

PQA-300

Power Quality Analyzer



Overview

PQA-300 Power Quality Analyzer offers the latest functionality and measurement technology designed specifically for the Utility industry. The PQA-300 is a portable compact solution to address; Flicker PST and PLT, Voltage and Current imbalance, Sags, Swells, harmonics, inter harmonics, THD, RMS Voltage and Current, Phase and Time measurement.

The **1024 samples/second** of the PQA-300 exceeds other PQ Recorders on the market and provides the resolution necessary to expose details of transient phenomena normally hidden by slower sampling speeds. Furthermore, the large data memory storage and battery backup provide long term measurement, mitigating the need to revisit sites for further data collection and analysis.

The PQA-300 stores continuous instantaneous voltage and current measurements for off line computing and supports the emerging field of Power Quality Data analytics. Detailed studies on topics such as power system impedances, capacitor bank induced transients, propagation of transients through a power system, signaling and interharmonic characteristics and Synchro-phasors are now possible using convenient portable instruments to collect the data. Computers can be used to develop complex algorithms to investigate and characterize power quality issues.

Operator safety during site application is of paramount importance. The PQA-300 is tested to, and complies with IEC 61010 600V CAT IV rating.

A GPS receiver option is available for the PQA-300. This option will provide the PQA-300 the capability of time stamping data to an accuracy, relative to UTC time, of ± 1 microsecond. For the GPS receiver to function properly it will need to be connected to the supplied antenna that has a

view of the sky so that it can receive satellite signals. The base GPS option comes with a small magnetically mounted antenna with a 16ft (5 meter) cable. Radian can also supply a high gain antenna with a cable up to 164ft (50 meter) in length if required.

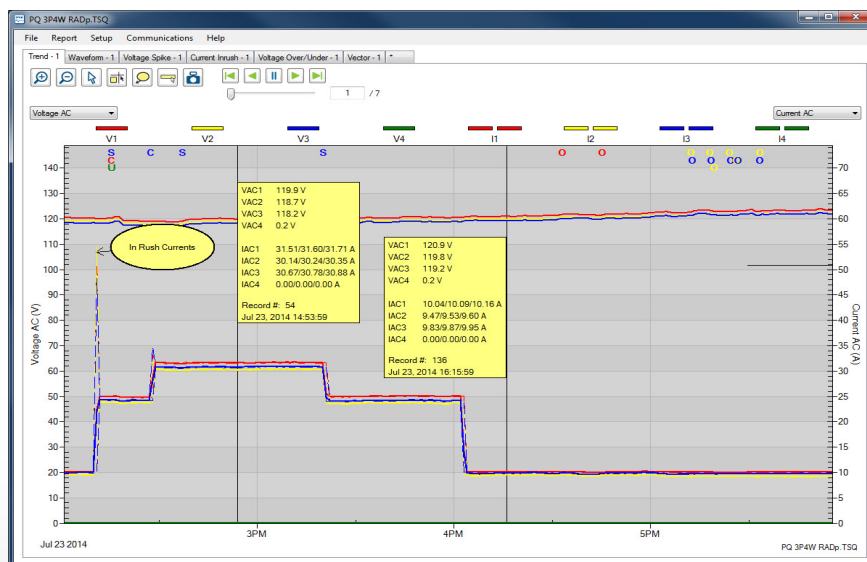
If a GPS receiver is installed the display selection in the Setup menu will be changed to "GPS". The GPS screen will show when the GPS receiver clock is synchronized to satellites, the GPS receiver clock time, the PQA-300 location in Latitude and Longitude, the number of connected satellites and the average satellite signal strength.

With the GPS option installed there will be two separate clocks in the PQA-300. The standard internal clock and the GPS clock. The time displayed in the PQA-300 main menu is from the standard internal clock. Both clock times are stored in the data records. PVII software will automatically use the GPS time stamps if the GPS time is synchronized to the satellites when recording is started. If the GPS time is not synchronized when recording is started PVII software will give the user the option of using the PQA-300 internal clock or the GPS clock. The GPS clock is battery backed up and has a lower drift than the PQA-300 internal clock so in most cases it is better to use the GPS clock, even when not synchronized to the satellites.

PV II Data Analysis Software

- Software to communicate and display data from PQA-300
- Connects wirelessly to multiple units (requires Bluetooth option)
- View real-time data numerically, vector diagrams and analog meter format.
- Annotate graphics
- Paste graphs to Microsoft Word or Excel
- Export data in PQDIF and CSV formats

Capturing data records and view measurement on the PQA-300 is but part of the analysis. Data can also be transferred to a computer using either the SD memory card or optional Bluetooth for more thorough investigation, analysis and reporting. PVII Data Analysis Software is supplied with each product and is also available as a download from the Radian web site.



**Large Data Memory Storage
and Battery Backup**

R A D I A N
WECO
Power and Energy Measurement Solutions

Technical Specifications

Power Supply

V1 Service Voltage: 90 – 750 VAC, 0 – 400 Hz - OR -

External Power Supply: 100 – 240 VAC \pm 10%, 47 – 63 Hz, 400mA
Output: 12 VDC, 1.25A

Measurement Accuracy

Voltage: V1, V2, V3 | 0 – 600 VAC | 0.1% of Full Scale + 0.1% of reading
V4 | 0 – 600 VAC/850 VDC (0-400 Hz) | 0.1% of Full Scale + 0.1% of reading

Current: I1, I2, I3, I4 | Clamp CT Scaling depending on CT, up to 50,000A
| Flex CT scaling 0 - 6,000A | 0.1% of reading + 0.1% of full scale + CT Accuracy

Measurement

Sampling Speed: 1024 samples/cycle every cycle (16 – 100 Hz)

Display: Color LCD 2.75" (7.00 cm) X 2.25" (5.71 cm)

PowerView Software

Min. PC configuration: Operating System - Windows XP, WIN 7/8, USB interface

I/O

PV II Communication: Bluetooth optional

Internal Clock

Accuracy: \pm 0.05 seconds

Drift: \pm 0.5 sec/day

Recording

Storage Rate: 0.2, 1, 5, 10, 15, 30 seconds, 1, 5, 10, 15, 30 minutes

Memory: 4G – 32G removable SD memory card

Power Supply and Battery Charger

Internal Power Supply: 50VA 100 – 600 VAC \pm 10%, 0 – 400 Hz

External Power Supply: Input: 100 – 240 VAC \pm 10%, 47 – 63 Hz
Output: 12 VDC, 1.25 A

Battery Run Time: 4 hours

Environmental

Operating Temperature: -20°C to +60°C, Storage -20°C to +70°C.

Humidity: Max 80% relative non condensing

Altitude: Max 2000m/6500 ft

Safety

Approval: IEC 61010-1, CAN/CSA-C22.2 600V CAT-IV, IEC 61000-4-7 and IEEE 519 Compliance

Pollution: Degree 2

Dimensions - 10.00" (25.4 cm) L X 11.0" (27.9 cm) W x 5.0" (12.7 cm) H

Weight - Approximately 5 lbs (2.27 kg)

Warranty - One year limited warranty, excluding battery pack. Extended Warranty is available.

Precision

- 1024 Samples/cycle every cycle
- Large data storage memory (up to 32GB)
- Ruggedized, Weatherproof, Lightweight & Compact
- Infinite Data Backup
- NIST Traceable Calibration
- Safety 600V CAT IV
- Powerful data analysis software
- Radian Technical Support
- Optional Wireless Bluetooth Interface
- Optional GPS Satellite Receiver
- Optional XCW Continuous Waveform 128 GB Storage

Application

- Customer Complaints Handling
- Power Quality Investigation & Diagnostics
- Energy Management & Load Monitoring
- IEC 61000-4-7 and IEEE 519 Compliance Testing
- Recording Harmonics to 128th, Sags and Swells
- 61000-4-30 Flicker PST & PLT

ORDERING INFORMATION	Model	Description
	PQA-300	Power Quality Auditor, 600V CAT IV, 120V Power Cord
	PQA-KIT	PQA Software on USB Flash Drive, 4G Memory Card (2), USB Card Reader & 12VDC Adapter
	PQA FLEX-4-24	Set (4) 24" Flex CT
	PQAVOL-002	Set (6) 6' Fused Voltage Leads for PQA R/Y/B/BK/W/BK +3 jumper
	PQA-COMM	PQA-300 Bluetooth Activation License
	PQA-GPS	GPS Synchronization
	PQA-XCW	Continuous Waveform 128 GB Storage Mode

In addition a wide variety of clamps, flex probes and cables are available, contact your sales representative for details.