

Description

12V Pro Series High-Frequency Inverter Chargers combine pure sine wave and multi-stage charging in a compact design. They efficiently convert 12VDC power to 230VAC with 91% peak efficiency.

When grid-connected, they easily recharge various battery types, including lithium, GEL, and AGM. With versatile connectors and communication protocols, installation and system integration are quick and simple.

Key Features

High Conversion Efficiency

Under 4% total harmonic distortion (THD) for clean, grid-like power. 91% peak conversion efficiency with low standby energy use (<10W).

Uninterrupted Power Supply

Switch from the grid to the connected battery within 20ms to ensure critical appliances operate smoothly.

Customizable Charging

- Battery types
- Charging current
- Output frequency
- Lithium battery activation

Detachable LCD Screen

Removable for easy monitoring and for making adjustments away from the main unit.

Residual Current Device (RCD)

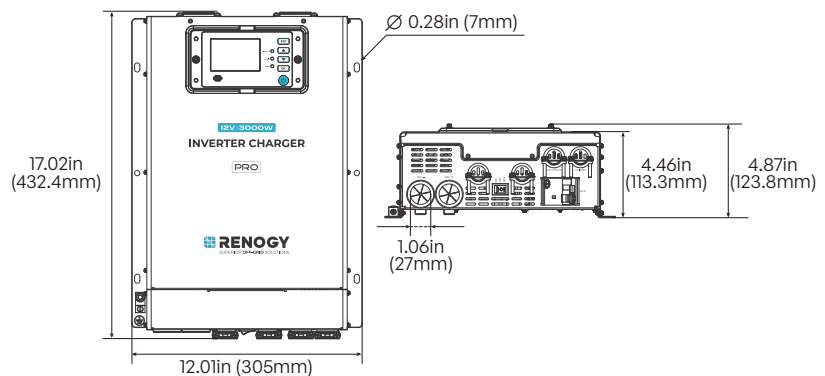
Automatically cuts power during potential leakage faults to prevent shocks, fires, and damage.

N-G Bonding

Provides a single grounding point to prevent ground loops and electric shock, minimizing the risk of inverter charger faults.



Product Dimensions



Pro 12V 3kW HF Inverter Charger*

*Pro 12V 2kW HF Inverter Charger is the same size as the 12V 3kW option.

For 2,000W Model:

- Battery Cables: 2/0 AWG
- ANL Fuse: 250A
- Fuse Cables: 2/0 AWG

For 3,000W Model:

- Battery Cables: 4/0 AWG
- ANL Fuse: 400A
- Fuse Cables: 4/0 AWG

Recommended Accessories



BT-2 Bluetooth Module

Enables remote monitoring and control via Bluetooth with the Renogy App.

Technical Specifications

Inverter Data

Model	RIV1220PCH-23S	RIV1230PCH-23S
Nominal Input Voltage	12VDC	12VDC
Input Voltage Range	10.5 to 15.5VDC	10.5 to 15.5VDC
Nominal Output Voltage Range	230VAC	230VAC
Output Waveform	Pure Sine Wave	Pure Sine Wave
Output Frequency Range (Configurable)	50/60Hz	50/60Hz
Continuous Output Power	2,000W	3,000W
Peak Power	4,000W (@100ms), 3,000W (@3s), 2,400W (@35s)	6,000W (@100ms), 4,500W (@3s), 3,600W (@35s)
Total Harmonic Distortion (THD)	THD≤4%	THD≤4%
Protection	Overload Protection, Overvoltage Protection, Undervoltage Protection, Over-Temperature Protection, Short Circuit Protection, Reverse Polarity Protection	Overload Protection, Overvoltage Protection, Undervoltage Protection, Over-Temperature Protection, Short Circuit Protection, Reverse Polarity Protection
Residual Current Protection	RCD	RCD
Self Consumption	<10W	<10W
Inverter Efficiency	91%	91%
Remote On-Off	Yes	Yes
Transfer Time	20ms	20ms
Transfer Relay Rating	16A	16A

Charger Data

Nominal Input Voltage	230VAC	230VAC
Input Voltage Range	187 to 264VAC	187 to 264VAC
Input Frequency Range	40 to 70Hz	40 to 70Hz
Maximum Battery Charge Current	80A	120A
Charge Current Range	5 to 80A	5 to 120A
Charger Efficiency	85% Peak	85% Peak

General Data

Battery Types	GEL, AGM, FLD, LI, USER	GEL, AGM, FLD, LI, USER
Communication	RV-C, RS485	RV-C, RS485
Operating Temperature Range	-4°F to 122°F / -20°C to 50°C	-4°F to 122°F / -20°C to 50°C
Storage Temperature Range	-22°F to 158°F / -30°C to 70°C	-22°F to 158°F / -30°C to 70°C
Humidity Range	0% to 95% RH (No Condensation)	0% to 95% RH (No Condensation)
Cooling	Fans	Fans
Noise Level	≤55db	≤55db
Ingress Protection	IP20	IP20
Dimensions	17.02 x 12.01 x 4.87in / 432.4 x 305 x 123.8mm	17.02 x 12.01 x 4.87in / 432.4 x 305 x 123.8mm
Weight	16.1 lbs / 7.3 kg	17.4 lbs / 7.9kg
Certification	CE, R10, UKCA	CE, R10, UKCA
Warranty	3-Year	3-Year

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These data sheets can be found in the downloads section of our website, www.renogy.com.