



MultiCal 2500 Secondary Standard Precision Calibrator

Multi-function Precision Laboratory Calibrator

The MultiCal 2500 Precision Laboratory Calibrator: Measures & Simulates: DC Voltage/Current Thermocouples, RTDs, Resistance, Loop Supply (24V), and Pressure (read only)



- Accuracy: $\pm 0.0025\%$ of rdg.
- Direct Keyboard Entry or cursor entry with decade control
- Source/Read 13 types of Thermocouples, 9 types of RTDs, Voltage, Current, and Pressure (read only)
- Custom RTD and SPRT profiles
- Nine (9) setpoints for each output range and type
- Beryllium-Copper binding posts reduces thermal EMFs
- RS232, USB, & IEEE-488 remote control
- Compatible with Fluke Met/Cal[®] Software
- Isolated Measurement channel
- Calibration Certification Included

Accurate

Easy to use

Efficient

Fast

Precise

Powerful

Versatile

Performance



E Instruments International

www.E-Inst.com

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MultiCal 2500 Secondary Standard Precision Calibrator

The **MultiCal 2500** is a powerful and precise laboratory calibrator instrument with unmatched versatility, performance, and simple-to-use intuitive user interface. The MultiCal 2500 is truly a Second Standard Precise Laboratory Calibrator unit.



Applications

This MultiCal 2500

Source/Reads 13 type of Thermocouples, 9 types of RTDs, Voltage, Current, and Pressure (read only)

Superior Accuracy:
to $\pm 0.0025\%$ of rdg.

Nine (9) setpoints for each output range and type

Resistance:
Measure: 0 to 4000 Ω
Simulate: 5 to 4000 Ω

Measure & Simulate:

13 Types of Thermocouples (J, K, T, E, R, S, N, B, L, U, C, BP, XK)

Measure & Simulate: 9 Types of RTDs *see specs below*

Measure & Simulate:

2 Voltage Ranges: 10V and 100V

MultiCal 2500 Precision Laboratory Calibrator Ordering Information

Part Number Ordering Information

MC2500 - MultiCal 2500 Precision Calibrator
User Manual, AC Line Cord, Thermocouple
Jumper Shorter, NIST Calibration Certificate

1 - 120V AC Unit with US Type Plug
2 - 230V AC Unit with European Plug

Optional Accessories

EIBP-1 High Accuracy RTD Probe (with data)
BPPA-100-1 Pressure Module Adapter
EPTL-1 Low EMF Beryllium Copper Test Leads
JKTE-1 Thermocouple Lead Kit
R/SNB-1 Thermocouple Lead Kit

Mechanical

Dimensions 5"h x 19"w x 11"d
(17.7 cm x 48.26 cm x 27.96 cm)
Weight 10.5 lbs. (4.8 kg)
Display (2) Large character 16 by
2 line alphanumeric backlit LCDs

BPPA-100-1 Pressure
Module Adapter



RS232, USB,
& IEEE-488
remote control



USB connection
to your computer.

* Specifications subject to change *



MultiCal 2500 Secondary Standard Precision Calibrator

MultiCal 2500 Precision Calibrator Specifications

Output Voltage

Range

0 to 100.000 mV

0 to 1.00000 V

0 to 10.0000 V

0 to 100.000 V

Resolution

0 to 100 mV Range 1 μ V

0 to 1 V Range 10 μ V

0 to 10 V Range 100 μ V

0 to 100 V Range 1 mV

Accuracy (% of reading)

0 to 100 V Range $\pm 0.003\%$ (30ppm) $\pm 3 \mu$ V

0 to 1 V Range $\pm 0.003\%$ (30ppm) $\pm 10 \mu$ V

0 to 10 V Range $\pm 0.003\%$ (30ppm) $\pm 100 \mu$ V

0 to 100 V Range $\pm 0.003\%$ (30ppm) ± 1 mV

Maximum Burden (~ 1 Ohm output impedance)

0 to 100 mV Range 10 mA

0 to 1 V Range 10 mA

0 to 10 V Range 10 mA

0 to 100 V Range 1 mA

Output Current

Range 0 to 100.000 mA

Resolution 1 μ A

Accuracy (% of reading) $\pm 0.005\% \pm 1$ Count

Maximum Burden 10 V

Thermocouples

Output

Types J, K, T, E, R, S, N, B, L, U, C, BP, XK

Range mV

Resolution 0.1 $^{\circ}$ C/ $^{\circ}$ F

Accuracy 0.14 $^{\circ}$ C; Type J, typical

Input

Types J, K, T, E, R, S, N, B, L, U, C, BP, XK

Range mV

Resolution 0.01 $^{\circ}$ C/ $^{\circ}$ F

Accuracy 0.14 $^{\circ}$ C; Type J, typical

RTD

Output

Range Pt385 (100, 200, 500, 1000),

Pt392, Pt3916 (JIS), Ni120,

Cu 10, YS I400

Resolution 0.01 $^{\circ}$ C/ $^{\circ}$ F; Pt385-100, typical

Accuracy ± 0.05 $^{\circ}$ C; Pt385-100, typical

Input (All RTD inputs are 4 wire)

Range Pt385 (100, 200, 500, 1000),

Pt392, PT3916 (JIS), Ni120,

Cu10, YSI400, 25 Ohm SPRT

Resolution 0.001 $^{\circ}$ C/ $^{\circ}$ F; Pt385-100, typical

Accuracy ± 0.02 $^{\circ}$ C; Pt385-100, typical

Ohms

Output

Range 5 to 4000.0 Ω

Resolution 5 to 400.00 Ω 0.001 Ω

5 to 4000.0 Ω 0.01 Ω

Accuracy

5 to 400.00 Ω ± 0.05 Ω

5 to 4000.0 Ω ± 0.3 Ω

Input (4 wire connection)

Range 0 to 4000.00 Ω

Resolution 0 to 400.00 Ω 0.001 Ω

0 to 4000.0 Ω 0.01 Ω

Accuracy

0 to 400.00 Ω 40 PPM ± 0.002 Ω

0 to 4000.00 Ω 40 PPM ± 0.02 Ω

Pressure

Range 0 to 1 inch H₂O; to 10,000 psi

Compatibility with 29 pressure modules using

the BPPA-100-1 pressure adapter and all Fluke

700 and Mensor 6100 Series

Pressure Modules

Isolated Measurement Channel

Range Accuracy

0-10.0000V $\pm 0.005\% \pm 0.2$ mV

0-100.000V $\pm 0.005\% \pm 2.0$ mV

0-52.0000mA $\pm 0.01\% \pm 1$ μ A

Loop power: 24 V $\pm 10\%$

HART™ resistor: 250 Ω $\pm 3\%$

Maximum current: 24 mA

Stability

Warm-up Time 30 minutes to rated accuracy

Temp Co. ($\sim 18^{\circ}$ C/ $>28^{\circ}$ C) 10% of accuracy spec/ $^{\circ}$ C

Environmental

Operating Temperature 0 $^{\circ}$ C to +50 $^{\circ}$ C

Storage Temperature -20 $^{\circ}$ C to +70 $^{\circ}$ C

Humidity

Operating <80% to 30 $^{\circ}$ C

<70% to 40 $^{\circ}$ C

<40% to 50 $^{\circ}$ C

Storage <95%, non-condensing

Power Requirements

Voltage Range 90 to 240 VAC

<15 VA

* Specifications subject to change *

Bulletin: 010810.01

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