FLUKE®

Fluke power quality and energy tools

Fluke offers an extensive range of power quality test tools for troubleshooting, preventive maintenance, and long-term recording and analysis in industrial, utilities and commercial building applications

Power quality troubleshooters and analyzers

Dedicated power and power quality meters for single-phase and three-phase frontline power quality troubleshooting with load studies, energy waste analysis and quality of service compliance testing. Along with models for advanced power quality and motor analyzers for predictive maintenance.

Power quality and energy loggers

Power and Energy loggers for characterizing power quality, conducting energy and load studies and capturing hard-to-find voltage events over a user-defined period of time.

Power quality recorders

Advanced power quality recorders for capturing comprehensive details of power disturbances including waveforms, trend analysis and IEC61000-4-30 Class-A 'quality-of-service' compliance testing over long period of time to capture the most difficult to trace problems.

Safety in power quality and energy measurements

The Fluke PQ400 Electrical Measurement Window enables the connection of three-phase measurement equipment to energized panels, without the need to open the panel door, or wear supplemental personal protective equipment.

Choose the right tool for the job

▲ Troubleshooters and analyzers

● Loggers

■ Recorders

	Application use
Energy studies	
Measure V, I, kW, Cos/DPF, kWhr	Get detailed power and energy consumption profiles during energy audits and pinpoint savings opportunities
Measure MIN/MAX and AVG values	
10 day logging	
Waste energy monetization	
Basic harmonics study	
THD measurement (V & I)	Discover the source of distortion in your installation, so that you can filter those loads or move them to separate circuits
Harmonics 1 to 25 for V & I	
Advanced harmonics study	
Full harmonic spectrum	If distorting loads are causing problems in your installation, you need comprehensive data to identify the source and create a solution
Power harmonics	
Basic industrial PQ troubleshooting	
Oscilloscope function	When troubleshooting in the field, graphical data enables you to trace the source of the problem at hand
Voltage dips and swells	
Advanced PQ troubleshooting	
Comprehensive logging capability	Complex installations often require a deeper dive into measurement data. Multiple loads may be interacting randomly to cause a single problem
Advanced Features	
Inrush	Discover peak current from load switching.
Flicker	Measure the effects of disturbing switching equipment.
Transients	Capture high speed voltage waveform caused by switching or network disturbances.
Mains signaling	Monitor signals on the network that are used for network wide equipment control
Power wave	Capture voltage and current waveforms over defined periods to discover the effects of motor and generator startups and close downs.
Event waveform capture	Visualization of dips and swells to identify the cause of the events,
400 Hz	Measurement for avionics and shipboard systems
Shipboard power	Quantify shipboard power against defined international standards.
Power inverter efficiency	Measure input and output power of inverters to optimize system performance.
Motor analysis	
Speed, torque, mechanical power, efficiency	Perform dynamic motor analysis by plotting of motor de-rating factor against load according to NEMA/IEC guidelines on direct on-line electric motors and motors driven by specific variable frequency drive systems.
Communications	
USB	
Ethernet	
Wi-Fi	
Bluetooth	
Wireless download	
Fluke Connect app	
Safety	
600 V/CAT IV	
1000 V/CAT III	
300 V/CAT II	
Power from measurement line	

[1]An upgrade package is available to upgrade an existing 1732 Energy Logger with the same features and capabilities of the 1734 Energy Logger.
[2]An upgrade package is available to upgrade an existing 1736 Power Logger with the same features and capabilities of the 1738 Advanced Power Logger.
[3]Event waveform capture (10.24kHz sampling).
[4]Basic screenshot functionality

FLUKE®

Single-phase		Three-phase								
VR1710	345	1732/1734[1]	1736/1738[2]	1742/1746/1748	1773	1775	1777	437-II	438-II	1760
	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•	•	•
								•	•	
•	•	•	•	•	•	•	•	•	•	•
(V only)	•		•	1746/1748	•	•	•	•	•	•
	•		•	1746/1748	•	•	•	•	•	•
				1746/1748	•	•	•	•	•	•
	•		•		•	•	•	•	•	•
•			•	•	•	•	•	•	•	•
	•		•	•	•	•	•	•	•	•
	•		1738[2]	1748	•	•	•	•	•	•
•				•	•	•	•	•	•	•
•				1748[3]		1 MHz	20 MHz	•	•	•
				1746/1748		•	•	•	•	•
								•	•	
•			1738[2]	1748		•	•	•	•	•
								•		
								•		
								•	•	
								Optional	•	
•	•	•	•	•	•	•	•	•	•	•
				•	•	•	•			•
		1734[1]	•	•		•	•			
		1734[1]	•	•		•	•			
		1734[1]	•	•		•	•			
		1734[1]	•	•				•[4]	•[4]	
	•	•	•	•	•	•	•	•	•	•
	•	•	•	•	•	•	•	•	•	•
•										
•		•	•	•	•	•	•			

FLUKE®

Application software

Each Fluke power quality product includes powerful application software that enables you to change measurement data into valuable reports that can be shared with key stakeholders to develop solutions. Each software package includes reporting tools that create valuable insights in to the performance of your electrical system.

Software package	Supports	Download	Graphing	Export raw data (text/CSV)	Advanced mixed parameter graphing	Add instrument screen and other images	Automatic reporting	Customized reporting	Report export to MS Office
PowerLog Classic	VR1710, 345 and 430 Series I	USB	•	•			•		
Fluke Energy Analyze+	1732, 1734, 1736, 1738, 1742, 1748, 1773, 1775, and 1777	USB, Memory stick, Ethernet (1740 and 1770 series) and WiFi	•	•	•	•	•	•	•
PowerLog 430-II	430 Series II products	USB and WiFi	•	•			•		
PQAnalyze	1760	Serial (USB) and Ethernet	•	•			•		•

Selecting the right power quality tool

Fluke tools will help you troubleshoot, record, and analyze power quality and energy parameters with speed and confidence.

Every Fluke energy optimization and power quality tool is a total solution beginning with an intuitive user interface that makes it easy to access even the most advanced features. Flexible and powerful software is included with each tool, at no extra cost.

Fluke offers a comprehensive line of troubleshooters, power and energy loggers, and recorders to handle a broad range of power quality applications. Use the quick reference guide below to identify the right tool for the problems you're experiencing.

	Troubleshooters and analyzers	Loggers	Recorders
Why use one?	These instruments include a live display when immediate access to the diagnostic information is needed.	Loggers are the basic tools for creating energy usage profiles used in monitoring and targeting. You can also use a power quality logger to validate voltage quality and look for general power quality trends.	Many problems can't be found immediately, especially those caused by different loads interacting. Use these instruments to record in depth voltage and current information over time, so you can better diagnose and resolve problems.
When?	Whenever a recurring problem exists (such as overheating transformers or motors, and nuisance tripping of breakers).	When you need to know the loading on a system, or to understand the general quality of service.	When intermittent voltage disturbances or high-speed transients cause problems.
Who?	Users who are not sure what to expect next as they install, commission and maintain electrical equipment at their facility.	Users who need to discover the general trends of power quality in their electrical system to discover the source of things like dips and swells.	Users who need detailed information about intermittent faults including high speed, high energy transients that may damage equipment or wiring.

Fluke. *Keeping your world up and running.®*