



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 |
|----------------------------------|--------------------|--------------------|--------------------|--------------------|
| Inverter Specifications | | | | |
| Input battery voltage range | 9 - 16 VDC | 18 - 32 VDC | 18 - 32 VDC | 18 - 32 VDC |
| Nominal AC output voltage | 120 VAC | 120 VAC | 120 VAC | 120 VAC |
| Output frequency and accuracy | 60 Hz ± 0.005% | 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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