

Fluke 1777 Three-Phase Power Quality Analyzer

Advanced Power Quality Testing for Industrial,
Utility and Commercial Applications



Why Fluke 1777?

- Automatic Measurement Capture - Capture over 500 PQ parameters, ensuring no critical data is missed.
- High Speed Transient Capture - Sampling rate up to 20Mhz and capture high-speed transients up to $\pm 8\text{kV}$.
- Comprehensive Harmonics - Measure harmonics up to the 50th order.
- Supra-harmonics Analysis - Measure Supra-harmonics up to 30 kHz.
- Compliance With Intl Standards - IEC 61000-4-30 Class A, IEC 61000-4-7 Class 1, IEC 61000-4-15 Class F1 and IEEE, suitable for utility compliance testing and regulatory audits.
- Dual Functionality - PQA with the detailed logging and analysis functions.
- Robust Data Management - Instantaneous view of logged data, and shareable via Fluke Energy Analyze Plus software, streamlining reporting and post-analysis workflows.

Unlock fast, precise, and comprehensive power quality diagnostics with the Fluke 1777 — ideal for troubleshooting, compliance testing, and preventive maintenance.

Summary of Tests & Deliverables.

The Fluke 1777 Power Quality Analyzer conducts a broad range of electrical tests essential for diagnosing, monitoring, and improving power quality in industrial, commercial, and utility environments. It provides:

- Comprehensive data capture including voltage, current, harmonics, flicker, transients, and power events.
- High-speed transient capture with up to 20 MHz sampling to detect fast disturbances.
- Compliance with international standards ensuring reliable and accepted results.
- Detailed logging and reporting for troubleshooting, commissioning, and compliance audits

Deliverables.

- Detailed measurement reports with graphs and event logs.
- Identification of power quality issues causing equipment malfunction or inefficiency.
- Recommendations for corrective actions and system improvements.

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Key Features Table.

Test Conducted	Purpose	Test Range & Value	Compliance Standard	Industrial/Utility Code	Specific Need for Test
Voltage Measurement	Monitor voltage levels for dips, swells, and interruptions	50 V – 1000 V (AC/DC), ± 8 kV transient capture	IEC 61000-4-30 Class A	EN 50160, GOST, NEQUAL, NETCODE	Detect voltage quality issues affecting equipment reliability
Current Measurement	Measure current magnitude and waveform	40 mA to 6000 A (using Rogowski coils and clamps)	IEC 61000-4-30 Class A	IEEE 519 (harmonics), EN 50160	Identify overloads, unbalance, and inrush currents
Harmonics Analysis	Analyze distortion from harmonics up to 50th order	0 – 50 harmonics, RMS and % of fundamental	IEC 61000-4-7 Class 1, IEEE 519	EN 50160, IEEE 1459	Prevent equipment overheating, nuisance tripping, and inefficiency
Interharmonics & Supra-harmonics	Detect non-integer harmonics and high-frequency noise	2 kHz – 30 kHz bands	IEC 61000-4-7, IEC 61000-4-15 Class F1	EN 50160, Utility PQ standards	Diagnose complex power quality disturbances affecting sensitive loads
Flicker Measurement	Assess voltage fluctuations causing light flicker	IEC flicker measurement method, Class F1	IEC 61000-4-15 Class F1	EN 50160, Utility PQ standards	Ensure compliance and comfort in lighting and sensitive devices
Transient Capture	Capture fast voltage transients up to 8 kV	1 MS/s to 20 MS/s sampling rate, ± 8 kV range	IEC 61000-4-30 Class A, IEC 61000-4-15	Utility transient disturbance codes	Identify transient events causing equipment failures
Power Quality Events (Dips, Swells, Interruptions)	Detect and log power quality events affecting load operation	Event logging with timestamps and waveform capture	IEC 61000-4-30 Class A	EN 50160, Utility PQ event reporting	Troubleshoot power interruptions and disturbances
Energy & Power Measurement	Measure real, reactive, and apparent power and energy	Up to 1000 V, 6000 A; IEEE 1459 compliant	IEEE 1459	Energy auditing codes	Optimize energy use and cost savings

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Why Rent the Fluke 1777?

- Access advanced power quality diagnostics without capital investment.
- Ideal for contractors, consultants, utilities, and maintenance teams on short-term projects.
- Comes with all necessary accessories and software for turnkey operation.

If you are....

- Industrial and Commercial electrical maintenance teams, facilities managers, electrical engineers, and maintenance technicians in manufacturing plants, large commercial buildings, and critical infrastructure who need to monitor and troubleshoot power quality issues to ensure equipment reliability.
- Power Quality Specialists, Utility engineers and consultants performing power quality compliance testing, disturbance analysis, and network health monitoring, leverage the 1777's compliance with IEC Class A standards and advanced transient capture.
- Electrical contractors, consulting engineers and professionals conducting periodic power quality audits, commissioning, and preventive maintenance for clients, who prefer renting high-end analyzers for specific jobs rather than purchasing.
- Renewable Energy System Operators and Integrators in managing solar, wind, and distributed generation systems requiring detailed harmonic and transient monitoring.
- Energy auditors and facility managers focused on energy efficiency and loss reduction and who need detailed power quality and consumption data.

Contact us today to reserve the Fluke 1777C for your testing requirements!

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Click on the links for.

[Rental Contract.](#)

[Fluke 1777 Specifications.](#)

[Fluke 1777 User Manual.](#)

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