



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,
 SITCAM, 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 $\pm 1\%$ of reading $\pm$ 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 (EN55022 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 measure-
 ments 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 L/X/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)	•	•	•	•
EN61010-1 & 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 8901/003, 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).