

Selection Table



	Fluke 199	Fluke 196	Fluke 192	Fluke 123
Bandwidth	200 MHz	100 MHz	60 MHz	20 MHz
Max. real-time sample rate	2.5 GS/s	1 GS/s	500 MS/s	25 MS/s
Inputs and digitizers	2 plus external / DMM input			2
Independently floating isolated inputs	Up to 1000 V between inputs, references and ground			-
Timebase range	5 ns - 2 min/div	10 ns - 2 min/div		20 ns - 1 min/div
Input sensitivity	5 mV-100 V/div			5 mV-500 V/div
Trigger types	Connect-and-View™, Free Run, Single Shot, Edge, Delay, Video, Selectable pulse width and External			Connect-and-View™, Free Run, Single Shot, Edge, Video
Glitch capture	50 ns			40 ns
Cursors and Zoom	Yes			-
Scope measurements	7 cursor + 24 automatic			26 automatic
Maximum record length	27,500 pts per input in ScopeRecord mode 1,000 pts per input in Scope mode			512 min/max pts per input
Capture last 100 screens	Automatic with Replay capability			-
Dual-input TrendPlot	Yes with Cursors and Zoom			Yes
Memory for screens/setups	10 screens and setups			2 screens, 10 setups
Memory for recordings	Two, each can store 100 scope screens, a ScopeRecord, or a TrendPlot			-
True RMS MultiMeter	5000 Count, Volts, Amps, Ohms, Continuity, Diode, Temp			
Line power	Adapter/battery-charger included			
Battery power	4 hr NiMH			5 hr NiCad
Size	256x169x64 mm			232x115x50 mm
Weight	1.95kg			1.2 kg
Safety certified (EN61010-1)	1,000V CAT II/600V CAT III			600V CAT III
PC and Printer Interface	With optional optically isolated adapter/cable			
Warranty	3 years			

Detailed technical specifications can be found in the technical datasheet or on the Fluke web site.

Ordering Information

FLK-123/003	Fluke 123 Industrial ScopeMeter
FLK-123/003S	Fluke 123 Industrial ScopeMeter with SCC120 kit
FLK-192/003	Fluke 192 ScopeMeter (60 MHz)
FLK-192/003S	Fluke 192 ScopeMeter (60 MHz) with SCC190 kit
FLK-196/003	Fluke 196 ScopeMeter (100 MHz)
FLK-196/003S	Fluke 196 ScopeMeter (100 MHz) with SCC190 kit
FLK-199/003	Fluke 199 ScopeMeter (200 MHz)
FLK-199/003S	Fluke 199 ScopeMeter (200 MHz) with SCC190 kit
SCC120	Software - Cable - Case kit for Fluke 123
SCC190	Software - Cable - Case kit for Fluke 190 Series

- Fluke ScopeMeter test tools come standard with a complete accessory package including line voltage adapter, and battery pack (installed). ScopeMeter 123 includes the shielded test leads, ScopeMeter 190 Series come with probes, probe accessories and multimeter test leads.
- SCC kit includes: Hard-shell carrying case, optically isolated RS-232 interface cable, and FlukeView® for Windows® software.
- Optional accessories ordering information can be found in the technical datasheet or on the Fluke web site.

Your authorized Fluke representative:

Visit the Fluke homepage for a virtual demonstration

To have an instant "hands on" demonstration of any of the Fluke ScopeMeters – just surf to the Fluke web site. You can download a fully functional instrument which is based on the real instrument software. And get the feel for the real instrument, it's remarkable user interface, make measurements and really experience the analytical power it puts in your hand.

You can also browse through the product manual and check-out the full technical specifications too. The Fluke web site is full of information on our whole range of products, so it's well worth a visit. Go to:

<http://www.fluke.com/scopemeter>



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In Canada: (905) 890-7600

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From other countries:

+1(425) 356-5500

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

FLUKE®

Oscilloscopes for field applications



ScopeMeter® 123 and 190 Series

- ✓ 20 MHz to 200 MHz bandwidth
- ✓ Up to 2.5 GS/s real-time sampling
- ✓ Up to 5 hours battery operating time
- ✓ Easy to use with Connect-and-View™ triggering

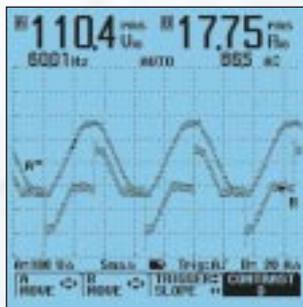
ScopeMeter 123

As simple as one-two-three

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 123 meets 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!

A three-in-one tool

ScopeMeter 123 combines a 20 MHz dual input digital storage oscilloscope, two true-RMS digital multimeters and a dual input TrendPlot™ recorder all in a compact, battery powered

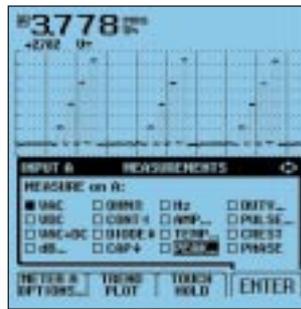


Dual-input measurement shows both meter reading and waveform at the same time

instrument. Leave all your other test tools behind because the ScopeMeter 123 is the only one you'll need.

The confidence to do a better job

Working under time pressure and in cramped or difficult to

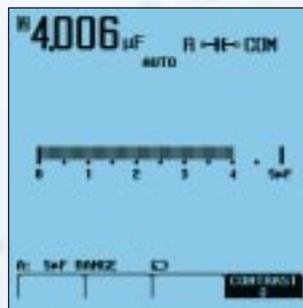


Switch-on and open measure menu and select from 26 scope and meter measurements

reach locations means you want to focus on the job and not on the test tool in your hand. Which is why the ScopeMeter 123 has Connect-and-View automatic triggering (see central panel). You don't have to worry about triggering and instrument settings, and you have all the information on screen to do the job right.

One test lead measures all

High frequency waveform, meter, capacitance and resistance measurements and conti-



Check the starting capacitor of a motor with the ScopeMeter 123

nity checks are all covered by the shielded test leads. No time wasted finding or swapping leads.

Battery powered mobility

Five hours of battery operation frees you from mains outlets for true on-the-move working. Its



handheld format (weighing just 1.2 kg) is easy to carry, and it fits comfortably in your hand. The rugged and drip proof case assures long life and reliable operation in the harshest industrial environments.

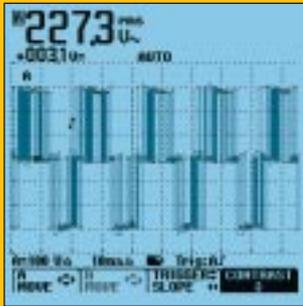
Safety certified

The ScopeMeter 123 and the included shielded test leads are safety certified for measurements on 600V CAT III industrial power systems. Via the optically isolated RS-232 interface, the ScopeMeter 123 can be safely connected to a printer for direct print out or a PC for later analysis and documentation with FlukeView software (see separate panel).



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

Scope users know how difficult triggering can be. Wrong settings show unstable and sometimes wrong results. Fluke's unique Connect-and-View

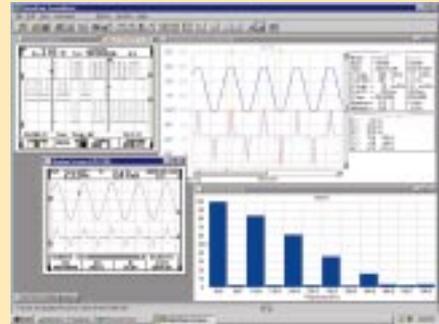


Connect-and-View captures even the most complex motor drive signals

recognizes signal patterns, and automatically sets up correct triggering. It provides a stable, reliable and repeatable display of virtually any signal - including motordrive and control signals - without touching a button. Signal changes are instantly recognized and settings adjusted for - once again - a stable display. Benefit from the speed and convenience when measuring a number of test-points in quick succession, unlike ordinary AutoSet/AutoRanging scopes.



FlukeView® Software for documenting, archiving and analysis



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

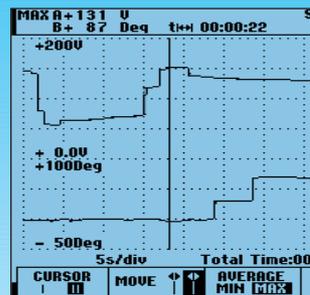
- Documenting - transfer waveforms, screens and measurement data from the ScopeMeter to a PC. Print or import the data into your report.
- Archiving - create a library of waveforms with your comments for easy reference and comparison.
- Analysis - use cursors, perform spectrum analysis or export data to other analysis programs.



ScopeMeters are connected to a PC via an optically-isolated RS-232 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.

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 - Fluke's 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.



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

ScopeMeter 190 Series

All this power in your hand

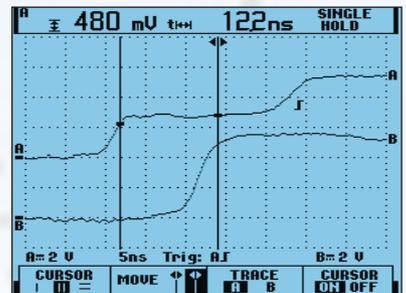
ScopeMeter 190 Series has specifications you typically only find on high-end bench oscilloscopes. They offer 200 MHz, 2.5 GS/s real-time sampling and advanced memory and triggering functions. They're rugged, compact and battery powered.

A choice of bandwidth

The ScopeMeter 190 Series offer up to 200 MHz bandwidth for capturing high frequency signals found in today's state-of-the-art electronics. For less demanding applications, there are also 100 MHz and 60 MHz models. You still get the same advanced functionality without paying for bandwidth you don't need.

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



High sampling notes gives you the required resolution for detailed signal analysis

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 (see right panel).

Deep memory for high-resolution ScopeRecord™

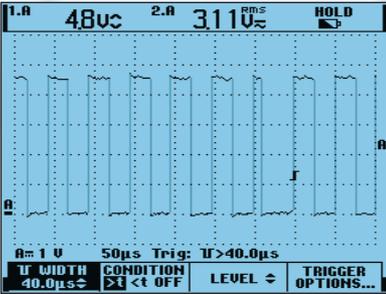
The memory stores 27,500 points per input for high resolution recording of events up to 30 hours, and still captures fast intermittents and glitches as short as 50 ns.

This continuous roll mode also stores events like motion profiles, UPS-, power supply- and motor start-ups. And with 100x 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.



Advanced trigger modes

A wide choice of automatic and manual trigger modes gives you the flexibility to capture just about any signal you'll encounter. Connect-and-View triggering is ideal for fast and easy checking of multiple test-points (see center panel). The

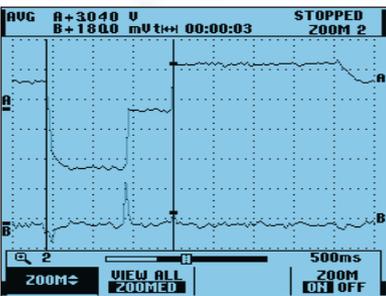


Pulse width triggering allows you to find anomalies like missing pulses

manual modes include time 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.

Analysis power

For analysis of waveforms, ScopeRecords and TrendPlot recordings the ScopeMeter 190 features 24 automatic measure-



Use the 27,500 pts memory of ScopeRecord and zoom in to maximum detail

ments, cursors, zoom and real-time clock. The analysis can be made directly or later when back in the office. Up to 2 recordings and 10 scope screens can be stored for analysis, print-out or download to a PC.

Measure from mV to kV

The ScopeMeter 190 Series with three independently floating isolated inputs is safety certified for measurements in 1000V CAT II and 600V CAT III environments. And the standard probes cover a wide application range from mV to kV, making the ScopeMeter 190 ideal for micro electronics to electrical power applications.

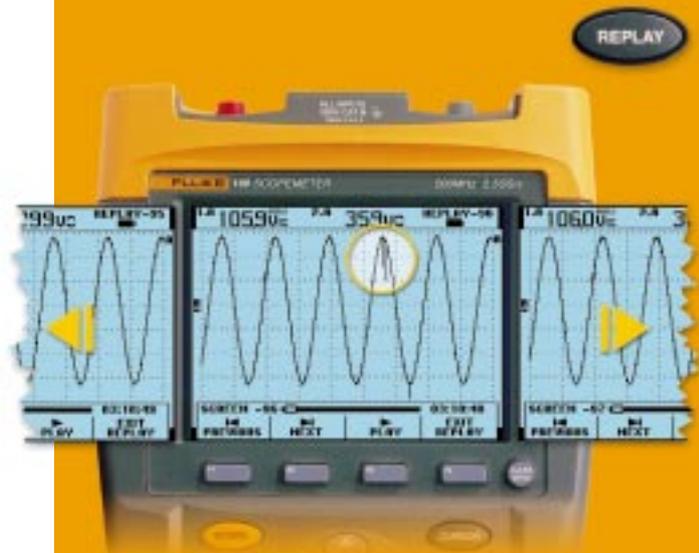
A versatile test-tool

Just like the industrial ScopeMeter 123, the ScopeMeter 190 is a three-in-one instrument incorporating a scope, multimeter and paperless recorder. The rechargeable NiMH battery provides four hours continuous operation, and takes just four hours to recharge. Battery saving and auto power down functions take you easily through the working day.



Automatic capture and replay of 100 screens

Scope users know how frustrating it is to see an 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.



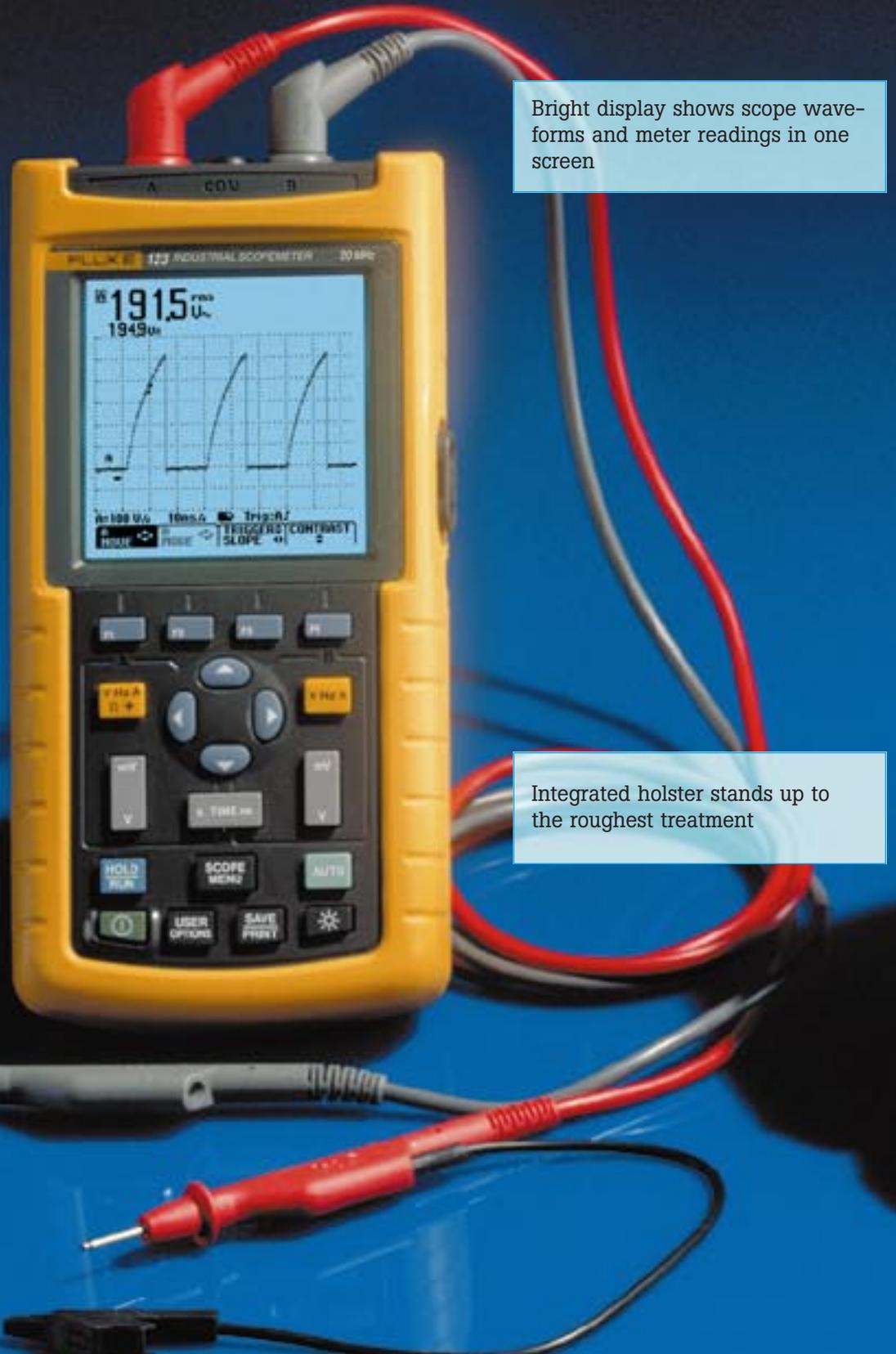
Oscilloscopes for field applications

ScopeMeter 123:

Three-in-one simplicity

The compact ScopeMeter 123 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 fast answers to problems in machinery, instrumentation, control and power systems.

- ☑ A dual-input 20MHz digital oscilloscope
- ☑ Two 5,000 counts 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
- ☑ Up to five hours battery operation
- ☑ 600V CAT III safety certified
- ☑ Optically isolated RS-232 interface
- ☑ Rugged compact case



Bright display shows scope waveforms and meter readings in one screen

Integrated holster stands up to the roughest treatment

Innovative shielded test leads cover all scope and meter functions



**ScopeMeter 190 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 - 60, 100 or 200 MHz bandwidth
- ☑ Up to 2.5 GS/s real-time sampling per input
- ☑ Connect-and-View™ automatic triggering, a full range of manual trigger modes plus external triggering
- ☑ 27,500 points per input record length using ScopeRecord mode
- ☑ Automatic capture and replay of 100 screens
- ☑ 24 automatic waveform measurements
- ☑ Cursors, zoom and real-time clock
- ☑ Four hours rechargeable NiMH battery pack
- ☑ 1000V CAT II and 600V CAT III safety certified
- ☑ Up to 1000V independently floating isolated inputs
- ☑ Includes a 5000-count true-rms multimeter and a TrendPlot™ paperless recorder

Multi-purpose probes cover mV to kV measurements

