

RD SERIES | INVERTER/CHARGER

Introduction

The RD Series Inverter/Charger is a new generation modified sine wave 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 (USA only), 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

- 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.

Model Numbers

- RD2212
- RD1824
- RD2824
- RD3924

Available For

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

Available Accessories

- Auto Generator Start
- Battery Monitor Kit
- Conduit Box
- DC Load Disconnect
- Fuse Blocks
- MagWeb
- Remote - ME-ARC
- Remote - ME-RC
- Remote Switch Adapter



Modified Sine Wave



Battery Voltage Options



Continuous Output Options



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 ± 5% | 120 VAC ± 5% | 120 VAC ± 5% | 120 VAC ± 5% |
| Output frequency and accuracy | 60 Hz ± 0.1 Hz | 60 Hz ± 0.1 Hz | 60 Hz ± 0.1 Hz | 60 Hz ± 0.1 Hz |
| 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 | 8000 |
| 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 |
| Maximum continuous input current | 293 ADC | 120 ADC | 186 ADC | 260 ADC |
| Inverter efficiency (peak) | 95% | 94% | 93% | 93% |
| Transfer time | 16 msec | 16 msec | 16 msec | 16 msec |
| Search mode (typical) | 5 watts | 5 watts | 5 watts | 5 watts |
| No load (120 VAC output, typical) | 20 watts | 12 watts | 19 watts | 25 watts |
| 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 (requires remote), and Battery Saver™ | | | |
| Battery temperature compensation | Yes, 15 ft Battery Temp Sensor standard | | | |
| Internal cooling | 0 to 120 cfm variable speed drive using dual 92mm brushless DC fans | | | |
| Overcurrent protection | Yes, with two overlapping circuits | | | |
| Overtemperature protection | Yes on transformer, MOSFETS, and battery | | | |
| Corrosion protection | Yes, PCB's conformal coated, powder coated chassis/top, and stainless steel fasteners | | | |
| Listings | ETL listed to UL1741 (USA only) | | | |
| Warranty | Two years | | | |
| ENVIRONMENTAL SPECIFICATIONS | | | | |
| Temperature (Operating/Non-operating) | -20° C to +60° C (-4° F to 140° F) to -40° C to +70° C (-40° F to 158° F) | | | |
| Operating humidity | 0 to 95% RH non-condensing | | | |

| PHYSICAL SPECIFICATIONS | | | | |
|-------------------------------|--|-----------------|-----------------|-----------------|
| Dimensions (h x w x d) | 13.75" x 12.65" x 8.0" (34.9 x 32.1 x 20.3 cm) | | | |
| Mounting | Shelf or wall (vents up) | | | |
| Weight | 37 lb (16.9 kg) | 35 lb (15.9 kg) | 42 lb (19 kg) | 53 lb (24 kg) |
| Shipping weight | 46 lb (20.9 kg) | 44 lb (20.0 kg) | 51 lb (23.2 kg) | 62 lb (28.1 kg) |
| Max operating altitude | 15,000' (4570 m) | | | |



GENERAL NOTES

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



AGENCY APPROVALS & CERTIFICATIONS

- ETL listed to UL1741 (USA only)

Sensata Technologies, Inc. ("Sensata") data sheets are solely intended to assist designers ("Buyers") who are developing systems that incorporate Sensata products (also referred to herein as "components"). Buyer understands and agrees that Buyer remains responsible for using its independent analysis, evaluation and judgment in designing Buyer's systems and products. Sensata data sheets have been created using standard laboratory conditions and engineering practices. Sensata has not conducted any testing other than that specifically described in the published documentation for a particular data sheet. Sensata may make corrections, enhancements, improvements and other changes to its data sheets or components without notice.

Buyers are authorized to use Sensata data sheets with the Sensata component(s) identified in each particular data sheet. HOWEVER, NO OTHER LICENSE, EXPRESS OR IMPLIED, BY ESTOPPEL OR OTHERWISE TO ANY OTHER SENSATA INTELLECTUAL PROPERTY RIGHT, AND NO LICENSE TO ANY THIRD PARTY TECHNOLOGY OR INTELLECTUAL PROPERTY RIGHT, IS GRANTED HEREIN. SENSATA DATA SHEETS ARE PROVIDED "AS IS". SENSATA MAKES NO WARRANTIES OR REPRESENTATIONS WITH REGARD TO THE DATA SHEETS OR USE OF THE DATA SHEETS, EXPRESS, IMPLIED OR STATUTORY, INCLUDING ACCURACY OR COMPLETENESS. SENSATA DISCLAIMS ANY WARRANTY OF TITLE AND ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, QUIET ENJOYMENT, QUIET POSSESSION, AND NON-INFRINGEMENT OF ANY THIRD PARTY INTELLECTUAL PROPERTY RIGHTS WITH REGARD TO SENSATA DATA SHEETS OR USE THEREOF.

All products are sold subject to Sensata's terms and conditions of sale supplied at www.sensata.com SENSATA ASSUMES NO LIABILITY FOR APPLICATIONS ASSISTANCE OR THE DESIGN OF BUYERS' PRODUCTS. BUYER ACKNOWLEDGES AND AGREES THAT IT IS SOLELY RESPONSIBLE FOR COMPLIANCE WITH ALL LEGAL, REGULATORY AND SAFETY-RELATED REQUIREMENTS CONCERNING ITS PRODUCTS, AND ANY USE OF SENSATA COMPONENTS IN ITS APPLICATIONS, NOTWITHSTANDING ANY APPLICATIONS-RELATED INFORMATION OR SUPPORT THAT MAY BE PROVIDED BY SENSATA.

Mailing Address: Sensata Technologies, Inc., 529 Pleasant Street, Attleboro, MA 02703, USA.