ScopeMeter® 190 Series
190 Series II, 190C Series, and 190C Series with Bus Health

Technical Data

ScopeMeter Series II 190-104 and 190-204: The first high-performance four-channel scopes built for harsh industrial environments

Introducing the first high-performance portable oscilloscopes with four independent isolated input channels, an IP 51 dust- and drip-proof rating, and a CAT III 1000 V / CAT IV 600 V safety rating. Choose 200 MHz or 100 MHz bandwidth models. Now, plant maintenance engineers and technicians can take a four-channel scope into the harsh world of industrial electronics.

Models 190-204, 199C, and 225 C shown here

New

A new generation of ScopeMeter

The 190 Series II include these new capabilities:
- 4 independent floating isolated inputs, up to 1000 V
- High-speed sampling: Up to 2.5 GS/sec
- Deep memory: 10,000 points per trace waveform capture
- CAT III 1000 V/CAT IV 600 V rated for safety in high voltage environments
- Up to 7 hours of battery operation, standard
- Isolated USB host port for direct data storage to a USB memory device; USB device port for easy PC communication
- Easy access battery door for quick battery swaps in the field
- Compact and only 2.2 kg (4.8 lb)
- Security slot: lock down oscilloscope with Kensington® lock while unattended

ScopeMeter 190C Series and 190 Series II

Rugged performance, speed and ease of use no matter which model you use

All 190 Series models offer:
- IP 51 rating, dust- and drip-proof
- Connect-and-View™ triggering for intelligent, automatic triggering on fast, slow and even complex signals
- Frequency Spectrum using FFT-analysis
- Automatic capture and REPLAY of 100 screens
- Deep waveform memory storage (up to 10,000 points per input channel)
- 30,000 points or more per input channel using ScopeRecord™ roll mode
- Paperless recorder with deep memory for long-term automatic measurements

1000 V CAT III
600 V CAT IV

1000 V CAT II
600 V CAT III

Connect+
and
View

CSA

Oscilloscope Modes

	190C Series			190 Series II	
	199C, 225C	**196C, 215C**	**192C**	**190-204**	**190-104**
Vertical deflection					
Number of channels	2	2	2	4	4
Bandwidth	200 MHz	100 MHz	60 MHz	200 MHz	100 MHz
Rise time	1.7 ns	3.5 ns	5.8 ns	1.7 ns	3.5 ns
Number of inputs	2 inputs plus external trigger			4 input channels	
Channel architecture	All inputs fully insulated from each other and from ground. Inputs may be activated in any combination.				
Input coupling	AC or DC, with ground level indicator				
Input sensitivity	2 mV/div to 100 V/div				
Bandwidth limiter	User selectable: 20 kHz, 20 MHz or full bandwidth				
Normal/invert	On each input channel, switched separately				
Variable attenuator	Variable Gain on input channel A			Variable Gain on each input channel	
Input voltage	CAT II 1000 V, CAT III 600 V rated – see General Specifications for further details			CAT III 1000 V, CAT IV 600 V rated – see General Specifications for further details	
Vertical resolution	8 bit				
Accuracy	± (1.5 % of reading + 0.04 x range/div) @ 5 mV/div to 100 V/div			± (2.1 % of reading + 0.04 x range/div) @ 5 mV/div to 100 V/div.	
Input impedance	1 MΩ ± 1 % // 15 pF ± 2 pF			1 MΩ ± 1 % // 14 pF ± 2 pF	
Horizontal					
Maximum real-time sample rate	2.5 GS/s (2 ch)	1 GS/s (2 ch)	500 MS/s (2 ch)	2.5 GS/s (2 ch) 1.25 GS/s (4 ch)	1.25 GS/s for each channel
Record length	Up to 3000 samples per channel			Up to 10,000 samples per channel	
Time base range	5 ns/div to 5 s/div (in 1-2-5-range). Slower time/division settings using ScopeRecord Roll mode.		10 ns/div to 5 s/div	5 ns/div to 4 s/div. in a 1-2-4-sequence. Slower time/division settings using ScopeRecord Roll mode.	
Maximum record length	3000 samples per channel (x2) in scope mode			10,000 samples per channel (x4) in scope mode	
	27,000 points per input in ScopeRecord™ roll mode (5 ms/div to 2 min/div)			30,000 points per input in ScopeRecord™ roll mode	
Timing accuracy	± (0.01 % of reading + 1 pixel)				
Glitch capture	50 nsec (5 µsec/div to 1 min/div)			8 ns peak detect on each channel	
Display and acquisition					
Display	144 mm full-color LCD, with backlight			153 mm full-color LCD with LED backlight	
Display modes	Any combination of channels; average on/off; replay				
Visible screen width	12 divisions horizontally in scope mode				
Persistence modes	Digital persistence off/short/medium/long/infinite; traces fade out in seven levels				
Waveform mathematics	A + B, A − B, A * B, all with user selectable scaling of resultant; A versus B (X–Y-mode); Frequency Spectrum using FFT analysis			One mathematical operation on 2 input channels: add/subtract/multiply; all with scalable resultant; X–Y-mode; Frequency Spectrum using FFT analysis	
Acquisition modes	Normal, Averaged, Auto, Single Shot, ScopeRecord™ roll, glitch capture, waveform compare with automatic "Pass/Fail testing", Replay				

	190C Series			190 Series II	
	199C, 225C	196C, 215C	192C	190-204	190-104
Trigger and delay					
Source	Any of the input channels. All input references isolated from each other and from 'earth ground'.				
Modes	Automatic Connect-and-View™, free run, single shot, edge, delay, dual slope, video, video line, selectable pulsewidth (channel A only), N-cycle				
Connect-and-View™	Advanced automatic triggering that recognizes signal patterns, automatically sets up and continuously adjusts triggering, time base and amplitude. Automatically displays stable waveforms of complex and dynamic signals like motor drive and control signals. Can be switched off if preferred.				
Video triggering (on channel A)	NTSC, PAL, PAL+, SECAM. Includes field 1, field 2 and line select.				
High-Res, non-inter-laced video	—			Non-interlaced video with line-select, for line frequencies in the range 14 kHz up to 65 kHz	
Pulse width triggering (on channel A)	Pulse width qualified by time. Allows for triggering <t, >t, =t, ≠ t, where t is selectable in minimum steps of 0.01 div or 50 ns.				
Time delay	1 full screen of pre-trigger view or up to 100 screens (=1200 divisions) of post-trigger delay				
Dual slope triggering	Triggers on both rising and falling edges alike				
N-cycle triggering	Triggers on N-th occurrence of a trigger event; N to be set in the range 2 to 99				
Automatic capture of 100 screens					
	When in oscilloscope mode, the instrument ALWAYS memorizes the last 100 screens—no specific user setup required. When an anomaly is seen, the REPLAY button can be pressed to review the full sequence of screen events over and over. Instrument can be set up for triggering on glitches or intermittent anomalies and will operate in "baby-sit" mode capturing 100 specified events.				
Replay	Manual or continuous replay. Displays the captured 100 screens as a "live" animation, or under manual control. Each screen has date and time-stamp.				
Replay storage	Up to 2 sets of 100 screens each can be saved for later recall and analysis.			Two sets of 100 screens each can be saved internally for later recall and analysis. Direct storage of additional sets on external flash memory drive through USB host port.	
FFT – frequency spectrum analysis					
	Shows frequency content of oscilloscope waveform using Fast Fourier Transform				
Window	Automatic, Hamming, Henning or None				
Automatic window	Digitally re-samples acquired waveform to get optimum frequency resolution in FFT resultant				
Vertical scale	Linear / Logarithmic (in volts or amps)				
Frequency axis	Logarithmic; frequency range automatically set as function of timebase range of oscilloscope			User selectable: lin or log. Frequency range automatically set as a function of timebase range of oscilloscope.	
Waveform compare and pass/fail testing					
Waveform compare	Provides storage and display of a reference waveform for visual comparison with newly acquired waveforms. Reference is derived from an acquired waveform and can be modified in the ScopeMeter or externally using FlukeView Software.				
Pass/Fail Testing	In waveform compare mode, the ScopeMeter can be set up to store only matching ("Pass") or only non-matching ("Fail") acquired waveforms in the replay memory bank for further analysis				
Automatic scope measurements					
	Vdc, Vac rms, Vac+dc, Vpeak max, Vpeak min, Vpeak to peak, Aac, Adc, Aac+dc, frequency (in Hz), risetime (using cursors), falltime (using cursors), Power Factor (PF), Watts, VA, VA reactive, phase (between any 2 inputs), pulsewidth (pos./neg.), dutycycle (pos./neg.), temperature °C, temperature °F, dBV, dBm into 50 Ω and 600 Ω, VPWM ac and VPWM ac+dc for measurement on pulsewidth modulated motordrives and frequency inverters				
Advanced functions	—			mA*s (current-over-time, between cursors) V*s (voltage over time, between cursors) W*s (energy, between cursors)	
Cursor measurements					
Source	On any input waveform or on mathematical resultant waveform (excl. X-Y-mode)				
Dual horizontal lines	Voltage at cursor 1 and at cursor 2, voltage between cursors				
Dual vertical lines	Time between cursors, 1/T between cursors (in Hz), voltage between markers, risetime with markers, falltime with markers; Vrms between cursors, Watts between cursors				
Single vertical line	Min-Max and Average voltage at cursor position; frequency and rms-value of individual frequency component in the FFT Result				
ZOOM	Up to 16x horizontal zoom			Ranges from full record overview to zoom in up to sample level, at any record length	

Bus Health automatically analyzes the electrical signals on the industrial bus system to measure individual parameters and to give waveform information. Automatically compares the measurement results to preset values and present 'good,'weak' or 'false' indicator with each parameter.	
Bus types and reference standards used	• AS–i (EN50295, 166 kb/s); • CAN-bus (ISO-11898, up to 1 Mb/s); • Modbus (EIA-232 up to 115 kb/s and EIA-485 up to 10 Mb/s); • Foundation Fieldbus H1 (61158 type 1, 31.25 kb/s) ; • Profibus DP (EIA-485 up to 10 Mb/s) and PA (61158 type 1 31.25 kb/s); • Ethernet [10Base2 (coaxial) and 10BaseT (UTP)], 10 Mb/s; • Ethernet 100BaseT (100 Mb/s); • RS-232 (EIA-232, up to 115 kb/s); • RS-485 (EIA-485, up to 10 Mb/s).
Measured parameters (where applicable)	Bias voltage level, signal amplitude, pulse width or baud rate, risetime, fall time, jitter, signal distortion, noise HF, noise LF, in–band noise

Meter Mode

	190C Series	190 Series II
	199C, 196C, 192C, 215C, 225C,	**190-204, 190-104**
Meter inputs	Via 4 mm banana inputs, fully isolated from scope inputs and scope ground	Up to four automatic meter measurements can be made at the same time, using the oscilloscope input channels
	The specified accuracy is valid over the temperature range 18 °C to 28 °C (65 °F to 82 °F). Add 10 % of specified accuracy for each degree C below 18 °C or above 28 °C.	
Maximum resolution	5,000 counts	999 counts
Meter input impedance	1 MΩ ± 1 % // 10 pF ± 2 pF	(thru scope channel:) 1 MΩ ± 1 % // 14 pF ± 2 pF
Advanced meter functions	Auto/manual ranging, relative measurements (Zero reference), TrendPlot recording	
Vdc, Vac, Vac+dc		
Vdc accuracy	± (0.5 % + 5 counts)	± (1.5 % + 5 counts)
Vac true rms accuracy		
15 Hz to 60 Hz:	± (1 % + 10 counts)	± (1.5 % + 10 counts)
60 Hz to 1 kHz:	± (2.5 % + 15 counts)	
60 Hz to 20 kHz:	–	± (2.5 % + 15 counts)
Vac+dc true rms accuracy		
15 Hz to 60 Hz:	± (1 % + 10 counts)	± (1.5 % + 10 counts)
60 Hz to 1 kHz:	± (2.5 % + 15 counts)	
60 Hz to 20 kHz:	–	± (2.5 % + 15 counts)
Voltmeter ranges	500 mV, 5 V, 50 V, 500 V, 1,000 V	
Ohms		
Ranges	500 Ω, 5 kΩ, 50 kΩ, 500 kΩ, 5 MΩ, 30 MΩ	–
Accuracy	± (0.6 % + 5 counts)	–
Other meter functions		
Continuity	Beeper on < 50 Ω (± 30 Ω)	–
Diode test	Up to 2.8 V	–
Amps	Adc, Aac, Aac + dc using an optional current clamp or shunt. Scaling factors: 0.1 mV/A, 1 mV/A, to 100 V/A and 400 mV/A	
Temperature	With optional accessories. Scale factors 1 °C/mV or 1 °F/mV	

Recorder Modes

	190C Series		190 Series II
	199C, 196C, 192C, 215C, 225C,		190-204, 190-104
ScopeRecord™ Roll Mode			
Dual or multiple input waveform storage mode, using deep memory			
Source and display	Input A, Input B, Dual		Any combination of inputs, up to 4 channels. All channels sampled simultaneously.
Bandwidth	20 MHz or 20 kHz, user selectable		
Memory depth	27,000 or more data points, each holding min/max. pair of information		
Min/max values	Min/max values are measured at high sample rate ensuring capture and display of glitches		
Recording modes	Single sweep, continuous roll, Start-on-Trigger (through external), Stop-on-Trigger (through external)		Single sweep, continuous roll, Start-on-Trigger (through any channel) Stop-on-Trigger (through any channel)
Stop-on-trigger	ScopeRecord mode can be stopped by an individual trigger event, or by an interruption of a repetitive trigger signal, through any input channel (through External on 190C Series)		
Horizontal scale	Time from start, time of day		
Zoom	Ranges from full record overview to zoom in up to sample level, at any record length		
Memory	Up to 2 dual input ScopeRecord waveforms can be saved for later recall and analysis.		Two multiple input ScopeRecord waveforms can be saved internally for later recall and analysis. Direct storage on external flash memory drive through USB host port.
ScopeRecord sample rate and recording timespan			
Time base range	5 ms/div to 1 min/div	2 min/div	5 ms/div ~ 2 min/div
Recorded timespan	6 sec to 24 hr	48 hr	6 sec ~ 48 hr
Time/division in 'view all' mode			0.5 s/div. ~ 4 h/div
Glitch capture	50 ns	250 ns	8 ns
Sample rate	20 MS/s	4 MS/s	125 MS/s
Resolution	200 μsec to 2 sec	4.8 sec	200 μsec ~ 4.8 sec
Trendplot™ Recording			
	Single or dual input electronic paperless chart recorder. Plots, displays and stores meter and scope measurements.		Multiple channel electronic paperless recorder. Graphically plots, displays and stores results of up to 4 automatic scope measurement over time.
Source and display	Any combination of measurements, made on any of the input channels		
Memory depth	18,000 points record per input. Each recorded sample point contains a minimum, a maximum and an average value, plus a date- and timestamp.		
Ranges	Normal view: 5 s/div to 30 min/div		
	In view–all mode: 5 min/div to 48 hr/div (overview of total record)		
Recorded time span	Up to 22 days with a resolution of 1 minute		More than 22 days, with a resolution of 102 seconds
Recording mode	Continuous roll for the duration of the full recordable timespan		Continuous recording, starting at 5 s/div. with automatic record compression
Measurement speed	5 automatic measurements per second or more		
Horizontal scale	Time from start, time of day		
Zoom	Up to 64x zoom		Up to 64x zoom-out for full record overview, up to 10x zoom-in for maximum detail.
Memory	Up to 2 TrendPlot recordings can be saved for later recall and analysis.		Two multiple input TrendPlot records can be saved internally for later recall and analysis. Direct storage on external flash memory drive through USB host port.
Cursor measurements – all recorder modes			
Source	Any waveform trace in any waveform display mode (Scope, ScopeRecord or TrendPlot)		
Dual vertical lines	Cursors may be used to identify Min, Max or Average value of any datapoint in a record, with time between cursors, time from start or absolute time.		

General Specifications

	190C Series	190 Series II
	199C, 196C, 192C, 215C, 225C,	**190–204, 190–104**
Input voltage ratings		
Rated input voltage and max. floating voltage	CAT II 1000 V, CAT III 600 V	CAT III 1000 V, CAT IV 600 V
	Maximum voltage between any contact and earth-ground voltage level	
Maximum probe voltage	CAT II 1000 V, CAT III 600 V	CAT III 1000 V, CAT IV 600 V
	Maximum voltage between standard 10:1 probe tip and reference lead	
Maximum BNC input voltage	300 V CAT IV	
	Maximum voltage on BNC input directly	
Maximum voltage on meter input	CAT II 1000 V, CAT III 600 V	—
	Safety designed banana input connectors	
Memory save and recall		
Memory locations	15 waveform memories plus 2 recording memories	
15 waveform memory locations	Stores Scope-trace waveform data (2 traces each) plus screen–copy plus corresponding setup	Stores Scope-trace waveform data (4 traces each) plus screen–copy plus corresponding setup
2 recording memories	Each may contain: • a 100 Screen Replay sequence, or • a ScopeRecord Roll-mode recording (2 traces), or • a TrendPlot recording of 2 measurements	Each may contain: • a 100 Screen Replay sequence, or • a ScopeRecord Roll-mode recording (4 traces), or • a TrendPlot recording of 4 measurements
External data storage	• On PC, using FlukeView™ Software	• On PC, using FlukeView™ Software, or • Direct storage on external flash memory drive through USB host port
Screencopies	• On PC, using FlukeView Software	• On PC, using FlukeView™ Software, or • Internally (in instrument) which can be copied on to external flash memory drive as .BMP-file, through USB host port
Volatility	Data is stored in RAM which is maintained by the instrument's main battery	Measurement data is initially stored in RAM, which is maintained by the main battery with a 30 seconds back-up when battery is exchanged. When storing data, this is written in non-volatile flash-ROM.
Real-time clock	Provides date and time stamp information for ScopeRecord, for 100 Screen Replay sequences and for TrendPlot recordings	
Case		
Design	Rugged, shock-proof with integrated protective holster. Handstrap and hangstrap included as standard.	
Drip and dust proof	IP 51 according to IEC529	
Shock and vibration	Shock 30 g, vibration (sinusoidal) 3 g according to MIL–PRF–28800F Class 2	
Display size	115.2 mm x 86.4 mm (4.54 in x 3.4 in); 144 mm (5.67 in) diagonal LCD	127 mm x 88 mm (153 mm diagonal) LCD
Resolution	320 x 240 pixels	
Contrast and brightness	User adjustable, temperature compensated	
Brightness	80 cd/m^2 typ. using power adapter	200 cd/m^2 typ. using power adapter, 90 cd/m^2 typ. using battery power
Mechanical data		
Size	256 mm x 169 mm x 64 mm (10.1 in x 6.6 in x 2.5 in)	265 mm x 190 mm x 70 mm (10.5 in x 7.5 in x 2.8 in)
Weight (incl. battery)	2 kg (4.4 lb)	2.2 kg (4.8 lb)
Power		
Line power	Mains adapter/battery charger BC190 included, version depending of country	
Battery power	Rechargeable NiMH BP190 (installed)	Rechargeable double capacity Li-ion battery BP291 (included). Battery swappable through easily accessible battery door at the rear of the instrument
Battery charge indicator	Battery status indicator on instrument screen	Battery has built-in status indicator for use with external charger, next to battery status indicator on instrument screen

	190C Series	190 Series II
	199C, 196C, 192C, 215C, 225C,	**190-204, 190-104**
Battery operating time (with backlight low)	> 3½ hours	Up to 7 hours using BP291 (included)
Battery charging time	4 hours	5 hours
Battery power saving functions	Auto 'power down' with adjustable power down time. On-screen battery power indicator.	Auto 'power down' with adjustable power down time; Auto 'Display off' with adjustable power down time; On-screen battery power indicator.
Safety		
Compliance	EN61010-1-2001, Pollution Degree 2; UL61010B, with approval; CAN/CSA C22.2, No. 61010-1-04, with approval; ANSI/ISA-82.02.01	EN61010-1-2001, Pollution Degree 2; CAN/CSA C22.2, No. 61010-1-04, with approval; UL61010B; ANSI/ISA-82.02.01
Environmental		
Operating temperature	0 °C ~ +50 °C	0 °C ~ +40 °C incl. battery +40 °C ~ +50 °C excl. battery
Storage temperature	–20 °C ~ +60 °C	
Humidity	+10 °C ~ +30 °C: 95 % RH non-condensing +30 °C ~ +40 °C: 75% RH non-condensing +40 °C ~ +50 °C: 45% RH non-condensing	
Maximum operating altitude	3,000 m (10,000 feet)	Up to 2,000 m (6666 ft) for CAT IV 600 V, CAT III 1000 V; up to 3,000 m (10,000 ft) for CAT III 600 V, CAT II 1000 V
Maximum storage altitude	12 km (40,000 ft)	
Electro-Magnetic-Compatibility (EMC)	EN 61326-1 for emission and immunity	EN 61326-1 (2005-12) for emission and immunity
Interface	Optical port in instrument transfers instrument settings, screen images and waveform data, compatible with FlukeView® software for Windows®, via optional OC4USB or PM9080 (optical to electrical interface cable)	Two USB ports provided. Ports are fully insulated from instrument's floating measurement circuitry. USB-host port directly connects to external flash memory drive for storage of waveform data, measurement results, instrument settings and screen copies. A mini-USB-B is provided which allows for interconnection to PC for remote control and data transfer under PC-control.
Warranty	Three-years (parts and labor) on main instrument, one-year on accessories	
Probe calibration output	(through DMM-input banana connectors)	Dedicated probe-cal output with reference contact provided, fully insulated from any measurement input channel

FlukeView® ScopeMeter® Software

FlukeView ScopeMeter software helps you get more out of your ScopeMeter:
- Store instrument's screen copies on the PC, in color
- Copy screen images into your reports and documentation
- Capture and store waveform data from your ScopeMeter on your PC
- Create and archive waveform references for automatic or visual comparison
- Includes waveform analysis, e.g. FFT spectrum analysis
- Copy waveform data into your spreadsheet for detailed analysis
- Use cursors for parameter measurement

System requirements
- Microsoft® Windows® XP and beyond
- CD-ROM drive
- One free USB port

Supported Instruments
With the new release V5, the following typenumbers are supported:
- Fluke 190C-series (225C, 215C, 199C, 196C, 192C, using an OC4USB or PM9080 interface cable);
- Fluke 190B-series (199B, 196B, 192B, using an OC4USB or PM9080 interface cable);
- 190-series II (190-204 and 190-104, using USB-cable);
- 120-series (123, 124, 125, using an OC4USB or PM9080 interface cable).

Accessories

		190C Series		190 Series II
		199C, 196C, 192C, 215C, 225C,		**190-204, 190-104**
Standard accessories				
	BC190	Mains adapter/battery charger for any 190-series instrument		
Battery (type)	BP190	NiMH battery	BP291	Li-ion battery
Voltage probes and test leads	VPS210	Probe sets, 10:1 (1 red, 1 grey) including hook-clips, ground leads with mini-alligator clips, ground springs and probe-tip insulation sleeves	VPS410	Probe-sets, 10:1 (1 red, 1 blue, 1 grey, 1 green) including hookclips, ground leads with mini-alligator clips, ground springs and probe-tip insulation sleeves
	TL75	Test lead set (1 red, 1 black)		
Other	BHT190	Bus Health Test Connection Set (included with Fluke 225C and 215C models only)		FlukeView demo package (with restricted functionality); USB interface cable for PC connectivity
		Handstrap (affixed to instrument) and hangstrap		Users manual on CD–ROM
Optional accessories				
	SW90W	FlukeView ScopeMeter software package (full version)	SW90W	FlukeView ScopeMeter software package (full version)
	C190	Hard Shell Carrying Case for 190C Series	C290	Hard Shell Carrying Case for 190 Series II
	SCC190	FlukeView Software, OC4USB–cable and C190 Carrying Case Kit	SCC290	Software and Carrying Case kit; includes FlukeView Software and C290 Carrying Case
	BP190	Rechargeable NiMH Battery Pack for Fluke 190C Series	BP291	Double capacity Li-ion Battery (4800 mAh) for Fluke 190 Series II
	VPS210	Voltage probe set, 10:1. Red and grey sets available	VPS410-x	Voltage probe set 10:1. Available colors: VPS410–R (red), VPS410–B (blue), VPS410–G (grey) and VPS410–V (green)
	OC4USB	Optically isolated interface cable for USB	VPS420-R	High Working Voltage Ruggedized Probe, 100:1, red/black
	PM9080	Optically isolated interface cable for RS-232	EBC290	External Battery Charger, charges BP291 while outside instrument
	AS200	Probe accessory extension set for VPS210 Series probes	HH290	Hanging Hook
	RS200	Probe accessory replacement set for VPS210 Series probes	AS400	Probe accessories extension set for VPS410 Series probes
			RS400	Probe accessories replacement set for VPS410 Series probes

Fluke also offers a wide range of optional accessories like temperature probes, current clamps, high voltage probes, cables, adapters and carrying cases to further assist you in your job. See the Fluke website or contact your distributor for details.

Ordering Information

190-204   Color ScopeMeter (200 MHz, 4 channel)
190-204/S Color ScopeMeter (200 MHz, 4 channel), with SCC290-kit
190-104   Color ScopeMeter (100 MHz, 4 channel)
190-104/S Color ScopeMeter (100 MHz, 4 channel), with SCC290-kit
225C   Color ScopeMeter (200 MHz/2.5 GS/s) with Bus Health Test Functions
225C/S   Color ScopeMeter (200 MHz/2.5 GS/s) with Bus Health Test + SCC190
215C   Color ScopeMeter (100 MHz/1 GS/s) with Bus Health Test Functions
215C/S   Color ScopeMeter (100 MHz/1 GS/s) with Bus Health Test + SCC190 kit
199C   Color ScopeMeter (200 MHz/2.5 GS/s)
199C/S   Color ScopeMeter (200 MHz/2.5 GS/s) + SCC190
196C   Color ScopeMeter (100 MHz/1 GS/s)
196C/S   Color ScopeMeter (100 MHz/1GS/s) + SCC190
192C   Color ScopeMeter (60 MHz/500 MS/s)
192C/S   Color ScopeMeter (60 MHz/500 MS/s) + SCC190 kit

Fluke. *Keeping your world up and running.*®