

Fluke 105B ScopeMeter® Specifications

Scope Mode

Vertical

Bandwidth

100 MHz (Fluke 105B and Fluke 99B)

60 MHz (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 bits (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

Scope Record™ (Fluke 105B, 99B & 96B only)

30k (up to 20ms/div-1 ch)

15k (up to 20ms/div-2 ch)

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

Accuracy

±(-0.1% of reading +1 pixel)

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 20 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), Frequency, Vmean (DC), Risetime, Vpeak-peak, Time between cursors, Vmax-peak, Time at cursors (Time of day or Time from start), Vmin-peak, Phase dV between cursors, V at cursors. Measurements can be scaled to Amperes. Readouts in % change or delta-zero.

Waveform Mathematics

(Fluke 105B and 99B only)

Add, multiply, filter, subtract, invert, 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

Continuity, Diode test, Amps, Hz, °C or °F, Pulse Width, Duty Cycle, RPM, dBm, dBV, dBW, Audio or RF Watts. (Amps, °C or °F with Optional Probes)

Advanced METER Functions

Touch Hold[®], Change Alert[™], Smoothing[™], Continuity Beeper. Readouts in % change, % scale or delta-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)

Sinewave

1V pk-pk at 976 Hz with <-3% distortion

Squarewave

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 $\pm(1\% \text{ of reading} \pm \text{ number of counts})$ from 18°C to 28°C. Add 0.1 x (specified accuracy) for each °C<18°C or >28°C.

Display

Cold cathode fluorescent back-lit liquid crystal

Size

84x84 mm (3.3x3.3 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 Rechargeable NiCad Pack

Operating time 4 hours typical

Charging time 21 hours typical

Alternate battery 4 Alkaline C cells

(user supplied) (non rechargeable)

Environmental

Temperature -- 0°C to 50°C

Shock and Vibration MIL-T-28800D for class 3

Drip and dust proof IP51 according to IEC529

Electro-Magnetic Compatibility

Emission -- EN50081-1 (EN55022 and EN60555-2)

Immunity -- EN50082-1 (IEC801 -2, -3, -4, -5)

Mechanical Data

Size

60x130x260 mm

(2.4x5.1x10.2 inches)

Weight

1.5 kg (3.3lbs)

Safety

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

Surge Protection:

6kV with included 10:1 probe, 4kV 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