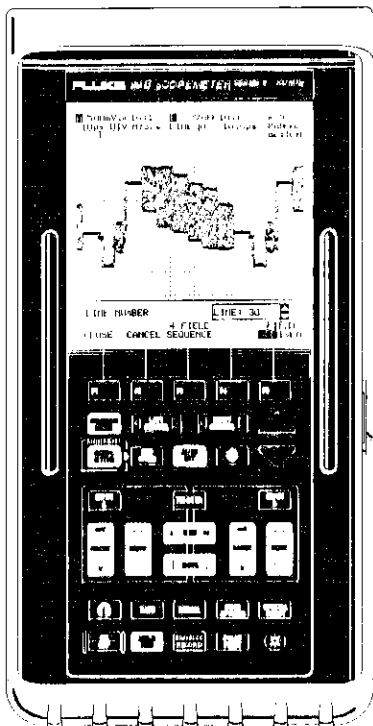


ScopeMeter B Test Tool

The brighter choice wherever you work



A new bright display and more!

ScopeMeter® B test tool is the best handheld scope for rugged on the go applications. You can count on its 100 MHz and 5 GS/s sampling rate that insures excellent fidelity on repetitive signals. The new B version offers a 10x brighter display with an unequalled 4 hour battery life. See the selection guide for details.

Video triggering. The ScopeMeter B test tool adds full video triggering for NTSC, PAL, SECAM & Hi resolution video. With built-in line and frame selector and trigger delay you can now see it all.

ScopeRecord™ is a new feature providing 30k deep memory for extended waveform recording, and a time of day (real time) clock to pinpoint events. Characterize complete events like long machine cycles or pulse train activity.

TrendPlot™ meter logging now has a time of day and date stamp. This versatile electronic chart recorder now helps to better identify measurement peaks and valleys for up to 40 days.

Full function true-rms meter

ScopeMeter test tool at its best. Simultaneously take meter and scope readings with a single probe. Measures AC, AC+DC (to 5 MHz) and DC Voltages in eight ranges to 600V rms (1700V peak to peak). Measure resistance to 30 MΩ in seven ranges. With optional accessories, measure current and temperature.

Measure menu

One button access lets you select a setup from 40 commonly-used measurements. Simply select a measurement and the automatic setup does the rest.

Continuous-autoset

This feature assures a stable, usable measurement on virtually any signal. It permits signal probing of a sequence of test points without touching the controls.

Complete package

When you take it from the box there is nothing extra to buy to get going. The scope and meter probe accessories, battery charger and battery are in there too. The Fluke 105B includes FlukeView software, cable and a carrying case.

Large storage capacity

Store and recall up to 40 setups for quick configuration. Store and recall 20 waveforms for quick, accurate signal comparison. Store and recall 10 screens for a quick snapshot of exactly how that signal looked. All 70 storage locations can be loaded to a PC with the PM 9080 interface cable and FlukeView software.

Versatility

The ScopeMeter test tools are famous for versatility and the B version is no exception. Amps, Watts, Power, Temperature, RPM, % Duty cycle, Phase and Pulse width, are just a few of the scaled measurements available.

FlukeView®

Add PC power to the ScopeMeter test tool. FlukeView ScopeMeter Software runs on a PC and communicates with the ScopeMeter test tool via the optional RS 232 serial interface. Versions for DOS and Windows support all models. (Screen capture only for the Model 92B) Print out complete screens directly or store graphical data for use in word processors or spreadsheets. Create a library of waveforms for reference and comparison.

Safety

Suited for making floating measurements on 600V rms industrial power lines. IEC61010 and UL listed for 600V Cat. III measurements.

Specifications

Scope mode

Vertical

Bandwidth: 100 MHz (Fluke 105B and Fluke 99B), 60MHz (Fluke 96B and Fluke 92B)

Coupling: AC, DC, Ground

Sensitivity: 1 mV to 100 V/div (with included 10:1 probe measure up to 600 Vrms)

Modes: A, A, B, -B, A+B, A-B, X vs. Y

Vertical resolution: 8 bit (256 levels)

Accuracy: ±(2% of reading + 1 pixel)

Horizontal

Range: 5 ns/div to 60 s/div (Fluke 105B and Fluke 99B), 10 ns/div to 60 s/div (Fluke 96B and Fluke 92B)

Acquisition modes: Recurrent, Single shot, Envelope, Roll, Glitch detect, Average, ScopeRecord™

Maximum sample rate: 5 GS/s (Fluke 105B and Fluke 99B), 2.5 GS/s (Fluke 96B and Fluke 92B) for repetitive signals, 25 MS/s for single shot, all models

Maximum record length:

ScopeRecord™: 30k (up to 20 ms/div 1 ch) 15k (up to 20 ms/div 2 ch)

512 samples per channel (up to 5 ns/div)

Accuracy: ±(0.1% of reading + 1 pixel)

Ordering Information

Ordering Information

Fluke 105B 100 MHz ScopeMeter Series II

Fluke 99B 100 MHz ScopeMeter Series II

Fluke 96B 60 MHz ScopeMeter Series II

Fluke 92B 60 MHz ScopeMeter Series II

Need Technical Assistance? Call:

1-800-44-FLUKE

Toll-free in the U.S.

(905) 890-7600 in Canada

(206) 356-5500 other countries



Specifications cont.

Trigger

Source: Input A, Input B, External
Modes: Free run, Triggered, Single
Types: Edge, Video, Event, N-cycle
Video: Triggers on Field 1, Field 2, Lines or selectable line number
Interlaced video: NTSC, PAL, PAL/M, SECAM, User selectable 2 Field or 4 Field sequence
Non Interlaced video: Line selection up to 3200 lines. Line frequency 14 kHz to 65 kHz
Time delay: Up to 1280 divisions pre trigger view. Up to 640 divisions trigger delay

Cursor measurements

(Fluke 105B, 99B and 96B only)

Up to 5 displayed simultaneously:

Vrms (AC)
Vmean (DC)
Vpeak-peak
Vmax-peak
Vmin-peak
dV between cursors
V at cursors
Frequency
Rise time
Time between cursors
Time at cursors (Time of day or Time from start)
Phase
Measurements can be scaled to Amperes.
Readouts in % change or Δ zero

Waveform mathematics

(Fluke 105B and 99B only)

Add
subtract
multiply
invert
filter
integrate
Instantaneous or mean Watts with optional current probes.

Zoom

Adjustable magnification. Allows full 30k record overview or zoom in to single sample resolution.

Memory save and recall

(Fluke 105B, 99B and 96B only)

Setup memories: 40 for Fluke 105B

and 99B, 20 for Fluke 96B

Waveform memories: 20 for Fluke 105B and 99B, 10 for Fluke 96B

Screen memories: 10 for Fluke 105B and 99B, 5 for Fluke 96B

Meter mode

DC voltage

Ranges: 100 mV to 300V (with included 10:1 probe measure up to 600 Vrms)
Accuracy: $\pm(0.5\%+5 \text{ counts})$

AC or AC+DC true rms voltage

Ranges: 100 mV to 250V (with included 10:1 probe measure up to 600 Vrms)

Accuracy:

50 Hz to 60 Hz: $\pm(1\%+10 \text{ counts})$
20 Hz to 20 kHz: $\pm(2\%+15 \text{ counts})$
5 Hz to 1 MHz: $\pm(3\%+20 \text{ counts})$
DC to 5 MHz: $\pm(10\%+25 \text{ counts})$

Additional measurements

Ω
°C or °F
dRV
Continuity
Pulse Width
dBW
Diode test
Duty Cycle
Audio or RF Watts
Amps
RPM
Hz
dBm
(Amps, °C or °F with optional probes)

Advanced meter functions

Touch Hold™
Change Alert™
Smoothing™
Continuity Beeper
Readouts in % change, % scale, or Δ zero

Min/Max Trend Plot

Chart recording function to log MIN, MAX, and AVERAGE readings. Displays all 3 readings as graphs with time and date stamp. Automatic vertical scaling and horizontal time compression for recording from 120 seconds to 40 days.

Signal generator

(Fluke 105B and Fluke 99B only)

Sine wave: 1V pk pk at 976 Hz with <3% distortion

Square wave: 5V pk pk at 488 Hz, 976 Hz, or 1.95 kHz

Component tester: Current or voltage ramp with 128 steps

General specifications

The accuracy of all measurements are within ±1% of reading ± number of counts) from 18°C to 28°C. Add 0.1 x (specified accuracy) for each °C <18°C or >28°C.

Display

Cold cathode fluorescent backlight liquid crystal

Size: 84 x 84 mm (3.3 x 3.3 inch)

Contrast and brightness: User adjustable

Real time clock

Stamps Min Max TrendPlots and 30k records with time and date.

Power

Line voltage adapter/battery charger included

Installed battery pack: Rechargeable NiCad

Operating time: 4 hours typical

Charging time: 21 hours typical

Alternate battery (user supplied):

4 Alkaline C cells (non rechargeable)

Environmental

Temperature: 0°C to 50°C

Humidity: 20°C to 30°C, 90% RH non-condensing, 30°C to 50°C, 70% RH non-condensing

Altitude: 2000m at 600V (at 5000m derated to 400V)

Shock and vibration: MIL T 28800 for class 3

Electro-magnetic compatibility:

Emission EN50081-1 (EN5022 and EN60555-2); Immunity EN50082-1 (IEC801 -2, -3, 4, -5)

Drip and dust proof: IP31 according to IEC529

Mechanical data

Size: 60 x 130 x 260 mm (2.4 x 5.1 x 10.2 inches)

Weight: 1.5 kg (3.3 lbs)

Safety

EN61010 1 Cat III for 600V measurements on industrial power distribution systems, UL 1244, CSA C22.2 No.1010.1, ANSI/ISA S82

Overload protection on A or B:

600 Vrms with included 10:1 probe, 300 Vrms on input

Overload protection on external input: 300 Vrms

Surge protection: 6 kV with included 10:1 probe, 4 kV on input, per IEC664 and ANSI/IEEE C62.41 test method

Floating measurements: 600 Vrms from any terminal to ground

Optically isolated RS-232 Interface

Connects ScopeMeter safely to a PC or serial printer

Printer drivers: HP Laserjet, Deskjet, Thinkjet and Epson FX/LQ

Warranty

3 years parts and labor
Following safety message must be placed under the colon with ordering information for accessories.



ScopeMeter® B Features and Selection Guide

	Fluke 105B	Fluke 99B	Fluke 96B	Fluke 92B
Oscilloscope Features				
Bandwidth (MHz)	100	New: 100	60	60
Maximum Repetitive Sample Rate	5 GS/s	5 GS/s	2.5 GS/s	2.5 GS/s
Maximum Time Resolution	200 ps	200 ps	400 ps	400 ps
Number of Channels	2	2	2	2
Continuous Autoset	•	•	•	•
New! Video Triggering, NTSC, PAL, SECAM, & Hi Resolution Video (line & field selectable)	•	•	•	•
New! ScopeRecord™ in 30k Memory; (Time base > 20 ms/div)	•	•	•	•
Glitch Capture down to 40 ns	•	•	•	•
Time/Division (5 ns/div to 60 sec/div)	•	•		
Time/Division (10 ns/div to 60 sec/div)			•	•
Volts/Division (1 mV/div to 100 V/div)	•	•	•	•
Pre & Post Trigger (20 to +640 div)	•	•	•	•
Trigger Delay (Cycles, Event, Time & Zoom)	•	•	•	•
Envelope Mode (Min/Max)	•	•	•	•
Gray Scale Waveform Display	•	•	•	•
Cursor Measurements	•	•	•	•
Waveform Mathematics (Integrate, +, -, filter)	•	•		
Measure Amps with Optional Current Clamps	•	•	•	•
Screen Memory	10	10	5	
Waveform Memory	20	20	10	
Setup Memory	40	40	20	
Multimeter Features				
5 MHz DMM Measurements & Full Waveform	•	•	•	•
Autoranging	•	•	•	•
Min Max TrendPlot with New Time and Date Stamp	•	•	•	•
Advanced Measurements (Temp., Current, RPM, % Duty, Pulse Width, di, Hz, % Scale, Amps, Watts, and more)	•	•		•
True-rms Volts	•	•	•	•
Diode Test (up to 2.8V)	•	•	•	•
Continuity Beeper	•	•	•	•
General Features				
New! High Contrast, Backlit Display	•	•	•	•
Automatic Setup Measurements	40	40	40	28
Waveform and Screen Image transfers to a PC and Remote Operation	•	•	•	
Screen Image Transfers to a PC	•	•	•	•
Signal Generator/Component Tester Output	•	•		
On Line Help (Information)	•	•	•	•
IEC61010-1 & ILL listed for 600 Volts	•	•	•	•
4 Hour NiCad Battery and Charger	•	•	•	•
Optically Isolated RS-232C Interface for Printer and PC (PM 9080 cable required)	•	•	•	•
PC Software & PM 9080 Cable	•	+	+	
Hard Carrying Case	•	+	+	+

• = standard feature + = option

Accessory Recommendations for Measurements >42V Peak (30V RMS)

Similar to a safety designed multimeter, but unlike a conventional oscilloscope, the ScopeMeter input connectors have no exposed metal and are fully insulated to protect against electrical shock. The ScopeMeter COM (common) inputs (Channel A red BNC shield, Channel B gray BNC shield, and black banana jack) are connected internally via self recovering fault protection. Any voltage on one COM input will be present on all COM connections. To avoid risk of electrical shock, use only the following accessories when a ScopeMeter COM input is connected to >42V peak (30V rms): PM 8901/003, PM 8901/008, PM 9081/002, PM 8918/002, PM 8918/202, PM 9094/001, PM 9266/04 (Fluke 916015), PM9081/001, PM9082/001, PM 9084/001, PM9085/001, PM 9090/001, TL20, TL75, AC20, AC30. Other ScopeMeter compatible accessories are only suitable when the ScopeMeter COM input is connected to an earth ground potential or <42V peak (30V rms).