

FLUKE®

Insulation resistance testing.

A complete solution—for every person.



Insulation resistance. The latest test tools from the testing experts.

You asked Fluke for a full family of insulation resistance testers. Now they're finally here.

Time and again, electrical workers tell us about the importance of testing insulation resistance. Insulation resistance tools are critical to a preventative maintenance program, and a staple for troubleshooting any number of residential, industrial and commercial applications.

Now Fluke has **a tool for every budget and need**, from compact handhelds to a portable high-voltage 5 kV model. We even offer a full-featured insulation tester with multimeter functions built right in—it's two products in one!

Every tester in the line is built to Fluke standards—in other words, beyond your expectations. These tools are all **rugged, reliable, accurate and easy to use**, for lower ownership costs over the long haul...less calibration costs, less repair and replacement costs and longer product lifetime.

Each Fluke tester also provides you access to "how-to" application notes, selected case studies and expert technical support—FREE.

For more about testing insulation, along with complete details on the growing family of Fluke insulation resistance testers, just visit www.fluke.com/insulationtest.

"You asked. We responded.

*Now you have more insulation
testing choices than ever."*



New



A digital insulation tester and full-featured multimeter—two tools in one!

Fluke 1587/1577 Insulation Multimeters

Fluke customers told us they wanted an insulation tester and a full-featured multimeter in one, compact product and now we've delivered two!

Both offer the "two tools in one" feature set, combining a digital insulation tester with a full-featured, true RMS digital multimeter in a single, compact, handheld unit. The result: maximum versatility for both troubleshooting and preventative maintenance.

Whether you work on motors, generators, cables or switch gear, Fluke insulation multimeters deliver impressive capability in a single unit. No longer do you need to go back to the truck, shop, or tool crib to get the extra tool you need to get the job done. They are rugged, reliable and easy to use, just what you would expect from Fluke. It all adds up to a breakthrough solution that saves you time and money.

Recommended for:
Fluke 1587: industrial plant maintenance, industrial and utilities electricians, field service contractors and commercial HVAC/R technicians
Fluke 1577: electrical contractors and commercial electricians



Key Features

- Insulation test
1587: 0.01 MΩ to 2 GΩ
1577: 0.1 MΩ to 600 MΩ
- Insulation test voltages
1587: 50 V, 100 V, 250 V, 500 V, 1000 V
1577: 500 V, 1000 V
- Auto-discharge of capacitive voltage
- Measure ac/dc voltage, dc millivolts, ac/dc milliamps, resistance, and continuity
- Fluke 1587 includes capacitance, diode test, temperature, min/max, and frequency
- Low-pass filter for variable-speed motor drive measurements (*1587 only*)



New

Insulation resistance testing in the palm of your hand

Fluke 1507/1503 Insulation Resistance Testers

With their multiple test voltages, the compact Fluke 1507 and 1503 Insulation Testers are ideal for many troubleshooting, commissioning, and preventative maintenance applications. Additional features, like the remote probe on these tools, reduces the time needed to perform repetitive testing.

The Fluke 1507 is the best compact, lightweight, hand-held insulation tester for advanced industrial and electrical insulation testing. Its full feature set offers the ability to easily and quickly perform advanced insulation resistance testing. Its handy size makes it easy to pack and use. And its reasonable price makes it an excellent value.

For basic electrical insulation testing, choose the compact Fluke 1503—a rugged, compact tool that handles the most common tests at a most affordable price.



Key Features

- Insulation test range
1507: 0.01 MΩ to 10 GΩ
1503: 0.1 MΩ to 2000 MΩ
- Insulation test voltages
1507: 50 V, 100 V, 250 V, 500 V, 1000 V
1503: 500 V, 1000 V
- Save both time and money with automatic calculation of Polarization Index and Dielectric Absorption Ratio
- Make repetitive tests simple and easy with the Compare (Pass/Fail) function (*1507 only*)
- Repetitive or hard-to-reach testing is easy with the remote test probe
- Live circuit detection prevents insulation test if voltage > 30 V is detected for added user protection
- Auto-discharge of capacitive voltage for added user protection
- AC/DC voltage: 0.1 V to 600 V
- 200 mA Continuity
- Resistance: 0.01 Ω to 20.00 KΩ
- Remote probe, test leads, probes and alligator clips included with each tester
- 1-year warranty

Recommended for:

Fluke 1507: electrical contractors, industrial and commercial electricians

Fluke 1503: residential and commercial electricians



Insulation testing you can depend on

Fluke 1520 MegOhmMeter

A proven workhorse, the 1520 can make up to 5,000 insulation resistance tests, more than any other Fluke insulation tester, without changing batteries. A dual analog/digital display makes it easy to use. A Lo-Ohms function measures voltage and checks connections. Thanks to superb accuracy, endurance and handheld size, the 1520 is a long-standing tool of choice for demanding plant and utilities work.



Key Features

- Large, backlit LCD with analog bar graph and digital display
- Three output voltages for insulation resistance testing: 250 V, 500 V, 1000 V
- Insulation resistance testing up to 4000 MΩ; switches automatically to voltage measurement when voltage is greater than 30 V ac or 30 V dc.
- AC/DC voltage measurement up to 600 V
- Lo-Ohms function for testing connections
- Last reading memory display
- 4 C-cell batteries for up to 5,000 tests per EN61557-2, with battery-life indicator and auto shut-off
- Auto-discharge of capacitive voltage charges
- Rugged, splash-proof case with impact-absorbing holster

Recommended for:
Fluke 1520: industrial and utilities electricians



Digital insulation testing up to 5000 volts

Fluke 1550B MegOhmMeter

For high-voltage, industrial-strength insulation testing, reach for the portable Fluke 1550B. No one makes a more portable 5 kV digital tool for troubleshooting, preventative maintenance and advanced applications in high voltage environments.

Perfect for testing high-energy switchgear, motors, generators and cables, the 1550B executes everything from simple spot checks to timed tests and breakdown evaluations. It even stores test results and downloads them to your PC via infrared port. The custom carrying case also houses heavy-duty leads, probes and alligator clips for a complete, rugged field-testing kit.



Key Features

- Standard test voltages of 250 V, 500 V, 1000 V, 2500 V, 5000 V for a wide range of equipment testing
- Measures resistances up to one teraohm
- Programmable test voltages available in 50 volt steps from 250 to 1000 volts and 100 volt steps from 1000 to 5000 volts
- Automatic calculation of Dielectric Absorption (DAR) and Polarization Index (PI) with no additional setup
- Easy set-ups save time and effort when conducting "timed" and "ramp" tests of insulation breakdown
- Improved ramp function (0 to 5000 V dc) for breakdown testing
- Autodischarge of capacitive voltage
- Runs off of high-capacity rechargeable batteries for more testing between recharge
- Warning voltage function alerts the user that voltage is present and gives the voltage reading up to 600 V ac or dc
- Measurements can now be stored in up to 99 memory locations, with easy recall
- Includes improved FlukeView® Forms Software and Optical Interface cable for easier downloading to a Windows® PC
- Guard system eliminates the effect of surface leakage current on high-resistance measurements
- Large digital/analog LCD shows detailed measurement data
- 2-year warranty

Recommended for:
Fluke 1550B: industrial and utilities electricians

Choose the best fit

		TWO IN ONE TOOLS		1503	1507	1520	1550B
		1587	1577				
Insulation Test Functionality	Test Voltages	50 V, 100 V, 250 V, 500 V, 1000 V	500 V, 1000 V	500 V, 1000 V	50 V, 100 V, 250 V, 500 V, 1000 V	250 V, 500 V, 1000V	250 V, 500 V, 1000 V, 2500 V, 5000 V
	IRT Range	0.01 MΩ - 2 GΩ	0.1 MΩ - 600 MΩ	0.1 MΩ - 2000 MΩ	0.01 MΩ - 10 GΩ	4 MΩ - 4 GΩ	200 KΩ - 1 TΩ
	PI/DAR				•		•
	Auto Discharge	•	•	•	•	•	•
	Timed Ramp Test (Breakdown)						•
	Pass/Fail Comparison				•		
	Est. # of IRT Tests	1000	1000	2000	2000	5000	
	Voltage > 30 V Warning	•	•	•	•	•	•
	Memory					(last reading only)	(99 locations)
	Remote Test Probe	•	•	•	•		
	Lo Ohms					•	
	Display	Digital LCD	Digital LCD	Digital LCD	Digital LCD	Digital LCD/ Analog Bar Graph	Digital LCD/ Analog Bar Graph
Continuity	•	•	(200 mA)	(200 mA)	•		
Multimeter Functionality	AC/DC Volts	•	•	•	•	•	
	Current	•	•				
	Resistance	•	•	•	•	•	
	Temperature (contact)	•					
	Lo-Pass Filter	•					
	Capacitance	•					•
	Diode Test	•					
	Frequency	•					
	MIN/MAX	•					
	Hold/Lock	•	•	•	•	•	•
	Backlight	•	•	•	•	•	
	Software						(Fluke View® Forms Basic)
Warranty	3 years	3 years	1 year	1 year	3 years	2 years	
Battery	4 AA (NEDA 15A or IEC LR6)	4 AA (NEDA 15A or IEC LR6)	4 AA (NEDA 15A or IEC LR6)	4 AA (NEDA 15A or IEC LR6)	4 C-cell (NEDA 14A or IEC LR14)	Rechargeable	

Fluke Combo Kits

Fluke has created two new combo kits to help maximize your productivity and help you solve problems faster and reduce downtime, all with significant savings over buying each product individually.

The products in each kit have been specifically selected for both troubleshooting and preventative maintenance applications.

Establishing preventative maintenance programs are becoming critical to maintaining the uptime of electrical equipment and can significantly reduce both planned and unplanned downtime. Unplanned downtime costs are difficult to calculate, but often significant. For some industries, it can represent 1% to 3% of revenue (potentially 30% to 40% of profits) annually.



New

Fluke 1587 ET

Advanced Electrical Troubleshooting Kit

Everything you need to troubleshoot electrical system problems quickly and easily in one case!

Includes:

- With the Fluke 1587, perform insulation tests, plus a wide-range of DMM tasks with confidence and ease
- Use the i400 with your Fluke 1587 to accurately measure AC current without breaking the circuit
- Check for hot spots and measure temperature with the Fluke 62 mini non-contact thermometer

Fluke 1587 MDT

Advanced Motor and Drive Troubleshooting Kit

Everything you need to troubleshoot motor and variable frequency drive electrical problems quickly and easily in one case!

Includes:

- With the Fluke 1587, perform insulation tests, plus a wide-range of DMM tasks with confidence and ease
- Use the i400 with your Fluke 1587 to accurately measure AC current without breaking the circuit
- Check the rotation of three-phase motors easily and safely with the Fluke 9040

Every need—and every budget:

Learn about the entire range of Fluke insulation resistance testers. See your Fluke sales representative or visit

www.fluke.com/insulationtest

Fluke. *Keeping your world up and running.*

Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:

In the U.S.A. (800) 443-5853 or

Fax (425) 446-5116

In Europe/M-East/Africa (31 40) 2 675 200 or

Fax (31 40) 2 675 222

In Canada (800) 36-FLUKE or

Fax (905) 890-6866

From other countries +1 (425) 446-5500 or

Fax +1 (425) 446-5116

Web access: <http://www.fluke.com/>

FLUKE®

Power Quality

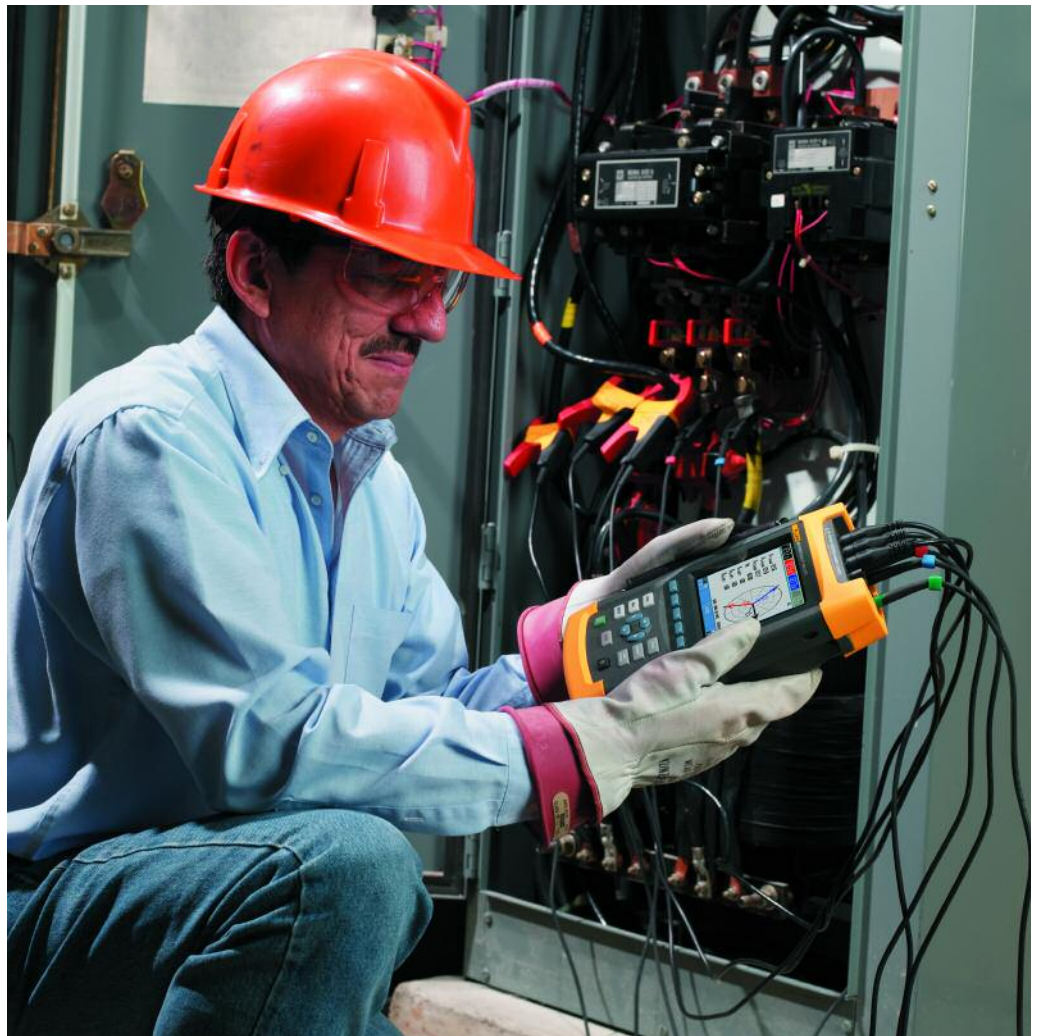


The 5-Star Solution

Pinpoint power quality problems faster
Fluke 430 Series Three-Phase Power Quality Analyzers

The Fluke 430 Series Three-Phase Power Quality Analyzers

**Locate,
predict,
prevent
and
trouble-
shoot
power
problems**



Measure all power parameters, find events and anomalies in seconds

In industry, healthcare, and business, in fact wherever electrical and electronic equipment is indispensable, power quality plays a critical role in maintaining uptime. 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.

Discover the 3-phase, 4-channel, 5-star power quality analyzers from Fluke to help you maintain efficient power systems. These tools give you the power to analyze every parameter, power-related event or anomaly faster, easier, safer and in more detail than ever before.

Analyze your power network quickly and easily.

Analyze details individually or monitor everything simultaneously.

- **Complete three-phase troubleshooting tool: Measure everything!**
Measure virtually every power system parameter. The 430 measures voltage, current, frequency, power, power consumption (energy), unbalance and flicker, tracks harmonics, inter-harmonics and captures events like dips and swells, transients, interruptions, rapid voltage changes and inrush.
- **Highest safety rating**
First on the market that meets the stringent CAT IV 600 V and CAT III 1000 V safety standard required for measurements at the service entrance.
- **AutoTrend: Don't waste time setting up recordings!**
Ever look at measurement data and wonder how it changes over time? Just press a single button to get a trend overview. No need to start a separate measurement since every measurement you see is always automatically recorded. Instantly zoom in on details and use cursors to analyze while recording continues.
- **Automatic transient display: Don't miss an event**
Capture up to 40 dips, swells, interruptions or transients automatically. When an event occurs, voltage and current waveform data are stored for all three phases and neutral allowing you to analyze timing relationships and perform a cause and effect analysis.
- **Four current and four voltage channels**
Four voltage inputs allow you to measure phase-to-phase, phase to neutral, and neutral to ground. Four current inputs allow measurements on three phases and neutral. This instrument also supports all common wiring schemes.
- **System-Monitor: Simultaneously check all power quality parameters**
One comprehensive overview gives immediate insight into your power system's quality, checking conformity to limits specified in EN50160 or to your own custom limits. Instantly see which parameters fall outside the limits and drill down into detailed event tables and trend graphs.
- **Fast and easy to use**
Menu-driven interface on the high-resolution color screen simplifies operation. The screen refreshes 5-times faster than any other power quality analyzer at 200 ms intervals.

Pinpoint power quality problems faster, easier, safer and in greater detail



The Fluke 430 Series Three-Phase Power Quality Analyzers

One tool to do the job

Locate, predict, prevent and troubleshoot.

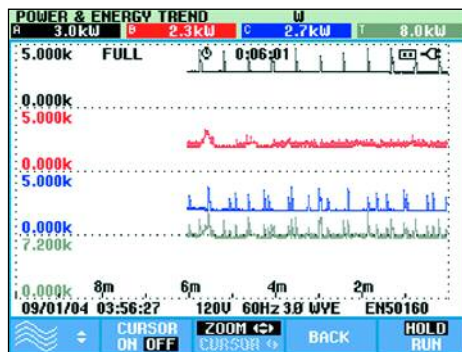
Highest safety rating

Designed to help protect you and your equipment against electrical shock and fire, the Fluke 430 Series analyzers, accessories and charger are all certified to meet the stringent safety standards for use in CAT IV 600 V and CAT III 1000 V environments. They are the first tools of their kind to carry the CAT IV rating so it can be used at virtually all power connections and outlets in low-voltage power distribution systems.



VOLTS / AMPS / HERTZ				
	A	B	C	N
Vrms	119.7	118.9	119.9	0.3
Vpk	131.7	130.6	155.9	0.4
CF	1.1	1.1	1.3	1.2
Hz	59.99			
Amp				
	A	B	C	N
A rms	432	412	360	46
A pk	562	494	648	87
CF	1.3	1.2	1.8	1.9

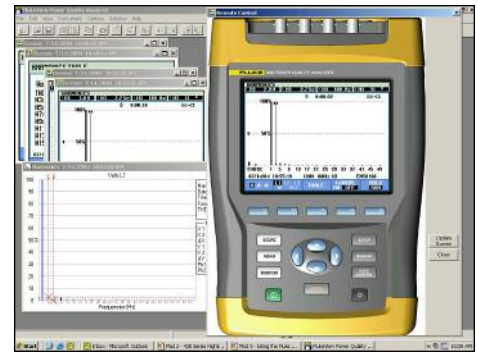
09/01/04 09:02:59 120V 60Hz 3Ø WYE ENS0160*



AutoTrend automatically records all displayed parameters in the background. Toggle between data and trend view and use cursors and zoom to analyze measurements without interrupting the recording.

Quickly see the trend

Unique AutoTrend gives you fast insight into changes over time. Every displayed reading is automatically and continuously recorded without having to set up threshold levels or interval times, or having to manually start the process. You can quickly view trends in voltage, current, frequency, power, harmonics or flicker on all three phases plus neutral. And you can analyze the trends using the cursors and zoom function – even while background recording continues.



Perform custom analysis and create reports with FlukeView® Power Quality software. Measurement data can also be exported to common spreadsheet programs.

Extensive data analysis possibilities

The Fluke 430 Series provides three ways to analyze measurements. Cursors and zoom can be used 'live' while taking measurements, or 'offline' on stored measurement data. The stored measurements can also be transferred to a PC with FlukeView® software. This software's 'view' mode allows cursors and zoom to be used on stored datasets as if actually working with the instrument.

Reporting your findings

Use FlukeView® Power Quality Analyzer software, included as standard equipment with the 434, to collect screen captures, trend plots, or datasets when it's time to write a report.

Automatic transient display

Every time an event or distortion on the voltage waveform is detected, the instrument triggers and automatically stores voltage and current waveforms on all three phases and neutral.

- Capture up to 40 dips, swells, interruptions and transients.
- See voltage transients as high as 6 kV and as fast as 5 microseconds.

System-Monitor: Multi-parameter power quality health check on one display

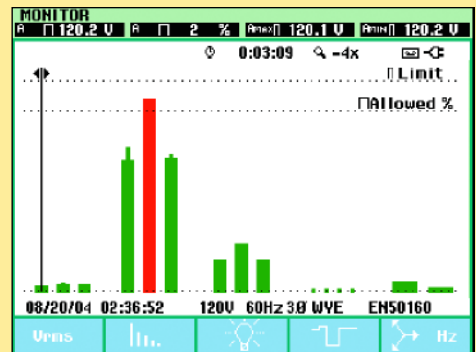
A single push of the MONITOR button brings up a single dashboard display of rms voltage, harmonics, flicker, interruptions, rapid voltage changes, swells, unbalance and frequency. The dashboard is updated live, showing compliance of each parameter to EN50160 limits or your own limits. Color-coded bars clearly show which parameters are inside (pass) or outside limits (fail). During a Monitor session, you can easily drill down to more detail of any parameter and view and capture its trend for a report.

Handheld unit delivered as a complete package

The Fluke 430 series includes:

- Four dual range 40 A and 400 A clamps and
- Five voltage test leads and clips
- Line adapter/battery charger
- Hard case for storage

Take it out of the box to start tackling your most challenging power quality problems immediately. The rugged construction and 7-hour battery operation make it ideal for demanding field work.



The System-Monitor overview screen gives instant insight into whether the voltage, harmonics, flicker, frequency and the number of dips and swells fall outside the set limits.

MONITOR EVENTS URMS

START 09/01/04 07:51:38 EVENT 8 / 8

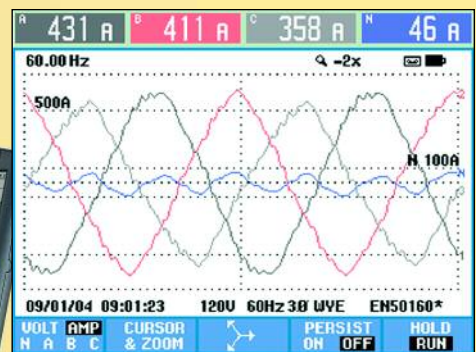
1:20:25

DATE	TIME	TYPE	LEVEL	DURATION
09/01/04	08:34:38:098	H21	0.5 %	0:00:10:000
09/01/04	08:36:38:098	H21	0.5 %	0:00:10:000
09/01/04	08:51:38:098	H21	0.5 %	0:00:10:000
09/01/04	08:53:38:098	H21	0.5 %	0:00:10:000
09/01/04	08:55:28:098	H21	0.5 %	0:00:10:000
09/01/04	09:02:58:098	H21	0.5 %	0:00:10:000
09/01/04	09:04:58:098	H21	0.5 %	0:00:10:000
09/01/04	09:08:38:098	H21	0.5 %	0:00:10:000

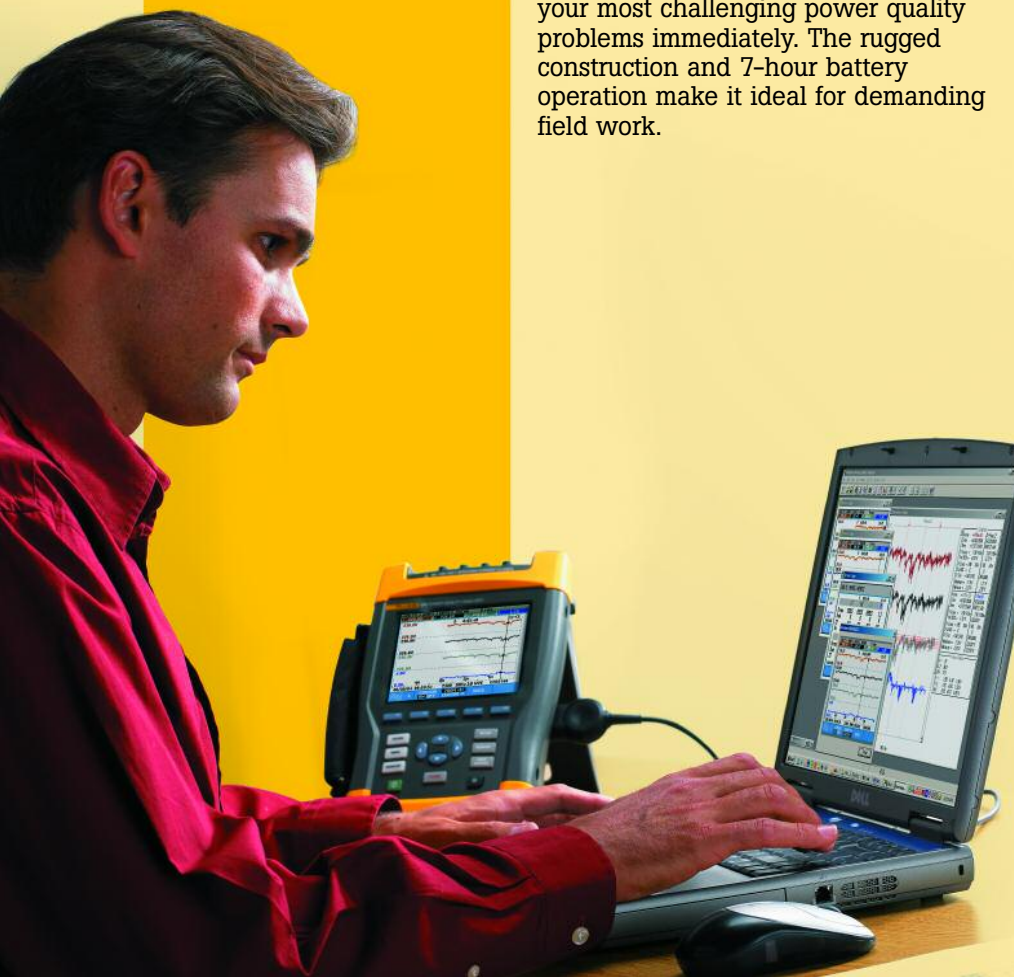
09/01/04 09:12:03 120V 60Hz 3Ø WYE EN50160

SELECTED ALL NORMAL DETAIL TREND BACK

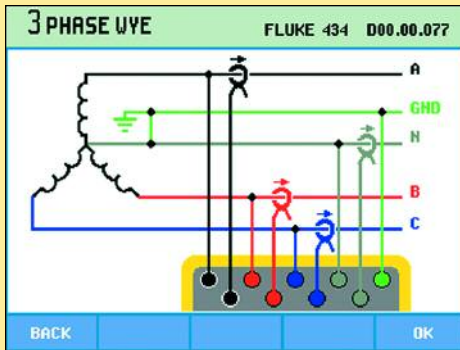
A detailed list is given of all events falling outside the set limits. By scrolling through the event list and selecting an event, the event can be analyzed in detail.



All relevant parameters are recorded so each event can be analyzed in detail. Cursors are automatically positioned at the selected event to easily view timing relationships.



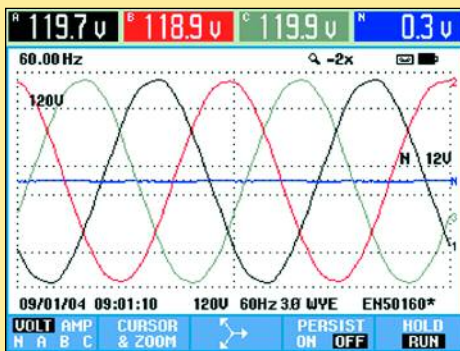
The Fluke 430 Series Three-Phase Power Quality Analyzers



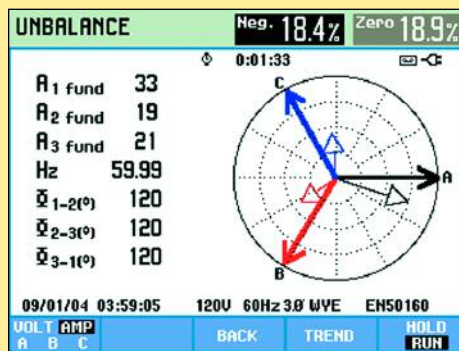
The full color display uses region specific industry-standard color-coding (user selectable) to correlate measurements with actual wiring.



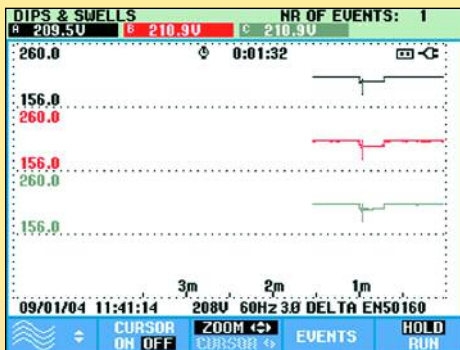
Simple menu structure with logical function grouping gives fast access to key measurements.



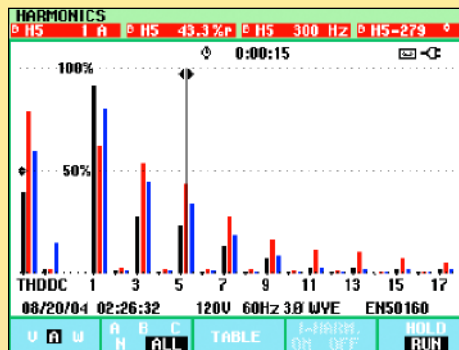
Scope view shows voltage and current waveforms for all three phases. You can toggle to a phasor diagram at any time.



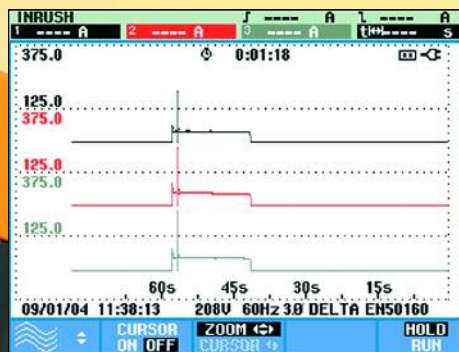
Phasor diagram shows voltage and current unbalance, and helps verify connections.



Record dips and swells as short as one half-cycle with min/max/avg readings.



Track harmonics up to the 50th, and measure and record THD in accordance with IEC61000-4-7 requirements.



Inrush function automatically triggers off of current and captures start up measurements on motors and other devices to help determine trip levels.



Measure and record power (W), VA and VARs. The 434 adds the ability to record energy consumption.

More power quality testing solutions

Fluke 43B power quality analyzer

Combines the capabilities of a power quality analyzer, a 20 MHz scope and a multimeter in one handheld tool.



- Measure power (W, VA, VAR) and power factor (PF, DPF)
- Calculate power and power factor on balanced 3-phase loads
- Measure voltage, current and power harmonics
- Measure dips and swells on a cycle-by-cycle basis for up to 24 hours
- Dual-channel, 20 MHz bandwidth digital oscilloscope
- Measure resistance, continuity and capacitance, and test diodes
- Measure temperature with optional temperature probe



Fluke VR101S

The smart tool for system voltage event monitoring

Detect dips, swells, transients down to 1 μ s, outages and frequency variations on single-phase mains. Featuring user-selectable capture limits that are downloaded from a PC using Fluke EventView™ software and optical interface cable (both supplied), the VR101S is simply plugged into the outlet under test.



Fluke offers a full suite of power quality test tools to locate, predict, prevent and troubleshoot power problems.

- Handheld troubleshooters for instant analysis
- Ready-to-use event loggers
- Full Disclosure power analyzers
- Power calibrators and standards backed by Fluke metrology expertise

The Fluke power quality set of products offer the highest level of performance and maintains the Fluke promise of rugged and reliable test tools.

Choose the right tool



Another solution to help reduce your maintenance costs.

Use the Raytek ThermoView Ti30 during power quality audits as part of a preventive maintenance program to improve your uptime.

ThermoView Ti30 thermal imager - the first affordable thermal imager specifically designed for predictive maintenance, with just what maintenance professionals need to do preventative maintenance and troubleshooting.

- Radiometric capabilities
- Fast target scanning
- Full-featured software for analysis and reporting
- Free 2-day training taught by Snell Infrared

Go to www.raytek.com
www.raytek.com for more information.

	434	433
Application	Three-phase	
Inputs	4 voltage and 4 current (for 3 phases and ground)	
Measurements		
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 (forward and reverse), kVAh, demand interval	•	Optional*
Flicker (Plt, Pst, PF5)	•	•
Unbalance	•	•
Recorder/AutoTrend	•	•
System-Monitor	•	•
Real time scope/Phasor diagrams	•	•
Dips and swells/Half cycle based	•	•
Transient display	•	Optional*
Inrush current	•	Optional*
EN50160 compliance	•	•
IEC61000-4-30 compliance	•	•
Memory (screens/data)	50/10	25/5 standard 50/10 Optional*
FlukeView software and interface cable	•	Optional*
Safety rating (Meets EN61010 European standards)	CAT IV 600 V/CAT III 1000 V	
Battery life	Up to 7 hours/charge	

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

Add the 434 functionality to the 433 with the Fluke 433UGK Upgrade Kit

- Advanced functions upgrade (Inter-harmonics, energy, transient display and inrush current, data memory extension)
- FlukeView® software SW43W
- USB Optical Cable

Fluke. Keeping your world up and running.

Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.

PO Box 1186, 5602 BD

Eindhoven, The Netherlands

For more information call:

In the U.S.A. (800) 443-5853 or

Fax (425) 446-5116

In Europe/M-East/Africa (31 40) 2 675 200 or

Fax (31 40) 2 675 222

In Canada (800) 36-FLUKE or

Fax (905) 890-6866

From other countries (425) 446-5500 or

Fax (425) 446-5116

Web access: <http://www.fluke.com>

Ordering information

- | | |
|--------------|--------------------------------------|
| Fluke 433 | Power Quality Analyzer (three-phase) |
| Fluke 434 | Power Quality Analyzer (three-phase) |
| Fluke 433UGK | Upgrade Kit for Fluke 433 |



5020A Thermo-Hygrometer Graphical temperature/humidity logger, pg. 11



FLUKE®

63 Infrared Thermometer Research heating and ventilation problems, pg. 12



CO-220 Carbon Monoxide Meter Stand alone CO meter, pg. 5

HVAC/Indoor Air Quality Selection Guide

Volume 1, 2005



87V Digital Multimeter Industrial multimeter with built-in thermometer, pg. 6












983 Particle Counter Troubleshoot and maintain indoor air quality, pg. 4

Selection Guide

	Air Composition			Thermal Imaging	IR Temperature		
							
Model	983 Particle Counter	CO-220 CO Detector	CO-210 CO Probe ⁽¹⁾	5020A Thermo-Hygrometer	T130 Thermal Imager	Fluke-63 IR Thermometer	Fluke-61 IR Thermometer
See page	4	5	5	11	10	12-13	12-13
Measurements							
Particle size	0.3, 0.5, 1.0, 2.0, 5.0, 10.0 µm						
Concentration		0-1000 ppm	0-1000 ppm				
Temperature	+40 °C (104 °F)			+50 °C (122 °F)	+250 °C (482 °F) J, K, T, E, N, R, S	+545 °C (1013 °F)	+275 °C (527 °F)
Optical resolution					90:1, 225:1	12:1	8:1
Relative humidity	20 % to 90 %			0 % to 100 %			
Vacuum							
Pressure							
Voltage ac/dc							
Current ac/dc							
Resistance							
Frequency							
Inrush current (integration time)							
Capacitance							
Conductance							
Data Storage							
Data logging	5000 data points			400,000 readings	100 images		
Min/Max/Ave		No/Yes/No		Yes/Yes	No/Yes/No		Yes/No
Display Hold/Auto (Touch) Hold		Yes/No			Yes/No	Yes/No	
Fast Min-Max							

(1) Accessory for use with a digital multimeter with dc millivolt inputs.

TC Temperature		Pressure	HVAC Electrical Tools					
								
Fluke 54 TC Thermometer	80PK-8 TC Clamp ⁽¹⁾	PV350 Pressure / Vac ⁽¹⁾	T5-600 Electrical Tester	337 ClampMeter	1AC VoltAlert Voltage Detector	16 DMM	179 DMM	87V DMM
14	13	16	15	9	16	8	7	6
+ 1767 °C (3212 °F)	+149 °C (300 °F)					+400 °C (752 °F)	+400 °C (752 °F)	+1090 °C (1994 °F)
		76 cm Hg (406.7 in H ₂ O)						
		3447 kPa (499.9 psi)						
			600 V	600 V	600 V ac	600 V	1000 V	1000 V
			100 A	999.9 A		200 µA	10 A	10 A
			1000 Ω	600 Ω		40 MΩ	50 MΩ	50 MΩ
				400 Hz			100 kHz	200 kHz
				100 ms				
						10 µF	10 µF	10 µF
								60 nS
500 data points								
Yes/Yes/Yes				Yes/Yes/No		Yes/Yes/No	Yes/Yes/Yes	Yes/Yes/Yes
			Yes/No	Yes/No			Yes/Yes	Yes/Yes
								250 µs

Particle Counter



New! Fluke 983 Particle Counter *Troubleshoot and maintain indoor air quality*

The new Fluke 983 Particle Counter, the preferred choice for HVAC and IAQ professionals, measures temperature and relative humidity as well as particle size. With expanded data logging and six-channel particle size display, the Fluke 983 allows users to run more tests quickly, with less time spent cycling through screens to obtain data. The Fluke 983 is lightweight and easy to use in any position, with a comfortable hand strap and rugged holster.

The Fluke 983 Particle Counter offers:

- Selectable sample time, count data, and programmable delay
- User-defined sample size (cubic feet or liters) and temperature measurements (°C or °F)
- Data displayed in totalize or concentration modes
- Logged samples include date, time, particle counts, sample volume, temperature and relative humidity

General specifications

- Simple user interface
- Bright white liquid crystal display with backlight
- Compact and lightweight
- Weight:** 1.0 kg (2.2 lbs)
- Dimensions:** (W x L x D)
11.43 cm x 20.96 cm x 5.72 cm
(4.5 in x 8.25 in x 2.25 in)
- Power:** AC adapter, 12V dc at 2.5 A, 90 to 250V ac, 50 to 60 Hz
- Battery:** Rechargeable (NiMH, 4.8V at 4.5 Ah)
- Battery live / recharge time:** 8 hours / 2 hours
- Operating temperature:** 10 °C to 40 °C (50 °F to 104 °F), 20 % to 90 % relative humidity, non-condensing
- Safety:** Meets 115B9921:1997 and CE standards
- Calibration:** PSL particles in air (NIST traceable)

Ordering information

Fluke-983 Particle Counter

Each particle counter includes: Certificate of Calibration (NIST), Windows-compatible software download utility, DB9 to RS-232 adapter and cable, Isokinetic probe, zero count filter, high purity tubing, 1/8 in. hose barb adapter, power supply, operation manual, hard molded plastic case

Summary specifications

6 size channels	0.3, 0.5, 1.0, 2.0, 5.0, 10.0 µm
Flow rate	0.1 cfm (2.83 L/min) controlled by internal pump
Count modes	Concentration, totalize, audio
Counting efficiency	50 % @ 0.3 µm; 100 % for particles > 0.45 µm (per JIS B9921:1997)
Zero count	1 count/5 minute (JIS B9921:1997)
Coincidence loss	5% at 2,000,000 particles per ft ³
Relative humidity	± 7 %, 20 % to 90 % non-condensing
Temperature	± 3 °C, 10 °C to 40 °C (50 °F to 104 °F)
Data storage	5000 sample records (rotating buffer) of date, time, counts, relative humidity, temperature, sample volumes, alarms, label
Alarms	Counts, low battery, sensor fail
Delay time	0 to 24 hours
Sample inlet	Isokinetic probe
Interface	RS-232 and RS-485 via RJ-45
Environmental	Operating: 10 °C to 40 °C (50 °F to 104 °F), 20 % to 90 % relative humidity, non-condensing Storage: -10 °C to 50 °C (14 °F to 122 °F), up to 90 % relative humidity, non-condensing

CO Detectors



CO-220 Carbon Monoxide Meter

- Standalone CO meter that does not require a digital multimeter
- Large backlit LCD displays CO levels from 0 to 1000 ppm
- Beeper triggers with increasing frequency as CO levels rise
- MAX hold function stores and displays the maximum CO level
- Automatic sensor zeroing and self-test upon startup

CO-210 Carbon Monoxide Probe

- Used as an accessory to a digital multimeter with DC millivolt inputs
- Displays CO level readings from 0 to 999 ppm, with a resolution of 1 ppm and accuracy of $\pm 3\%$
- Also used as a standalone device with an LED indicator and beeper that triggers with increasing frequency as CO levels rise



CO-205 Aspirator Kit

The CO-205 flue gas sampling accessory kit contains all the components necessary to provide a clean sample for the Fluke family of gas measuring devices.

The CO-205 accessory kit includes:

- Stainless steel sampling tube
- Industrial-grade hand operated aspirator to draw flue sample
- Easily replaceable particulate filter
- Specially designed nose cap for connection to the Fluke CO-210/220

Ordering information

Fluke-CO-205

Includes instruction sheet

Fluke-CO-210

Includes soft carrying case, battery and instruction sheet

Fluke-CO-220

Includes soft carrying case, battery and instruction sheet

Digital Multimeters



Fluke 87V Digital Multimeter *Accuracy and diagnostic functions for maximum industrial productivity*

The new Fluke 87V has improved measurement functions, troubleshooting features, resolution and accuracy to solve more problems on motor drives and in plant automation, power distribution, and electro-mechanical equipment. The 87V operates very similar to the classic 87, but with more problem-solving power, safety, convenience and impact protection.

New features for maximum productivity:

- Unique function for accurate voltage and frequency measurements on adjustable speed motor drives and other electrically noisy equipment
- Built-in thermometer conveniently allows you to take temperature readings without separate instrument
- Large digit display with bright two level backlight makes the 87V easy to read

Fluke 87V/E Industrial Electrician Combo Kit

Includes special accessories to increase productivity.

Ordering information

Fluke 87-5

Every Fluke 87V comes packaged with TL75 Test Leads, AC72 Alligator Clips, holster, 9 V battery (installed), temperature probe, CD-ROM (user's manual and technical notes) and operators guide.

Fluke 87-5/E

Kit comes packaged with TL225 Test Leads, TP238 Removable Test Probes, AC220 Plunger Style Alligator Clips, 80BK Temperature Probe, TPAK magnetic hanger and durable carrying case.

General specifications

Size: 201 x 98 x 52 mm (with holster)

Weight: 355 g

Weight With Holster and Flex-Stand: 624 g

Display

Digital: 6000 counts updates 4/sec. (19,999 counts in high-resolution mode)

Analog: 32 segments, updates 40/sec.

Frequency: 19,999 counts, updates 3/sec at > 10 Hz.

Warranty: Lifetime

Battery life: Alkaline: ~400 hours typical, without backlight

Shock: 1 Meter drop per IEC 61010-1:2001 Vibration; Per MIL-PRF-28800 for a Class 2 instrument

Summary specifications

Function	Range and resolution	Basic accuracy
DC volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.05 %
AC volts	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	0.7 % (True-rms)
DC current	600.0 μA, 6000 μA, 60.00 mA, 600.0 mA, 6.000 A, 10.00 A	0.2 %
AC current	600.0 μA, 6000 μA, 60.00 mA, 600.0 mA, 6.000 A, 10.00 A	1.0 % (True-rms)
Temperature (excl. probe)	-200 to 1090 °C (-328 to 1994 °F)	1.0 %
80BK Temperature Probe	-40 to 260 °C (-40 to 500 °F)	2.2 °C or 2 %
Resistance	600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ	0.2 %
Capacitance	10.00 nF, 100.0 nF, 1.000 μF, 10.00 μF, 100.0 μF, 9,999 μF	1.0 %
Frequency	199.99 Hz, 1.9999 kHz, 19.999 kHz, 199.99 kHz	0.005 %

Digital Multimeters



Fluke 179 Digital Multimeter *Versatile meter for maintenance, field service and bench repair*

Find most heating and ventilation problems with this versatile multimeter. It is simple to use and offers true-rms, several measurement functions, conformance to the latest safety standards, and a large, easy to read display.

Features include:

- True-rms voltage and current measurements
- 0.09 % basic accuracy
- 6000 count resolution digital display with analog bargraph and backlight
- Manual and automatic ranging
- Display Hold and Auto
- Frequency and capacitance measurements
- Resistance, continuity and diode measurements
- Temperature measurements
- Min/Max/Avg recording
- Smoothing mode allows filtering of rapidly changing inputs
- Easy battery exchange without opening the case
- Closed case calibration through front panel
- Ergonomic case with integrated protective holster
- EN61010-1 CAT III 1000 V / CAT IV 600 V
- Measures twice as fast as other multimeters

Summary specifications

Function	Range and resolution	Basic accuracy
V dc	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	± 0.09 % ± 0.15 %
V ac ¹	600.0 mV, 6.000 V, 60.00 V, 600.0 V, 1000 V	± 1.0 % of reading
A dc	60.00 mA, 400.0 mA, 6.000 A, 10.00 A ²	± 1.0 % of reading
A ac ²	60.00 mA, 400.0 mA, 6.000 A, 10.00 A ²	± 1.5 % of reading
Resistance	600.0 Ω, 6.000 kΩ, 60.00 kΩ, 600.0 kΩ, 6.000 MΩ, 50.00 MΩ	± 0.9 % of reading
Capacitance	1000 nF, 10.00 μF, 100.0 μF, 9999 μF	± 1.2 % of reading
Frequency ³	99.99 Hz, 999.9 Hz, 9.999 Hz, 99.99 kHz	± 0.1 % of reading
Temperature	-40 °C to +400 °C (-40 °F to +752 °F)	1.0 % of reading

¹All ac voltage and ac current ranges are specified from 5 % of range to 100 % of range.

²10 A continuous, 20 A for up to 30 seconds.

³Voltage frequency is specified from 2 Hz to 100 kHz. Current Frequency is specified from 2 Hz to 30 kHz.

General specifications

Size: 201 x 98 x 52 mm

(with holster)

Weight: 355 g

Weight with holster and

Flex-Stand: 624 g

Display

Digital: 6000 counts updates 4/sec. (19,999 counts in high-resolution mode.)

Analog: 32 segments, updates 40/sec.

Frequency: 19,999 counts, updates 3/sec at > 10 Hz.

Warranty: Lifetime

Battery life: Alkaline: ~400 hours typical, without backlight

Shock: 1 Meter drop per IEC 61010-1:2001

Vibration: Per MIL-PRF-28800 for a Class 2 instrument

Ordering information

Fluke-179 Digital Multimeter

Meter is packaged with TL75 test leads, 9 V battery (installed), 80BK Temperature Probe and manual.

Digital Multimeters



Fluke 16 Multimeter with Thermometer Measures temperature and microamperes

The Fluke 16 measures temperature quickly and accurately. Standard equipment includes an 80BK integrated DMM temperature probe. A microamp function is included for flame sensor measurements down to 0.1 microampères. Use the Fluke 16 to test motor start and run capacitors up to 10,000 microfarads.

Rely on the Fluke 16 to make your everyday measurements:

- Up to 600 volts ac or dc
- Resistance up to 40 megohms
- Diode test
- Exceptionally fast continuity

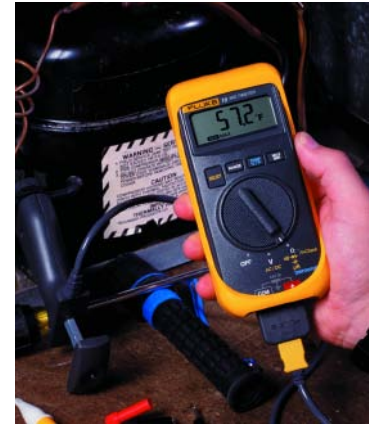
General specifications

Size: 346 x 71 x 142 mm

Weight: 286 g

Warranty: 3 years

Battery life: Alkaline: ~ 650 hours typical



Buy
Combo Kit
and Save



HVAC 16/322 Combo Kit

- Includes Fluke 16 Multimeter with temperature
- Fluke 322 compact clamp meter
- TL75 hard point test lead set
- 80BK integrated temperature probe
- C800 durable carrying case

Summary specifications

Function	Range and resolution	Basic accuracy
V dc	4000 mV, 4.000 V, 40.00 V, 400.0 V, 600 V	± (0.9 % + 1)
V ac	4000 mV, 4.000 V, 40.00 V, 400.0 V, 600 V	± (1.9 % + 3)
A dc	200.0 µA	± (1.0 % + 2)
A ac	200.0 µA	± (2.0 % + 3)
Resistance	400.0 Ω, 4.000 kΩ, 40.00 kΩ, 400.0 kΩ, 4.000 MΩ, 40.00 MΩ	± (0.9 % + 1)
Capacitance	1.000 µF, 10.00 µF, 100.0 µF, 1000 µF, 10,000 µF	± (1.9 % + 2) ± 10 % + 90 counts

8

Ordering information

Fluke-16 Digital Multimeter

Meter comes packaged with TL75 Test Leads, 9 V battery (installed), C10 holster and 80BK Temperature Probe.

Fluke-16/322 HVAC Combo Kit

Clamp Meters



Fluke 337 Clamp Meter *Take a new look at the way you make current measurements*

The Fluke 337 Clamp Meter is a true-rms clamp meter that measures AC/DC current, voltage, ohms, and motor start-up current. Its new, ergonomic concept is shaped to fit your hand and to access tight spots easily.

- Small body and jaws fit perfectly in your hand and into tight places
- Handy display hold button keeps measurements on the display
- Meter controls are positioned so current measurements can be done with one hand (index finger on clamp opening lever and thumb on rotary switch)
- Large, backlit display is easy-to-see
- In-rush current function for measuring starting current for motors, lighting, etc.
- Auto shut-off maximizes battery life so the meter works when you need it
- Improved low current measurement accuracy from new microprocessor technology



General specifications

Size: 250 mm x 80 mm x 40 mm (9.875 in x 3.125 in x 1.625 in)

Weight: 310 g (11 oz)

Warranty: Three years

Battery life: Alkaline approximately 150 hours continuous, Automatic low battery indicator

MIN/MAX: Yes

Backlight: Yes

Display Hold: Yes

Max wire diameter: 1.2 in

Summary specifications

Function	Range	Basic accuracy
V dc	to 600.0 V	1 % + 5 counts
V ac (True-rms)	to 600.0 V	1 % + 5 counts (20 to 100 Hz)
A dc	0 to 999.9 A	2 % + 3 counts
A ac (True-rms)	to 999.9 A	2 % + 5 counts (10 to 100 Hz)
Inrush (Integration time)	100 mS	
Resistance	600.0 Ω/6000 Ω	1.5 % + 5 counts
Frequency	to 400 Hz	0.5 % + 5 counts
Continuity	≤ 30 Ω	

Ordering information

Fluke-337

Meter comes packaged with: Coated instruction card, safety information sheet, soft carrying case, TL75 Test Leads, Two AA Alkaline batteries

Thermal Imager



Fluke Ti30 Thermal Imager *Everything needed for everyday imaging*

The affordable Fluke Ti30 Thermal Imager is an unbeatable solution for predictive maintenance.

- Complete imaging solution including unlimited use InsideIR software and two days of professional thermography training
- Designed for industrial use with storage capacity of up to 100 images
- Displays both thermal image and temperature
- Use the Ti30 to detect hidden moisture behind walls and in duct work and identifying blockages within the heat exchange system

Summary specifications

Detector	
Detector type	120 x160 thermal element uncooled focal plane array microbolometer
NETD (Noise equivalent temp. difference)	200 mK
Thermal	
Temperature range	-10 °C to 250 °C (14 °F to 482 °F)
Accuracy	±2 % or ±2 °C (+/- 3 % or 3 °C from -10 to 0 °C)
Optical	
Optical resolution	90:1
Slit response optical resolution	225:1
Minimum diameter measurement spot	7 mm (0.27 in) at 61 cm (24 in)
Field of view (FOV)	17° Horizontal x 12.8° Vertical
Target sighting	Single laser dot (Meets IEC Class 2 & FDA Class II requirements)
Controls and adjustments	
Focus	Focusable, 61cm (24 in) to infinity
Temperature scale	°C or °F selectable
Palettes	Gray, ironbow or rainbow
Measurement modes	Automatic, semi-automatic or manual
LCD backlight	Bright, dim, off-selectable
Adjustable emissivity	0.10 to 1.00 by 0.01
Reflected background temperature	-50 °C to 460 °C (-58 °F to 860 °F)
Environmental	
Ambient operating temperature	-10 °C to 50 °C (14 °F to 122 °F)
Relative humidity	10 to 90 % non-condensing
Storage temperature	-25 °C to 70 °C (-13 °F to 158 °F) [without batteries]
Other	
Storage capacity	100 images
Image frame rate	20 Hz

General specifications

Power: Rechargeable battery pack or 6AAs (not included)

Battery life: Minimum 5 hours continuous use

Thermal analysis software: InsideIR (included)

PC software operating systems: Microsoft® Windows® 98®, 2000® or XP®

Weight (includes batteries): 1 kg (2.2 lb)

Warranty: 1 year (U.S. only)

Ordering information

Fluke-Ti30 Thermal Imager

Fluke-Ti30 packaged with: docking station with universal power adapter and USB connection, hardshell carrying case, USB field cable, rechargeable battery pack, interactive CD, training presentation CD, carrying pouch, wrist strap and quick reference card.

The Fluke-Ti30 Thermal Imager is sold exclusively through thermography representatives. To request a demonstration or order a Ti30 imager, visit www.fluke.com/thermography or call (800) 866-5478.

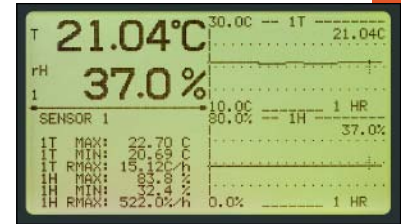
Thermo-Hygrometer



Fluke 5020A Thermo-Hygrometer Graphical temperature/humidity logger

The Fluke 5020A offers unmatched precision among environmental data loggers.

- Two channels measure ambient temperature to $\pm 0.125^\circ\text{C}$ and relative humidity to $\pm 1.5\%$
- On-board memory holds up to 400,000 time/date-stamped readings; PC card holds millions more
- Detachable probes contain their own calibration data for easy recalibrations
- Optional software logs in real time or shows graphical/statistical data
- User configurable display for trend graphs and data
- Visual and audio alarms for numerous alarm or fault conditions



Summary specifications

Feature	Description
Temperature range	0 °C to 50 °C (32 °F to 122 °F)
Temperature accuracy	15 °C to 35 °C: ± 0.25 °C (calibrated) 0 °C to 15 °C, 35 °C to 50 °C: ± 0.5 °C (uncalibrated typical)
Delta temperature accuracy	± 0.025 °C for ± 1 °C changes within 15 °C to 35 °C
Temperature resolution	User selectable up to 0.001 °C
RH range	0 % to 100 % RH
RH accuracy	20 % to 70 % RH: +2 % RH (calibrated) 0 % to 20 % RH, 70 % to 100 % RH: ± 3 % RH
Delta humidity accuracy	± 1.0 % for ± 5 % changes within 20 % to 70 % RH
RH resolution	User selectable up to 0.01 %
Inputs	Up to two sensors, each measuring temperature and relative humidity; remountable
Display	LCD, displays data graphically, numerically and statistically; 16 setups are included
Memory (internal)	400,000 typical individual time-stamped readings
Alarms	Visual and audio alarms for temperature, temperature rate, RH, RH rate, and fault conditions
Communications	RS-232 and IrDA
PC card interface	64 MB flash memory for downloading data to a PC
Operating range	0 °C to 50 °C
Calibration	Certificate of NIST-traceable calibration included

General specifications

Size: 4.9 H x 8.3 W x 2.0 D in (125 x 211 x 51 mm)

Weight: 1.5 lb. (0.7 kg)

Power: 12 V dc from external 100-240 V ac power supply

Ordering information

5020A Thermo-Hygrometer

Includes probe, wall-mount bracket and RS-232 cable

Thermometers



Fluke 61

Fluke 61 and 63 Infrared Thermometers **Laser quick. Fluke tough.**

Infrared thermometers are ideal tools for measuring surface temperatures of rotating, hard-to-reach, electrically live, or dangerously hot targets. These handheld portable tools enable professionals to monitor the status of electrical motors and research heating and ventilation problems with ease.

Fluke 61 Infrared Thermometer

- Bright laser beam provides easy targeting
- Display clearly supplies data at a glance
- Shock-absorbing holster increases ruggedness
- 0.2 °C (0.5 °F) resolution
- Backlight illuminates the screen in the dark
- Automatic sleep mode after seven seconds extends battery life
- Alkaline batteries provide 4000 typical measurements

Fluke 63 Infrared Thermometer

- High-resolution optics
- High accuracy: 1 % and repeatability: 0.5 %
- MAX temperature display
- Laser targeting
- Backlit display
- Expanded measurement range up to 535 °C (999 °F)



Fluke 63



Fluke 61 **General specifications**

Size: 190 mm x 51 mm x 41 mm
(7.5 in x 2 in x 1.6 in)
Weight: 341 g (0.75 lb)
Warranty: One-year
Power: 9 V alkaline or NiCd battery
Battery life: 12 hours

Fluke 63 **General specifications**

Size: 200 mm x 160 mm x 55 mm
(8 in x 6 in x 2 in)
Weight: 320 g (11 oz)
Warranty: One-year
Power: 9 V alkaline or NiCd battery
Battery life: 10 hours with laser and backlight on 40 hours with laser and backlight off

Feature	61	63
Temperature range	-18 to 275 °C (0 to 525 °F)	-32 to 535 °C (-25 to 999 °F)
Response time	< 1 second	≤ 0.5 second (95% of reading)
Spectral response	7 to 18 μm	8 to 14 μm
Resolution	0.2 °C (0.5 °F)	0.2 °C (0.5 °F)
Emissivity	Fixed at 0.95	Fixed at 0.95
Repeatability	± 2 °C or ± 2 %, whichever is greater	± 0.5 % or ≤ ± 1 °C (± 2 °F), whichever is greater
Ambient operating temperature	0 °C to 50 °C (32 °F to 120 °F)	0 °C to 50 °C (32 °F to 120 °F)
Relative humidity	10 to 90 % RH at <30 °C (86 °F) ambient	10 to 90 % RH non-condensing, noncondensing, at < 50 °C (120 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F) without battery	-20 °C to 60 °C (-13 °F to 158 °F) without battery
Display hold	No	Yes
Tripod mounting	No	Yes
°C or °F selectable	Yes	Yes
Hard carrying case	No	Yes
Typical distance	1 m (3 ft)	Up to 2 m (6 ft) to target
Distance to spot ratio	8:1	12:1
Accuracy	± 3 °C (5 °F) for targets between -18 °C (0 °F) to -1 °C (30 °F) ± 2 % of reading or 2 °C (3.5 °F) for targets above -1 °C (30 °F) to 275 °C (525 °F) with the instrument stable between 23 °C to 25 °C	-32 °C to -26 °C (-25 °F to -15 °F): ± 3 °C (± 5 °F) -26 °C to -18 °C (-15 °F to 0 °F): ± 2.5 °C (± 4 °F) -18 °C to 23 °C (0 °F to 73 °F): ± 2 °C (± 3 °F) 23 °C to 510 °C (73 °F to 950 °F): ± 1 % of reading or ± 1 °C (± 2 °F), whichever is greater Above 510 °C (950 °F): ± 1.5 % of reading



80PK-8 Pipe Clamp Temperature Probe

- Type-K thermocouple for fast temperature and super-heat measurements of pipe surfaces
- Durable ribbon sensor
- Measurement range: -29 °C to 149 °C (-20 °F to 300 °F) for pipe diameters from 6.4 to 34.9 mm (.25 in to 1.375 in)
- One year warranty
- Accessory for use with DMM with dc millivolt input and 80AK DMM adapter

Ordering information

Fluke-61 Infrared Thermometer

Meter is packaged with holster, instruction sheet and 9 V battery

Fluke-63 Infrared Thermometer

Meter is packaged tripod mounting hard case, operator's guide, users manual on CD-ROM and 9 V Alkaline battery

80PK-8 Pipe Clamp Temperature Probe

Thermometers



General specifications

Size: 17.3 mm x 8.6 mm x 3.8 mm (6.8 in x 3.4 in x 1.5 in)

Weight: 400 g

Batteries: 3 AA batteries; typical 1000-hour life

Fluke 54 Thermometer Laboratory accuracy. Wherever you go.

The Fluke 54 Series II contact thermometer offers fast response and laboratory accuracy (0.05 % + 0.3 °C) in a rugged, handheld test tool.

- Relative time clock on MIN, MAX, and AVG provides a time reference for major events
- Electronic Offset function allows compensation of thermocouple errors to maximize overall accuracy
- Measures J, K, T, and E-types of thermocouples
- Readout in °C, °F, or Kelvin (K)
- Splash and dust resistant case protected by impact absorbing holster
- User-friendly front panel is easy to set up and operate
- Sleep mode increases battery life; typical 1000-hour battery life
- Battery door allows easy battery replacement without breaking the calibration seal
- Optional ToolPak™ accessory allows the thermometer to hang from any metal object (with the rare earth magnet) or secure around a pipe (with hook-and-loop straps) for hands-free operation.
- Large backlit dual display shows any combination of T1, T2, T1-T2, plus MIN, MAX, or AVG.
- Additional thermocouple types R, S, and N (for a total of 7 different types)
- Recall function allows logged data to be easily reviewed on the meter display
- IR communication port allows data to be exported to optional FlukeView® Forms Temperature PC software for further analysis and graphing
- Data Logging up to 500 points of data with user adjustable recording interval



14

Ordering information

Fluke 54 II

Dual Input Digital Thermometer includes: Impact absorbing holster and two 80PK-1 beaded probe thermocouples

Summary specifications

Feature	
Thermocouple types	K,J,T,E,N,R,S
Number of inputs	Dual
Time stamp	Time of day
Temperature measurement accuracy (for temperatures above -100 °C)	Type J,K,T,E,N: ± [0.05 % + 0.3 °C (0.5 °F)] Type R,S: ± [0.05 % + 0.4 °C (0.7 °F)]
Measurement range (depending on thermocouple type)	-250 °C (-418 °F) to 1767 °C (3212 °F)
Display resolution	0.1 °C /°F/K < 100° 1° °C/°F/K ≥ 1000°
Operating temperature	-10 °C to 50 °C (14 °F to 122 °F)
Storage temperature	-40 °C to 60 °C (-40 °F to 140 °F)
Humidity	0 % to 90 %; 0 °C to 35 °C (32 °F to 95 °F), 0 % to 70 %; 0 °C to 50 °C (32 °F to 122 °F)

Electrical Testers



Fluke T5-600 Electrical Tester Electrical tester with OpenJaw™ Current

The Fluke T5-600 Electrical Tester lets you check voltage, continuity and current with one compact tool. With the T5, all you have to do is select volts, ohms, or current and the tester does the rest. OpenJaw™ current lets you check current up to 100A - without breaking the circuit. Its tough test leads stow neatly in the back of the tester, making it easy to tote the T5 in your tool pouch. Detachable SlimReach™ test probes are customized for national electrical standards. The test leads accept optional accessories such as clips and specialty probes. The optional H5 holster lets you clip the T5 onto your belt.

- Automatically measures volts ac and volts dc with precise digital resolution
- Displays resistance to 1000 Ω
- Easy and accurate OpenJaw™ current measurement
- Continuity beeper
- Compact design with neat probe storage
- Rugged enough to withstand a 10-foot (3 m) drop
- Detachable SlimReach™ probe tips are customized for national electrical standards
- Available in 600 V and 1000 V models
- Auto off mode to conserve battery life



Ordering information

T5-600 600 V Voltage, Continuity and Current Tester

Meter is packaged with detachable probes and instruction sheet

Function	Range
Measure dc voltage	600 V
Measure ac voltage	600 V
Measure ac current (average)	100 A
Measure continuity	< 25 Ω
Measure resistance	1000 Ω
DC polarity indicator	Yes
Detachable probe tips with optional probe tips styles	Yes
Safety rating	600 V Overvoltage CAT III
Warranty	Two-years

Fluke T5-600 General specifications

Size: 30.5 x 51 x 203 mm

Weight: 300 g

Warranty: 2 years

Battery life: 200 hour zinc chloride, 400 hour alkaline

Battery type: Two AA zinc chloride

Low battery indicator: Yes

Current sensor opening: 12.9 mm

Calibration cycle: 1 year

Test leads: Heavy duty, flexible leads rated for 1000 V use. Field replaceable leads terminate in male shrouded banana plugs.

Probes: Detachable Slim-Reach™ probe included

Styles: TP4 4 mm round

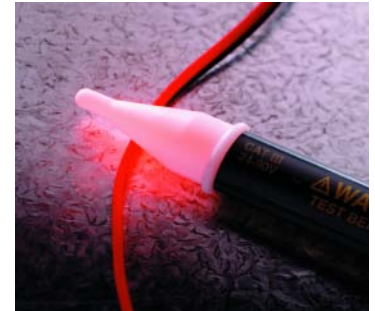
Electrical Testers



Fluke VoltAlert™ 1AC Easy-To-Use Voltage Detector

VoltAlert™ ac voltage tester from Fluke is easy to use—just touch the tip to a terminal strip, outlet, or cord. When the tip glows red, you know there's voltage in the line. Electricians, maintenance, service, safety personnel, and homeowners can quickly test for energized circuits and defective grounds on the factory floor, in the shop, or at home.

- Fits in a shirt pocket for convenience
- All outer surfaces are non-conductive for safety
- Detects voltage without metallic contact
- Manufactured, printed and packaged in the US
- Quickly locates the hot, neutral and ground terminals in any receptacle



1AC General specifications

Size: 146 mm L x 19 mm D
(5.75 in L x 0.75 in D)

Weight: 41 g with batteries
(1.45 oz)

Outer surface: Probe is composed of injection molded high-impact, non-flammable PVC and ABS

HVAC Pressure Testers

16

Ordering information

Fluke-1AC Voltage
Detector

PV350 Pressure Vacuum
Module



PV350 Pressure Vacuum Module

- Compatible with all Fluke and most popular DMMs
- Digital pressure and vacuum measurements in a single module
- Transducer sealed in 316 stainless steel compatible with a variety of liquids and gases
- Measures vacuum to 76 cm Hg
- Displays results in English (psig or Hg) or metric (kPa or cm Hg) units
- Measures pressure to 3447 kPa (500 psig)

Accessories

Test Leads and Probes



TL81A Deluxe Electronic Test Lead Set

- 22 piece set with quadfold pouch
- Includes mini alligator clips, hooks and pincers for virtually every electronic need
- Slide-on IC probe tip adapter and test lead couplers
- Both modular test leads and lead-probe combinations
- CAT II 300 V
- Use with 179 and 87V DMM



TL910 Electronic Test Probes with Replacement Tips

- Small profile provides accessibility
- Comes with 5 sets of replaceable tips
- Replacement tips: TP912
- CAT III 1000 V, 3 A

Push-On Clips



AC72 Alligator Clips

- Slide-on style for test probes
- Jaws open to 8 mm
- For use with TL71 and TL75 test lead and probe sets
- CAT III 1000 V, 10 A, CAT IV 600 V, 10 A

Test Lead and Probe in One



TL71 Premium DMM Test Lead Set

- Flexible silicone insulated leads are heat and cold resistant
- Distinctive comfort grip probes
- Recommended for μ V measurements
- CAT III 1000 V, 10 A, CAT IV 600 V, 10 A
- Use with 16, 179, 87V DMM and 336 Clamp Meter



TL76 2 mm/4 mm Test Lead Set

- 2 mm threaded probes with removable 4 mm banana-style spring contacts
- Flexible 1.5 m silicone leads
- CAT III 1000 V, CAT IV 600 V, 10 A
- Use with 16, 179, 87V DMM and 336 Clamp Meter

Sets and Kits



TL220 Industrial Test Lead Set

- Starter kit for industrial applications
- TP220 has round, stainless steel tip
- Includes 1 pair: AC220, TP220, TL222
- CAT III 1000 V, CAT IV 600 V, 10 A
- Use with 16, 179, 87V DMM and 336 Clamp Meter

Accessories

AC Current Clamp

i400s AC current clamp for oscilloscopes and power quality analyzers

- Pair a current clamp with your scope or power quality meter to measure up to 400 A ac
- Only current clamp available with a CAT IV 600 V / CAT II 1000 V safety rating makes them ideal companions for modern CAT IV rated meters
- Specially designed to offer maximum utility in a compact shape
- Take accurate current readings without breaking the circuit
- Soft non-slippery overmold handle
- Can be used with DMMs with optional PM9081/001 BNC/Banana adapter



New

Adapters



PM9081

- Dual Banana Plug 4 mm male to female BNC Adapter
- The set consists of two adapters

Temperature Accessories

80AK DMM Adapter

- Adapts Type-K thermocouple mini-connector to dual banana plug inputs
- Compatible with all Fluke DMMs with temperature measurement functions
- Measurement range and accuracy is not affected by the 80AK adapter



80BK Integrated DMM Temperature Probe

- Compatible with all Fluke DMMs with temperature measurement functions
- K-Type thermocouple with standard banana jack
- Convenient one-piece construction
- Measurement range: -40 °C to 260 °C (-40 °F to 500 °F)



Soft Cases

C12A Meter Case

- Zippered carrying case with inside pockets and belt loop
- For 110, 111, 112, 12 and 16 DMMs



C90 Meter Case

- Zippered carrying case with inside pocket and belt loop
- Holds mid-sized DMMs and process meters



C25 Meter Case

- Zippered carrying case with padding and inside pocket
- Holds large DMMs and process meters



C125 Meter Case

- Zippered carrying case with detachable external pouch



Holster

C10 Meter Holster

- Snap on yellow holster absorbs shocks and protects meter from rough handling
- Fits Fluke 10 Series DMMs



High-Voltage Probes

80K-40 High Voltage Probes

- Allows a digital multimeter to measure up to 40,000 volts peak
- 1000:1 division ratio output when connected to 10 MΩ multimeter
- Ground clip included
- Intended for low energy applications that are referenced to ground



18

Modular Clips (for use with test leads)

AC220 SureGrip™ Alligator Clips

- Insulated, nickel plated jaws grip objects up to 3/8 in.
- Blunt tip grabs round screw heads
- CAT III 1000 V, CAT IV 600 V, 10 A



AC285 SureGrip™ Alligator Clips

- Multi-purpose tooth pattern grips anything from fine gauge wire to a 3/4 in. nut
- Nickel-plated steel jaws
- CAT III 1000 V, CAT IV 600 V, 10 A



Fluke provides the tools and support to keep you up-to-date on the latest in HVAC/R and IAQ

Visit www.fluke.com/user/support/appnotes for application notes such as:

Evaluating Indoor Air Quality with the FLuke 983 Particle Counter

Information on conducting a basic IAQ investigation, interpreting the data and how to understand particle counter readings. A cleanroom exercise is also included.

HVAC/R: Service Tips with Fluke Multimeter and Accessories

How to tackle some typical troubleshooting tasks in refrigeration, air conditioning, heat pump and heating applications.

Troubleshooting HVAC/R Systems

Troubleshoot the refrigeration system while applying the principles of superheat and sub-cooling to HVAC/R equipment.

Contact your local Fluke sales organization for the following (in the United States, call 1-800-44-FLUKE, outside the U.S. call +1-425-446-5500):

	Air Conditioning and Refrigeration Troubleshooting Guide Poster	2114638
	Heating System Common Test Point Poster	2114623
	Ohm's Law Poster	2100120
	Pressure Temperature Chart Poster	2114645
	Understanding Safety Categories Poster	2096630
	Pressure Temperature Pocket Card	1265816



Fluke Plus keeps you on the edge

FLUKE®



FlukePlus membership rewards you with benefits you can use and it's FREE!

Sign up for the first members-only program created for test tool users. Get exclusive access to:

- Product tips and "how to" articles
- Previews of the latest news and applications from Fluke
- **Exclusive offers** and promotions
- Direct connection to Fluke technical support
- **Advance notice** about the hottest new products from Fluke

HVAC/R pressure temperature calculator

Calculate temperature and pressure anytime, anywhere

- Dual display of temperature and pressure
- Select from 14 refrigerant types
- Available for PC, Pocket PC, selected mobile phones and Palm (OS 3.0 and higher)

For exclusive membership benefits, sign up at www.fluke.com/flukeplus

Promotions included in FlukePlus are open to U.S. residents only at this time.

Service and repair locations worldwide

To contact Fluke or to locate an authorized service center, call one of the following telephone numbers:

USA: 1-888-99-FLUKE
(1-888-993-5853)

Canada: 1-800-36-FLUKE
(1-800-363-5853)

Europe: +31 402-675-200

Japan: +81-3-3434-0181

Singapore: +65-738-5655

Other countries: +1-425-446-5500

Or visit the Fluke web site at www.fluke.com.

Fluke. Keeping your world up and running.

Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.

PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:

In the U.S.A. (800) 443-5853 or

Fax (425) 446-5116

In Europe/M-East/Africa (31 40) 2 675 200 or

Fax (31 40) 2 675 222

In Canada (800)-36-FLUKE or

Fax (905) 890-6866

From other countries +1 (425) 446-5500 or

Fax +1 (425) 446-5116

Web access: <http://www.fluke.com>

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Fluke
Plus

Accessories Selection Guide

	16	179	87V	54II	61	336	T5
Current	i200		•	•			
	i200s	•	•	•			
	i400		•	•			
	i400s	2	2	2			
	80i-600A		•	•			
	i1000s	2	2	2			
	i2000flex	•	•	•			
	i3000s	•	•	•			
	i410	•	•	•			
	i1010	•	•	•			
Temperature	80AK	•	•	•			
	80BK	•	•	•			
	All 80PK probes	1	1	1	•		
	80PJ-1 & 80PJ-9				•		
	80PT-25				•		
	80T-1500U			•			
	80PJ-EXT				•		
	80PK-EXT	1	1	1	•		
	80PT-EXT				•		
	80CK-M	1	1	1	•		
80CJM				•			
Cases and Holsters	C510	•	•	•			
	C520						•
	C550	•	•	•	•	•	•
	C12A	•					
	C23	•			•		
	C25		•	•	•	•	
	C33					•	•
	C43			•			
	C50	•			•		
	C90	•	•		•		
	C125	•	•	•			
	C20			•			
	C100		•	•			
	C800	•	•	•			
	C10	•					
	H80M			•			
	H3					•	
	H5						•
	ToolPak Meter Hanger		•	•	•		
Test Leads	Standard Test Lead Input	•	•	•	•	•	•
	TL220	•	•	•		•	
	TL223	•	•	•		•	
	TL238	•	•	•		•	
	TL80A		•	•			
	TL81A		•	•			
	TL71	•	•	•		•	
	TL76	•	•	•		•	
Specialty	FlukeView® Forms Software			•			
	PV350 (pressure)	•	•	•			
	FOM (fiber optic)	•	•	•			
	CO-210	•	•	•			
	80K-6, 80K-15, 80K-40	dc	•	•			

(1) Requires 80AK (2) Requires PM9081/001 Adapter

Oscilloscopes for field applications



Powerful ScopeMeter® test capabilities:

- From 20 to 200 MHz bandwidth and up to 2.5 GS/s real-time sampling
- Up to seven hours operating time
- Now with FFT Analysis, advanced triggering and 3k memory length

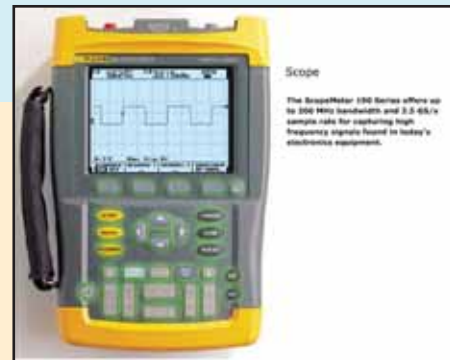
All this power in your hand



ScopeMeter® 190C and 190B Series: Speed, performance and analysis power

For the more demanding applications, the ScopeMeter 190 Series high-performance oscilloscopes offer specifications usually found on top-end bench instruments. With up to 200 MHz bandwidth, 2.5 GS/s real-time sampling and a deep memory of 27,500 points per input they're ideal for engineers who need the full capabilities of a high-performance oscilloscope in a handheld, battery powered instrument.

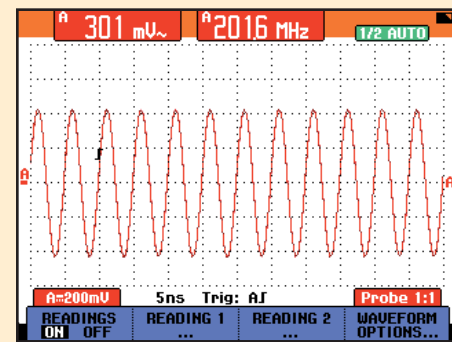
- Dual-input – 200, 100 or 60 MHz bandwidth
- Up to 2.5 GS/s real-time sampling per input
- Up to 1000 V independently floating isolated inputs for 1000 V CAT II and 600 V CAT III safety certification
- Four hours rechargeable NiMH battery pack



See an English on-line demonstration, go to www.fluke.com/scopemeter

A choice of bandwidth

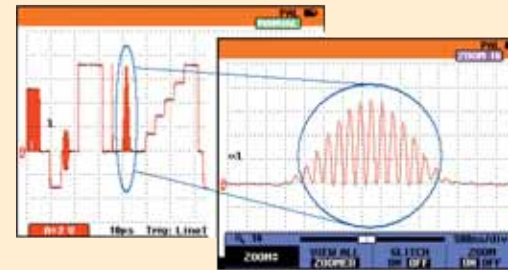
The ScopeMeter 190C and 190B Series offer up to 200 MHz bandwidth for capturing high-frequency signals found in today's state-of-the-art electronics.



High sampling rates give you the required resolution for detailed signal analysis.

See what's really happening

With a maximum real-time sampling rate of 2.5 GS/s per input, you can see what really happens, with 400 ps resolution. Both inputs have their own digitizer, so you can simultaneously acquire two waveforms and analyze them with the highest resolution and detail. If an anomaly flashes by on the screen, just press the Replay button to see it again. And thanks to the wider screen, you will always see a 12 divisions time window giving a far better overview of what's happening both before and after the trigger event!



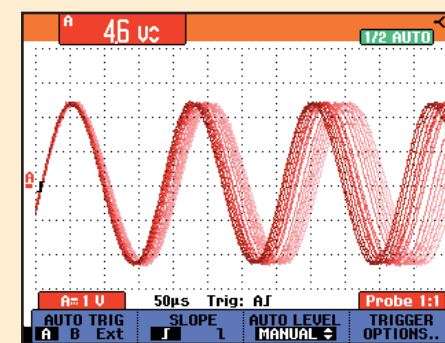
Thanks to the deeper memory, very small parts of the waveform can be studied in full detail using 'zoom'.

NEW! Deeper waveform acquisition memory

The waveform memory of all oscilloscopes in both the 190B and 190C Series has been enlarged to allow as many as 3000 samples per channel to be acquired. You can use the ZOOM function to find tiny details in a long waveform, for example, the color burst in a video signal or a single impulse in a complex data-stream. All models also allow the high-resolution waveforms to be transferred to a PC for later detailed analysis using FlukeView ScopeMeter software.

Easier identification of traces, everywhere

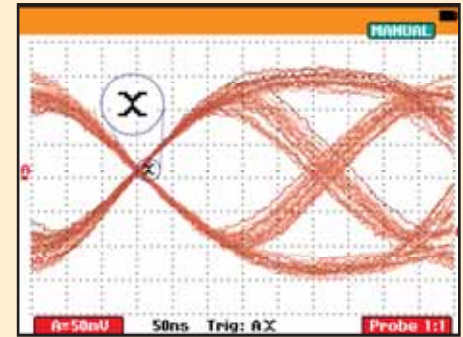
The full-color display makes identification of individual waveforms easier, particularly when displaying large amplitude or multiple overlapping waveforms on screen. On-screen color labels, measurements and warnings are clearly linked to specific waveforms.



Digital Persistence mode gives analog scope-like display of complex and modulated signals.

See dynamic signal behavior instantaneously

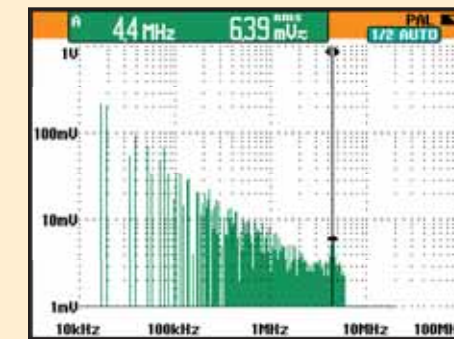
The Digital Persistence mode (Fluke 190C) helps to find anomalies and to analyze complex dynamic signals by showing the waveforms amplitude distribution over time. Digital Persistence uses multiple intensity levels and user selectable decay time it's as if you're looking at the display of an analog, real time oscilloscope! The fast display update rate that's standard on all models reveals signal changes instantaneously, useful for instance when making adjustments to a system under test.



Dual-slope triggering used to capture the eye-pattern on a digital datastream.

Advanced trigger modes

The ScopeMeter 190 Series greatly simplifies triggering with Connect-and-View™ automatic triggering. Two new modes – "n-cycle triggering" and "dual-slope triggering" – have been added to the Fluke 190C Series to help you isolate the phenomena of interest. N-cycle triggering ensures you get a stable live image of a signal, for example, in-frequency dividers and clocked (synchronous) digital systems, or to synchronize on bursts of pulses. Dual-slope triggering enables the oscilloscopes to trigger on both rising and falling edges alike. This means that any edge in the signal will act as a trigger event and initiate a new waveform acquisition, a most useful capability when making eye-patterns from digital data-streams, or in conjunction with single-shot phenomena. However, manual triggering is sometimes required. Manual modes include edge, delay, video and pulse width triggering. A fully isolated external trigger input is included for troubleshooting time relationships between two input signals synchronized to a third signal.

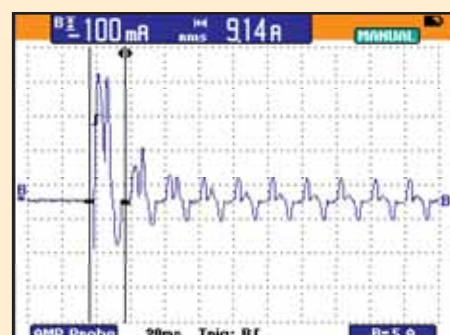


Frequency Spectrum shows an overview of frequencies contained in a signal.

NEW! Frequency Spectrum Analysis

All 190C Color ScopeMeter models now include Frequency Spectrum Analysis functionality based on Fast Fourier Transformation (FFT) analysis as a standard feature. This enables you to identify the individual frequency components contained in a signal. The spectrum analysis function is also handy for revealing the effects of vibration, signal interference or crosstalk. An automatic window function assures optimal windowing, although you may manually select your preferred time window.

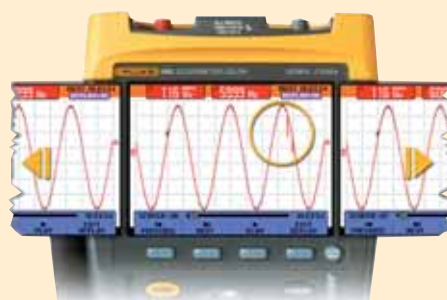
ScopeMeter 190 Series



The inrush current is measured on the part of the waveform enclosed by the cursors.

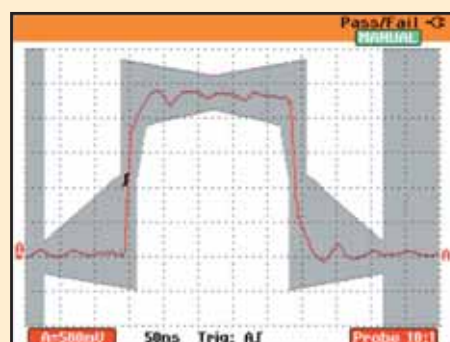
NEW! Cursor-limited automatic measurement

ScopeMeter 190C and 190B features 30 automatic measurements, cursors, zoom and real-time clock. Now automatic power and Vrms-measurements can be performed on a specific, user identified portion of the waveform using the cursors of the Fluke 190C to define the time-window of interest. In this way, the ScopeMeter 190C measures the power within a specified time span, or the rms-value of a voltage during a dedicated period of time.



Automatic capture and replay of 100 screens

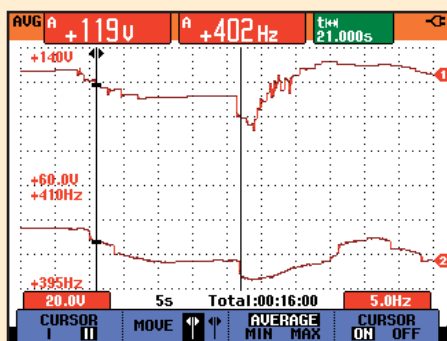
Scope users know how frustrating it is to see a one-time anomaly flash by never to be seen again. Not with the ScopeMeter 190 Series! Now you can look back in time with a touch of the replay button. In normal use, the instrument continuously memorizes the last 100 screens. Each time a new screen is acquired, the oldest is discarded. At any moment, you can "freeze" the last 100 screens and scroll through picture-by-picture or replay as a "live" animation. Cursors can be used for further analysis. You can even use the advanced trigger capabilities to capture up to 100 specific events. Two sets of 100 captured screens with individual time stamps can be stored for later recall or download to a PC.



Pass/Fail testing of actual signal against a reference template

Waveform Pass/Fail Testing

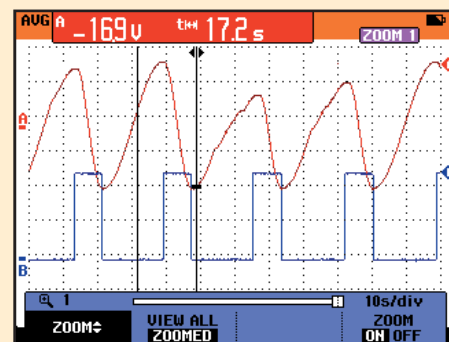
"Waveform reference" allows an acquired trace to be stored and designated "reference trace" for visual comparisons, or it can be used as the reference for automatic "Pass/Fail" testing (190C). Up to 100 individually matching ("Pass") or non-matching ("Fail") waveforms can be stored in the replay memory, allowing you to monitor your system's behavior over a long period of time, without having to be present!



Cursors and zoom featured by the 190 Series help you to analyze the captured TrendPlot.

Use TrendPlot™ to help find intermittents, fast

The toughest faults to find are those that happen only once in a while – intermittents. They can be caused by bad connections, dust, dirt, corrosion or simply broken wiring or connectors. You may not be around to see it – Fluke's ScopeMeter will. In this "paperless recorder" mode, you can plot the minimum and maximum peak values and average over time – up to 22 days. The two inputs can plot any combination of volts, amps, temperature, frequency and phase – with time and date stamp – to help lead you to the cause of those faults quickly.



Use the 27,500 points memory of ScopeRecord and zoom in for maximum detail.

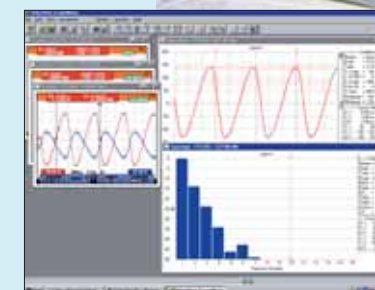
Deep memory for high-resolution ScopeRecord™

The ScopeRecord memory stores 27,500 points per input or more, for high resolution recording of events up to 48 hours, and captures fast intermittents and glitches as short as 50 ns. This continuous roll mode, for example, stores events like motion profiles, UPS, power supply and motor start-ups. All models also have a "Stop-on-Trigger" in the ScopeRecord mode. This allows the ScopeMeter to store waveform data until the instrument is triggered or until a repetitive trigger signal is interrupted. This way, the instrument will, for example, automatically recognize a power failure and store the waveform data preceding it. And with 100 x zoom, you can look at the smallest details, like individual power cycles. Two of these 27,500 point recordings can be stored for later analysis.

FlukeView® Software for documenting, archiving and analysis

FlukeView for Windows® helps you get more out of your ScopeMeter® by:

- **Documenting** – transfer waveforms, screens and measurement data from the ScopeMeter to a PC. Print or import the data into your report.
- **Adding user text to individual ScopeMeter settings** – providing guidance to the operator when recalling a set-up.
- **Archiving** – create a library of waveforms with your comments for easy reference and comparison. Store complete Replay cycles for analysis of waveform changes. Store complete memory content of the ScopeMeter on your PC for back-up purposes.
- **Waveform Compare** – store reference waveforms, add operator instructions, and send both to the ScopeMeter for waveform comparison and "Pass/Fail" testing.
- **Analysis** – use cursors, perform spectrum analysis or export data to other analysis programs.
- **Connection to a PC via an optically-isolated interface cable** – Software and cable come as separate items or as part of a special value kit. This kit also includes a protective hard shell carrying case for safe and convenient storage of instrument and accessories.

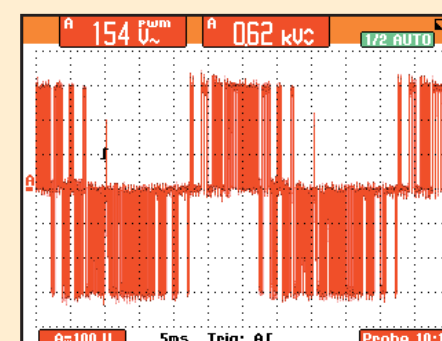


ScopeMeter Special Value Kit

FlukeView Software and the optically isolated interface cable come as separate items, or as part of the special value SCC-Kit. This kit contains:

- FlukeView Software (SW90W)
- Optically Isolated Interface Cable (For USB)
- Protective Hard-Shell Carrying Case (C190 or C120)

The SCC-kit can be ordered separately, or with the main instrument by adding an "S" to the main instrument type number, e.g., Fluke 199C/S (see Ordering Information on back cover for more detailed information).



Vpwm measures effective voltage on motor drive and frequency inverter outputs.

Measure from mV to kV – fully isolated and safely!

The ScopeMeter 190C and 190B series have three independently floating isolated inputs. While conventional oscilloscopes can only make measurements referenced to the line power ground, measurements on each of the Fluke ScopeMeter 190 series inputs can be referenced to a different "low" level. This enables measurements in mixed circuits having different ground references, and also eliminates the risk of accidental ground short

circuits. All inputs are safety certified for measurements in 1000 V CAT II and 600 V CAT III environments. And the standard probes cover a wide application range from mV to kV, making the 190C and 190B ScopeMeter ideal for micro electronics to electrical applications.

Many more new functions

- Variable gain on channel A helps you compare signals on the two inputs.
- The Vpwm measurement is for measuring the effective rms output voltage of variable speed motor drives and frequency inverters.
- The high-sensitivity setting of 2 mV/div allows for measurements on low-level signals, that are hard to make with the average oscilloscope. (Fluke 190C)
- For medical imaging diagnostics or high-resolution video applications, an optional configuration is available with current over time (mAs), high-resolution video triggering (up to 2800 lines) and more.



As simple as one-two-three



ScopeMeter® 120 Series

The compact ScopeMeter 120 Series is the rugged solution for industrial troubleshooting and installation applications. It's a truly integrated test tool, with oscilloscope, multimeter and "paperless" recorder in one affordable, easy-to-use instrument. Find answers fast to problems in machinery, instrumentation, control and power systems.

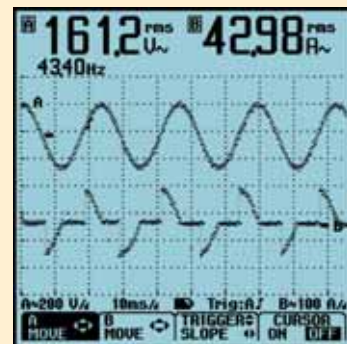
- Dual-input 40 MHz or 20 MHz digital oscilloscope
- Two 5,000-count true-rms digital multimeters
- A dual-input TrendPlot™ recorder
- Connect-and-View™ trigger simplicity for hands-off operation
- Shielded test leads for oscilloscope, resistance and continuity measurements
- 10:1 Voltage Probe included with Fluke 124 for reduced circuit loading
- Up to seven hours battery operation
- 600 V CAT III safety certified
- Optically isolated interface
- Rugged compact case

ScopeMeter 120 Series test tools include innovative shielded test leads covering all scope and meter functions. The bright display shows scope waveforms and meter readings in one screen. The integrated holster stands up to the roughest treatment.



In today's complex systems, a meter measurement just doesn't give enough detail to determine the cause of a fault. Signal anomalies, dropouts and glitches that might cause a machine to go down are best displayed with an oscilloscope.

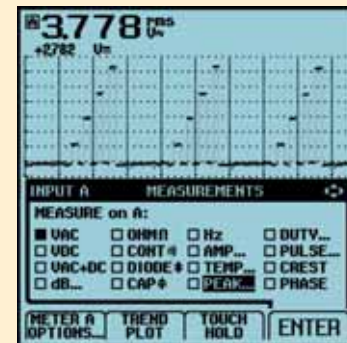
The ScopeMeter 124 and 123 meet today's need of simultaneously measuring and checking waveforms. The unique Connect-and-View™ triggering automatically displays stable waveforms of virtually any signal. It really is as easy as one-two-three!



Dual-input measurement shows both meter reading and waveform at the same time.

A three-in-one tool

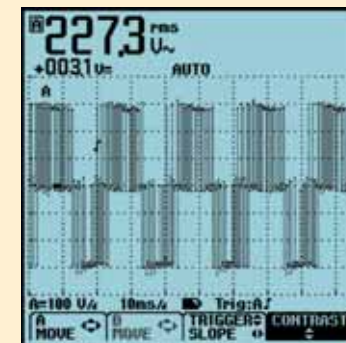
ScopeMeter 120 Series combines a 40 or 20 MHz dual input digital storage oscilloscope, two true-rms digital multimeters and a dual input TrendPlot™ recorder all in a compact, battery powered instrument. Leave all other test tools behind because the ScopeMeter 120 Series test tool is the only one you'll need.



Switch-on and open measure menu to select from 26 scope and meter measurements.

The confidence to do a better job

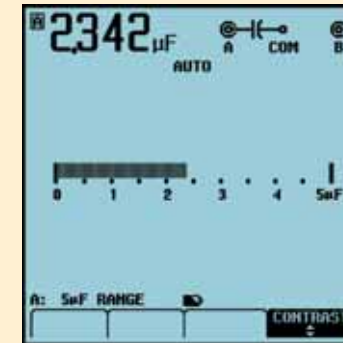
Working under time pressure and in cramped or difficult-to-reach locations means you want to focus on the job at hand, not on the test tool in your hand. That's why the ScopeMeter 120 Series has Connect-and-View automatic triggering. You don't have to worry about triggering and instrument settings and you have all the information on screen to do the job right.



Connect-and-View captures even the most complex motor drive signals.

Connect-and-View™ triggering for an instant, stable display

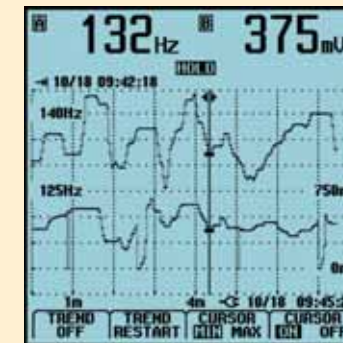
Scope users know how difficult triggering can be. Incorrect settings show unstable and sometimes incorrect results. The unique Connect-and-View function recognizes signal patterns and automatically sets up correct triggering. It provides a stable, reliable and repeatable display of virtually any signal, including motor drive and control signals, without touching a button. Signal changes are instantly recognized and settings adjusted for a stable display. Benefit from the speed and convenience when measuring a number of test-points in quick succession.



Check the starting capacitor of a motor with the ScopeMeter 120 Series.

One test lead measures all

High frequency waveform, meter, capacitance and resistance measurements as well as continuity checks are all covered by the shielded test leads. No time wasted finding or swapping leads. The included accessories allow hook-up at test objects of every dimension.



Cursors featured in the Fluke 124 can help analyze the captured Trendplot.

Use TrendPlot™ to help find intermittents, fast

The toughest faults to find are those that happen only once in a while – intermittents. They can be caused by bad connections, dust, dirt, corrosion or simply broken wiring or connectors. Other factors, like line outages and sags or the starting and stopping of a motor, can also cause a machine to stop. You may not be around to see it your Fluke ScopeMeter will. In this "paperless recorder" mode, you can plot the minimum and maximum peak values and average over time up to 16 days. The two inputs can plot any combination of volts, amps, temperature, frequency and phase – with time and date stamp – to help lead you to the cause of those faults quickly.

Battery powered mobility

Up to seven hours of battery operation frees you from mains outlets for true on-the-move working. The handheld format and the weight of just 1.2 kg make the instrument easy to carry and to fit comfortably in your hand. The rugged and drip proof case assures long life and reliable operation in the harshest industrial environments. (See technical specifications for details on battery life.)

Floating measurements, safety certified

While conventional oscilloscopes can only make measurements referenced to power line ground, the Fluke 120 Series makes floating measurements so there's no risk of an accidental ground short circuit when making a connection.

The Fluke ScopeMeter 120 Series test tools and the included shielded test leads are safety certified for measurements on 600 V CAT III industrial power systems. Using the VPS40 probe, measurements up to 1000 V CAT II are fully supported. Via the optically isolated interface, the ScopeMeter 120 can be safely connected to a printer for direct print-out or to a PC for later analysis and documentation using FlukeView® Software (for additional details about FlukeView software see page 5).

Specifications - 120 and 190 Series ScopeMeter® Test Tools

	190C ScopeMeter Series			190B ScopeMeter Series			120 ScopeMeter Series	
	Fluke 199C	Fluke 196C	Fluke 199B	Fluke 196B	Fluke 192B	Fluke 124	Fluke 123	
Bandwidth	200 MHz	100 MHz	200 MHz	100 MHz	60 MHz	40 MHz	20 MHz	
Max real time sample rate	2.5 GS/s	1.0 GS/s	2.5 GS/s	1.0 GS/s	0.5 GS/s	25 MS/s	25 MS/s	
Max record length (per input)	3000 Points					512 Points (min/max pairs)		
Number of Inputs	2 Scope and 1 DMM (Isolated)					2 Scope Or DMM		
Input sensitivity	2 mV/div. to 100 V/div.		5 mV/div. to 100 V/div.			5 mV/div. to 500 V/div.		
Independently isolated floating inputs	●					—		
Display and Display Modes								
Display	Color			Monochrome			Monochrome	
Persistence	Digital with variable decay			On/Off			—	
Envelope mode	●					●		
Waveform compare	visual + automatic			visual only			—	
FFT	●			—			—	
Pass/fail testing	●			—			—	
Triggering								
Connect-and-View™ trigger	●					●		
Edge, single, free run	●					●		
Video	●					●		
Video lines	●					●		
Pulse width	●					—		
External	●					With ITP 120 Option		
Advanced Functions								
Cursors	●					●		
Zoom	●					—		
Dual input Trendplot™	●					●		
ScopeRecord™ mode	●					—		
Automatic capture and replay last 100 screens	●					—		
Waveform mathematics	●					—		
Save setups and screens	10					20		10
True-rms multimeter	5000 Counts Volts, Amps, Ohms, Continuity, Diode, Temp							
Safety, Power and Warranty								
Safety (EN61010-1)	1000 V CAT II/600 V CAT III					600 V CAT III ¹		
Battery	4 hour Ni-MH					7 hour NiMH		5 hour NiCd
Line power	Adapter/battery charger included							
PC printer interface	Using Optional Optically Isolated RS-232 adapter cable PM9080 or PAC91 printer adaptable cable							
Warranty	Three-year on main instrument/One-year on standard accessories							

¹Max Input voltage 1000 V CAT II with VPS40, 40 MHz 10:1 Voltage probe.

Ordering Information

Fluke 199C	Color ScopeMeter 200 MHz / 2.5 GS/s
Fluke 199C/S	Color ScopeMeter 200 MHz / 2.5 GS/s with SCC190
Fluke 196C	Color ScopeMeter 100 MHz / 1 GS/s
Fluke 196C/S	Color ScopeMeter 100 MHz / 1GS/s with SCC190
Fluke 199B	ScopeMeter 200 MHz / 2.5 GS/s
Fluke 199B/S	ScopeMeter 200 MHz / 2.5 GS/s with SCC190 kit
Fluke 196B	ScopeMeter 100 MHz / 1 GS/s
Fluke 196B/S	ScopeMeter 100 MHz / 1 GS/s with SCC190 kit
Fluke 192B	ScopeMeter 60 MHz / 500 MS/s
Fluke 192B/S	ScopeMeter 60 MHz / 500 MS/s with SCC190 kit
Fluke 124	Industrial ScopeMeter, 40 MHz
Fluke 124/S	Industrial ScopeMeter, 40 MHz, with SCC120 kit
Fluke 123	Industrial ScopeMeter, 20 MHz
Fluke 123/S	Industrial ScopeMeter, 20 MHz, with SCC120 kit
PM9080	Optically Isolated adapter/cable
SW90W	FlukeView ScopeMeter Software for Windows
OC4USB	Optically isolated interface cable for USB
VPS40	40 MHz, 10:1 probe set for use with Fluke 120 Series
BP120	Rechargeable NiCd Battery for use with Fluke 120 Series
BP130	Rechargeable NiMH Battery for use with Fluke 120 Series
BP190	Rechargeable NiMH Battery for use with Fluke 190 Series
SCC190	FlukeView Software + Cable + Case kit for Fluke 190 and 190C Series
SCC120	Software - Cable - Case kit for Fluke 120 Series

- ScopeMeter test tools come standard with a complete accessory package including line voltage adapter and battery pack (installed), a set of voltage probes (one red and one grey) and test leads.
- Optional accessories ordering information can be found in the technical datasheet or on the Fluke web site.

Fluke. Keeping your world up and running.

Fluke Corporation
PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:
In the U.S.A. (800) 443-5853 or
Fax (425) 446-5116
In Europe/M-East/Africa
Phone +31 (0)40 2675 200
Fax +31 (0)40 2675 222
In Canada (800) 36-FLUKE or
Fax (905) 890-6866
From other countries
+1 (425) 446-5500 or
Fax +1 (425) 446-5116
Web access: <http://www.fluke.com>

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Go to www.fluke.com/scopemeter for an on-line ScopeMeter demonstration, or to see a fully functional software simulation, plus you can download a specification sheet.

FLUKE®

Non-contact Thermometers

from the #1 name in test tools

Industrial infrared thermometers for every application



62 Mini



576

574

572



63

66

68

You will find all the information you need in this brochure to order and promote the newest non-contact infrared thermometers from Fluke.

Professional non-contact infrared thermometers

Just point and shoot.

Fluke offers a full line of industrial non-contact infrared (IR) thermometers for a complete range of applications. From quickly identifying hot and cold spots for routine troubleshooting to monitoring, logging, and analyzing precise temperature as part of a predictive maintenance program, Fluke has the right tool for the job—even when the job requires measuring the temperature of very hot, very cold, hard-to-reach, moving, distant or dangerous objects.

And Fluke backs its tools with the industry's best warranty and highest rated customer service. When professional technicians need industrial IR thermometers, they come to the number one name in test tools.





Key markets:

- **Predictive and preventive maintenance**
Electrical and mechanical equipment monitoring
- **HVAC/R**
Residential and commercial troubleshooting
- **Process monitoring**
Product quality assurance
- **Construction**
Building inspections
- **Petrochemical applications and hazardous locations**
Mechanically, thermally or chemically hostile environments

Temperature measurement techniques:

- **Spot:** determine the absolute surface temperature of a given spot on an object
- **Temperature differential:** compare two spot measurements against each other
- **Scanning:** detect changes along a wide or continuous target region



Fluke 62 Mini

For quick, basic temperature checks in applications where the technician is close to the target, there's nothing simpler than using a Fluke 62 Mini—just aim the laser sighting at the center of your target, pull the trigger, and read the temperature on the large, backlit LCD. Rugged enough for industrial environments with its protective rubber “boot”, the 62 Mini also comes with a handy storage pouch that can be snapped to your belt, keeping quick temperature checks at your fingertips.



Model	Fluke 62 Mini
Temperature range	-30 to 500 °C (-20 to 932 °F)
D:S (Distance to spot size) at 80% energy	10:1
Laser sighting	Single point, offset
Emissivity	Preset 0.95
Accuracy (Assumes ambient operating temperature of 23 °C [73 °F])	± 1 °C (2 °F) from 10 °C to 30 °C (50 °F to 86 °F), ± 1.5% of reading or ± 1.5 °C (3 °F) (whichever is greater over the balance of the range)
Response time	500 mSec
Nylon holster	•
Weight and dimensions	200 g (7 oz) and 152 x 101 x 38 mm (6 x 4 x 1.5 in)
Power	9 V alkaline or NiCD battery
Battery life (alkaline)	12 hours
Display hold	7 seconds
LCD backlit	•
Warranty	2 years, conditional



Included with the 62 Mini IR thermometer

The Fluke 62 Mini IR thermometer includes a 9 V alkaline battery, illustrated user's guide, protective boot and convenient storage pouch.



Ordering information

To order Fluke products, contact your local Fluke representative.

Product ordering information for distributor purchasing agents.

Fluke Model #	Fluke Oracle #	UPC Code	Description	Height (Metric/English)	Length (Metric/English)	Width (Metric/English)	Weight (Metric/English)	Country of origin
FLUKE-62	2433868	0 95969 29112 5	Infrared Thermometer	235 mm/ 9.25 in	165 mm/ 6.5 in	64 mm/ 2.5 in	0.270 kg / 0.60 lb	China

Fluke 63, 66 and 68

Professional technicians select the rugged Fluke 63, 66 or 68 IR thermometers for maintenance diagnostics in demanding environments. The durability, optical resolution, accuracy and extended temperature ranges make the Fluke 63, 66 and 68 the maintenance technician's preferred choice for daily MRO tasks. For special surfaces such as concrete tiles or lead, the Fluke 66 and 68 offer adjustable emissivity.



Model	Fluke 63	Fluke 66	Fluke 68
Temperature range	-32 to 535 °C (-25 to 999 °F)	-32 to 600 °C (-25 to 1100 °F)	-32 to 760 °C (-20 to 1400 °F)
D:S (Distance to spot size) at 90% energy	12:1	30:1	50:1
Laser sighting	Single point, offset		
Emissivity	Preset 0.95	Adjustable	
Accuracy (Assumes ambient operating temperature of 23 °C [73 °F])	± 1 % of reading or ± 1 °C (± 2 °F), (whichever is greater over the balance of the range)		
Response time	500 mSec		
MAX, MIN, DIF and AVG temperatures	MAX only	All	
Recall last reading		•	
HI/LO alarm		•	
Protective hard case		•	
Weight and dimensions	320 g (11 oz) and 200 x 160 x 55 mm (8 x 6 x 2 in)		
Power	9 V alkaline		
Battery life (alkaline)	20 hours with laser and backlight on 50% (Fluke 63) 40 hours with laser and backlight off (Fluke 66/68)		
Display hold	7 seconds		
LCD backlit		•	
Warranty	2 years, conditional		

Included with the 63, 66 and 68 IR thermometers

The 63, 66 and 68 IR thermometers include 9 V alkaline battery, operator's guide, CD-ROM with user's manual and a durable hard case.



Accessories

80PR 60 RTD Temperature Probe

- Take both contact and non-contact readings at the same time (thermometer displays results concurrently)
- Temperature range: -40 to 260 °C (-40 to 500 °F); accuracy ± 1 °C (± 2 °F); probe length: 9 cm (3.5 in); probe diameter: 4.8 mm (.187 in); cable length: 1 m (40 in)



H6 Infrared Thermometer Holster

- Durable nylon holster specially designed for Fluke 63, 66 or 68 units
- Snap-on loop attaches to belt
- Velcro closures provide quick access and secure storage



Ordering information

To order Fluke products, contact your local Fluke representative.

Product ordering information for distributor purchasing agents.

Fluke	Fluke Model #	UPC Code Oracle #	Description	Height (Metric / English)	Length (Metric / English)	Width (Metric / English)	Weight (Metric / English)	Country of origin
Fluke-63	2148281	0 95969 26114 2	Infrared Thermometer	25.4 cm/10 in	19.1 cm/7.5 in	6.9 cm/2.75 in	0.9370 kg/ 2.06555 lb	China
Fluke-66	2148296	0 95969 26115 9	Adjustable Infrared Thermometer	25.4 cm/10 in	19.1 cm/7.5 in	6.9 cm/2.75 in	0.9370 kg/ 2.06555 lb	China
Fluke-68	2148308	0 95969 26116 6	Adjustable Infrared Thermometer	25.4 cm/10 in	19.1 cm/7.5 in	6.9 cm/2.75 in	0.9370 kg/ 2.06555 lb	China
80PR-60	2148313	0 95969 26117 3	RTD Probe used on the Fluke 66/68	30.2 cm/11.8 in	9.8 cm/3.8 in	2.9 cm/1.1 in	0.0528 kg/ 0.1165 lb	China
H6	2152040	0 95969 26188 3	Holster used on the Fluke 63/66/68	30.2 cm/11.8 in	5.7 cm/2.25 in	17.8 cm/7 in	0.1494 kg/ 0.3295 lb	China

Fluke 572 and 574

More demanding applications require more precise measurement and specialized features. That's when predictive maintenance professionals reach for the Fluke 570 series. An even wider temperature range, more powerful optics, a more precise sighting system, faster response time and adjustable emissivity make the 570 series the most accurate IR thermometer on the market.

Advanced sighting

An extra bright coaxial three-dot laser sighting highlights the center and diameter of the measurement spot. The laser sighting appears twice as bright to the human eye as a standard laser sighting (while maintaining the same safety rating as less bright lasers), making accurate sighting easier in a variety of lighting conditions and distances.



Additional features of the 574

For maintenance professionals who need to monitor, capture, analyze and report temperatures and temperature trends, the 574 comes with 100-point onboard data logging capabilities, customizable log location names, programmable emissivity settings and PC software for condition monitoring and process control.

Model	Fluke 572	Fluke 574	Fluke 574-NI
Temperature Range	-30 to 900 °C (-25 to 1600 °F)		
D:S (Distance to spot size) at 90% energy	60:1 [50:1 with close focus option (close focus not available with NI model)]		
Laser sighting	extra bright* 3-dot, coaxial (*twice as bright as perceived by the human eye, while maintaining the same safety rating as less bright lasers)		
Emissivity	Adjustable		
Accuracy (Assumes ambient operating temperature of 23 °C [73 °F])	± 0.75 % of reading or ± 0.75 °C (± 1.5 °F) (whichever is greater over the balance of the range)		
Response time	250 mSec		
Display hold (7 seconds)	•	•	•
LCD backlit	•	•	•
MAX, MIN temperatures	•	•	•
DIF, AVG temperatures		•	•
HI alarm	•	•	•
LO alarm		•	•
Bar graph display	•	•	•
100-point data logging		•	•
Data graphing software			
(Windows XP, NT, 2000 compatible, RS232 port required)		•	•
Protective hard case	•	•	•
Weight and dimensions	472 g (1 lb 1 oz.) and 16.7 x 5 x 19.8 cm (6.58 x 1.97 x 7.8 in)	480 g (1 lb 1 oz) and 16.7 x 5 x 19.8 cm (6.58 x 1.97 x 7.8 in)	
Power	2 AA Batteries	2 AA Batteries/AC adapter	
Battery life (alkaline)	13 hours with laser and backlight on 50%		
Warranty	2 years, conditional		

Software for condition monitoring and process control (574)

- Graph measurements to visually review trends of up to five log locations
- Tailor high/low alarms per inspection location
- Create and customize recognizable names and emissivity values for each location
- Store up to 10,000 data points on a PC
- Export data for integration with Maintenance, Repair and Operations (MRO) systems

Included with the 572 and 574 IR thermometers

572 and 574 IR thermometers include 2 AA batteries, user's manual, and a durable hard case. The 574 also includes AC power supply, thermocouple K, RS 232 cable and condition monitoring software.



Options

Nonincendive (574)

Intended for use in hazardous locations, the Fluke 574-NI unit does not release enough electrical or thermal energy to ignite flammable gasses or vapors under normal operational and environmental conditions (Factory Mutual, a USA organization, approved as Class I, Division 2 nonincendive device).

Close Focus

The 574-CF and 572-CF measure temperature in very small areas (necessary in specialized applications). [6 mm (.24 in) at 300 mm (11.4 in)]. Close Focus 574-NI not available

NIST/DKD Traceable

Calibration Certificate

All models may be ordered with an optional NIST traceable calibration certificate.

Accessories

Holster with Belt Clip

Durable padded holster specially designed for Fluke 570 series IR thermometers



Analog Cable

Used for MV/degree output (574)



Ordering information

To order Fluke products, contact your local Fluke representative.

Product ordering information for distributor purchasing agents.

Fluke	Fluke Model #	UPC Code Oracle #	Description	Height (Metric/English)	Length (Metric/English)	Width (Metric / English)	Weight (Metric / English)	Country of origin
Fluke-572	2436583	0 95969 29157 6	Precision Infrared Thermometer	22.9 cm/ 9 in	27.7 cm/ 10.4 in	8.4 cm/ 3.3 in	1.1 kg/ 2.43 lb	Germany
Fluke-572-CF	2436601	0 95969 29159 0	Precision Infrared Thermometer w/Close Focus	22.9 cm/ 9 in	27.7 cm/ 10.4 in	8.4 cm/ 3.3 in	1.1 kg/ 2.43 lb	Germany
Fluke-574	2436612	0 95969 29160 6	Precision Infrared Thermometer w/logging software	29.9 cm/ 11.8 in	39.2 cm/ 15.4 in	11 cm/ 4.3 in	2.22 kg/ 4.88 lb	Germany
Fluke-574-CF	2436647	0 95969 29163 7	Precision Infrared Thermometer w/Close Focus	29.9 cm/ 11.8 in	39.2 cm/ 15.4 in	11 cm/ 4.3 in	2.22 kg/ 4.88 lb	Germany
Fluke-574-NI	2436620	0 95969 29161 3	Precision Infrared Thermometer w/logging software Nonincendive	29.9 cm/ 11.8 in	39.2 cm/ 15.4 in	11 cm/ 4.3 in	2.22 kg/ 4.88 lb	Germany
C570	2436565	0 95969 29155 2	Soft Case	25 cm/ 10 in	17.8 cm/ 7 in	6 cm/ 2.3 in	.163 kg/ .36 lb	Poland
AN5	2437178	0 95969 29170 5	Cable Analog Output	2.5 cm/ .98 in	1.5 m/ 5 ft	14 cm/ 5.5 in	.055 kg/ .121 lb	Germany

Fluke 576



For the most complete temperature documentation solution, predictive maintenance professionals use the Fluke 576 photographic infrared thermometer. In addition to all the features found in the 574 precision IR thermometer, including advanced extra bright coaxial three-dot laser sighting system; 100-point data logging; customizable log names; programmable emissivity values; and monitoring, analysis, and reporting software, the Fluke 576 also integrates a digital camera for photographic documentation.

Fluke 576 photo documentation

Simultaneously measure temperature and digitally photograph the target and its surroundings. A wealth of data is instantly captured in a digital photo: time and date stamp, temperature data and location name. Photos and data are easily downloaded into the accompanying PC software. The addition of the photos helps to enhance reports, to more explicitly communicate problem areas with repair personnel, and to ensure consistency when taking repeated measurements over time when looking for equipment condition trends.



Model	Fluke 576
Temperature Range	-30 to 900 °C (-25 to 1600 °F)
D:S (Distance to spot size) at 90% energy	60:1 (50:1 with Close Focus option)
Laser sighting	3-dot, coaxial
Emissivity	Adjustable
Accuracy (Assumes ambient operating temperature of 23 °C [73 °F])	± 0.75 % of reading or ± 0.75 °C (± 1.5 °F) (whichever is greater over the balance of the range)
Response time	250 mSec
Display hold (7 seconds)	•
LCD backlit	•
MAX, MIN, DIF, AVG temperatures	•
HI/LO alarm	•
Bar graph display	•
100-points data logging	•
Maximum number of 640 x 480 pixel photos (VGA)	26
Maximum number of 320 x 240 pixel photos (VGA)	100
Data graphing & photo viewing software (Windows XP and 2000 compatible) USB required	•
Image file format	.jpg files
Protective hard case	•
Weight and dimensions	580 g (1 lb 4 oz) and 16.7 x 5 x 23.8 cm (6.58 x 1.97 x 9.57 in)
Power	2 AA Batteries / USB
Battery life (alkaline)	8 hours (13 hours with photographic mode off) 50 photos w/flash; 200 photos without flash
Warranty	2 years, conditional

Software for condition monitoring and process control

- Scan thumbnails of measurement photos
- Paste .jpg files showing photo of each object measured with measurement data, date and time into reports
- Continually monitor temperature, taking photos at alarm violations (while connected to PC)

Included with every 576 IR thermometer

The 576 infrared thermometer includes 2 AA batteries, a durable hard case, operator's guide on CD, thermocouple K probe, software and USB computer cable.



Options

Close Focus

The Fluke 576 may be ordered in a close focus model to measure very small areas (necessary in specialized applications) [6 mm (.24 in) at 300 mm (11.4 in)].

NIST/DKD Traceable Calibration Certificate

All models may be ordered with an optional NIST traceable calibration certificate.

Accessories

Infrared Thermometer Holster with Belt Clip

- Durable holster specially designed for Fluke 570 series
- Padded for increased instrument protection



Analog Cable

For mv/degree output



Ordering information

To order Fluke products, contact your local Fluke representative.

Product ordering information for distributor purchasing agents.

Fluke Model #	Fluke Oracle #	UPC Code	Description	Height (Metric / English)	Length (Metric / English)	Width (Metric / English)	Weight (Metric / English)	Country of origin
Fluke-576	2436658	0 95969 29164 4	Precision Photographic Infrared Thermometer w/logging software	29.9 cm / 11.8 in	39.2 cm / 15.4 in	11 cm / 4.3 in	2.07 kg / 4.57 lb	Germany
Fluke-576-CF	2436673	0 95969 29166 8	Precision Photographic Infrared Thermometer w/logging software	29.9 cm / 11.8 in	39.2 cm / 15.4 in	11 cm / 4.3 in	2.07 kg / 4.57 lb	Germany
C570	2436565	0 95969 29155 2	Soft Case	25 cm / 10 in	17.8 cm / 7 in	6 cm / 2.3 in	.163 kg / .36 lb	Poland
AN5	24327178	0 95969 29170 5	Cable Analog Output	2.5 cm / .98 in	1.5 m / 5 ft	14 cm / 5.5 in	.055 kg / .121 lb	Germany

Get the information you need to market these products instantly from the Fluke Partner Portal

Download digital files and information to support these products from the Fluke Partner Portal, including:

- Product data sheets
- Press releases
- Photos
- Order status inquiry

If you have not already registered for access to the Fluke Partner Portal, please go to <https://support.fluke.com> and select Partner Portal: Fluke Industrial Tools from the pull-down menu, then click register. Complete the registration form and submit it. Your submittal will be approved within 48 hours, at which time you will receive a confirming e-mail with a reminder of the user name and password you selected. Only Fluke distributors and sales staff, not end-customers, may access the Fluke Partner Portal.

Description	Literature Code
Fluke 62 Mini Product Data Sheet	2437622
Fluke 63 Product Data Sheet	2150511
Fluke 66 and 68 Product Data Sheet	2153543
Fluke 572, 574 and 574-NI Product Data Sheet	2437646
Fluke 576 Product Data Sheet	2437668
Infrared Thermometry Q and A	2437125

Promotional tools

To order, contact your local Fluke representative.

FLUKE®

Fluke Corporation
PO Box 9090,
Everett, WA 98206-9090
USA

Fluke. *Keeping your world up and running.*

Fluke Corporation
PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:
In the U.S.A. (800) 443-5853 or
Fax (425) 446-5116 or
Europe/M-East/Africa (31 40) 2675 200 or
Fax (31 40) 2 675 222 or
Canada (800) 36-FLUKE or
Fax (905) 890-6866
Other countries (425) 446-5500 or
Fax (425) 446-5116
Web access: <http://www.fluke.com>

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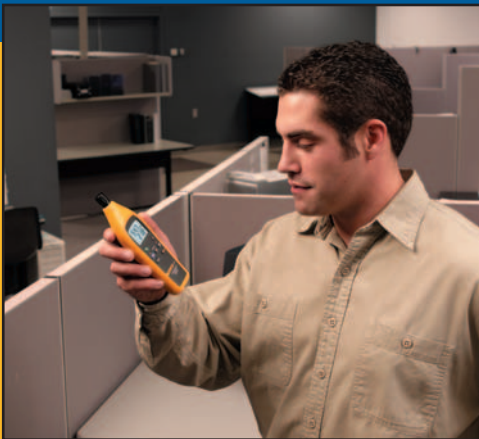
FLUKE®

Introducing the Fluke 971 Temperature Humidity Meter

The latest solution from Fluke
to meet the needs of your
HVAC and IAQ customers.



New Fluke 971 Temperature Humidity Meter: Taking indoor comfort to the next degree



Superior usability and ergonomic design

- Bright, backlit dual display of humidity and temperature highlights readings in less than ideal environments.
- 99 record storage capacity supports data analysis across numerous locations.
- Durable, ergonomic holster with integrated belt clip allows for convenient storage and retrieval in the field.
- Wet bulb and dew point calculations at the push of a button.

Customer market:

- **Operations and Maintenance and HVAC Contractors** will respond to indoor climate complaints and use the Fluke 971 to ensure parameters remain within acceptable ranges.
- **IAQ Specialists** will monitor temperature and humidity conditions as part of a comprehensive indoor air quality investigation.

Assess thermal comfort conditions quickly and accurately

- **Satisfy your customers with a solution that works.** The Fluke 971 provides the answers your customers need, with the reliability and ruggedness that Fluke products are known for. From the wet bulb and dew point calculations to the rugged holster and belt clip, the Fluke 971 provides the features your customers want with an eye towards protecting their investment for some time to come.
- **Expand your existing Fluke HVAC / IAQ line.** Be a single source provider for Fluke HVAC / IAQ test and measurement products, the preferred brand of HVAC and MRO professionals.
- **Partner with Fluke.** The Fluke team will support you in growing your IAQ business with extensive market initiatives including lead generation and merchandising.

General specifications

Temperature range	-20 °C to 60 °C (-4 °F to 140 °F)
Temperature accuracy	
0 °C to 45 °C	± 0.5 °C
-20 °C to 0 °C and 45 °C to 60 °C	± 1.0 °C
32 °F to 113 °F	± 1.0 °F
-4 °F to 32 °F and 113 °F to 140 °F	± 2.0 °F
Resolution	0.1 °C (0.1 °F)
Response time (temperature)	500 ms
Temperature sensor type	NTC
Relative humidity range	5 % to 95 % RH
Relative humidity accuracy	
(10 % to 90 % RH) @23 °C (73.4 °F)	± 2.5 %RH
(< 10 %, > 90 % RH) @23 °C (73.4 °F)	± 5.0 %RH
Humidity Sensor	Electronic capacitance polymer film sensor.
Data Storage	99 points
Response time (humidity)	For 90 % of total range - 60 sec. with 1m/s air movement
Operating temperature	
Temperature	-20 °C to 60 °C (-4 °F to 140 °F)
Humidity	0 °C to 55 °C (32 °F to 131 °F)
Storage temperature	-20 °C to 60 °C (-4 °F to 140 °F) at < 80 % R.H. (with battery removed)
Weight	190 g (6.6 oz)
Dimensions	194 mm x 60 mm x 34 mm (7.6 in x 2.4 in x 1.3 in)
Battery Type	4 x AAA alkaline batteries
Battery Life	200 hours

Related tools and accessories

Fluke-983 Particle Counter

Lightweight and accurate in any position, the Fluke 983 has a six-channel particle size display and extensive data-logging capacity, making it the perfect tool for monitoring problem areas. Use it to respond to building occupant complaints and monitor air particle concentrations in sensitive areas such as cleanrooms, hospitals, and food and beverage plants.

Fluke CO-220 Carbon Monoxide Meter

CO meter measures levels from 0 to 1000 ppm, with an audible signal triggered more frequently as CO levels rise. Used to detect dangerous CO leaks. CO-220 responds very quickly to ambient changes in carbon monoxide concentration without the use of a pump. Perfect for professionals who need to measure CO levels where the accumulation of combustion gas is possible.

Fluke CO-210 Carbon Monoxide Probe

Use as a standalone device or as an accessory to a digital multimeter with DC millivolt inputs. The CO-210 displays CO level readings from 0 to 999 ppm, with a resolution of 1 ppm.



VoltAlert™ – 1AC-II, 1LAC-II

The next generation voltage testers from Fluke are easy to use—just touch the tip to a terminal strip, outlet, or cord. When the tip glows red and the unit beeps, you know there's voltage in the line. Electricians, maintenance, service, safety personnel, and homeowners can quickly test for energized circuits and defective grounds on the factory floor, in the shop, or at home.

- The 1AC-II using Fluke Voltbeat™ technology continually tests its battery and circuitry, so you know it's working.
- The VoltAlert™ is a Category IV – 1000 V product, the highest rating of its kind and important for improved user protection.
- Voltage detection of 90 V to 1000 V ac, plus a 20 V to 90 V ac low voltage model.
- It is rugged, reliable, and has a two-year warranty.



Ordering Information

Product ordering information for distributor purchasing agents

To order Fluke products, please contact your local Fluke representative.

Fluke Model #	Fluke oracle #	UPC code	Description	Height Metric (English)	Length Metric (English)	Width Metric (English)	Weight Metric (English)	Country of Origin
971	2418208	0 95969 28751 7	Temperature Humidity Meter	6.1 cm (2.4 in.)	31.5 cm (12.4 in)	17.78 cm (7.0 in)	0.32 kg (0.7 lbs)	Taiwan
983	2414646	0 95969 28697 8	Particle Counter	31.75 cm (12.5 in)	15.88 cm (6.25 in)	34.93 cm (13.75 in)	3.8 kg (8.4 lbs)	USA
CO-210	664706	0 95969 06179 7	Carbon Monoxide Probe	6.35 cm (2.5 in)	21.59 cm (8.5 in)	10.92 cm (4.3 in)	0.45 kg (1.0 lb)	Canada
CO-220	664711	0 95969 06180 3	Carbon Monoxide Meter	6.35 cm (2.5 in)	23.88 cm (9.4 in)	10.92 cm (4.3 in)	0.45 kg (1.0 lb)	Canada
1AC-A1 -II	2432932	0 95969 29078 4	ACV Detector 90 - 1000 V Eng, Frn, Spn	25.4 cm (10 in)	3.92 cm (1.54 in)	18.4 cm (7.25 in)	0.15 kg (0.34 lb)	China
1AC-A2 -II	2432944	0 95969 29079 1	ACV Detector 90 - 1000V Por, Jpn, TCh	25.4 cm (10 in)	3.92 cm (1.54 in)	18.4 cm (7.25 in)	0.15 kg (0.34 lb)	China
1AC-P1 -II	2433000	0 95969 29085 2	ACV Detector 200 - 1000V Eng, Thai, Ch	25.4 cm (10 in)	3.92 cm (1.54 in)	18.4 cm (7.25 in)	0.15 kg (0.34 lb)	China
1LAC-A1 -II	2433021	0 95969 29087 6	LowV Detector 20 - 90 V Eng, Frn, Spn	25.4 cm (10 in)	3.92 cm (1.54 in)	18.4 cm (7.25 in)	0.15 kg (0.34 lb)	China

Get the information you need to market these products instantly through the Partner Portal.

Download digital files and information to support these products from the Fluke Products Portal, including

- Product data sheets
- Press releases
- Photos






If you have not already registered for access to the Fluke Partner Portal, please go to <http://support.fluke.com> and select Partner Portal: Fluke Industrial Tools from the pull down menu, then click "Register." Complete the registration form and submit it. Your submittal will be approved within 48 hours, at which time you will receive a confirmation e-mail with a reminder of the user name and password you selected. Only Fluke distributors and sales staff, not end-user customers,

may access the Fluke Partner Portal.



Promotional Tools

To order, contact your local Fluke representative.

	Description	Literature Code
	Fluke HVAC/IAQ Selection Guide	2425959
	Fluke 971 Data Sheet	2457037
	Fluke 971 Introduction CD-ROM (contains images, press release and literature)	2517561
	Application note: Managing air comfort with relative humidity tests	2522930
	Case study: Specific HVAC applications for the Fluke 971 Relative Humidity Meter	2524516

Fluke. *Keeping your world up and running.*

Fluke Corporation

PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:
In the U.S.A. (800) 443-5853 or
Fax (425) 446-5116 or
Europe/M-East/Africa (31 40) 2675 200 or
Fax (31 40) 2 675 222 or
Canada (800) 36-FLUKE or
Fax (905) 890-6866
Other countries (425) 446-5500 or
Fax (425) 446-5116
Web access: <http://www.fluke.com>