

# Power Quality Analyzers

## Analyze your power network quickly

### Features



	434	433	43B
<b>Application</b>	Three-phase		Single-phase
<b>Inputs</b>	4 voltage and 4 current (for 3 phases and neutral)		1 voltage and 1 current
<b>Measurements</b>			
Vrms, Arms, Hz, W, VAR, VA, PF, Cos φ (DPF), Crest Factors	●	●	●
Harmonics and THD (V,A,W), k-factor	●	●	●
Inter-harmonics	●	Optional*	-
kWh and kVARh, kVAh, demand interval	●	Optional*	-
Flicker (Plt, Pst, PF5)	●	●	-
Unbalance	●	●	-
<b>Recorder/AutoTrend</b>	●/●	●/●	●/-
<b>System-Monitor</b>	●	●	-
<b>Real time scope/Phasor diagrams</b>	●/●	●/●	●/-
<b>Dips and swells/Half cycle based</b>	●/●	●/●	●/-
<b>Transient display</b>	●	Optional*	●
<b>Inrush current</b>	●	Optional*	●
<b>EN50160 compliance</b>	●	●	-
<b>IEC61000-4-30, -4-7, -4-15 compliance</b>	●	●	-
<b>Built-in general purpose Scope and DMM</b>	-	-	●
<b>Memory (screens/data)</b>	50/10	25/5 standard 50/10 optional*	20 for screens and data
<b>FlukeView software and interface cable</b>	●	Optional*	Depending on configuration
<b>EN61010 safety rating</b>	600 V CAT IV/1000 V CAT III		600 V CAT III

Optional functionality can be added with upgrade kit. For details see ordering information.

In industry, healthcare, and business – in fact wherever electrical and electronic equipment is indispensable – power quality plays a critical role in maintaining continuity. Non-linear loads, switching, load changes and equipment problems can result in poor power quality. Poor power quality is not only costly in terms of wasted energy and unnecessary downtime, it's also dangerous and increases risk of equipment failure.

Fluke has an unrivalled range of power quality analyzers to help you maintain high-quality power systems. The tools give you the power to analyze every parameter, power-related event or anomaly faster, safer and in more detail than ever before.

### Fluke 43B

A choice of three configurations

	43Basic	43B	43Kit
i400s Current Clamp	●	●	●
SW43W FlukeView Software	●	●	●
OC4USB Serial Interface Adapter Cable (USB)	●	●	●
C120 Hard Case	●	●	●
VPS40 Voltage Probe	●	●	●
Fluke 61 IR Thermometer	●	●	●
VR101S Voltage Event Recorder	●	●	●

All configurations are delivered with test leads, probes, clips, battery pack, banana-to-BNC adapter and line voltage adapter/battery charger.

Check the Fluke web site for Technical Specifications and Application Notes with the Fluke power quality analyzers.

#### Broad power quality product range

In June 2005 Fluke Corporation acquired LEM Instruments. With this acquisition Fluke adds a whole new range of power and power quality measurement tools:

- **TOPAS2000 (New)**  
For accurate power quality data analysis
- **Memobox**  
For power quality disturbance analysis
- **Analyst 3P**  
For power usage checks

Check the Fluke web for more information.



# 43B Single-phase Power Quality Analyzer

FLUKE®

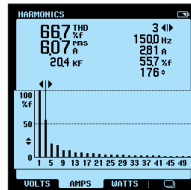


Fluke 43B

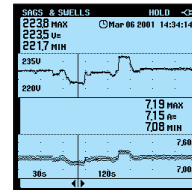
## The perfect tool for tracking down single-phase power-related problems

The Fluke 43B is the choice for diagnosing and troubleshooting power quality and general equipment failures. Ease of use thanks to menu selection of the power

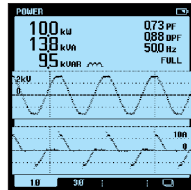
modes, it combines the capabilities of a power quality analyzer, a 20 MHz oscilloscope, a multimeter and a data recorder in a single instrument.



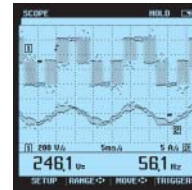
- Voltage, current, and power harmonics
- Up to 51st harmonic
- Total harmonic distortion (THD)
- Phase angle of individual harmonics



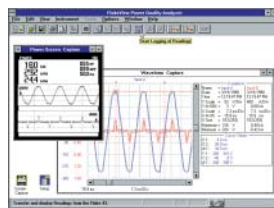
- Continuously measure volts and amps on a cycle-by-cycle basis for up to 16 days
- Use cursors to read time and date of sags and swells



- Watts, power factor, COS  $\phi$ , VA and VAR
- Voltage and current waveforms



- Connect-and-View™ scope for quick waveform display
- View voltage and current channels simultaneously



On all inputs



## Specifications

(Check the Fluke web for detailed specifications)

Menu items	Measurements	Ranges	Accuracy
Volts/Amps/Hz	Volts Amps Mains frequency CF Crest Factor	5.000 V-1250 V 50.00A-50.00 kA 40.0 - 70.0 Hz 1.0 to 10.0	±(1%+10) ±(1%+10) ±(0.5%+2) ±(5%+1)
Power	Watts, VAR, VA PF, DPF, COS $\phi$	250 W-1.56 GW 0.25-0.9 0.90-1.00	±(4%+4) ±0.04 ±0.03
Harmonics	Volts Amps Watts K-factor	1st to 51st harmonic 1st to 51st 1st to 51st 1.0 to 30.0	±(3%+2) to ±(15%+5) ±(3%+8) to ±(15%+5) ±(5%+2) to ±(30%+5) ±10%
Sags & Swells	Voltage and Current	4 min-16 days selectable	±(2%+10)
Transient Capture	40 ns pulse width Up to 40 transients	Select 20/50/100/200% above or below line voltage	±5% of full scale
Inrush Current	1sec. to 5 min selectable	1 A to 1000 A	±5% of full scale
Ohms/Continuity/ Capacitance	Ohms Capacitance	500.0 $\Omega$ to 30.00 M $\Omega$ 50.00 nF to 500.0 $\mu$ F	±(0.6%+5) ±(2%+10)
Temperature (with accessory)	°C °F	-100.0°C to 400.0°C -200.0°F to 800.0°F	±(0.5%+5)
Scope	DC, AC, AC+DC, peak, peak-peak, Hz, duty cycle, phase, pulse width, crest factor	Sampling rate: Bandwidth: Voltage BW (Channel 1) Current BW (Channel 2)	25 MS/sec 20 MHz 15 kHz
Screen saves	All functions	20 screens	
Recording	V/A/Hz, Power, Harmonics, $\Omega$ /Cap, Temperature, Scope	4 min - 16 days selectable	Select any two parameters display mode in each

## Included (replacement) Accessories

Fluke 43Basic, Fluke43B and Fluke43Kit:  
TL24 (TL224) test lead set, AC20 (AC220)  
alligator clip set, TP4 test probe set, BP120MH  
rechargeable battery pack, BB120 Shielded  
BNC adapter, PM8907 line adapter/charger,  
user and application manual.  
Fluke43Basic: i400s AC current clamp.  
Fluke43B and Fluke 43Kit: i400s AC current  
clamp, AB200 alligator clip set, TP1 test  
probe set, C120 hard carrying case, OC4USB  
interface cable, SW43W FlukeView Software.  
Fluke 43B: VPS 40 voltage probe, Fluke 61 IR  
thermometer  
Fluke43 Kit: VR101S voltage event recorder.

## Ordering Information

Fluke 43Basic Power Quality Analyzer  
(single-phase)  
Fluke 43B Power Quality Analyzer  
(single-phase)  
Fluke 43Kit Power Quality Analyzer  
(single-phase)

10028-eng Rev. 08

## Recommended Accessories



C789 (43 Basic)

i2000flex

i1000s

80TK

PAC91