

PORTABLE DC CALIBRATION 2000 Series



These versatile and portable calibrators bring laboratory accuracy to process control applications. Current loop (4 – 20 mA) indicators, controllers and recorders can be calibrated with accuracy measured in ppm rather than percentages.



Industries Served

Consumer Products
Medical
Automotive
Process Control
Aerospace/Military
4-20mA Loops
Calibration Labs
Data Acquisition
System Test
Engine Control
Calibration
Engineering &
Test Labs
Industrial
Controllers
Instrument
Maintenance
& Repair

Thermocouple simulation allows the fine tuning of any measurement or control loop. Temperature measurement is automatically compensated for the cold junction temperature.

The 2000 series instruments will compute current or voltage output using an equation derived from two data points. This allows the user to enter a temperature, pressure or flow level and the 2000 will output the appropriate current or voltage signal.

The highly versatile 2000M adds temperature measurement and automatic cold junction compensation to the impressive list of features. It allows the user to read or source in °C or °F for B,E,J,K,N,R,S and T thermocouples.

Compact and economical, the 2000 series provides the right combination of accuracy and flexibility for most temperature measurement/simulation applications.

These portable, precision instruments address a wide cross-section of calibration requirements.

- Excellent performance and flexibility in portable, battery-operated instruments
- DC voltage and current capability, +/- 22 volt, 10ppm accuracy, +/- 22mA, 40ppm accuracy
- Temperature simulation with 0.01° resolution, 0.015°– 0.12° accuracy (90 day)
- DC resolution down to 10nV or 10pA
- Temperature measurement with 0.1° – 0.2° accuracy (90 day)
- Auto cold junction compensation
- Battery operation (8 hours typ.)
- Optional RS232 interface allows laptop PC control in the field, while the IEEE-488 interface supports ATE applications. Additional memory can be added to either interface for 10 user-defined test steps
- Temperature Control Loops
- Thermocouple measurement and simulation

PORTABLE DC CALIBRATION

2000 Series



CONDENSED SPECIFICATIONS

(Contact XITRON for complete specifications)

Physical

Size: 4.1" W x 6.3"H x 9.7"D (104mm x160mm 246mm)

Weight: 3lbs. (1.4kg) in use, 5 lbs (2.3kg) shipping

Environmental

Operating: 0° C to 50°C, less than 70% R.H. at 40°C (non-condensing)

Storage: -30°C to 65°C, less than 95% R.H. at 40°C (non-condensing)

Isolation

Output to Chassis, Ground or Interface: 1500V pk max

ORDERING INFORMATION

PART#	Description
2000I	DC voltage and current calibrator
2000M	DC voltage and current calibrator, thermocouple simulator with voltage and temperature measurement and automatic cold junction compensation
RS	RS-232 interface
IE	IEEE-488 interface
MO	Operating manual (1 supplied with each instrument)
CC	Canvas carrying case with charger and lead pocket
SP48	48" long low thermal EMF shielded lead set (spade terminals)
PL36	36" long low thermal EMF red and black lead set (plugs)
RA	Single instrument rack adapter kit
RB	Three instrument rack adapter kit
NB	No battery option (typically used in ATE applications)

CALIBRATION

An automatically sequenced Internal Calibration may be performed at any time. This procedure does not require any external equipment or connections. The accuracy specification assumes the use of this procedure at least every five days, or following and ambient temperature change of greater than 5°C.

An automatically sequenced External Calibration may be performed at any time. In order to prevent unauthorized access, an optional password protection scheme is utilized. A one year external calibration cycle is recommended for normal use, however, this may be reduced (e.g. to three months) if increased accuracies are required, or increased (e.g. to two years) if reduced accuracies are required. External Calibration may be performed at any ambient temperature between 10°C and 35° C without degradation of the accuracy specifications, the accuracy figures then being valid for ambient temperatures of up to 5°C from this calibration temperature.

QUALITY AND RELIABILITY

XITRON Technologies, founded in 1990, is the premier source of precision power testing and measurement instruments for industrial manufacturing and medical electronics. Using the latest digital signal processing and circuitry, XITRON's sophisticated technology gives our customers the edge in design verification and product manufacturability. XITRON is ISO 9001:2000, EN46001 registered, and FDA (GMP 820) compliant.



Tel: (858) 530-8099 Fax: (858) 530-8077

www.xitrontech.com Email: sales@xitrontech.com support@xitrontech.com

XITRON Technologies Incorporated 9770-A Carroll Centre Road San Diego, California 92126