

Fluke 43B Series Power Quality Analyzer

Specifications	
V/A/Hz	Usable Bandwidth: 10 Hz..3.5 kHz Harmonics on 400Hz fundamental: 9th Typical accuracy for 400Hz fundamental: 5%
Power, battery life	Usable Bandwidth: 20 Hz..2 kHz Harmonics on 400Hz fundamental: 5th Typical accuracy for 400Hz fundamental: 10%
Harmonics	Usable Bandwidth: 10 Hz..3.5 kHz Harmonics on 400Hz fundamental: 9th Typical accuracy for 400Hz fundamental: 10% channel 1, 50% channel 2
Note	Accuracies are stated as \pm (percentage of reading + counts) without probes unless otherwise noted. Specifications below are valid for signals with a fundamental between 40 and 70 Hz.
Input Characteristics	Input impedance 1 M Ω , 20 pF Voltage rating 600V rms, CAT III
V/A/Hz Display	True-rms voltage (ac + dc) Ranges: 5.000 V, 50.00 V, 500.0 V, 1250 V* Accuracy: $\pm(1\% + 10 \text{ counts})$ True-rms current (ac + dc) Ranges: 50.00 A, 500.0 A, 5.000 kA, 50.00 kA, 1250 kA Accuracy: $\pm(1\% + 10 \text{ counts})$ Frequency Ranges: 40.0 to 15.9 kHz Accuracy: $\pm(0.5\% + 2 \text{ counts})$ CF Crest factor Ranges: 1.0 - 10.0 Accuracy: $\pm(0.5\% + 1 \text{ count})$
Power Display	Watts, VA, VAR 1-phase and 3-phase, 3 conductor balanced loads Ranges: 250 W - 1.56 GW Accuracy: $\pm(4\% + 4 \text{ counts})$ Fundamental Power Accuracy: $\pm(2\% + 6 \text{ counts})$ Total Power Power Factor Range: 0 - 1.0 Accuracy: ± 0.04 Displacement Power Factor, Cos .F Range: 0.25 - 0.9 Accuracy: ± 0.04 Range: 0.90 - 1.0 Accuracy: ± 0.03 Frequency Fundamental Ranges: 40.0 to 70.0 Hz Accuracy: $\pm(0.5\% + 2 \text{ counts})$

Harmonics Display	Voltage, Current, Frequency Ranges: Fundamental to 51st harmonic Accuracy: Fundamental: VA $\pm(3\% + 2 \text{ counts})$ W $\pm(5\% + 2 \text{ counts})$ 2 to 31st harmonic: VA $\pm(5\% + 3 \text{ counts})$ W $\pm(10\% + 10 \text{ counts})$ 32 to 51st harmonic: VA $\pm(15\% + 5 \text{ counts})$ W $\pm(30\% + 5 \text{ counts})$ Frequency Fundamental Ranges: 40 Hz to 70 Hz Accuracy: $\pm 0.25 \text{ Hz}$ Phase Range: V, A (between Fundamental & Harmonics) Accuracy: $\pm 3^\circ$ to $\pm 15^\circ$ Range: W (between Voltage Fundamental & Current Harmonics) Accuracy: $\pm 5^\circ$ to $\pm 15^\circ$ K-factor (Current and Power) Range: 1.0 to 30.0 Accuracy: $\pm 10\%$ THD Total Harmonic Distortion Range: 0.00 - 99.99 Accuracy: $\pm(3\% + 8 \text{ counts})$
Sags and Swells	Recording times: 4 min to 16 days (selectable) Vrms Actual, Vrms max, min(AC + DC) Ranges: 5.000V, 50.00V, 500.0V, 1250V* Accuracy: Readings $\pm(2\% + 10 \text{ counts})$; Cursor readings $\pm(2\% + 12 \text{ counts})$ Arms Actual, Arms max, min (AC + DC) Ranges: 50.00A, 500.0A, 5.000 kA, 50.00 kA Accuracy: $\pm(2\% + 10 \text{ counts})$
Transient Capture	Minimum pulse width: 40 ns Useful bandwidth input 1: DC to 1 MHz Number of transients: 40 Voltage threshold settings: 20%, 50%, 100%, 200% above or below reference
R, C, Diode, Continuity	Resistance ranges: 500.0 Ω , 5.000 k Ω , 50.00 k Ω , 500.0 k Ω , 5.000 M Ω , 30.00 M Ω Resistance accuracy: $\pm(0.6\% + 5 \text{ counts})$ Capacitance ranges: 50.00 nF, 500.0 nF, 5.000 μ F, 50.00 μ F, 500.0 μ F Capacitance accuracy: $\pm(2\% + 10 \text{ counts})$ Diode voltage: Accuracy $\pm(2\% + 5 \text{ counts})$ Continuity: Beeper on at $< 30 \Omega \pm 5 \Omega$ Max current: 0.5 mA
Inrush Current	Inrush times: 1 s, 5 s, 10 s, 50 s, 100 s, 5 min Current ranges: 1 A, 5 A, 10 A, 50 A, 100 A, 500 A, 1000 A Accuracy: $\pm 5\%$ of full scale

Temperature (with accessory)	Range: -100 °C - 400 °C Accuracy: ±(0.5% + 5 counts)
Scope Display	Measurements: dc, ac, ac+dc, peak, peak-peak, frequency, duty cycle, phase, pulse width, crest factor Time ranges: 20 ns/div to 60 s/div Max sampling rate: 25 MS/s Bandwidth Voltage channel [1]: 20 MHz at inputs, 20 MHz with VPS40 probe (included with Fluke43B), 1 MHz with TL24 Leads Current channel [2]: 15 kHz at inputs, 10 kHz with included clamps Coupling: AC, DC (10 Hz - 3 dB) Vertical sensitivity: 5 mV/div to 500V/div Vertical resolution: 8 bit (256 levels) Record length: 512 samples per channel Timebase modes: Normal, roll, single Pre-trigger: Up to 10 divisions Trigger Source: Input 1 or Input 2 or automatic selection Trigger Mode: Automatic Connect-and-View™, Free Run, and Single Shot Connect-and-View™: Advanced automatic triggering that recognizes signal patterns Automatically adjusts triggering, timebase and amplitude and displays stable pictures
Memories	20 (screens, settings, data)
Recording	Recording times: 4 min to 16 days (selectable) Parameters: Choose one or two parameters from one of the groups below: Volts/Ampères/Hertz Watts, VA, VAR, PF, DPF, Frequency Harmonics, THD, Volts (Fund. & Harmonic), Ampères (F&H) Watts(F&H) Frequency (H), %(H) of total, Phase(H), KF Temperature Resistance, Diode, Continuity, Capacitance Scope: DC Voltage, DC Current, AC Voltage, AC Current, Frequency, Pulse Width + or -, Phase, Duty cycle + or -, Peak max, Peak min, Peak min-max, Crest Factor
Note	*Rated EN 61010-1 600 V CAT II CSA
Environmental Specifications	
Operating Temperature	0 °C to +50 °C

Safety Specifications

Electrical Safety	EN 61010-1 CAT II, 600V. CSA listed
--------------------------	-------------------------------------

Mechanical & General Specifications

Size	232 x 115 x 50 mm
Weight	1.1 kg
Warranty	3 years
Battery Life	Rechargeable Ni-MH pack (charger included) Operating time: 6.5 hours Charging time: 7 hours
Shock & Vibration	Mil 28800E, Type 3, Class III, Style B
Case	IP51 (dust, drip, waterproof)