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 Class-A 'quality-of-service' compliance testing over long period of time to capture the most difficult to trace problems.

Choose the right tool for the job.

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▲ **Troubleshooters and analyzers**

○ **Loggers**

■ **Recorders**

	Application use	Single-phase		Three-phase										
		VR1710	345	1732/1734[1]	1736/1738[2]	1742	1746	1748	434-II	435-II	437-II	438-II	1750[4]	1760
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		• (V only)	•		•		•	•	•	•	•	•	•	•
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.				1738[2]			•	•	•	•	•	•	•
Flicker	Measure the effects of disturbing switching equipment.	•				•	•	•	•	•	•	•	•	•
Transients	Capture high speed voltage waveform caused by switching or network disturbances.	•						•[3]		•	•	•	•	•
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,	•			1738[2]			•		•	•	•	•	•
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.								Optional	Optional	Optional	•		
Communications														
USB		•	•	•	•	•	•	•	•	•	•	•		•
Ethernet						•	•	•					•	•
Wireless download				1734[1]	•	•	•	•	•	•	•	•		
Fluke Connect app				1734[1]	•				•	•	•	•		
Safety														
600 V/CAT IV			•	•	•	•	•	•	•	•	•	•	•	•
600 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]Not available in Europe

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, 1746 and 1748	USB, Memory stick, Ethernet (1740 series) and WiFi	•	•	•	•	•	•	•
PowerLog 430-II	430 Series II products	USB and WiFi	•	•			•		
Power Analyze	1750	Ethernet and Bluetooth	•	•			•	•	•
PQAnalyze	1760	Serial (USB) and Ethernet	•	•			•		•

Out-of-the-box solutions for energy optimization and power quality

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 solution beginning with an intuitive user interface that makes advanced features easy to access. 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. But how do you know which tool is right for which job? 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 trends in the power quality.	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 and 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?	On-site electrician or electrical technician.	Power quality specialist, on-site electrician or electrical technician, engineer facilities technicians and high-end electrical contractors, commissioners of new equipment.	Facility manager, plant manager, Industrial engineers and technicians, utility power engineer, power consultants.

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