FLUKE®

Improve productivity. Save time. Save money.

Move into the most powerful multimeter solution in the world,
with the NEW 189 Data Logging Multimeter and Software Combo Pack.

Every year companies spend billions on plant maintenance and operations. Chronic failures of machines and systems, account for a major portion of this expense.

Heading off these typical breakdowns — not just attending to the emergencies — can cut costs dramatically and save countless man-hours.

The productivity gains you need to keep up with your workload.

With more work and fewer people to do it, you can't afford to wait until equipment breaks. Logging electrical signals is more important than ever.

The **189 Data Logging Multimeter andSoftware Combo Pack** gives a practical,affordable approach to predictive maintenance.

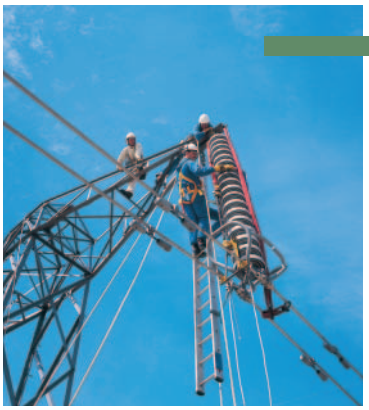
- With its **built-in data logger**, the Fluke 189 helps you track down elusive, intermittent problems, monitoring equipment with any of its functions, while you do other jobs.
- **Overlay data** from six meters or six time periods to find cause and effect relationships or for predictive maintenance applications.
- With the break-through accuracy and precision of the Fluke 189, our **most advanced DMM,** you'll catch events as brief as 50 ms.
- The rugged **Fluke 189** is designed for the kind of harsh environment that would ruin most data loggers or multimeters.
- For extended remote logging applications, you can **log up to 450 hours** of data using the extended battery pack.
- Turn data into meaningful graphs and tables using **FlukeView® Forms software** on your PC.
- **TPAK™** Magnetic Hanger allows you to securely hang your meter for monitoring or hands-free use.
- Soft carrying case to protect your investment.
- **USB Cable** included with kit.

FLUKE®

189/FVF2 Combo Pack makes predictive maintenance a reality.

Save money by reducing downtime.

Random spikes in volatile organic compound levels were causing intermittent production line shut downs of an automotive parts plant making belts and hoses. By graphing the 4–20 mA signals generated by the plant sensors, logging it for four hours with FlukeView® software the maintenance supervisor identified and fixed the airflow problem, eliminating costly downtime.



Save money on equipment.

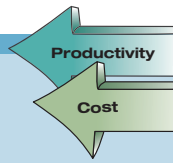
Using a Fluke 189 and FlukeView® Forms Software to replace expensive chart recorders and data acquisition equipment meant substantial savings in monitoring power substations for light rail electric railways. They are able to gather the same data with much more compact and easy to use equipment and save money at the same time.

Increase productivity.

Digital temperature logging increased the efficiency of a rubber plant's manufacturing process and freed engineers to do more important work than manual monitoring of temperatures.

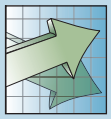
Prevent failures and expensive repairs.

By monitoring and graphing engine coolant temperatures, mechanics are able to detect sensor anomalies, spotting intermittent problems they miss with a scope. Now mechanics can find these problems before the engine fails and has to be rebuilt or replaced.



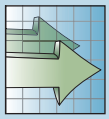
What's your approach to maintenance?

Crash and repair



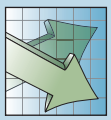
In this mode, you react to events as they happen. After equipment fails, you try to understand why it happened and what if anything can be done to prevent the failure in the future.

Preventive maintenance



To minimize crashes, preventative maintenance programs are based on a timetable or schedule (like regular oil changes, or systematically checking motor temperatures, or another industrial example). By regularly monitoring equipment you often get early warning signs of problems so you can take preventative steps.

Predictive Maintenance



In the this advanced mode, a continuous improvement program is accomplished by using specific metrics. You track equipment performance over time and spots trends that let you predict failures before they occur so you can avert them and maximize uptime.

Why data logging with the Fluke 189/FVF2 can improve your productivity.

- The automated logging capabilities let you monitor one area of concern while you work in another area.
- Logged Data allows you to analyze, predict and prevent problems over time.
- Print and retain data using FlukeView® Forms so you can track and reference historical data
- Monitor a suspect system, and catch elusive, intermittent events, sags and swell.
- The Fluke 189 catches and notes events with a time stamp
- Log up to 450 hours with extended battery pack

The 189 Data Logging Multimeter and Software Combo Pack is superior to any on the market

- The 189 performs two types of data logging: interval and event.
- Interval logging takes measurements at intervals defined by the user.
- Event logging effectively detects when a system is operating abnormally, while making the most efficient use of memory (default is 4 % to trigger event logging).
- The 189 can log any of the over 20 different measurement functions on the meter.

With the magnetic hangar (TPAK), you can find a convenient place to hang the compact 189 and leave it in place to log.

Data comes alive with FlukeView® Forms software

- For full graphic display of event data use FlukeView® Forms with Microsoft Windows® on your PC. The software can also export data into Microsoft Excel.
- You can even display readings from up to **six different meters** on the same graph to show links between multiple processes, events and locations.
- It turns simple time and event data into graphical reports and easy to scan tabular information.
- FlukeView® Forms comes with standard forms, graphs and tables that you can modify to suit your needs.
- Record and display any function the meter measures: volts, ohms, frequency, capacitance, temperature, diode testing and more.
- To view and share data, download the free FlukeView® Forms Reader at **your local Fluke web.**

Visit your local web for □ application notes.

Logging data is fast and easy with the Fluke 189/FVF2 Combo Pack.

There are two types of logging the Fluke 189 can do, interval logging and event logging. **Interval logging** takes measurements at defined time intervals (adjustable – default at 15 minutes). **Event logging** runs in the background to automatically capture information between interval readings when a signal is unstable. A default threshold of 4 % is used for event logging. Signal changes of more than 4 % of the last stable measurement will be captured as an event.

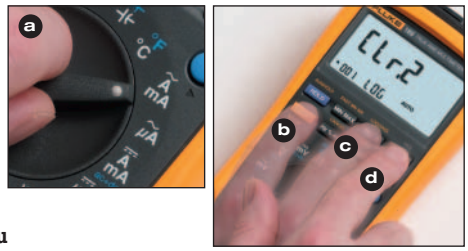
Here's how you get started:

Step 1- To start logging with default settings

a. Select the desired meter measurement function and attach test leads or appropriate accessory.
b. Press the yellow [SETUP] button.
c. Press the "LOGGING" [REL Δ] button.
d. When "Clr?" appears in the display, press the "YES" [▲ ⎍] button. (Be aware that pressing "YES" will erase any information currently stored on the meter).

"Log will show at the bottom of the screen to confirm you are logging and the interval counter will start at 001.

Step 1



Step 2- To stop logging

a. Press yellow [SETUP] button.
b. Press the "CANCEL" [Hz % ms] button.

Meter stops logging and data is ready to be downloaded.

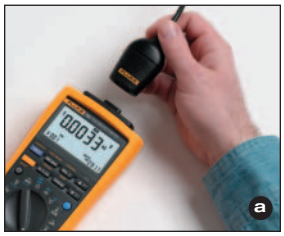
Step 2

Step 3- To view interval data on the meter

a. Turn the rotary switch to the VIEW MEM position.
b. Press the [▲ ⎍] or [▼ ⎍] button to cycle through the readings. The interval memory reading # is shown in the lower left hand section of the display, the time of day the interval was saved is in the bottom right of display.

Step 3

Step 4



Step 4- To view all data (interval and event) on a PC

a. Connect 189 multimeter to PC via USB cable (supplied with kit).
b. Launch FlukeView® Forms software.
c. Click on "Get Meter Data" in the Flukeview® Forms software.
d. Information is downloaded and can viewed in several customizable forms.

If you would like to reset the factory default settings for event or interval logging, Fluke recommends you review the application note "189 Event Logging" which is available free of charge at **your local Fluke web** under application notes, so that you can modify the settings of your logging DMM to meet your needs.

Great for troubleshooting electronics, too.

Gets the job done faster, easier and more confidently than ever before.

The Fluke 189 is most accurate handheld meter that Fluke makes:

- True-rms, 100 KHz bandwidth for precise measurement of distorted signals
- 50,000 count display
- 0.025 % basic dc accuracy and 1 microvolt resolution for bench meter performance in a handheld package
- Double display to view multiple test readings simultaneously
- Rel function can be used to eliminate test lead resistance
- Measure capacitors and components from 1nF to 50,000 microF
- Db, frequency, pulse width and duty cycle to test electronic circuits
- Use FlukeView® Forms software (included in the kit) to analyze data on your PC.

The 189 Data Logging Multimeter and Software Combo Pack allows you to improve productivity with every feature and function

FLUKE®

Function	Benefit
Data recording and software	
Built-in data logger with time stamp	Record and view intermittent problems without a chart recorder (max 995 data points)
FlukeView® Forms software	Turn logged data into graphical reports and easy to scan tabular information on your PC
Included accessories	
Magnetic Hanger (TPAK)	Position meter for hands free viewing
Soft carrying case	Protects your meter while stored
Extended run time battery pack	Log data for up to 450 hours without a battery change
Temperature Thermocouple	Included in Combo Kit for convenient temperature measurement and monitoring
USB Cable Adapter	Easy interfacing to your PC or laptop
Alligator clips	Ensures secure electrical connections
Premium test leads	Maximum performance in temperature extremes
Multimeter features	
V dc and V ac resolution	1 µV, precise measurements in a handheld
Measure current	10 A, 1000 V fuse, measure over 10 amps using clamp
Built-in thermometer with thermocouple	No need to carry a separate thermometer
Backlight	2-level, bright white, easier to read in dark locations
Peak capture, MIN/MAX	250 µS, record intermittent problems
Capacitance	5 nf to 50,000 µF, measure capacitors with one tool
Duty cycle and pulse width	Measure control circuits
Relative offset	Remove test lead resistance. See small signal variations.
Test lead input	Alerts you to minimize blown fuses
Battery and fuse door	Change battery and fuses quickly without breaking calibration seal
Safety and warranty	
2nd edition ANSI and IEC CAT electrical safety rating	Increased protection from 8 kV electrical spikes that can cause arc flash
Limited life warranty	Lower cost of ownership
Built for extreme environments	Can be used in environments where most test equipment fails (operating temp: -20 °C to +55 °C)

Save 24% when you buy the Combo Pack

The 189 Data Logging Multimeter and Software Combo Pack saves you 24 % off the price of individual products.

Kit includes:

- Fluke 189 Multimeter
- FlukeView® Forms Software
- USB cable adapter
- TL71 premium test leads
- AC72 alligator clips
- 80BK Temperature Thermocouple
- BP189 High Capacity Battery Pack
- C25 soft carrying case
- TPAK Fluke magnetic hanger

Photo on front shown with optional LockPak accessory, not included with kit.

LIMITED LIFETIME WARRANTY

Do your job with greater personal safety

The Fluke 180 Series of multimeters gives you an important safety advantage. Safety protected to CAT IV 600 V and CAT III 1000 V, they withstand voltage spikes of 8 kilovolts and help protect you from the hazards of arc flash. Their conformance to the most rigorous second edition ANSI and IE standards has been validated by independent testing organizations.

N10140

Ordering information

Fluke 189/FVF2
189 Data Logging Multimeter and Software Combo Pack

Also available

Fluke 189
Logging Multimeter

Fluke 187
Digital Multimeter (Non-logging version of the Fluke 189)

FVF-SC2
FlukeView® Forms Software w/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:
U.S.A. (800) 443-5853 or
Fax (425) 356-5116
Europe/Middle East/Africa
(31 40) 2 678 200 or
Fax (31 40) 2 678 222
Canada (800) 36-FLUKE or
Fax (905) 890-6886
Other countries +1 (425) 356-5500 or
Fax +1 (425) 356-5116

Printed in the U.S.A. 2/2005 2427320 Pub-ID 10902-eng