The Fluke 43 Power Quality Analyzer performs the measurements you need to maintain power systems, troubleshoot power problems and diagnose equipment failures. All in a rugged handheld package.

- Combines the most useful capabilities of a power quality analyzer, multimeter and scope
- New! Calculates 3-phase power on balanced loads, from a single-phase measurement
- Measures power harmonics, and captures voltage sags, transients and inrush current
- Monitoring functions help track intermittent problems and power system performance
- Menus use familiar electrical terminology
- New! Toggle through the most commonly used power quality modes with a single keystroke
- Records two selectable parameters for up to 16 days
- New! 20 measurement memories to save/recall screens and data with cursor readings
- New! FlukeView® Software can log harmonics and all other readings over time
- New! FlukeView Software provides a complete harmonics profile up to the 51st harmonic
- Measures resistance, diode voltage drop, continuity, and capacitance
- Users / applications manual and power quality video to help answer tough questions
- Complete package with voltage probes and 500A current clamp, FlukeView Software and optically isolated interface cable
- 3 year warranty on the Fluke 43B, 1 year on accessories

- New! On screen graphics show you how to set up 3-phase power measurements

- Watts, power factor, displacement power factor (Cos φ), VA and VAR
- Voltage and current waveforms

- Voltage and current waveforms
- True-rms voltage and current
- Frequency

- Voltage, current, and power harmonics
- Up to 51st harmonic
- Total harmonic distortion (THD)
- Phase angle of individual harmonics
### Input Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ranges</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input impedance</td>
<td>1 MΩ, 20 pF</td>
<td>± [1 % + 10 counts]</td>
</tr>
<tr>
<td>Voltage rating</td>
<td>400 Vrms, CAT III</td>
<td>± [1 % + 10 counts]</td>
</tr>
<tr>
<td>True-rms voltage (AC+DC)</td>
<td>5.000 V, 50.00 V, 500.0 V, 1250 V*</td>
<td>± [1 % + 10 counts]</td>
</tr>
<tr>
<td>True-rms current (AC+DC)</td>
<td>50.00 A, 500.0 A, 5.000 kA, 50.00 kA, 1250 kA</td>
<td>± [1 % + 10 counts]</td>
</tr>
<tr>
<td>Frequency</td>
<td>10.0 Hz to 15.0 kHz</td>
<td>± [0.5 % + 2 counts]</td>
</tr>
<tr>
<td>CF Crest Factor</td>
<td>1.0 to 10.0</td>
<td>± [0% + 1 count]</td>
</tr>
</tbody>
</table>

### Power

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ranges</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>W, VA, VAR, Reactive Power</td>
<td>250 W, 25.0 kW, 250 kW, 2500 kW, 2.50 MW, 25 MW, 250 MW, 625 MW, 1.56 GW</td>
<td>± [2 % + 6 counts] Total Power</td>
</tr>
<tr>
<td>DC Power Factor</td>
<td>0.00 to 1.00</td>
<td>± 0.04</td>
</tr>
<tr>
<td>DPF Displacement Power Factor</td>
<td>0.00 to 0.25, 0.25 to 0.80, 0.80 to 1.00</td>
<td>not specified</td>
</tr>
<tr>
<td>Hz Frequency fundamental</td>
<td>40.0 to 70.0 Hz</td>
<td>± [0.5 % + 2 counts]</td>
</tr>
</tbody>
</table>

### Harmonics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volts, Amps, Watts</td>
<td>Fundamental 5.000 V, 50.00 V, 500.0 V, 1250 V* ± [3 % + 2 counts]</td>
</tr>
<tr>
<td>2 to 31st Harmonic</td>
<td>V.A ± [6 % + 3 counts], W ± [10 % + 10 counts]</td>
</tr>
<tr>
<td>32 to 51st Harmonic</td>
<td>V.A ± [15 % + 5 counts], W ± [50 % + 5 counts]</td>
</tr>
<tr>
<td>Frequency of fundamental</td>
<td>40 Hz to 70 Hz ± 0.25 Hz</td>
</tr>
<tr>
<td>Phase</td>
<td>T.V, A, Watts (between Fund. &amp; Harmonic) 2nd, 3rd, ... 31st ±15%</td>
</tr>
<tr>
<td>Watts (between Volt Fund. &amp; Amps Harmonic)</td>
<td>Fund, 3rd, ..., 31st ±15%</td>
</tr>
<tr>
<td>K-Factor (Amps &amp; Watts)</td>
<td>1.0 to 30.0 ± 10 %</td>
</tr>
<tr>
<td>THD</td>
<td>0.00 to 99.99 ± [3% + 8 counts]</td>
</tr>
</tbody>
</table>

### Sags & Swells

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ranges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vrms actual, Vrms max, min (AC + DC)</td>
<td>5.000 V, 50.00 V, 500.0 V, 1250 V* ± [2% + 10 counts]</td>
</tr>
<tr>
<td>Arms actual, Arms max, min (AC + DC)</td>
<td>50.00 A, 500.0 A, 5.000 kA, 50.00 kA ± [2% + 10 counts]</td>
</tr>
</tbody>
</table>

### Specifications

Accuracies are stated as ± (percentage of reading + counts) without probes unless otherwise noted. Specifications are valid for signals with a fundamental between 40 and 70 Hz.

- Continuously measure volts and amps on a cycle-by-cycle basis for up to 24 hours
- Use cursors to read time and date of sags and swells
- Catch voltage transients and waveform distortion
- Catch and save up to 40 transients
- Correlate the cause of transients with time and date stamps

- Rated 600V CAT III
Inrush Current

- Ranges: 1 A, 5 A, 10 A, 50 A, 100 A, 500 A, 1000 A
- Accuracy: ± 5% of full scale

Inrush times (selectable): 1 s, 5 s, 10 s, 50 s, 100 s, 5 min

Cursor readings: A peak max at cursor 1 and cursor 2 ± 5% of full scale

Time between cursors**: 4 to 235 pixels ± (0.2% + 2 pixels)

Scope, dual channel scope with measurement reading

Input impedance

- Input 1: 1 MΩ/12 pF; with BB120: 20 pF ± 2 pF
- Input 2: 1 MΩ/10 pF; with BB120: 18 pF ± 2 pF

Vertical

- Voltage ranges: 50 mV/div to 500V/div ± (1% + 2 pixels)
- Vertical sensitivity, resolution: 5 mV/div to 500V/div, 8 bit (256 levels)

Bandwidth input 1 (voltage): DC to 20 MHz at inputs, or with BB120 and VPS100-R probe (Opt); 1 MHz with TL24 Leads

Bandwidth input 2 (current): DC to 15 kHz at inputs, 10 kHz with 80i-500s Current Clamp

Coupling: DC, AC [10 Hz - 3 dB]

Horizontal

- Timebase modes: Normal, roll, single
- Timebase ranges: 60 s/div to 20 ns/div ± (0.4% + 1 pixel)
- Sampling rate: 25 MS/s
- Record length (min / max samples): 512 per channel
- Trigger source: Input 1 or Input 2 or Automatic selection

Connect-and-View™: Advanced automatic triggering that recognizes signal patterns and automatically adjusts triggering, timebase and amplitude. Automatically displays stable pictures of complex and dynamic signals like motor drive and control signals.

Pre-trigger: Up to 10 divisions

Measurement readings, per channel selectable:

- Volts & Amps (DC, AC, AC + DC rms, Peak max, Peak min, Peak min / max, Frequency, Duty cycle + or –, Phase, Pulse Width + or –, Crest factor)
- Ohms, Diode, Continuity, Capacitance

- Ohms: 500.0 Ω; 5.000 kΩ, 50.00 kΩ, 500.0 kΩ, ± 0.6% +5 counts
- Diode voltage: 0 to 3.000 V ± (2% + 5 counts)
- Continuity, shorts > 1 ms: Continuously on at < 30Ω, ± 5Ω
- Capacitance: 50.00 nF, 500.0 nF, 5.000 µF, 50.00 µF, ±(2% + 10 counts)
- Temperature***: -100.0 °C to 400.0 °C, ±(0.5% +5 counts)
- Max current, max open circuit vol.: 0.5 mA, < 4 V (all functions above)

Memory

- Number of screens: 20

Optical Isolated RS-232 Interface

- To printer: Supports HP LaserJet™, DeskJet, Epson FX/LQ and Postscript printers with optional PAC91 Printer Adapter Cable
- To PC: FlukeView® Power Quality Analyzer software with PM9080 Interface Adapter included

FlukeView® Power Quality Software

- Hardware requirements: PC or 100% compatible with Windows® 95, 98, Me, 2000, NT4.0.

** 1 pixel = inrush time/250

*** Requires optional temperature accessory
General Specifications

<table>
<thead>
<tr>
<th>Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line voltage adapter/battery charger included</td>
</tr>
<tr>
<td>Installed battery</td>
</tr>
<tr>
<td>Operating time</td>
</tr>
<tr>
<td>Charging time</td>
</tr>
<tr>
<td>Refresh Cycle</td>
</tr>
<tr>
<td>Environmental</td>
</tr>
<tr>
<td>Temperature</td>
</tr>
<tr>
<td>Environmental</td>
</tr>
<tr>
<td>Enclosure</td>
</tr>
<tr>
<td>Mechanical Data</td>
</tr>
<tr>
<td>Size (H x W x D)</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Safety</td>
</tr>
<tr>
<td>For measurements on 600 Vrms Category III installations, Pollution Degree 2 in accordance with</td>
</tr>
<tr>
<td>EN61010-1 (1993) (IEC1010-1)</td>
</tr>
<tr>
<td>ANSI/ISA S82.01-1994</td>
</tr>
<tr>
<td>CAN/CSA-C22.2 No. 1010.1-92</td>
</tr>
<tr>
<td>UL1311-1</td>
</tr>
<tr>
<td>Surge protection</td>
</tr>
<tr>
<td>Floating measurements</td>
</tr>
<tr>
<td>Warranty</td>
</tr>
</tbody>
</table>

Ordering Information

Fluke 43B Power Quality Analyzer

Included Accessories

C120 Hard Case
TL24 Test Leads
AC20 Industrial Test Clips
AC85 Large Jaw Alligator Clips
TP1 Flat-tipped Slim-Reach™ Test Probes
TP4 4 mm Round Slim-Reach™ Test Probes
80i-500s 500A AC Current Clamp
PM 9080 Optically Isolated RS232 Interface Adapter
BP120 Rechargeable Ni-Cd Battery Pack (installed)
PM 9007 Line Voltage Adapter/Battery Charger
SW43W FlukeView® Power Quality Analyzer Software for Windows

FlukeView® Power Quality Analyzer Users Manual
Shielded Banana-to-BNC Adapter
Users Manual / Application Guide
Power Quality CD-ROM

Optional Accessories

C789 Soft Carrying Case
801-110s 100A AC/DC Current Probe
i200s AC Current Clamp
i1000s 1000A AC Current Clamp
i2000flex Flexible 2000A AC Current Probe
i3000s Clamp-On AC Current Clamp
VPS100-R Red 10:1 Voltage Probe (requires BB120, one included)
BB120 Two Shielded Banana-to-BNC Adapters
80TK Thermocouple Module
80T-IR Non Contact Infrared Temperature Probe
80T-150U Universal Temperature Probe
PAC91 Parallel Printer Adapter
PM9087 Isolated Automotive Lighter Plug Charging Adapter
TL20 63” Test Lead Set
TL21 Extension Lead Set
TL22 63” Right Angle Silicone Test Lead Set
TL23F Electrical Test Lead Set
TL23R Electrical Test Lead Set
TL24 63” Right Angle/ Straight Silicone Test Leads
TL26A 60” 5-Way Test Lead Set
TL28A 63” Alligator Clip Test Lead Set
TL71 Premium DMM Test Lead Assembly
TL74 4 mm Diameter Test Leads
TL75 48” Hardpoint Test Lead Set

Fluke. Keeping your world up and running.

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