

FREEFLOW™

PORTABLE POWER METER

MODEL: NRG-3169

VERSION 1.5

For Professional Pump Performance Results



The FREEFLOW Portable Power meter is an intelligent instrument which can be used as part of the FREEFLOW Pump testing System. The system has been designed by users, to ensure both efficient and reliable pump testing results.

A Wide Range of Measurement Functions

Simultaneously measure voltage, current, power (active, reactive, and apparent), integrated power, power factor, and frequency.

Wireless Operation

Essential Real-time Motor data is shown on the Computer Screen and updated continuously at one second intervals.

Wireless connection can enable Power meter data to be integrated with FREEFLOW data in most application at distances of up to 200m.

User-Friendly Configuration

Statistical parameters are computed in real-time to indicate the stability of measurement – and provide confidence to the operators.

Multi-Language Support

Select from nine languages, including Japanese and English.

Equipped with ranges from 0.5 A to 5000 A

The power meters support seven types of clamp-on current sensors to enable measurement for a variety of items, from CT terminals to large current and thick power lines.

Detect Incorrect Connection Using Vector Diagrams

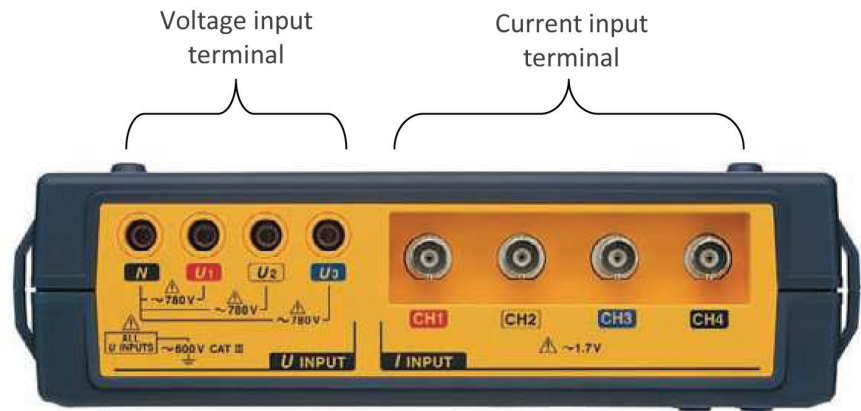
Use the vector display on the connection confirmation screen to check the phase, whether a connection is loose, or whether the clamp-on sensor connection has been reversed during VT/CT terminal measurement.

Data Storage

On board memory can be used to store parameters



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BASIC SPECIFICATION

Measurement line type :	Single-phase 2-wire, single-phase 3-wire, three-phase 3-wire, and threephase 4-wire systems (50/60 Hz)	
Number of systems : that can be measured (for systems that share the same voltage)	Three-phase: 3P3W2M (measures the voltage and current for two lines) 3P3W3M (measures the voltage and current for all three lines) 3P4W (measures the voltage and current for three lines)	2 systems 1 system 1 system
Item :	Voltage, current, active power, reactive power, apparent power, power factor, integrated value, frequency, harmonics	
Measurement range :	For the voltage, current, and active power ranges, see the range configuration tables on page 2.	
Measurement method :	Simultaneous digital sampling of voltage and current, PLL synchronization or a fixed clock (50/60 Hz)	
Input methods :	Voltage: Isolated input. Current: Isolated input using a clamp-on sensor	
Effective measurement area :	Within 5 to 110% of the range	
Total display area :	Voltage and current: Power: Harmonic level:	Within 0.4 to 130% of the range (zero is suppressed for less than 0.4%) Within 0 to 130% of the range (zero is suppressed when the voltage or current is zero) Within 0 to 130% of the range
Display :	5.7-inch LCD (320 × 240 dots), with backlight	
Range switching method :	Manual (the current range can be set for each system)	
Display update rate :	Approx. every 0.5 seconds (except when performing RS-232C communications)	
Input resistance : (50/60 Hz)	Voltage: 2.0 MΩ ± 10% (differential input). Current: 200 kΩ ± 10%	
Maximum measurement : terminal voltage	Voltage input: 780 Vrms AC, peak value: 1103 V Current input: 1.7 Vrms AC, peak value: 2.4 V	
Maximum in-phase voltage :	Voltage input terminals: 600 Vrms AC (50/60 Hz)	
Accuracy :	Voltage: ±0.2%rdg.±0.1%f.s. Current/active power: ±0.5%rdg.±1.1%f.s. (including CT)	

Riventa Contact Details

For all enquires please email info@riventa.co.uk
Visit our website for further details www.riventa.com

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