RENOGY
TRUSTED ENERGY SOLUTIONS

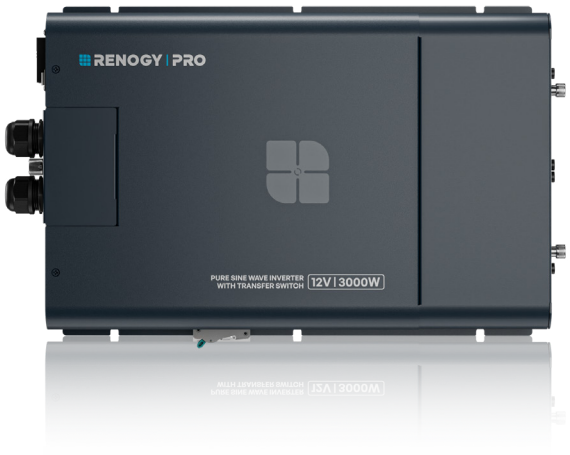
PRO 12VDC/230VAC 3000W PURE SINE WAVE with Transfer Switch

RIV1230PU-235

Description

Renogy 3000W Pure Sine Wave Inverter converts power stored in a battery bank into clean household AC power for off-grid and backup applications. Its pure sine wave output supports household appliances and sensitive electronics with smooth, stable power.

A built-in transfer switch supports external AC priority operation. When an external AC source is available, it supplies connected loads first, helping preserve battery capacity. If the external AC source is lost, the inverter automatically switches to battery-powered inverter mode within 20 ms, helping compatible devices continue operating with minimal interruption.



Key Features

- **3000W Continuous Power with 6000W Surge Capability**
Provides reliable power for high-start appliances including microwaves, coffee makers, kettles and compatible power tools.

- **20ms Fast Automatic Transfer Switch with 16A AC Bypass**
Automatically switches between shore/grid power and battery backup within 20ms. Built-in RCD helps improve electrical safety for RV and off-grid applications.

- **Pure Sine Wave Output with <3% THD**
Delivers clean and stable AC power to support sensitive electronics such as TVs, refrigerators and other household devices.

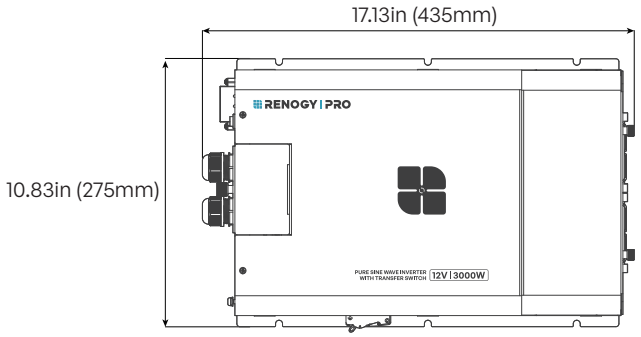
- **Smart Control via Bluetooth App, RV-C & OTA Updates**
Monitor system status, adjust settings and perform firmware updates remotely for easier installation and maintenance.

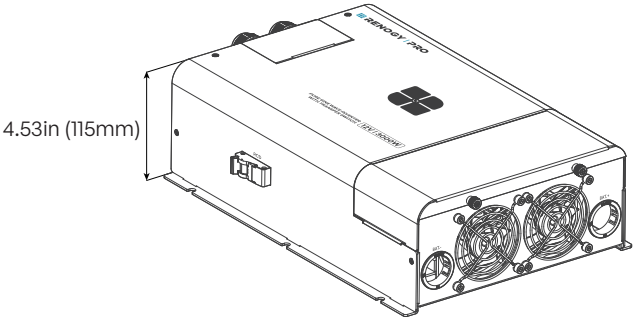
- **Ultra-Low Standby Consumption <15W**
Minimizes idle energy loss to extend battery runtime during off-grid operation.

- **Multi-Layer Safety Protection**
Includes overload, overvoltage, undervoltage, overtemperature, short-circuit, reverse polarity and RCD protection.

- **Compact & Durable Design for RV and Off-Grid Use**
Operates reliably from -20°C to 60°C with intelligent fan cooling for demanding outdoor environments.

Module Diagram





Technical Specifications

Inverter Data

Model	RIV1230PU-235
Nominal Input Voltage (VDC)	12VDC
Input Voltage Range (VDC)	10.5 to 15.5VDC
Output Voltage (VAC)	230VAC
Output Waveform	Pure Sine Wave
Output Frequency Range (Configurable)	50Hz
Continuous Output Power (W)	3,000W
Peak Power (W)	6,000W (@1s)
Total Harmonic Distortion (THD)	< 3%
Protection	Overload Protection; Overvoltage Protection; Undervoltage Protection ; Over-Temperature Protection; Short Circuit Protection; Reverse Polarity Protection
Residual Current Protection	RCD
Self Consumption	＜15W
Inverter Efficiency	93%
Remote On-Off	YES
Transfer Time (ms)	20ms
Transfer Relay Rating	16A
Input Voltage Range (VAC)	230VAC
Input Frequency Range	50Hz

General Data

Battery Types	AGM, GEL, FLD, LI
AC Terminals	AC Socket X1 / AC Output Terminal Block×1
DC Terminals	M8
Communication	Bluetooth, RV-C
Operating Temperature Range	-20°C to 60°C / -4°F to 140°F
Storage Temperature Range	-40°C to 70°C / -40°F to 158°F
Humidity Range	0% to 95% (NC)
Cooling	Fans
Ingress Protection	IP20
Altitude	2,000M
Dimensions	17.13 x 10.83 x 4.53in / 435 x 275 x 115mm
Weight	12.79 lbs / 5.8kg
Certification	CE, RCM, R10, SAA
Warranty	3-Year