



## The RD Series Inverter/Charger

For Renewable Energy Applications



The RD Series Inverter/Charger is powerful, easy-to-use, and cost effective.

### MODEL NUMBERS:

- RD2212
- RD1824
- RD2824
- RD3924

### AVAILABLE FOR:

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

### AVAILABLE ACCESSORIES:

- AGS
- Battery Monitor Kit
- DC Load Disconnect
- Fuse Blocks
- Remote
- Remote Switch Adapter
- Series Stacking Interface



The Powerful Difference

### Reliable Off-Grid Power from Magnum Energy

The RD Series Inverter/Charger from Magnum Energy is a new generation inverter designed specifically for renewable energy use. The RD Series is powerful, easy-to-use, and best of all, cost effective.

#### Power Factor Corrected (PFC)

**Charger:** Our PFC charger is built into all of our inverter chargers.

It uses less energy from a generator than a standard charger – using 25-30% less AC current than standard chargers.

**Safe and reliable:** The RD Series is ETL Listed to the stringent requirements of UL 1741, ensuring that the inverter is safe and reliable.

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

### Features

#### You asked and Magnum listened.

The RD Series Inverter/Charger is loaded with features:

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

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

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

**Multiple ports:** The RD Series provides multiple ports, including an RS485 communication port for network expansion, and a remote port.

**Accessible design:** The extra large AC access cover with terminal screw block and 360° DC connection terminals with covers make this inverter more accessible when it needs to be.

#### Convenient switches:

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

#### Expanded transfer relay:

60 Amp transfer service is available on all models.

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

### Accessories and Options\*

**Remote control:** For convenient finger-tip operation, including the new one-knob™ programming.

**AGS module:** Automatically starts and stops your generator based on temperature or battery voltage.

\* For more detailed information and specifications on these accessories, please see the accessories data sheet.



# The RD Series Inverter/Charger

## Specifications

	RD2212	RD1824	RD2824	RD3924
<b>Inverter Specifications</b>				
Input battery voltage range	9 - 16 VDC	18 - 32 VDC	18 - 32 VDC	18 - 32 VDC
Nominal AC output voltage	120 VAC	120 VAC	120 VAC	120 VAC
Output frequency and accuracy	60 Hz ± 0.005%	60 Hz ± 0.005%	60 Hz ± 0.005%	60 Hz ± 0.005%
1 msec surge current (amps AC)	60	70	100	150
100 msec surge current (amps AC)	37	40	60	90
5 sec surge power (real watts)	3700	4000	6000	9000
30 sec surge power (real watts)	3450	3300	4800	6400
5 min surge power (real watts)	3100	2850	3950	5800
30 min surge power (real watts)	2400	2400	3500	4750
Continuous power output at 25° C	2200 VA	1800 VA	2800 VA	3900 VA
Rated input battery current	191.0 ADC	88 ADC	133 ADC	188 ADC
Inverter efficiency (peak)	95%	95%	94%	93%
Transfer time	16 msec	16 msec	16 msec	16 msec
Search Mode	.2 ADC	.3 ADC	.3 ADC	.3 ADC
No Load (120 VAC output)	0.87 ADC	.5 ADC	.6 ADC	.6 ADC
Waveform	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave	Modified Sine Wave

## Charger Specifications

Continuous output at 25° C	110 ADC	50 ADC	80 ADC	105 ADC
Charger efficiency	85%	85%	85%	92%
Power factor	> 0.95	> 0.95	> 0.95	> 0.95
Input current at rated output (AC amps)	15	15	21	29

## General Features and Capabilities

Transfer relay capability	2 legs at 30 A for 120 V/30 A or 240 V/60 A service
Five stage charging capability	Bulk, Absorb, Float, Equalize, and Battery Saver™
Battery temperature compensation	With available temp sensor (battery temp 0 – 50° C)
Remote inverter on/off switch	With available pigtail to connect to dry contact
Internal cooling	0 to 120 cfm variable speed drive using dual 92mm brushless DC fans
Overcurrent protection	Yes, with two overlapping circuits
Overtemperature protection	Yes on transformer, MOSFETS, and battery
Conformal coating on PCB's for corrosion protection	Yes
Powder coated chassis & top for corrosion protection	Yes
Stainless steel fasteners for corrosion protection	Yes
Listings	ETL listed to UL1741
Warranty	Two years

## Environmental Specifications

Operating temperature	-20° C to +60° C (-4° F to 140° F)
Nonoperating temperature	-40° C to +70° C (-40° F to 158° F)
Operating humidity	0 to 95% RH non condensing

## Physical Specifications

Dimensions (h x w x d)	13.75" x 12.65" x 8.0" (34.9 cm x 32.1 cm x 20.3 cm)
Mounting	Shelf or wall (vents up)
Weight	38 lb (17 kg)      38 lb (17 kg)      42 lb (19 kg)      45 lb (20 kg)
Max operating altitude	15,000' (4570 m)

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