Speed, performance and analysis power

For more demanding applications, the ScopeMeter 190C 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 27500 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 models
- Up to 2.5 GS/s real time sampling per input
- Bus Health Test capability for industrial buses, including Profi, Foundation, ModBus and many more (225C and 215C)
- Choice between a high resolution Color or Black and White display
- See even more detail than before. The Fluke ScopeMeter 190 family is now twice as fast with >100/second trace updates rates.
- High waveform resolution of max. 3000 datapoints per channel
- Digital Persistence for analyzing complex dynamic waveforms like on an analog scope (190C Series only)
- Fast display update rate (> 100/sec) for seeing dynamic behavior instantaneously
- Connect&View™ automatic triggering,
- a full range of manual triggering modes plus external triggering.
- Automatic capture and replay of 100 screens
- 27500 points per input record length using ScopeRecord mode
- Up to 1000 V independently floating isolated inputs
- Waveform reference for visual comparisons and automatic pass/fail testing of waveforms (190C Series only)
- V_{pwm} function for motor drive and frequency inverter applications.
- Waveform mathematics: Add, Subtract and Multiply
- Frequency Spectrum Analysis using FFT (190C)
- X-vs-Y mode (Lissajous display) for study of signal relationships
- Cursors, zoom and real-time clock
- 30 automatic waveform measurements
- Four hours rechargeable Ni-MH battery pack
- Includes a 5000 count true-RMS multimeter and a TrendPlot™ paperless recorder

ScopeMeter for medical imaging and video test applications

For tests on such systems, an optional configuration is available. Please check the Fluke website for further details.

Bus Health Test (225C and 215C)

Bus Health Test analyses the electrical signals on an industrial bus or network and gives a clear "Good", "Weak" or "Bad" validation mark for each of the relevant parameters, presented next to the actual measurement value.

The Fluke 225C and 215C can make the signal quality validation as soon as electrical signals are passed along the network, without looking at the data content. They find errors like improper cable connections, bad contacts, incorrect grounding and missing or superfluous terminators.

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.
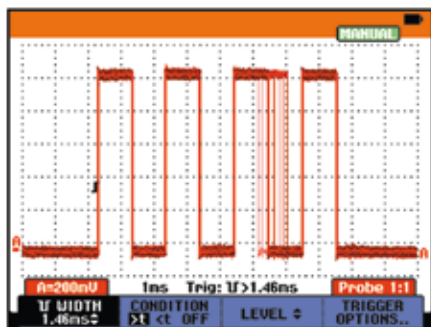
Fluke 199C

Fluke 196C

Fluke 192C

New

Fluke 225C

Fluke 215C

LISTED UL CSA True RMS

600V CAT III
On all inputs

See dynamic signal behavior instantaneously

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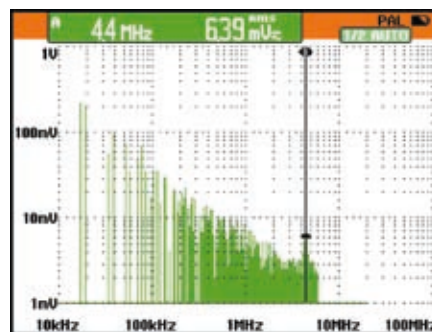
Frequency Spectrum Analysis 190C

All 190C Color ScopeMeters include Frequency Spectrum Analysis on Fast Fourier Transformation (FFT) analysis as a standard feature.

This makes it possible to identify the individual frequency components contained in a signal. The spectrum analysis function is also handy to reveal the effects of vibration, signal interference or crosstalk. An automatic window function assures optimal windowing, although you may manually select your preferred time window.

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


Pulse width fluctuations are clearly visible using Digital Persistence

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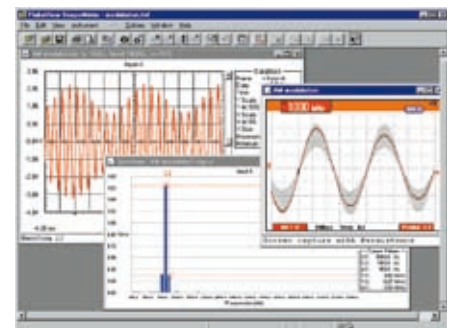
FlukeView Screen

Included Accessories

BC190 Battery Charger
BHT190 Set of 3 break-out adapters (225C/215C)
BP190 NiMH Battery Pack
VPS210-G + VPS210-R Voltage Probe
TL75 Hard Point Test Lead Set
user's manual (CD-Rom), Getting Started Booklet

Ordering Information

Fluke 192C	Color ScopeMeter (60 MHz, 500 MS/s)
Fluke 196C	Color ScopeMeter (100 MHz, 1 GS/s)
Fluke 199C	Color ScopeMeter (200 MHz, 2.5 GS/s)
Fluke 215C	Color ScopeMeter with Bus Health Test (100 MHz, 1 GS/s)
Fluke 225C	Color ScopeMeter with Bus Health Test (200 MHz, 2.5 GS/s)
Fluke 192C/S	192C + SCC190 kit option
Fluke 196C/S	196C + SCC190 kit option
Fluke 199C/S	199C + SCC190 kit option
Fluke 215C/S	215C + SCC190 kit option
Fluke 225C/S	225C + SCC190 kit option
SCC190	FlukeView Software, OC4USB cable, carrying case for Fluke 190 Series
SW90W	FlukeView Software
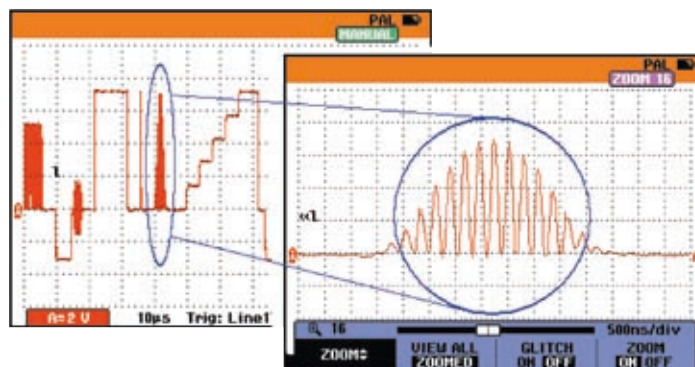
Thanks to the deep memory, very small parts of the waveform can be studied in full detail using "zoom".

Recommended Accessories

SCC190   C195   OC4USB   i400s   SCC198

Oscilloscopes for field applications

Features

	225C	215C	199C	196C	192C	125	124	123
LDC Display	Color					B/W		
Persistence	●	●	●	●	●			
Waveform reference	●	●	●	●	●			
Automatic pass fail testing	●	●	●	●	●			
Cursors and zoom	●	●	●	●	●	Cursors		
Connect and View triggering	●	●	●	●	●	●	●	●
Video triggering with the line count	●	●	●	●	●	●	●	●
Selectable pulse width triggering	●	●	●	●	●			
Capture and replay of last 100 screens	●	●	●	●	●			
Dual input TrendPlot	With cursors and Zoom					●	●	●
Memory for screens and set-ups	10 screens and setup					20	20	10
Recorder memories, each can store 100 scope screens, a ScopeRecord or a TrendPlot	2 recorder memories							
1000V Independently floating isolated outputs	●	●	●	●	●			
Meter measurements: VAC RMS, VAC+DC, Ohms, Continuity, Diode, Amps, Temp. (°C, °F)	●	●	●	●	●	●	●	●
Waveform mathematics: A+B, A-B, AxB, A versus B (X-Y mode)	●	●	●	●	●			
Frequency Spectrum Analysis using FFT	●	●	●	●	●			
Power measurements and V_{PWM}	●	●	●	●	●	●		
Capacitance and frequency measurements	-/●	-/●	-/●	-/●	-/●	●/●	●/●	●/●
Bus Health Test function	●	●				●		
Rugged, dust and drip proof case	●	●	●	●	●	●	●	●
PC and printer interface via optically isolated RS-232/USB cable	1)	1)	1)	1)	1)	1)	1)	1)
FlukeView® for Windows® Software (SW90W)	1)	1)	1)	1)	1)	1)	1)	1)

● Standard equipped   1) Optional

The ScopeMeter 190C Series of high performance oscilloscopes have bandwidth of 60, 100 and 200 MHz and sample rates up to 2.5 GS/s.
These instruments offer a high-resolution color display that has a fast update rate, waveform pass/fail testing and a digital persistence mode – making the analysis of complex and dynamic signals much easier.

For industrial electronic or electro mechanical applications, the 120 Series Industrial ScopeMeter, with a 20 or 40 MHz bandwidth and Connect-and-View™ triggering for an instant, stable display will get the job done.

Specifications

(Check the Fluke web for detailed specifications)

	225C	215C	199C	196C	192C	125	124	123
Oscilloscope specifications								
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 GS/s	2.5 GS/s	1 GS/s	500 MS/s	25 MS/s		
Input sensitivity	2 mV/div. ...1000 V/div					5 mV/div. ...500 V/div.		
Timebase range	5 ns/div. ...2 min/div.				10 ns/div. ...2 min/div.	10 ns/div. ...1min/div.		20 ns/div. ...1 min/div.
Inputs and digitizers	2 plus external trigger/DMM input					2		
Independently floating isolated outputs	Up to 1000 V between inputs, references and ground							
Max. record length... ... in Scope mode: ... in ScopeRecorde mode:	3000 points per input 27.500 points per input or more (5 ms/div. to 2 min/div.)					512 min/max points per input		
Glitch capture	Up to 3 ns using Pulse Width triggering; 50 ms peak detect at 5 µs/div. to 1 min/div.					40 ns		
Scope measurements	7 cursor measurements, 30 automatic measurements Automatic Vrms and watts measurement on cursor limited part of waveform					cursors + 26 automatic ...plus power measurements and Vpwm		26 automatic
True RMS multimeter	5000 counts, single input					5000 counts, dual input		
General specifications								
Line power	Adapter/battery charger included (BC190)					Adapter/battery charger included (PM8907)		
Battery (installed)	4 hr Ni-MH (BP190)					7 hr Ni-MH (BP120 MH)		
Size	256 x 169 x 64 mm					232 x 115 x 50 mm		
Weight	2 kg					1.2 kg		
Safety certified (EN61010-1)	1000 V CAT II / 600 V CAT III					600 V CAT III		
Warranty	3 years							

Check the Fluke web site for Technical Specifications and Application tion Notes for the Fluke ScopeMeters

ScopeMeter® Accessories

ScopeMeter probes
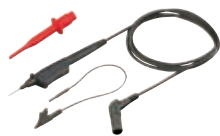
| VPS40 | VPS100/200 series | VPS210-R series | VPS210-G series | DP120 |

	VPS40	VPS200-R	VPS200-G	VPS201	VPS100-R	VPS100	VPS250	VPS121	DP120	PM8918/301
Description	Voltage Probe Set	Voltage Probe Set	Voltage Probe Set	Voltage Probe Set	Voltage Probe Set	Voltage Probe Set	Voltage Probe Set	Voltage Probe	Differential Probe Set	Low Pass Filter Probe
Number and color	One Black	One Red	One Grey	Red & Grey	One Red	Red & Grey	Red & Grey	One Black	Red & Grey	One Blue
Attenuation	10:1	10:1	10:1	100:1	10:1	10:1	10:1	1:1	200:1, 20:1	10:1
Bandwidth DC-MHz	40	200	200	200	100	100	75	12	20	4 kHz
Length (m)	1.2	1.2	1.2	1.2	1.2	1.2	2.5	1.2	1.5	2.5
EN 61010-2 CAT II	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	1000 V	-	1000 V	-
EN 61010-2 CAT III	600 V	600 V	600 V	600 V	600 V	600 V	600 V	300 V	600 V	600 V
ScopeMeter 190 Series		●	●	●	●	●	●	●	●	●
ScopeMeter 120 Series	●						●	●[1]	●[1]	●[1]

1) Using BB 120

	VPS210-R	VPS210-G	VPS212-R	VP212-G	VPS220-R	VPS220-G	VPS201
Description	Voltage Probe Set		Voltage Probe Set		Voltage Probe Set		Voltage Probe Set
Number and color	1 Red	1 Grey	1 Red	1 Grey	1 Red	1 Grey	1 Black
Attenuation	10:1		10:1		100:1		1:1
Bandwidth DC...MHz	200 MHz		200 MHz		200 MHz		30 MHz
Length (m)	1.2 m		2.5 m		1.2 m		1.2 m
EN 61010-2 CAT II	1000 V		1000 V		1000 V		-
EN 61010-2 CAT III	600 V		600 V		600 V		300 V
ScopeMeter 190 Series	●	●	●	●	●	●	●
ScopeMeter 120 Series			●	●			
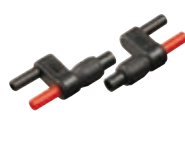
| PM9091/9092 | PM9081 | PM9082 | PM9093 |

	PM9091	PM9092	PM9081	PM9082	PM9093
Description	50 Ω BNC cable set (1Red, 1Grey, 1Black)	50 Ω BNC cable set (1Red, 1Grey, 1Black)	Dual Banana plug male to female BNC	Dual Banana jack male to female BNC	Male BNC to dual female BNC
Length	1.5 m	0.5 m			
EN 61010-2 CAT III	300 V	300 V	300 V	300 V	300 V
ScopeMeter 190 Series	●	●	●	●	●
ScopeMeter 120 Series	●[1]	●[1]	●	●[1]	●[1]

1) Using BB 120
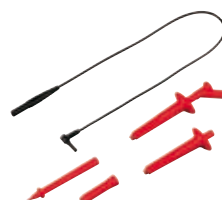
| RS200 | AS200-R | OC4USB | PM9080 | PM9090 |

RS200	Probe Replacement Set for VPS Series Probes
AS200-R	Probe Accessory Set, Red for VPS Series Probes
AS200-G	Probe Accessory Set, Grey for VPS Series Probes
PM9080	Optical Interface Adapter Cable for serial port
OC4USB	Optical Interface Adapter Cable for USB Port
PM9090	Probe Pin Grabber Flexible Clip for VPS Series Probes
PM9094	Mini Testhook Set for PM8918 Probes
PAC91	Printer Adapter Cable

Battery Packs	
BP120MH	NiMH Battery Pack for 120 Series + 43B
BP190	NiMH Battery Pack for 190 + 430 Series

All accessories have a one year warranty