Millennium Series M2000A

Lab Standard Voltage/Current Bench Calibrator

The Martel M2000A Bench Calibrator sets a new standard in lab calibrator value – the M2000A features the accuracy and stability of calibration sources costing twice as much – and provide useful features no other calibrator offers in its class! Despite its world-class performance and powerful operating features, the M2000A Calibrator is very simple to setup and use.

General Features

- Superior calibration accuracy
- Direct keyboard entry or cursor entry with decade control
- Automatic standby function protects device under test
- Nine (9) manual/automatic setpoints per output range
- Local or RS232 remote control
- IEEE-488 (GPIB) port included
- Compatible with Fluke Met/Cal® software
- Optional rack/panel mount kit available

Simple Data Entry

The M2000A provides simple, front-panel control of output voltage or current using either direct keyboard entry or cursor entry.

The M2000A calibrator has an automatic OPERATOR/STANDBY function, which not only protects the device under test and the M2000A from overload conditions, but also provides UL/CSA-certified safe operation when ranging to output voltages over 30V.

A second function key provides easy access for up to nine setpoints for each output range that can be recalled individually at the touch of a button, or can be stepped through automatically with control of the setpoint dwell time.

Remote Control

All of the M2000A operating functions can be accessed via RS232 using a standard PC running Fluke Met/Cal® software, Windows® HyperTerminal, Visual Basic or any other software using an ASCII interface. An IEEE-488 bus interface is also standard.

Rock solid

The M2000A stability and accuracy is traceable to NIST standards. The accuracy of the M2000A is specified for both 90-day and one-year interals.

Specifications (1 year at 23°C ±5°C; % of reading, unless otherwise noted)

Output Voltage	
Range & Resolution	
0 to 100 mV Range	1 µV
0 to 1 V Range	10 µV
0 to 10 V Range	100 µV
0 to 100 V Range	1 mV
Accuracy (% of reading)	
0 to 100 mV Range	±0.003% (30 ppm) ± 3.0 µV
0 to 1 V Range	±0.003% (30 ppm) ± 20.0 µV
0 to 10 V Range	±0.003% (30 ppm) ± 200.0 µV
0 to 100 V Range	±0.003% (30 ppm) ± 2.0 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 (10 mA @ 24 VDC)
Output Current	
Range	0 to 100.000 mA
Resolution	1 µA
Accuracy (% of reading)	± 0.01% ± 2 µA
Maximum Burden	10 V
Stability	
Warm-up Time	30 minutes to rated accuracy
Temperature Coefficient (~18°C/>28°C)	10% of accuracy spec/°C
Temperature Range	
Operating	0°C to +50°C
Storage Temperature	-20°C to +70°C
Power Requirements	
Voltage Range	90 to 240 VAC (factory set)
Mechanical	
Dimensions	11.5"h x 4.7"w x 8.75"d (29.21 cm x 11.83 cm x 22.00 cm)
Weight	5 lbs. (2.27 kg)
Display	(16) Large characters x 2 lines Alphanumeric, backlit high contrast LCD

M2000A Ordering Information

Part Number	Description
1919092	Martel M2000A Precision V/I Source Calibrator, 120 VAC power
1919138	Martel M2000A Precision V/I Source Calibrator, 240 VAC power
	Optional Accessories
80055	PTL-1B low EMF Beryllium Copper test lead (single, black)
80056	PTL-1R low EMF Beryllium Copper test lead (single, red)
	Martel M2000A includes • Calibrator as above • North American style power cord (120 VAC version) • European style power cord (240 VAC version) • User Manual • NIST Traceable Calibration Certificate