

FLUKE

5100B

The Fluke 5100B is a microprocessor-controlled multifunction calibrator designed to calibrate analog and digital multimeters up to 4.5 digits. It provides accurate, low-noise AC/DC voltage, AC/DC current, and resistance outputs. The calibrator can be enhanced with a 10 MHz wideband voltage option and features direct-drive outputs for Fluke power and transconductance amplifiers.

SPECIFICATIONS

General

Interfaces	GPIB (Option 05) / RS-232 (Option 06)
Display	Gas-discharge digital display (neon)

Physical

Power Supply	100 / 120 / 220 / 240 VAC ($\pm 10\%$), 48 Hz to 62 Hz
Operating Temperature	0 °C to 50 °C °C
Dimensions (W×H×D)	432 mm × 178 mm × 508 mm mm
Weight	34 kg kg

General & Metrological Overview

Calibrator Type	Multifunction Calibrator
Target Multimeter Resolution	Up to 4.5 digits
Calibration Interval Recommended	1 Year

DC Voltage Source

DC Voltage Range	0 V to 1100 V
DC Voltage Best 1-Year Accuracy	0.005%
DC Voltage Range Steps	200 mV, 2 V, 20 V, 200 V, 1100 V

AC Voltage Source

AC Voltage Range	0 V to 1100 V
AC Voltage Best 1-Year Accuracy	0.05%
AC Voltage Range Steps	200 mV, 2 V, 20 V, 200 V, 1100 V
AC Voltage Standard Frequency Range	50 Hz to 50 kHz
Optional Wideband Frequency Range	10 Hz to 10 MHz (with Option 03)

DC Current Source

DC Current Range	200 μ A to 2 A
DC Current Best 1-Year Accuracy	0.025%
DC Current Range Steps	200 μ A, 2 mA, 20 mA, 200 mA, 2 A

AC Current Source

AC Current Range	200 μ A to 2 A
AC Current Best 1-Year Accuracy	0.07%
AC Current Range Steps	200 μ A, 2 mA, 20 mA, 200 mA, 2 A
AC Current Frequency Range	50 Hz to 1 kHz

Resistance Simulation

Resistance Range	1 Ω to 10 M Ω
Resistance Best 1-Year Accuracy	0.005%
Resistance Step Values	1 Ω , 10 Ω , 100 Ω , 1 k Ω , 10 k Ω , 100 k Ω , 1 M Ω , 10 M Ω

System Control & Connectivity

Wideband Option Compatibility	Option 03 (Low-noise, flat 10 MHz wideband AC source)
Direct Drive Compatibility	Fluke 5220A 20A Transconductance Amplifier & Fluke 5205A Precision Power Amplifier

Environmental

Relative Humidity	<80% RH (0 $^{\circ}$ C to 35 $^{\circ}$ C), <70% RH (35 $^{\circ}$ C to 50 $^{\circ}$ C)
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Performance

Warm-up Time	1 hour
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Electrical Safety

Maximum Guard-to-Chassis Voltage	1000 V dc or peak ac
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AC Outputs

Frequency Resolution	3 digits
Frequency Accuracy	$\pm$ 0.1%

Operation

Sensing Capability	2-wire or 4-wire external sensing
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TECHNOLOGY

Analog-to-digital metrology standard

APPLICATIONS

Calibration of analog and digital multimeters up to 4.5 digits

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.