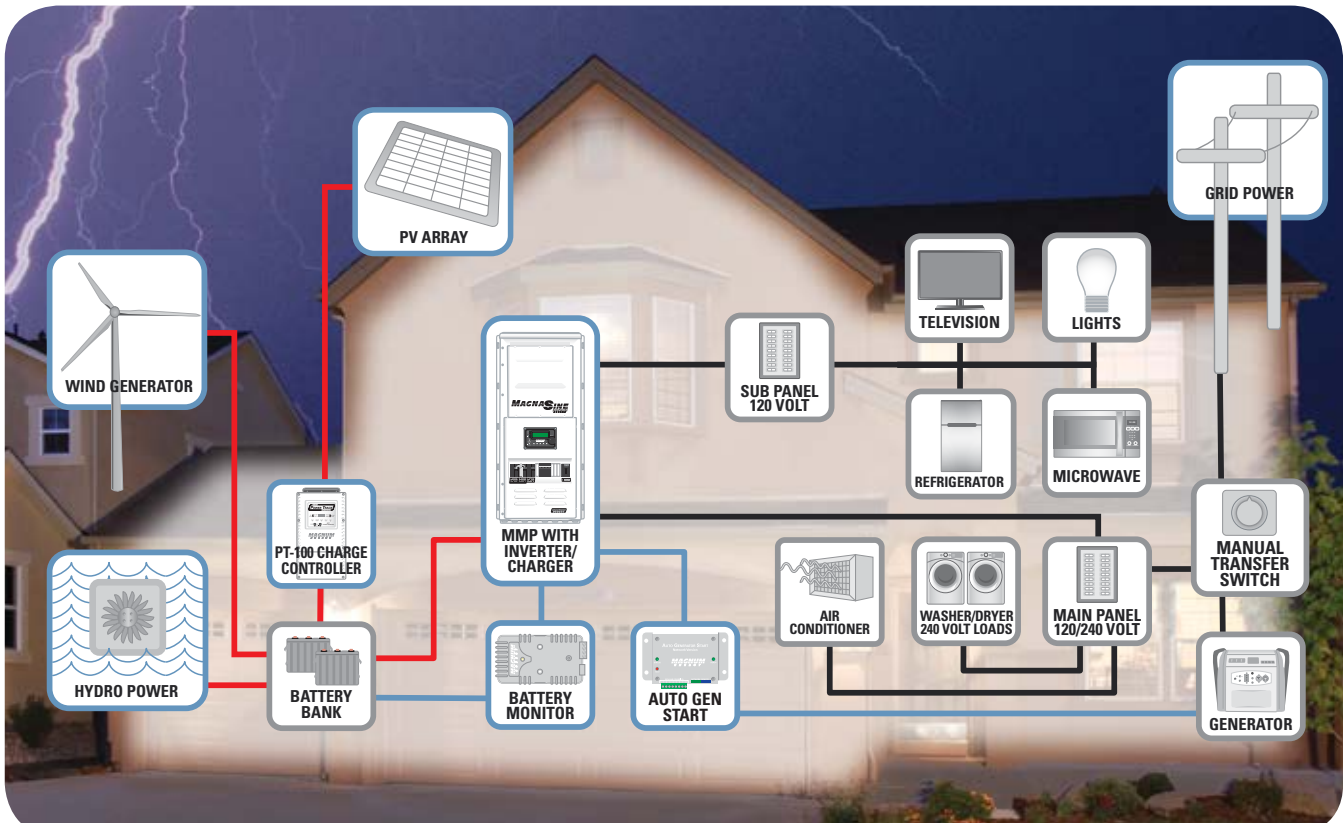
RENEWABLE ENERGY & MAGNUM ENERGY BRAND PRODUCTS

For reliable power regardless of grid connectivity, Magnum Energy brand inverter/chargers, interconnection system equipment, 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 900 to 4300 watts, and systems up to 17,200 watts you'll be sure to find the components right for your situation.

OFF-GRID POWER DIAGRAM



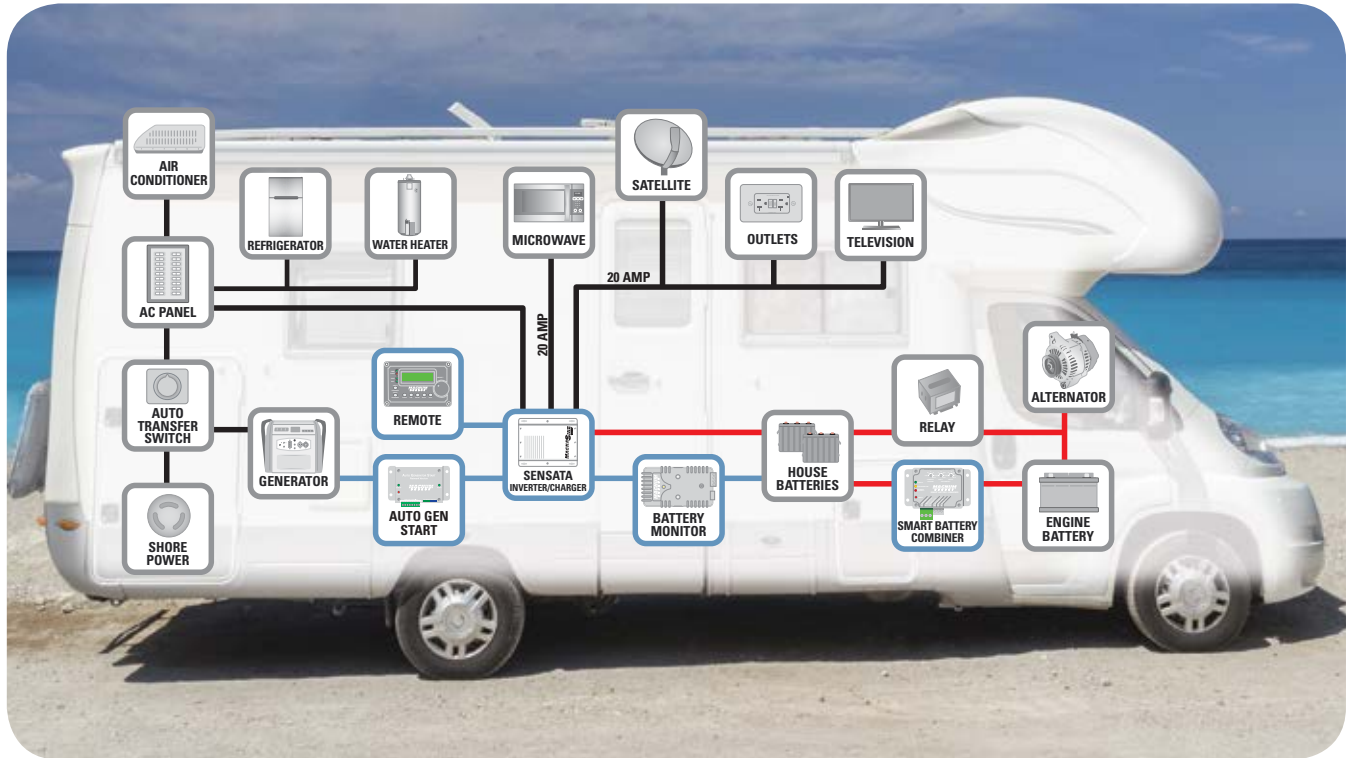
BACK-UP POWER DIAGRAM



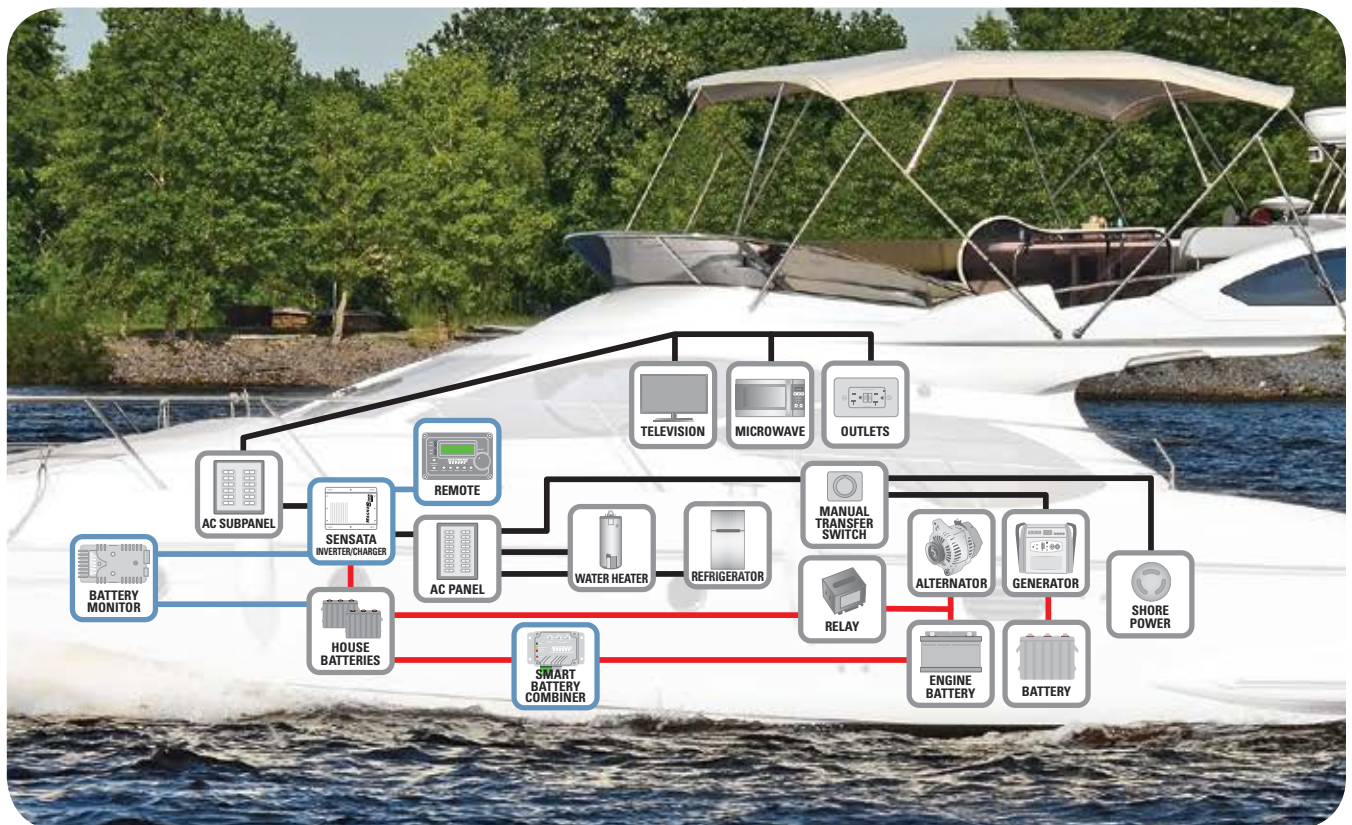
CARAVANS, BOATS, & MAGNUM ENERGY BRAND PRODUCTS

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

CARAVAN 30 AMP SYSTEM DIAGRAM



MARINE SYSTEM DIAGRAM



PT-100 CHARGE CONTROLLER



Model Number
PT-100

Available For

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

Works With

	PAGE
MM-E Series.....	6
MS-E Series.....	10
MS-AEJ Series.....	12
MS-PE Series.....	14
MMP-E Panel System.....	18
MPSL-PE Panel.....	19
MPDH-PE Panel.....	21
RD-E Series.....	16

Available Configurations

- Works as a stand-alone controller using internal settings
- Works with a Magnum Energy brand Inverter/Charger and Magnum Energy brand Remote. Menu settings for the PT-100 are currently only available via the ME-ARC Remote.

Available Accessories

DC Breakers.....	24
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The PT-100 is a Maximum Power Point Tracker (MPPT) charge controller designed to harvest the maximum available energy from the PV array and deliver it to the batteries. The PT-100's MPPT algorithm finds the maximum power point of the array and operates at this point while regulating the output current to 100 amps and battery voltage to fully charge the battery.

FEATURES

High Efficiency:

The PT-100 provides typical 99% conversion efficiency and uses less than four watts of power in nighttime mode.

MPPT:

Maximum Power Point Tracking technology for increased PV power output efficiency.

Voltage Options:

Compatible with 12, 24, or 48V battery systems with automatic detection of system voltage. The PT-100 will produce up to 100 amps regardless of battery voltage.

Supports a Large PV Array:

A single controller supports a large PV array up to 6600W. Larger PV arrays may be used because the PT-100 is current limited to 100 amps for maximum harvest.

Optimal Battery Charging:

Automatic battery temperature compensation using an included external temperature sensor for optimum battery charging, even during extreme temperature changes.

Multi-stage Charging:

Maximizes system performance and improves battery life.

GFDI:

Integrated PV Ground-Fault Detection and Interruption/Indication, with pre-fault leakage/diagnostic metering.

LED Indicators and Screen:

Multiple LED indicators and large digital LED screen on front panel for easy-to-read system information.

On-site Updates:

The PT-100's software can be updated on site.

Extensive Electronic Protection:

Over-temperature protection, power derating when temperature is high, PV short circuit and high PV input shutdown, output overcurrent protection and night-time back-feed (reverse current) protection.

AFCI:

An integrated PV Arc-Fault Circuit Interrupter detects, indicates, and extinguishes series arcs.

Convenient Installation:

Run all of the wiring to the unique, remain-in-place wiring box with ease prior to installing the full PT-100 unit.

Easy MP-PE and MMP-E integration:

The PT-100 is designed to work with a Magnum Panel (MP-PE) or Mini-Magnum Panel (MMP-E). It provides room and access to PV and battery disconnect breakers.

EVEN MORE FUNCTIONALITY WITH THE OPTIONAL REMOTE

- Built-in programmable auxiliary relay for device control.
- Internal data logging functionality keeps energy harvest information and battery Ahr/Whr data up to 255 days. Use the optional remote to display this information.

PT-100 CHARGE CONTROLLER SPECIFICATIONS

PT-100	
ELECTRICAL SPECIFICATIONS	
Maximum PV input voltage (any condition)	200 VDC + battery voltage or 240 VDC - whichever is lower
Maximum PV operating voltage	187 VDC
Maximum PV array short circuit current	100 ADC
Nominal battery voltage range	12, 24, or 48 VDC
Battery charger output voltage range	10 to 66 VDC
Continuous charger output current	100 ADC (from -20 °C to +40 °C) with proportional power reduction up to 60 °C ambient
Maximum output power	6600 watts
Efficiency	99% typical
Tare loss / nighttime power consumption	<4 watts (fan off, display/LEDs off)
Charger regulation method	Automatic three-stage (bulk, absorption, float) charge with manual equalization
GENERAL FEATURES AND CAPABILITIES	
Battery temperature compensation	With Battery Temperature Sensor (BTS) connected (battery temperature -20 °C to +55 °C)
Internal cooling	Using dual ball-bearing fans for long life
Overcurrent protection	With two overlapping circuits
Over-temperature protection	On transformer and MOSFETS
Listings	ETL Listed to UL/cUL 1741, CSA C22.2 #107.1-01, CE
Warranty	Five 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	
Enclosure type	Indoor, ventilated, with removable powder-coated conduit box
Unit dimensions (w x h x d)	8.5" x 15.5" x 4.0" (21.6 cm x 39.4 cm x 10.2 cm)
Shipping dimensions (w x h x d)	11.5" x 19.5" x 8.125" (29.2 cm x 49.5 cm x 20.6 cm)
Mounting	Mounted on a vertical surface (wall) or installed on MP or MMP enclosure
Weight	13.6 lb (6.2 kg)
Shipping weight	18 lb (8.2 kg)
Max operating altitude	15,000' (4570 m)

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

MM-E SERIES INVERTER/CHARGER



Model Number
MM1012E • MM1324E



Modified Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available For

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

Available Accessories

	PAGE
AGS.....	28
Battery Monitor Kit.....	30
Remote - ME-ARC.....	34
Remote - ME-RC.....	34
Remotes - MM-RC.....	35

The Magnum Energy brand MM-E Series Inverter/Charger from Sensata Technologies is a modified sine wave inverter for 230 VAC / 50 Hz installations, providing a cost effective solution for those with smaller power needs. Versatile, easy-to-use, and lightweight, the MM-E 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.

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	~ 20 ms	~ 20 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, 4.6 m (15') 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	15 AAC
Input circuit breaker	8 AAC	20 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)	38.1 cm x 16.5 cm x 12.7 cm (15.0" x 6.5" x 5.0")	
Mounting	Shelf (top or bottom up) or wall	
Weight	10.4 kg (23 lb)	
Shipping weight	10.9 kg (24 lb)	
Max operating altitude	4570 m (15,000')	
Construction	ABS plastic top and cast aluminum bottom	

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

MMS-E SERIES INVERTER/CHARGER



Model Number
MMS912E



Pure Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

The MMS-E 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-E 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.

Available For

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

Available Accessories

	PAGE
AGS.....	28
Battery Monitor Kit.....	30
Remote - ME-ARC.....	34
Remote - ME-RC.....	34
Remotes - MM-RC.....	35

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-E Series will automatically shut down.

Versatile Mounting

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

Fan Cooled

The MMS-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.

Current Overload Protection

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

MMS-E SERIES INVERTER/CHARGER SPECIFICATIONS

MMS912E	
INVERTER SPECIFICATIONS	
Input battery voltage	10 to 17 VDC
Nominal AC output voltage	230 VAC \pm 5%
Output frequency and accuracy	50 Hz \pm 0.1 Hz
Total Harmonic Distortion (THD)	< 5%
1 msec surge current (amps AC)	30
100 msec surge current (amps AC)	7.5
5 sec surge power (real watts)	1600
30 sec surge power (real watts)	1250
5 min surge power (real watts)	1200
30 min surge power (real watts)	1100
Continuous power output at 25° C	900 VA
Maximum continuous input current	120 ADC
Inverter efficiency (peak)	87%
Transfer time	~ 20 ms
Search mode (typical)	0.4 ADC at 12.6 V
No load (230 VAC output, typical)	19 watts at 12.6V
Waveform	Pure Sine Wave
CHARGER SPECIFICATIONS	
Continuous output at 25° C	40 ADC
Charger efficiency (peak)	80%
Power factor	> 0.95
Input current at rated output (AC amps)	3
GENERAL FEATURES AND CAPABILITIES	
Transfer relay capability	20 AAC (input current for charging and pass through)
Battery temperature compensation	Yes, 4.6 m (15') 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
AC input	Hardwire
Output circuit breaker	7 A switchable
Input circuit breaker	8 AAC
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)	42 cm x 21 cm x 12 cm (16.6" x 8.4" x 4.7")
Mounting	Shelf (top or bottom up) or bulkhead (vents up)
Weight	10.4 kg (23 lb)
Shipping weight	11.8 kg (26 lb)
Max operating altitude	4570 m (15,000')
Construction	ABS plastic top and cast aluminum bottom

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

MS-E SERIES INVERTER/CHARGER



Model Numbers
MS1512E • MS2712E



Pure Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available For

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

Available Accessories

	PAGE
MMP-E.....	18
AGS.....	28
Battery Monitor Kit	30
MagWeb	32
Remote - ME-ARC.....	34
Remote - ME-RC.....	34
Smart Battery Combiner - ME-SBC	36

The Magnum Energy brand MS-E Series Inverter/Charger from Sensata Technologies – a pure sine wave inverter designed for 230 VAC/50 Hz installations. The MS-E 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 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%.

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 INVERTER/CHARGER SPECIFICATIONS

	MS1512E	MS2712E
INVERTER SPECIFICATIONS		
Input battery voltage range	9 - 16 VDC	9 - 17 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)	40	45
100 msec surge current (amps AC)	15	21
5 sec surge power (real watts)	3100	4100
30 sec surge power (real watts)	2800	3750
5 min surge power (real watts)	2200	3600
30 min surge power (real watts)	1800	3500
Continuous power output at 25° C	1500 VA	2700 VA
Maximum continuous input current	200 ADC	360 ADC
Inverter efficiency (peak)	89%	86%
Transfer time	~ 20 ms	~ 20 ms
Search mode (typical)	8 watts	9 watts
No load (230 VAC output, typical)	20 watts	34 watts
Waveform	Pure Sine Wave	Pure Sine Wave
CHARGER SPECIFICATIONS		
Continuous output at 25° C	75 ADC	125 ADC
Charger efficiency (peak)	86%	83%
Power factor	> .95	> .95
Input current at rated output (AC amps)	4.5	8.5
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, 4.6 m (15') 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)	34.9 cm x 32.1 cm x 20.3 cm (13.75" x 12.65" x 8.0")	
Mounting	Shelf (top or bottom up) or wall	
Weight	19.1 kg (42 lb)	25.0 kg (55 lb)
Shipping weight	23.2 kg (51 lb)	28.2 kg (62 lb)
Max operating altitude	4570 m (15,000')	

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

MS-AEJ SERIES INVERTER/CHARGER



Model Number
MS3748AEJ



Pure Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

The Magnum Energy brand MS-AEJ Series Inverter/Charger from Sensata Technologies is a pure sine wave inverter designed for 120/240 VAC/50 Hz installations (Jamaica).

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.

Easy-to-install: Install the MS-AEJ 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.

Available For

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

Available Accessories

	PAGE
MMP-E.....	18
AGS.....	28
Battery Monitor Kit	30
MagWeb	32
Remote - ME-ARC.....	34
Remote - ME-RC.....	34
Smart Battery Combiner - ME-SBC	36

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%.

Versatile Mounting

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

Buy with Ease

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

MS-AEJ SERIES INVERTER/CHARGER SPECIFICATIONS

MS3748AEJ	
INVERTER SPECIFICATIONS	
Input battery voltage range	36 - 67.6 VDC
Nominal AC output voltage	120/240 VAC $\pm 5\%$
Output frequency and accuracy	50 Hz ± 0.4 Hz
Total Harmonic Distortion (THD)	< 5%
1 msec surge current (amps AC)	70 L-L
100 msec surge current (amps AC)	32 L-L
5 sec surge power (real watts)	6200
30 sec surge power (real watts)	6000
5 min surge power (real watts)	5400
30 min surge power (real watts)	4000
Continuous power output at 25° C	3700 VA
Maximum continuous input current	90 A @ 50.5 V
Inverter efficiency (peak)	91%
Transfer time	~ 20 ms
Search mode (typical)	10 watts
No load (230 VAC output, typical)	22 watts
Waveform	Pure Sine Wave
CHARGER SPECIFICATIONS	
Continuous output at 25° C	60 ADC
Charger efficiency (peak)	91%
Power factor	> .95
Input current at rated output (AC amps)	16 A @ 240 V (8 A per leg)
GENERAL FEATURES AND CAPABILITIES	
Transfer relay capability	30 amps AC per leg
Five stage charging capability	Bulk, Absorb, Float, Equalize (requires remote), and Battery Saver™
Battery temperature compensation	Yes, 4.6 m (15') 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	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 (l x w x h)	34.9 cm x 32.1 cm x 20.3 cm (13.75" x 12.65" x 8.0")
Mounting	Shelf (top or bottom up) or wall
Weight	25.0 kg (55 lb)
Shipping weight	28.6 kg (63 lb)
Max operating altitude	4570 m (15,000')

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

MS-PE SERIES INVERTER/CHARGER



Model Numbers
MS4124PE • MS4348PE



Pure Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

Available For

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

Available Accessories

	PAGE
MMP-E.....	18
MPSL-PE.....	19
MPDH-PE.....	21
ACLD.....	26
AGS.....	28
Battery Monitor Kit	30
MagWeb	32
Remote - ME-ARC.....	34
Remote - ME-RC.....	34
Router.....	35
Smart Battery Combiner - ME-SBC	36

The Magnum Energy brand MS-PE 230V Series Inverter/Charger from Sensata Technologies is a pure sine wave inverter designed specifically for the most demanding renewable energy applications. The MS-PE Series is powerful, easy-to-use, and best of all, cost effective.

Parallel stacking: You can parallel up to four inverterchargers for up to 17.2kw of power at 230V. The ME-RTR Router is required for parallel stacking the MS-PE 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-PE Series is listed to stringent CE requirements.

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%.

Versatile Mounting

Mount the MS-PE Series on a shelf or wall.

Lightweight

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

Multiple Ports

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

Buy with Ease

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

MS-PE SERIES INVERTER/CHARGER SPECIFICATIONS

	MS4124PE	MS4348PE
INVERTER SPECIFICATIONS		
Input battery voltage range	18 - 34 VDC	36 - 64 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)	65	75
100 msec surge current (amps AC)	30	37
5 sec surge power (real watts)	6300	7500
30 sec surge power (real watts)	5300	7100
5 min surge power (real watts)	4750	6600
30 min surge power (real watts)	4600	5000
Continuous power output at 25° C	4100 VA	4300 VA
Maximum continuous input current	273 ADC	143 ADC
Inverter efficiency (peak)	90%	91%
Transfer time	~ 20 ms	~ 20 ms
Search mode (typical)	9 watts	10 watts
No load (230 VAC output, typical)	30 watts	28 watts
Waveform	Pure Sine Wave	Pure Sine Wave
CHARGER SPECIFICATIONS		
Continuous output at 25° C	105 ADC	55 ADC
Charger efficiency (peak)	88%	91%
Power factor	> .95	> .95
Input current at rated output (AC amps)	14	16
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, 4.6 m (15') 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)	34.9 cm x 32.1 cm x 20.3 cm (13.75" x 12.65" x 8.0")	
Mounting	Shelf (top or bottom up) or wall	Shelf (top or bottom up) or wall
Weight	25.0 kg (55 lb)	25.0 kg (55 lb)
Shipping weight	28.6 kg (63 lb)	28.6 kg (63 lb)
Max operating altitude	4570 m (15,000')	4570 m (15,000')

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

RD-E SERIES INVERTER/CHARGER



Model Numbers
RD2624E • RD4024E



Modified Sine Wave



Battery Voltage Options



Continuous Output Options
in Watts

The Magnum Energy brand RD-E Series Inverter/Charger from Sensata Technologies for 230 VAC/50 Hz installations comes with all of the features you've come to expect from a Magnum Energy brand 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 RD-E Series models come with an on/off inverter-mounted switch with an easy-to-read LED indicator.

Available For

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

Available Accessories

	PAGE
MMP-E.....	18
AGS.....	28
Battery Monitor Kit	30
MagWeb	32
Remote - ME-ARC.....	34
Remote - ME-RC.....	35
Smart Battery Combiner - ME-SBC	36

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	~ 20 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, 4.6 m (15') 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)	34.9 cm x 32.1 cm x 20.3 cm (13.75" x 12.65" x 8.0")	
Mounting	Shelf (top or bottom up) or wall	
Weight	19 kg (42 lb)	25 kg (55 lb)
Shipping weight	21.3 kg (47 lb)	27.2 kg (60 lb)
Max operating altitude	4570 m (15,000')	

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

MMP***-E - MINI MAGNUM PANEL



The Magnum Energy brand MMP-E – Mini Magnum Panel by Sensata Technologies is an inclusive, easy-to-install panel designed to work with one Magnum Energy brand MS-E, MS-PE, RD-E or other non-Sensata inverter/charger.

FEATURES

Small Footprint

Only (h x w x d) 56 cm x 38 cm x 33 cm

Money-saving Design

Not only is the MMP-E less expensive, but it is pre-wired for fast installation, saving labor costs

Easy Access

Front-mounted breakers and remote (optional)

Inclusive

Want to use the MMP-E with a non-Magnum Energy brand inverter/charger? Sensata offers an optional addition to the MMP-E allowing it to work with other inverter/chargers.

Listed

CE listed

DC Load Breakers

Fits either din rail or back-mount DC load breakers.

The MMP-E shown with inverter (sold separately) and optional remote and backplate.



PART NUMBERS	DIMENSIONS (H X W X D)	SHIPPING WEIGHT
MMP250-30S-E	55.9 cm x 38.1 cm x 33 cm	14.5 kg (32 lb)
MMP175-30S-E	55.9 cm x 38.1 cm x 33 cm	14.5 kg (32 lb)

The MMP-E, including installed Magnum Energy brand products are covered under a five-year warranty!

INCLUDES

- One DC breaker – 175A or 250A
- One 30A AC bypass breaker
- One 30A AC input breaker
- 500A/50mv DC shunt
- DC buss bars for battery positive and negative
- Din rail or back mount for optional DC mini breakers – will hold up to eight breakers
- Inverter hood

*** can be either 175 or 250, depending on the inverter model.

MPSL-PE - MAGNUM PANEL



The Magnum Energy brand MPSL-PE – Magnum Panel, Single Enclosure, Low Capacity from Sensata Technologies – is designed to accommodate a maximum of two inverters.

The MPSL-PE shown with a single inverter (sold separately) and an optional backplate.

FEATURES

Expandable

Start with the enclosure and just one inverter and in the future expand to two inverters with ease, using the MPX-PE.

Easy Installation

All connections are front-mounted, including AC and DC breakers and the MPX-PE.

Labor Saving

Panel is pre-wired for fast installation, saving labor costs.

DC Load Breakers

Fits either din rail or back-mount DC load breakers.

Convenient Knockouts

Knockouts on the side of the enclosure are compatible with most charge controllers.



The MPSL-PE shown with two inverters (sold separately), an optional MPX-PE extension to accommodate a second inverter, an optional dual backplate, and an optional router.

PART NUMBERS	DIMENSIONS (H X W X D)	SHIPPING WEIGHT
MPSL175-PE	68.6 cm x 45.7 cm x 38.1 cm	22.7 kg (50 lb)
MPSL250-PE	68.6 cm x 45.7 cm x 38.1 cm	22.7 kg (50 lb)

INCLUDES

- One DC breaker – 175A or 250A
- One 60A AC bypass breaker
- 500A/50mv DC shunt
- Inverter AC input protection
- Inverter hood

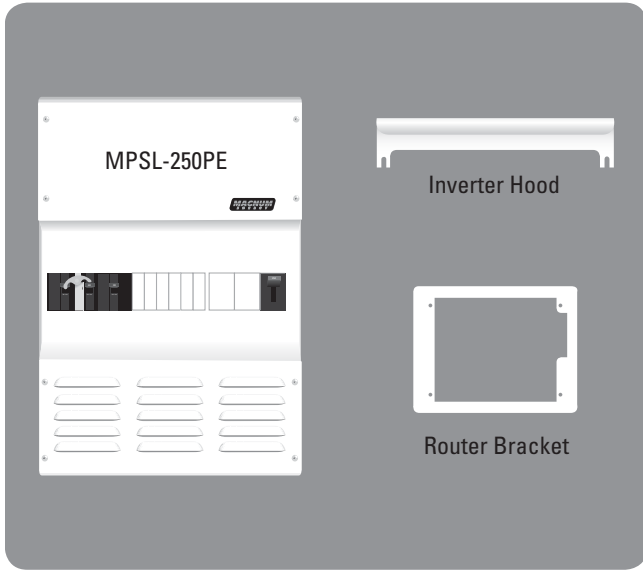
The MPSL-PE, including installed Magnum Energy brand products are covered under a five-year warranty!

MPSL***-PE CONFIGURATIONS

*** can be either 175 or 250, depending on the inverter model.

Only MPSSL250-PE configurations shown below for clarity.

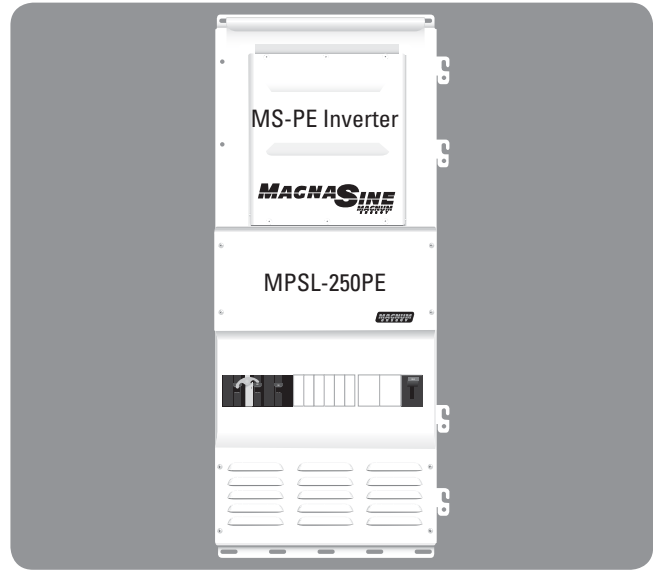
MPSSL-250PE (As Shipped)



MPSSL-PE includes:

- 60A AC System Bypass
- 30A AC Inverter Input Breaker
- 250A DC Battery Disconnect
- 500A/50mV DC Shunt
- Inverter Hood
- Router Bracket

MPSSL-250PE (As Field Installed)



MPSSL-PE includes:

- 60A AC System Bypass
- 30A AC Inverter Input
- 250A DC Battery Disconnect
- 500A/50mV DC Shunt
- Inverter Hood
- Router Bracket

Options shown, not included:

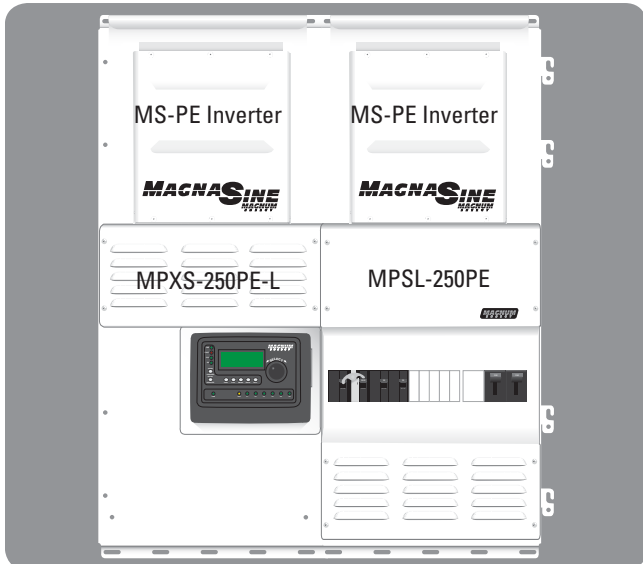
- MS-PE Parallel-stack inverter used in this one inverter MP-E configuration. See MMP-E Series panels for additional single inverter installations.
- BP-S - mounting backplate - single

Continuous Power Output at 25 °C:

- 4.1kVA with one MS4124PE
- 4.3kVA with one MS4348PE

MPSSL-250PE WITH MPXS-250PE-L

(As Field Installed)



MPSSL-PE with MPX-PE includes:

- 60A AC System Bypass
- 30A AC Inverter Inputs (x2)
- 250A DC Battery Disconnect (x2)
- 500A/50mV DC Shunt
- Inverter Hood (x2)
- Router Bracket

Continuous Power Output at 25 °C:

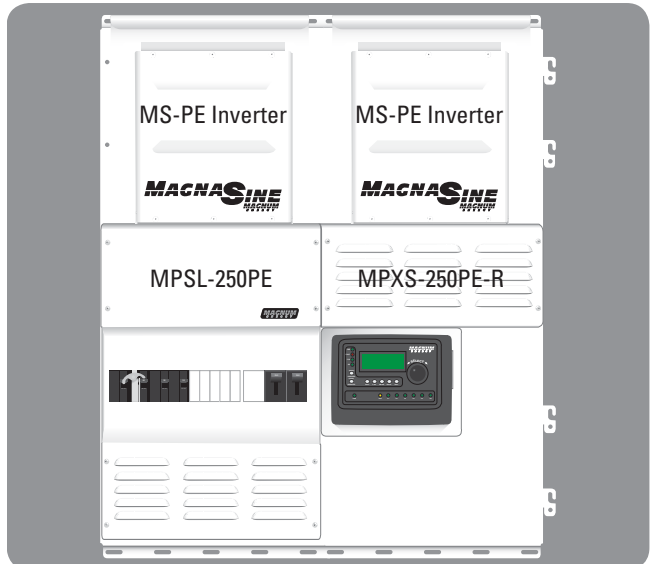
- 8.2kVA with two MS4124PEs
- 8.6kVA with two MS4348PEs

Options shown, not included:

- MS-PE Parallel-stack inverter (x2)
- ME-RTR Router
- BP-D mounting backplate - dual

MPSSL-250PE WITH MPXS-250PE-R

(As Field Installed)



MPSSL-PE with MPX-PE includes:

- 60A AC System Bypass
- 30A AC Inverter Inputs (x2)
- 250A DC Battery Disconnect (x2)
- 500A/50mV DC Shunt
- Inverter Hood (x2)
- Router Bracket

Continuous Power Output at 25 °C:

- 8.2kVA with two MS4124PEs
- 8.6kVA with two MS4348PEs

Options shown, not included:

- MS-PE Parallel-stack inverter (x2)
- ME-RTR Router
- BP-D - mounting backplate - dual

MPDH-PE - MAGNUM PANEL



The Magnum Energy brand MPDH-PE – Magnum Panel, Dual Enclosure, High Capacity from Sensata Technologies – is designed to accommodate a maximum of four inverters with two enclosures – one for AC connections and one for DC connections.

FEATURES

More Power Capacity

The 125A bypass breaker and the 1000A DC shunt safely handle the power from larger systems.

Expandable

Start with the enclosures and just two inverters and in the future expand to up to four inverters, using the MPX-PE.

Easy Installation

All connections are front-mounted, including AC and DC breakers and the MPX-PE.

Labor Saving

Panel is pre-wired for fast installation, saving labor costs.

DC Load Breakers

Fits either din rail or back-mount DC load breakers.

Convenient Knockouts

Knockouts on the side of the enclosures are compatible with charge controllers.

Separate AC and DC Enclosures

For installers who prefer separate enclosures, the MPDH-PE provides an easy solution.

The MPDH-PE shown with four inverters (sold separately), two optional MPX-PE extensions to accommodate the additional inverters, two optional backplates, and the optional Magnum Energy brand router.

PART NUMBERS	DIMENSIONS (H X W X D)	SHIPPING WEIGHT
MPDH175-PE	MPDH175-PE-AC: 68.6 cm x 45.7 cm x 38.1 cm	MPDH175-PE-AC: 20.9 kg (46 lb)
	MPDH175-PE-DC: 68.6 cm x 45.7 cm x 38.1 cm	MPDH175-PE-DC: 21.8 kg (48 lb)
MPDH250-PE	MPDH250-PE-AC: 68.6 cm x 45.7 cm x 38.1 cm	MPDH250-PE-AC: 20.9 kg (46 lb)
	MPDH250-PE-DC: 68.6 cm x 45.7 cm x 38.1 cm	MPDH250-PE-DC: 21.8 kg (48 lb)

The MPDH-PE, including installed Magnum Energy brand products are covered under a five-year warranty!

INCLUDES

- Two DC breakers – 175A or 250A
- One 125A AC bypass breaker
- 1000A/100mv DC shunt
- Inverter AC input protection
- Two inverter hoods

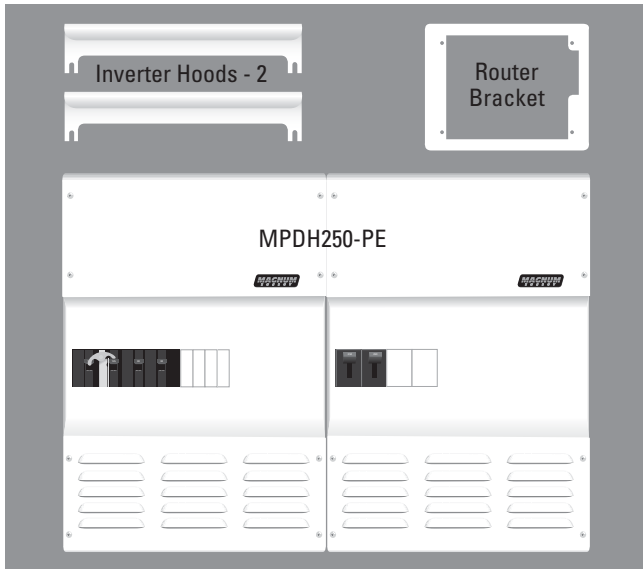
MPDH***-PE CONFIGURATIONS

*** can be either 175 or 250, depending on the inverter model.

Only MPDH250-PE configurations shown below for clarity.

MPDH250-PE

(As Shipped)

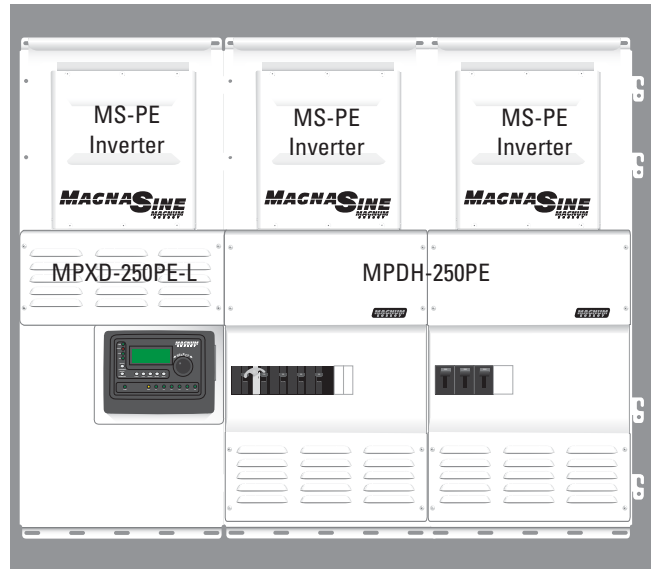


MPDH-PE includes:

- D125A AC System Bypass
- 30A AC Inverter Input Breaker (x2)
- 250A DC Battery Disconnect (x2)
- 1000A/100mV DC Shunt
- Inverter Hood (x2)
- Router Bracket

MPDH250-PE WITH MPXD-250PE-L

(As Field Installed)



MPDH-PE with MPX-PE includes: Continuous Power Output at 25 °C:

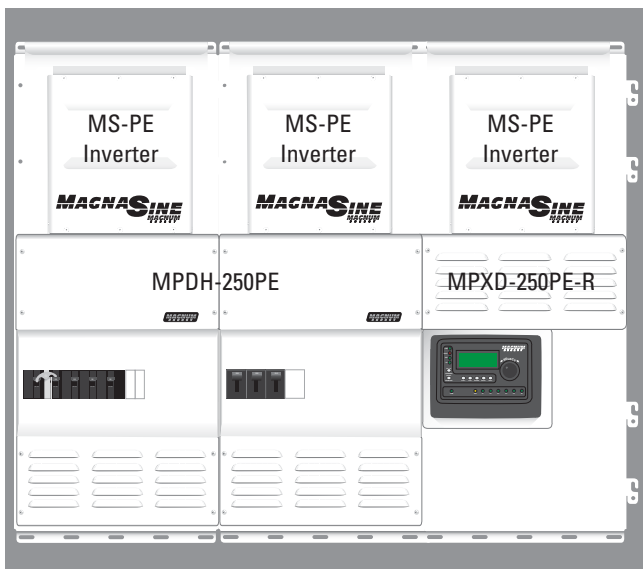
- D125A AC System Bypass
- 30A AC Inverter Input Breaker (x3)
- 250A DC Battery Disconnect (x3)
- 1000A/100mV DC Shunt
- Inverter Hood (x3)
- Router Bracket
- 12.3kVA with three MS4124PEs
- 12.9kVA with three MS4348PEs

Options shown, not included:

- MS-PE Parallel-stack inverters (x3)
- ME-RTR Router
- BP-S - mounting backplate - single
- BP-D - mounting backplate - dual

MPDH250-PE WITH MPXD-250PE-R

(As Field Installed)



MPDH-PE with MPX-PE includes: Continuous Power Output at 25 °C:

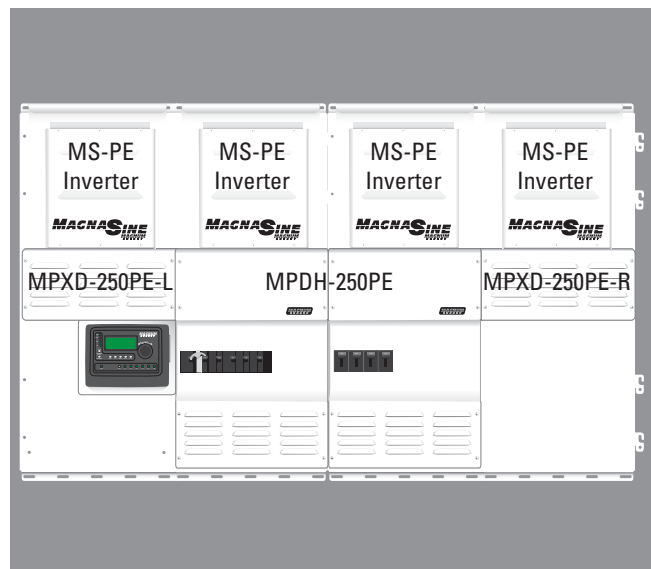
- D125A AC System Bypass
- 30A AC Inverter Input Breaker (x3)
- 250A DC Battery Disconnect (x3)
- 1000A/100mV DC Shunt
- Inverter Hood (x3)
- Router Bracket
- 12.3kVA with three MS4124PEs
- 12.9kVA with three MS4348PEs

Options shown, not included:

- MS-PE Parallel-stack inverters (x3)
- ME-RTR Router
- BP-S - mounting backplate - single
- BP-D - mounting backplate - dual

MPDH250-PE WITH MPXD-250PE-L

AND MPXD-250PE-R (As Field Installed)



MPDH-PE with MPX-PE includes: Continuous Power Output at 25 °C:

- D125A AC System Bypass
- 30A AC Inverter Input Breaker (x4)
- 250A DC Battery Disconnect (x4)
- 1000A/100mV DC Shunt
- Inverter Hood (x4)
- Router Bracket
- 16.4kVA with four MS4124PEs
- 17.2kVA with four MS4348PEs

Options shown, not included:

- MS-PE Parallel-stack inverters (x4)
- ME-RTR Router
- BP-D - mounting backplate - dual (x2)

Backplates

BACKPLATE FOR MMP-E (BP-MMP)

Model Numbers

- BP-MMP

Backplate for the MMP-E.
Fits one MMP-E only.

Works With

	PAGE
MMP-E Panel.....	18

Shipping Dimensions (h x w x d)

96.5 cm x 43.2 cm x 5.1 cm

Shipping Weight

5.0 kg (11 lb)



BACKPLATE SINGLE (BP-S)

Model Numbers

- BP-S

Single backplate for the Magnum Panels.
Fits one enclosure – MPSSL-PE,
MPXS-PE, or MPXD-PE.

Works With

	PAGE
MPSSL-PE	19
MPXS-PE.....	25
MPXD-PE.....	25

Shipping Dimensions (h x w x d)

106.7 cm x 88.9 cm x 5.1 cm

Shipping Weight

8.2 kg (18 lb)



BACKPLATE DUAL (BP-D)

Model Numbers

- BP-D

Dual backplate for the Magnum Panels.
Fits two enclosures – MPSSL-PE with
MPXS-PE, with MPXS-PE, two MPX-
PE's, or MPDH-PE.

Works With

	PAGE
MPSSL-PE	19
MPDH-PE.....	21
MPXS-PE.....	25
MPXD-PE.....	25

Shipping Dimensions (h x w x d)

106.7 cm x 88.9 cm x 5.1 cm

Shipping Weight

15.5 kg (34 lb)



Breakers

BREAKER - DC, BACK MOUNT

Model Numbers

- BR-DC75-BM
- BR-DC100-BM

Back mount DC breaker for the MMP-E and MP-PE Series.



Works With

	PAGE
MMP-E Panel.....	18
MPSL-PE	19
MPDH-PE.....	21
MPXS-PE.....	25
MPXD-PE.....	25

BREAKER - DC, HIGH CAPACITY

Model Numbers

- BR-DC175
- BR-DC250

Front mount DC breaker for the MMP-E and MP-PE Series.

Works With

	PAGE
MMP-E Panel.....	18
MPSL-PE	19
MPDH-PE.....	21
MPXS-PE.....	25
MPXD-PE.....	25

MPX-PE Extension Kits

MPX-PE SERIES

Dimensions (h x w x d)

27.9 cm x 50.8 cm x 30.5 cm

Shipping Weight

9.5 kg (21 lb)

Extension box for use with the MP-PE system. Each MPX-PE fits one MS-PE.



MODEL NUMBERS	INCLUDES	WORKS WITH	PAGE
MPXS-175PE-L	DC/AC breaker and wires, MP-Hood	MPSL175-PE	20
MPXS-250PE-L	DC/AC breaker and wires, MP-Hood	MPSL250-PE	20
MPXS-175PE-R	DC/AC breaker and wires, MP-Hood	MPSL175-PE	20
MPXS-250PE-R	DC/AC breaker and wires, MP-Hood	MPSL250-PE	20
MPXD-175PE-L	DC/AC breaker and wires, MP-Hood, parallel cables	MPDH175-PE	22
MPXD-250PE-L	DC/AC breaker and wires, MP-Hood, parallel cables	MPDH250-PE	22
MPXD-175PE-R	DC/AC breaker and wires, MP-Hood, parallel cables	MPDH175-PE	22
MPXD-250PE-R	DC/AC breaker and wires, MP-Hood, parallel cables	MPDH250-PE	22

ACLD-40 4kW AC Load Diversion Controller

Model Numbers
ACLD-40



Available For

- Renewable Energy Systems Back-up Power

Works With

	PAGE
MS-PE Series.....	14
MMP-E Panel System	18
MPSL-PE Panel	19
MPDH-PE Panel	21

Warranty

- Three-year warranty standard. Five-year warranty if purchased with and installed on an MP-PE or MMP-E panel.

Note: The ACLD-40 must be connected to a MS-PE Series inverter *and* an external diversion load.

INTRODUCING THE MOST SOPHISTICATED WAY TO ADD THREE-STAGE CHARGING TO YOUR AC COUPLED SYSTEM

What is an ACLD – AC Load Diversion Controller?

The ACLD monitors the battery voltage of a backup battery bank, and if the voltage rises to a predetermined level, the ACLD connects a diversion load of sufficient size, to the battery or energy source to prevent the battery voltage from increasing any further. The controller will continue to engage and disengage the load as often as necessary to prevent battery overcharge.

An AC Load Diversion controller is used to divert excess energy to an AC load in an effort to keep the battery bank that is connected to a back-up inverter from being overcharged, when used in an AC Coupled application.

ACLD-40 Features

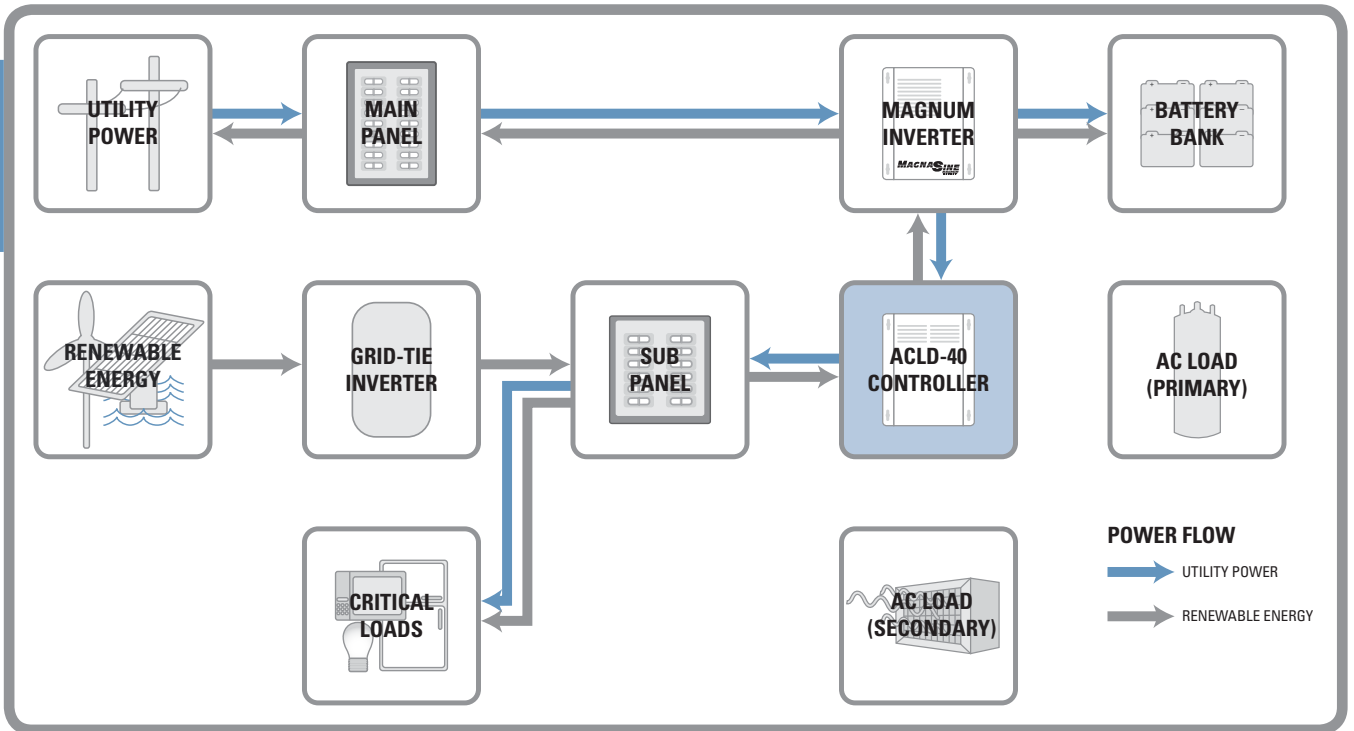
- Controls up to 4000 watts of excess power to prevent battery over-charge.
- Works with 24 or 48 volt systems.
- Allows the use of common, resistive AC household loads instead of hard-to-find DC loads to divert excessive current.
- Easy access Inverter and Network ports.
- Standard RS485 MagNet protocol to communicate with Magnum inverters and remotes.
- Can utilize power generated from wind, solar, or hydro systems.
- Provides PWM (Pulse Width Modulation) voltage when powering diversion load to run load without flicker.

ACLD-40 SPECIFICATIONS

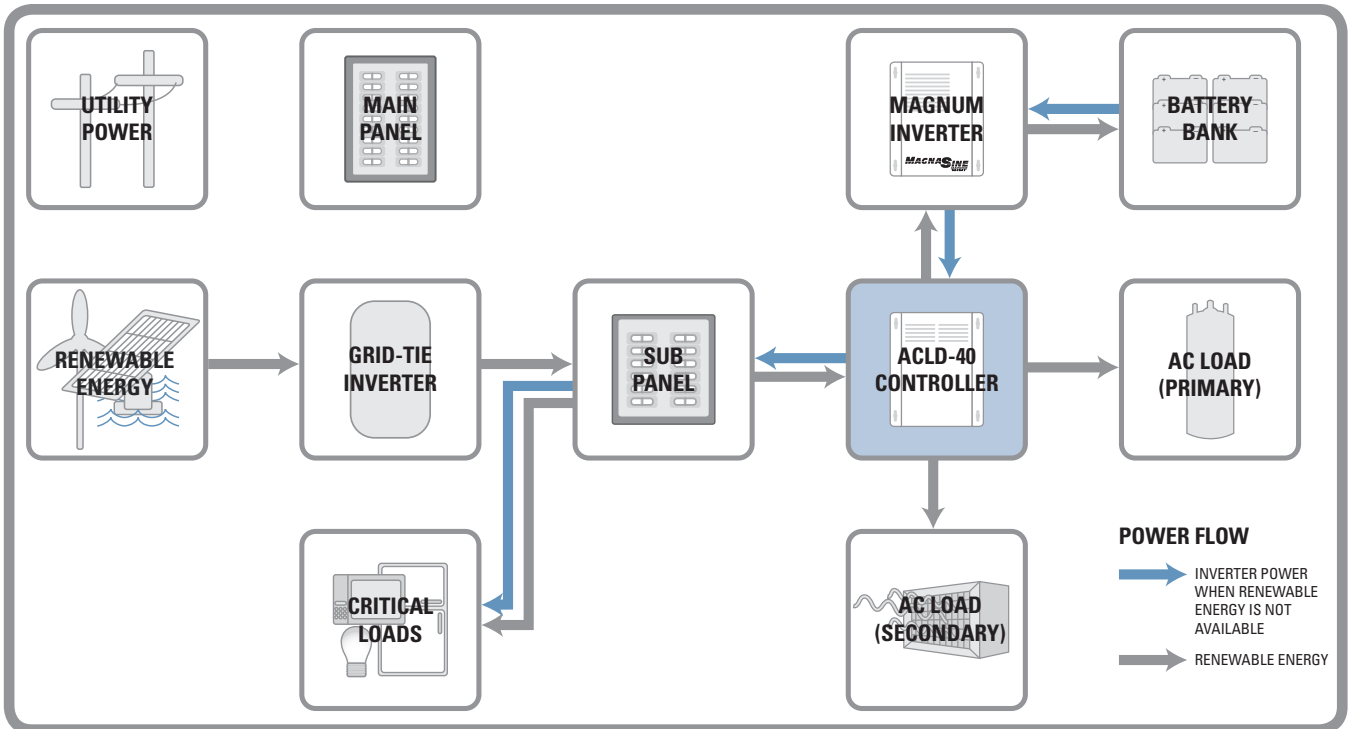
ACLD-40	
ELECTRICAL SPECIFICATIONS	
Frequency	50/60 Hz
Input voltage	240 VAC ± 10%
Output voltage	0 - 240 VDC
Continuous power	4000 VA
GENERAL FEATURES AND CAPABILITIES	
Listings	ETL Listed to UL 1741 - second edition and CSA C22.2 #107.1-01
Warranty	Three years (Five years when purchased with and installed on an MP/MMP system)
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	
Unit dimensions (w x h x d)	11.5" x 13.75" x 7" (29.2 cm x 34.9 cm x 17.8 cm)
Shipping dimensions (w x h x d)	13.6" x 15.8" x 9.3" (34.6 cm x 40.3 cm x 23.7 cm)
Mounting	Shelf (top or bottom up) or Wall (vents up)
Weight	20 lb (9.1 kg)
Shipping weight	23 lb (10.5 kg)
Max operating altitude	15,000' (4570 m)

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

ACLD SYSTEM DIAGRAM WHEN UTILITY POWER IS AVAILABLE



ACLD SYSTEM DIAGRAM WHEN UTILITY POWER IS **NOT** AVAILABLE



AUTOMATIC GENERATOR START MODULE (AGS)



Model Numbers
ME-AGS-S • ME-AGS-N

Works With

	PAGE
MM-E Series Inverter/Charger	6
MMS-E Series Inverter/Charger	8
MS-E Series Inverter/Charger	10
MS-AEJ Series Inverter/Charger	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

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

Imagine being able to enjoy a day away all-the-while knowing your living space will stay cool and comfortable and your batteries will stay charged and ready for all of the activities that make up daily life. There's nothing better than returning to a nice, cool, comfortable home with charged batteries after a day away. The Magnum 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-RC or ME-ARC remote panels.

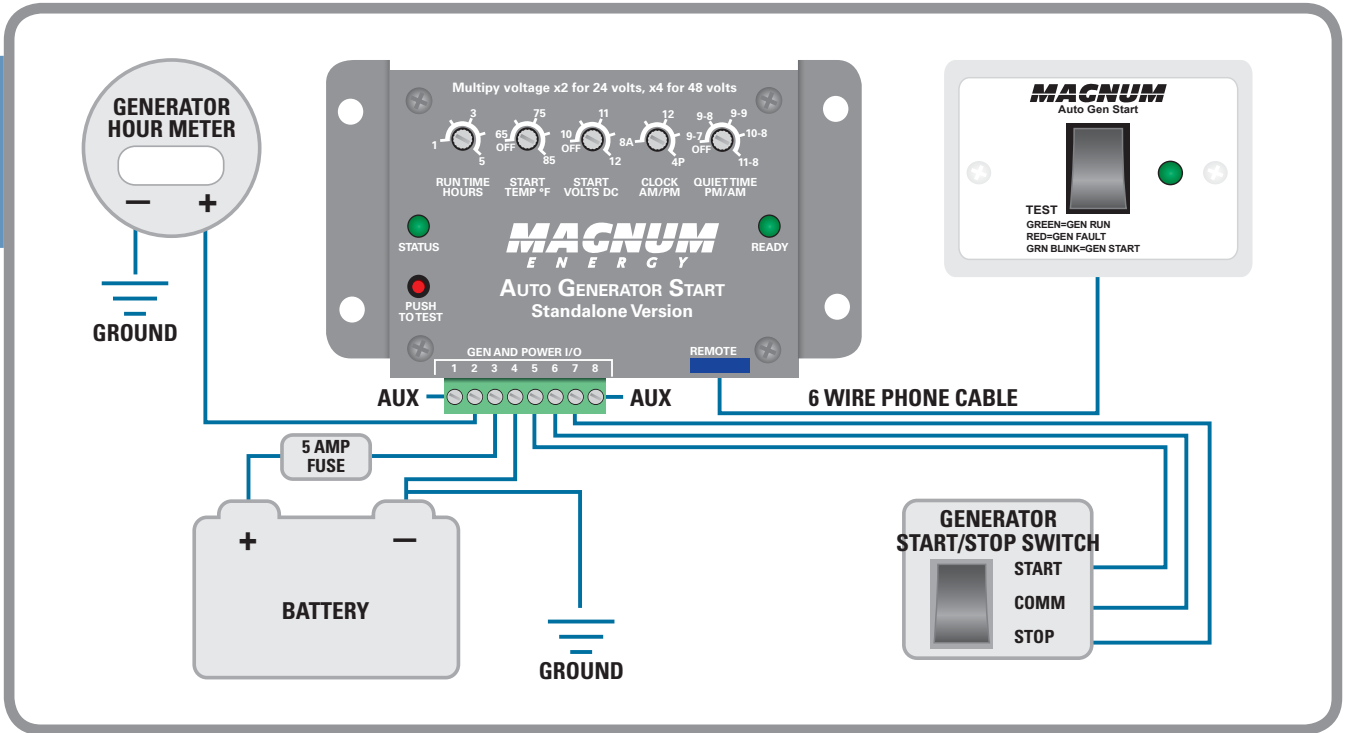
- **ME-AGS-N kit includes:**
AGS module (3 relay), 10' network cable, and a 60' remote temperature sensor cable.
- **ME-AGS-S kit includes:**
AGS module (3 relay), Remote on/off/test switch, switch bezel, a 25' 6-wire cable, and has basic adjustments starting on battery voltage or temperature.



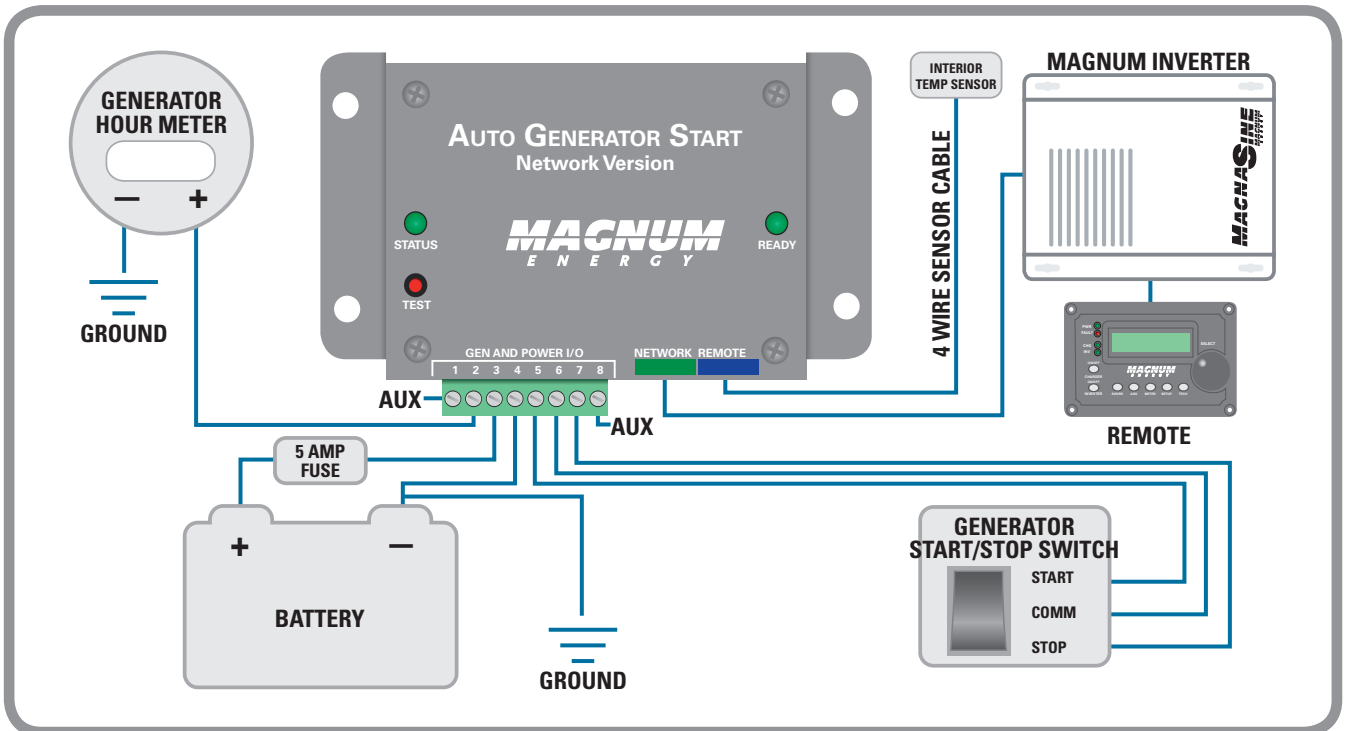
ME-AGS-N FEATURES*

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

AGS WIRING DIAGRAM FOR STAND ALONE SYSTEMS (ME-AGS-S)



AGS WIRING DIAGRAM FOR NETWORKED SYSTEMS (ME-AGS-N)



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

BATTERY MONITOR KIT (ME-BMK)



Model Numbers

ME-BMK • ME-BMK-NS (no shunt)

Works With

	PAGE
MM-E Series Inverter/Charger	6
MMS-E Series Inverter/Charger	8
MS-E Series Inverter/Charger	10
MS-AEJ Series Inverter/Charger	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

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-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 Energy brand Inverter/Charger and Magnum Energy 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 or ME-ARC.

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

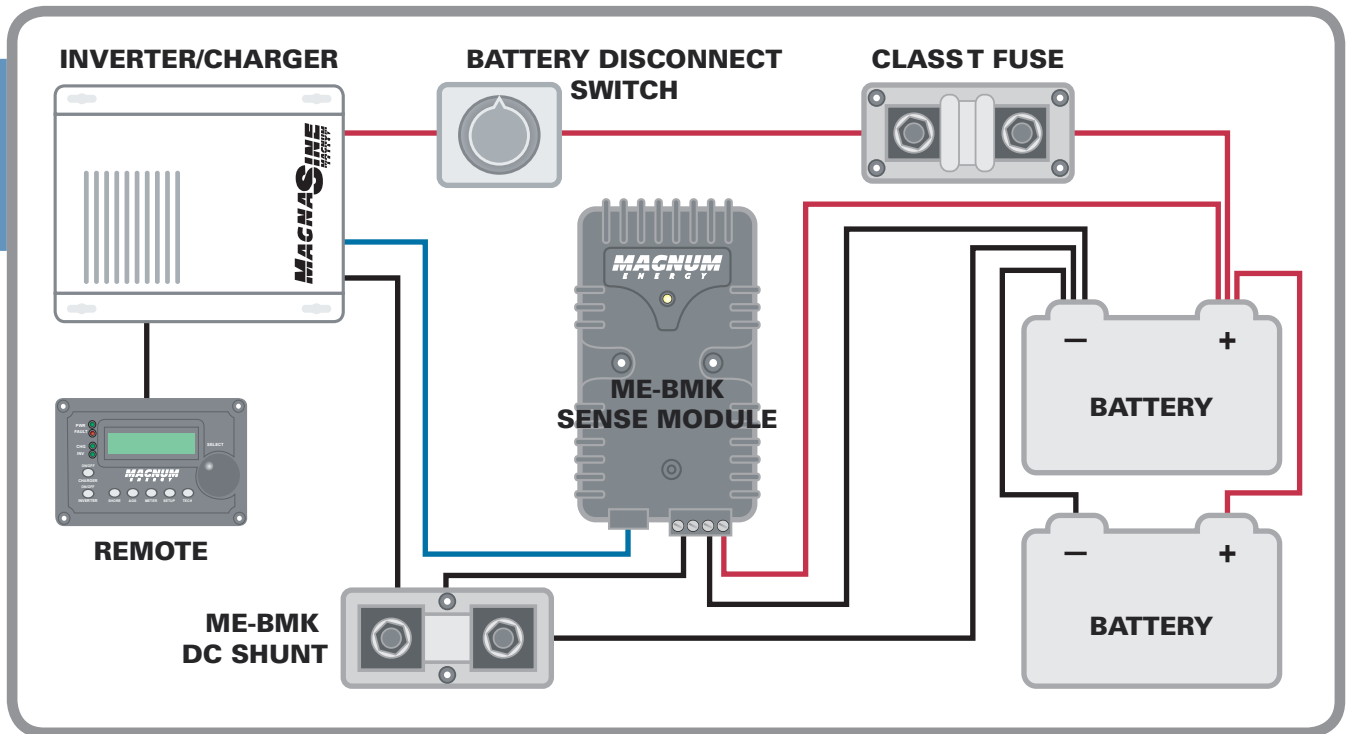
- State of Charge (SOC)
0 - 100%
- DC volts
- DC amps
- Amp hours in/out
- Resettable amp hours out
- Total amp hours out
- Minimum volts DC
- Maximum volts DC
- Temperature compensated
- Auto detects input voltage

Kit includes

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

* Requires ME-RC remote revision 2.0 or higher.

ME-BMK BASIC CONFIGURATION DIAGRAM



ME-BMK SPECIFICATIONS

	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	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.

THE MAGWEB: WEB MONITORING KIT



Model Numbers

ME-MW-W (wireless) • ME-MW-E (ethernet)

Works With

	PAGE
MS-E Series Inverter/Charger.....	6
MS-AEJ Series Inverter/Charger.....	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

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 Magnum Energy brand MagWeb Series from Sensata Technologies is a powerful and cost effective tool for remotely monitoring Magnum Energy brand Series Inverters and Accessories. 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 18:46:23
Inverter Settings	
Model:	MS4024
Revision:	3.7
Stack Mode:	Standalone Unit
Remote Settings	
Revision:	2.1
AC Search Watts:	No Searching, Always On
AC Shore Amps:	00
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:	26.8 VDC (for 0.0 hours)
Float Voltage:	27.0 VDC
Equalize Voltage:	28.9 VDC
Battery Monitor	
Revision:	1.0

Daily System Summary

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: 28°C / 77°F Transformer: 58°C / 136°F FETs: 41°C / 105°F
AC Out:	Active: (0 amps)
AC In:	Active: (0 amps)



Low cost ethernet version available!

MAGWEB SPECIFICATIONS

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
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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)
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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
MM-E Series Inverter/Charger.....	6
MMS-E Series Inverter/Charger	8
MS-E Series Inverter/Charger.....	10
MS-AEJ Series Inverter/Charger	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

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-E, MS-E, MS-PE, RD-E, MM-E, and MMS-E 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
MM-E Series Inverter/Charger.....	6
MMS-E Series Inverter/Charger	8
MS-E Series Inverter/Charger.....	10
MS-AEJ Series Inverter/Charger	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

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.



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

Accessories

	PAGE
Remote Bezel.....	35

No cross platform confusion:

The ME-RC remote is the same remote used on all Magnum Energy brand Series Inverter/Charger models in the ME-E, MS-E, MS-PE, RD-E, MM-E, and MMS-E 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.

REMOTE - MM-RC

Model Number

- MM-RC25

The low-cost, easy-to-read MM-RC designed to work with the Magnum Series MM-E and MMS-E Inverter/Chargers.

Works With

	PAGE
MM-E Series Inverter/Charger	6
MMS-E Series Inverter/Charger	8



MM-RC Inverter/Charger models

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 BEZEL - ME-RC-BZ

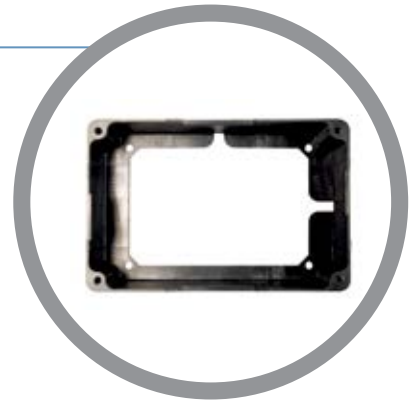
Model Numbers

- ME-RC-BZ

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

Works With

	PAGE
ME-RC	34



ROUTER - ME-RTR

Model Numbers

- ME-RTR

Works With

	PAGE
MS-PE	14

The Magnum Energy brand Router from Sensata Technologies is a combination of the ME-ARC advanced feature remote and a communication hub for MS-PE 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-PE Series inverter/charger, communication ports for ME-AGS-N or ME-BMK accessories, and a two wire voltage controlled auxiliary relay.



SMART BATTERY COMBINER (ME-SBC)



Model Number
ME-SBC

Works With

	PAGE
MS-E Series Inverter/Charger.....	10
MS-AEJ Series Inverter/Charger.....	12
MS-PE Series Inverter/Charger	14
RD-E Series Inverter/Charger	16

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

The Magnum Energy brand by Sensata Technologies Series 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.

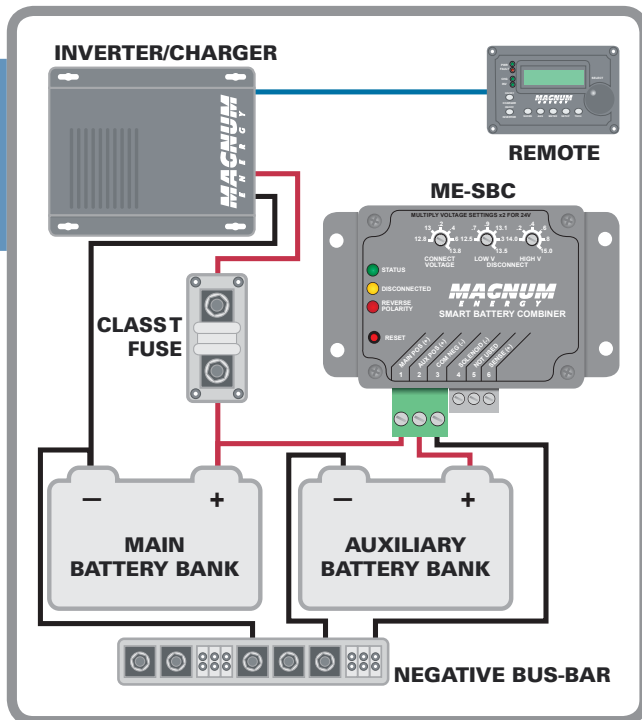
FRONT PANEL INCLUDES

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

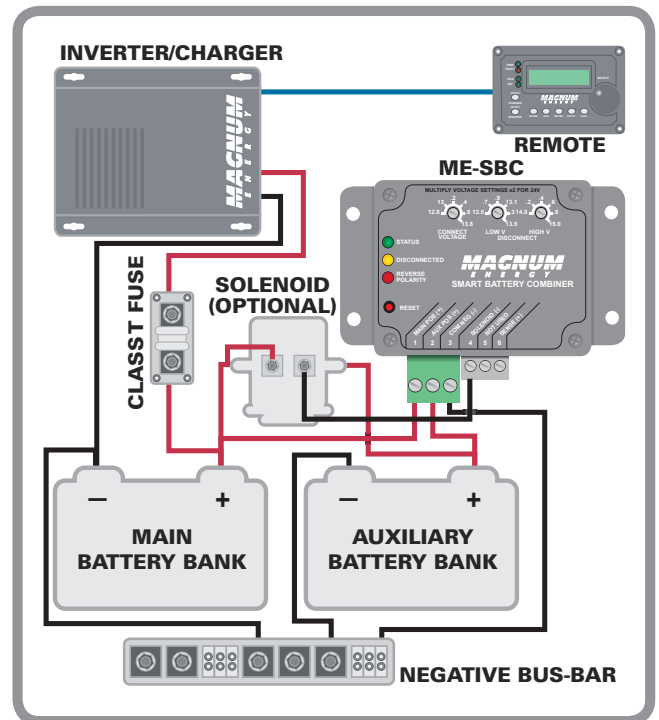
FEATURES

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

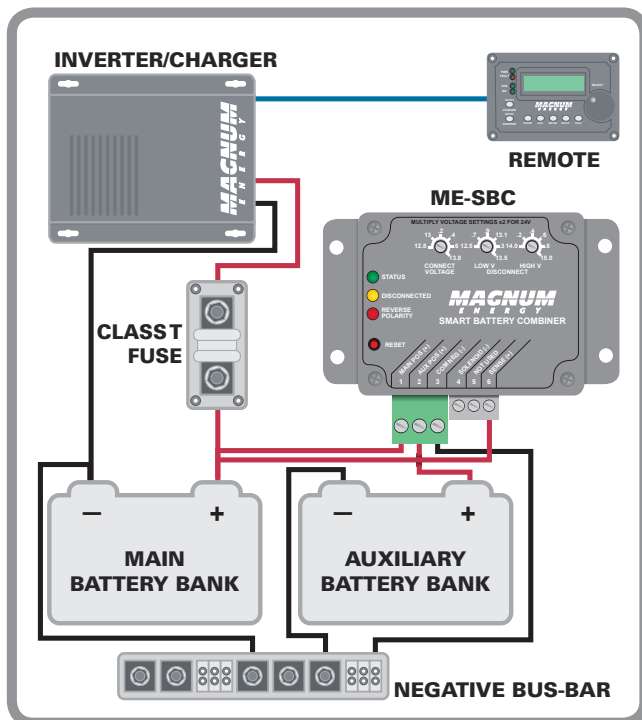
ME-SBC BASIC CONFIGURATION DIAGRAMS



25 amp Combiner Mode



Solenoid Drive



Remote Voltage Sense

ME-SBC SPECIFICATIONS

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

Testing for specifications at 25° C.

Specifications subject to change without notice.



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